# Special Documentation **Tutorial for FieldCare projects**

Connection of HART, PROFIBUS, FOUNDATION Fieldbus, Ethernet/IP and Modbus devices with FieldCare via Modem, Fieldgate and Remote I/O

FieldCare				×
New Existing R	lecent			
×	R	HART		00000°
Create Project	Connection Wizard	MultiDrop	Point-to-Point	SOFTING
PCP Interface	ISS Interface	IPC Interface	CDI FXA291	CDI USB
Pouesnoi National Inst.				
, Creates an empty p	roject			
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# 1 Change history

Product version	Operating Instructions	Changes	Comments
2.11.xx	SD01928S/04/EN/01.17	Documentation separated into Operating Instructions and Special Documentation	-
2.12.xx	SD01928S/04/EN/02.17	New product version Section 12 "HART via SFG250 Ethernet gateway" Section 31 "PROFIBUS via SFG500 with Heartbeat verification DTM"	-
2.13.xx	SD01928S/04/EN/03.18	New product version	-
2.13.xx	SD01928S/04/EN/04.18	Changes	Removed I/O-Link topic

## 2 Document information

## 2.1 Document function

This tutorial assumes that FieldCare has been correctly installed according to the instructions in the Getting Started manual, and that the appropriate DTM catalog has been installed and updated. The manual describes a number of use cases with various system architectures. It is assumed that all devices and system components are installed and connected according to the instructions in the associated Operating Instructions.

For detailed information on "FieldCare installation": Getting Started  $\rightarrow \cong 11$ 

Where equipment is to be configured in explosion hazardous areas, it must be ensured all components, including computer, have the appropriate certification.

## 2.2 Symbols used

## 2.2.1 Safety symbols

Symbol	Meaning
<b>A</b> DANGER	<b>DANGER!</b> This symbol alerts you to a dangerous situation. Failure to avoid this situation will result in serious or fatal injury.
	<b>WARNING!</b> This symbol alerts you to a dangerous situation. Failure to avoid this situation can result in serious or fatal injury.
	<b>CAUTION!</b> This symbol alerts you to a dangerous situation. Failure to avoid this situation can result in minor or medium injury.
NOTICE	<b>NOTE!</b> This symbol contains information on procedures and other facts which do not result in personal injury.

## 2.2.2 Symbols for certain types of information

Symbol	Meaning
	<b>Permitted</b> Procedures, processes or actions that are permitted.
	<b>Preferred</b> Procedures, processes or actions that are preferred.
×	<b>Forbidden</b> Procedures, processes or actions that are forbidden.
i	<b>Tip</b> Indicates additional information.
	Reference to documentation
	Reference to page
	Reference to graphic
►	Notice or individual step to be observed
1., 2., 3	Series of steps

Symbol	Meaning
L <b>&gt;</b>	Result of a step
?	Help in the event of a problem
	Visual inspection
	Operation via local display
	Operation via operating tool
	Write-protected parameter

Symbol	Meaning	Symbol	Meaning
	<b>Permitted</b> Procedures, processes or actions that are permitted.		<b>Preferred</b> Procedures, processes or actions that are preferred.
X	<b>Forbidden</b> Procedures, processes or actions that are forbidden.	i	<b>Tip</b> Indicates additional information.
	Reference to documentation		Reference to page
	Reference to graphic	1., 2., 3	Series of steps
4	Result of a step		Visual inspection

## 2.2.3 FieldCareIcons

Previous symbol	Current symbol	Meaning
D	*	Start new project.
<b>2</b>	Ē	Open existing project.
		Save open project.
<b>a</b>		Print open project.
۵		Open clipboard.
<u>ل</u>	DTMs	Show DTM catalog.
Ð		Open documentation for selected device or detailed device information.
		Open inventory.
	Q	Activate protocol.
<b>技</b>	T <sub>0</sub>	Add new device to the network.
<b>1</b> 22	₽ <mark>,</mark>	Remove device from the network.

Previous symbol	Current symbol	Meaning	
1	E	Create new network topology using CommDTM and DeviceDTMs.	
<b>Ŷ</b> t	T 🚯	Compares the network topology in the field with the actual physical network, and devices are added to the existing network.	
		Scans the preconfigured topology and shows the report with the scanned device information.	
		Indicates whether there is a connection with the device.	
*		Transfer information from the device to FieldCare.	
*	<b>*</b>	Transfer information from FieldCare to the device.	
F ·	<b>₽</b> f	Device-specific functions for the selected device.	
4	<b>L</b>	Add plant level.	
4		Add item.	
		Remove plant level.	
		Remove item.	
	î	Open device checklist to show selected devices in the plant.	
>		Confirm replaced device.	
New icons			
		Disconnected <sup>1)</sup>	
		Set up communication, ready for communication $^{1)}$	
		Communication channel occupied or communication action canceled. $^{1)}$	
		Connected <sup>1)</sup>	
0		W@M symbol, appears in the start bar on the bottom right if a connection to W@M has been established.	
		Switch on touch mode	
		Switch off touch mode	

1) Status indicator: online/offline status indication of devices in the plant and network view

## 2.3 Text emphasis

Emphasis	Meaning	Example
Bold	Keys, buttons, program icons, tabs, menus, commands	Start → Programs → Endress+Hauser In the File menu, select the Print option.
Angle brackets	Variables	<dvd drive=""></dvd>

## 2.4 Acronyms used

Acronyms	Meaning
CDI	Common Data Interface
СОМ	Communication Equipment
CommDTM	Communication Device Type Manager
CSV	Character Separated Value
DTM	Device Type Manager
DP	Decentralized Peripheral
FDT	Field Device Tool
FIFO	First In First Out
HART	Highway Addressable Remote Transducer
I/O	Input/Output
IP	Internet Protocol
ISS	Internal Service Interface
LAN	Local Area Network
LAS	Link Active Scheduler
MUX	Muliplexer
NIC	Network Interface Card
РА	Process Automation
PC	Personal Computer
PCD	PROCENTEC Communication Driver
PCI	Peripheral Component Interconnect
PCIe	Peripheral Component Interconnect express
DCS	Distributed Control System
PROFIBUS	Process Field Bus
PROFINET	Process Field Network
SPL	Second Program Loader
PLC	Programmable Logic Controller
ТСР	Transmission Control Protocol
UDP	User Datagram Protocol
USB	Universal Serial Bus

## 2.5 Documentation

### FieldCare SFE500

- Operating Instructions BA00065S/04/EN
- Getting Started KA01303S/04/EN

### Field Controller SFC162

Operating Instructions BA00069S/04/EN

#### Fieldgate FXA520

Operating Instructions BA00051S/00/EN

#### Fieldgate FXA720

Operating Instructions BA00030S/04/EN

### Commubox FXA191

Safety Instructions XA000058F/00/A6

#### Commubox FXA195

Safety Instructions XA00336F/00/A3

### WirelessHART Adapter SWA70

Operating Instructions BA00061S/04/EN

WirelessHART Fieldgate SWG70

Operating Instructions BA00064S/04/EN

## 2.6 Registered trademarks

 $\mathsf{PROFINET}^{\circledast}$  is a registered trademark of the  $\mathsf{PROFIBUS}$  User Organization, Karlsruhe/Germany.

 $\mathsf{PROFIBUS}^{\circledast}$  is a registered trademark of the  $\mathsf{PROFIBUS}$  User Organization, Karlsruhe/Germany.

FOUNDATION<sup>TM</sup> Fieldbus is the trademark of the FieldComm Group, Austin, TX 78759, USA.

HART<sup>®</sup>, WirelessHART<sup>®</sup> is the registered trademark of the FieldComm Group, Austin, TX 78759, USA.

Ethernet/IP is the registered trademark of ODVA, Michigan USA.

Modbus is the registered trademark of Modicon, Incorporated.

All other brand and product names are trademarks or registered trademarks of the companies and organizations in question.

## 3 FieldCare project

## 3.1 Creating a project

The first steps in creating a project are always identical. The FieldCare dialog appears by default; this can be deactivated under **Extras** → **Options** → **Project**. The FieldCare dialog is no longer displayed if the **None** check box is checked.



## Creating a project

- 1. Open FieldCare.
  - └ The "FieldCare" dialog opens.



On the "New" tab, select the Create Project item and click Open.
 FieldCare opens a new project with a host PC.

## 3.2 Saving a project

FieldCare projects are stored in a database but are not accessible as files on the hard disk. It is possible to access these files by using FieldCare in file mode. All projects are saved in the same manner.

#### Saving a project

<b>1.</b> Select <b>File</b> $\rightarrow$ <b>Save As</b> .	$e \rightarrow Save As.$
---	--------------------------

← The Save Project As dialog opens.

Look In:	Projekte	
FieldCare B.	9. ojekt	

2. Enter a project name and click **Save**.

└ The project is saved.

## 3.3 Opening a saved project

## Opening a saved project

- 1. In the **FieldCare** dialog, click the **Existing** tab.
  - └ The "Open Project" dialog opens. The last projects to be opened are displayed.

Look In: Desights	
FieldCare BA	
FieldCare Projekt	
Project name:	

2. Select **Project** and click **Open**.

└ The project is displayed.

If the project does not appear on the screen, click **View**  $\rightarrow$  **Network**.

## 4 HART point-to-point connection via Commubox FXA191

## 4.1 Use cases

The Commubox FXA191 provides a direct connection between a HART device (4 to 20 mA) and the RS232C port (COM port) of a computer. To establish communication with the HART device, a resistor of at least  $250 \Omega$  must be provided in the circuit. The way in which this is done depends upon the system architecture and power source used.

To see the HART device, FieldCare requires:

- HART CommDTM
- HART DeviceDTMs

P Observe the maximum total load of the smart transmitter!

## **WARNING**

**A Commubox FXA191 from a non-Ex installation is used in an Ex installation.** Malfunction due overloaded protective circuits.

• A Commubox FXA191 from a non-Ex installation may not be used in an Ex installation.

For detailed information on "Commubox FXA191": Safety instructions → 🗎 11

## 4.1.1 Loop power from controller/field device



■ 1 Operation of Commubox FXA191 in a control loop (I/O card active/device passive or vice versa) Via a resistor  $\ge 250 \Omega$  (recommended 270 to 330 Ω) in the control loop

- 1 I/O card PLC/DCS passive or active
- 2 Commubox FXA191
- 3 RS232C
- 4 FieldCare
- 5 Field device passive or active



- 2 Operation of a Commubox FXA191 in a control loop (I/O card active/device passive or vice versa). In the control loop (loop-resistance  $\geq 250 \Omega$ )
- 1 I/O card PLC/DCS passive or active
- 2 Commubox FXA191
- 3 RS232C
- 4 FieldCare
- 5 Field device passive or active

## 4.1.2 Loop power from a transmitter power supply



■ 3 Operation of Commubox FXA191 in a control loop powered by a transmitter power supply. From the control room via the communication sockets of the transmitter power supply.

- 1 Active power supply (RNS221, RN221N-A, RN221N-B (Ex), RMA422, RMA42)
- 2 Commubox FXA191
- 3 RS232C
- 4 FieldCare
- 5 I/O card PLC/DCS passive
- 6 Field device (passive)



- Operation of Commubox FXA191 in a control loop powered by a transmitter power supply. Via the resistor  $\geq 250 \ \Omega$  (recommended 270 to 330  $\Omega$ ) in the control loop (communication resistor of Commubox FXA191 off)
- 1 Active power supply (RNS221, RN221N-A, RN221N-B (Ex), RMA422, RMA42)
- 2 Commubox FXA191
- 3 RS232C
- 4 FieldCare
- 5 I/O card PLC/DCS passive
- 6 Field device (passive)



- 5 Operation of Commubox FXA191 in a control loop powered by a transmitter power supply. In the control loop (loop-resistance  $\geq$  250 Ω)
- 1 Active power supply (RNS221, RN221N-A, RN221N-B (Ex), RMA422, RMA42)
- 2 Commubox FXA191
- 3 RS232C
- 4 FieldCare
- 5 I/O card PLC/DCS passive
- 6 Field device (passive)

## 4.2 Connection procedure

Normally, the Commubox FXA191 connects to the COM1 port when it is plugged into the computer.

It is recommended that only a native serial port be used. The use of USB/Serial converters is not recommended.

Deactivate the FIFO buffer in the serial port settings.

When working with a modem that is connected to the COM1 port of the computer, you can also select the **HART (Point-to-Point)** item in the **FieldCare** dialog. This automatically sets up the project and the program scans for a device with the HART address **0** (standard for non-Multidrop mode).

#### Establishing a connection

- **1.** Create a project  $\rightarrow \square$  13.
- 2. In the "Network" dialog, right-click Host PC.
  - ← A drop-down list opens.

Network					
Network Tag	C	Channel	A	Device t	Physical Device
Add Device					

#### 3. Select Add Device.

└ The "Add New Device" dialog opens.

Filter						
Manufacturer:						
Device:				R	ter	
△ Device		Version	Class	Manufacturer	Protocol	
CDI Communication FX	KA291	V2.09.00 (2016	S -	Endress+Hauser	CDI	
CDI Communication TI	CP/IP	V2.09.00 (2016	<b>V</b> -	Endress+Hauser	CDI TCP/	
CDI Communication U	SB	V2.09.00 (2016	Ψ.	Endress+Hauser	CDI USB	
CommDTM PROFIBUS	S DP-V1	V5.00.2(22) (20	Q .	Softing Industrial Endress+Hauser Endress+Hauser	PROFIBUS	
FF H1 CommDTM		V1.5.4.2 (2015	V -			
Flow Communication F	XA193/291	V3.27.00 (2015	- T		ISS	
FXA520		V1.05.09 (2011	V .	Endress+Hauser	HART	
HART Communication		V1.0.56 (2016	ΰ.	CodeWrights G Endress+Hauser Endress+Hauser	HART	
IPC (Level, Pressure) F	XA193/291	91 V1.02.17 (2014 V1.01.18 (2014	- T			
PCP (Readwin) TXU1	0/FXA291		· .		PCP	
PROFIdtm DPV1		V 2.20.0(121) (	Q .	Softing Industrial	Profibus DI	
SFGNetwork		V1.10.00.343 [	👽 dtmSp	Endress+Hauser	SFG5xx	
<					>	
	Device	type (DTM) informat	ion			
Device:	CDI Co	mmunication FXA29	1			
Manufacturer:	Endres	s+Hauser				
Device ID / SubID:	17					
Device ID / SubID: Manufacturer ID:						
Device ID / SubID: Manufacturer ID: Hardware revision:						
Device ID / SubID: Manufacturer ID: Hardware revision: Software revision:						
Device ID / SubID: Manufacturer ID: Hardware revision: Software revision: Device revision:						
Device ID / SubID: Manufacturer ID: Hardware revision: Software revision: Device revision: Profile revision:						

4. Select the **HART Communication** item and click **OK**.

- └ The HART CommDTM is added to the network.
- 5. In the "Network" dialog, right-click **HART Communication**.
  - └ A drop-down list opens.



6. Select **Configuration**.

└ The "HART Communication (Configuration)" dialog opens.

Communication interface	HART modem	•
Serial Interface	COM1 (Communications Po	ort) 💌
HART protocol	Master	Secondary Master 💌
	Preamble	5
	Number of communication retries	7
Address scan	Start address	0 💌
	End address	0 💌
T Multimenter and Durat	and a second found a sub-order	aband DC 222)

- 7. Define the parameters.
  - Communication interface: HART modem
     Serial interface: COM1 (communication port), the port can be selected from the drop-down menu if the computer has a second RS232C port (COM2) and the Commubox is connected to this port
     HART protocol master: 5
     HART protocol preamble: 3
    - HART protocol number of communication retries: 0
    - Address scan start address: 0

Address scan end address: 0 (highest station address for HART Multidrop)

### 8. Click **OK**.

└ FieldCare returns to the "Network" dialog.

#### 9. Right-click HART Communication.

🛏 A drop-down list opens.



#### 10. Select Create Network.

← FieldCare now scans the network and indicates the result.



The DeviceDTM is added to the network tree and the DTM opens.



- The DTMs are opened as follows if the Commubox FXA191 is connected to a HART Multidrop network and several devices are found:
   In the "Network" dialog, right-click the device and select Connect or Online Parameterize.
- **12.** Save the project  $\rightarrow \square$  13.

The project is saved.

If FieldCare cannot find the correct DTM, it will offer alternative versions, graded according to their suitability in the "Scan Result" dialog. The user has the choice of accepting a DTM of less quality, or canceling the scan.

If no new DTM is available, the user can still integrate the device by using the HART iDTM.

## 5 HART point-to-point connection via Commubox FXA195

## 5.1 Use cases

The Commubox FXA195 provides a direct connection between a HART device (4 to 20 mA) and the USB port of a computer. To establish communication with the HART device, a resistor of at least 250  $\Omega$  must be provided in the circuit. The way in which this is done depends upon the system architecture and power source used.

To see the HART device, FieldCare requires:

- HART CommDTM
- HART DeviceDTMs

Observe the maximum total load of the smart transmitter.

The communication resistor  $(250 \Omega)$  integrated in the Commubox should not be connected in parallel to a power supply point greater than 15 V. If the communication resistor is used, it must always be incorporated into the 4 to 20 mA circuit.

### **WARNING**

A Commubox FXA195 from a non-Ex installation is used in an Ex installation. Malfunction due overloaded protective circuits.

• A Commubox FXA195 from a non-Ex installation may not be used in an Ex installation.

For detailed information on "Commubox FXA195": Safety instructions → 🗎 11

## 5.1.1 Loop power from controller/field device



If a Commubox FXA195 in a control circuit (I/O card active/device passive or vice versa). In the control circuit (communication resistor of FXA195 on)

- 1 I/O card PLC/DCS passive or active
- 2 Commubox FXA195
- 3 USB
- 4 FieldCare
- 5 Field device passive or active



- 7 Operation of a Commubox FXA195 in a control circuit (I/O card active/device passive or vice versa). Via a resistor ≥ 250  $\Omega$  (recommended 270 to 330  $\Omega$ ) in the control circuit (communication resistor of FXA195 off)
- 1 I/O card PLC/DCS passive or active
- 2 Commubox FXA195
- 3 USB
- 4 FieldCare
- 5 Field device passive or active



**E** 8 Operation of a Commubox FXA195 in a control circuit (I/O card active/device passive or vice versa). In the control circuit (loop-resistance  $\geq 250 \Omega$ )

- 1 I/O card PLC/DCS passive or active
- 2 Commubox FXA195
- 3 USB
- 4 FieldCare
- 5 Field device passive or active

## 5.1.2 Loop power from the transmitter power supply



- 9 Operation of Commubox FXA195 in a control loop powered by a transmitter power supply. From the control room via the communication sockets of the transmitter power supply.
- 1 Active power supply (RNS221, RN221N-A, RN221N-B (Ex), RMA422, RMA42)
- 2 Commubox FXA195
- 3 USB
- 4 FieldCare
- 5 I/O card PLC/DCS passive
- 6 Field device (passive)



- IO Operation of Commubox FXA195 in a control loop powered by a transmitter power supply. In the control loop (communication resistor of FXA195 on)
- 1 Active power supply (RNS221, RN221N-A, RN221N-B (Ex), RMA422, RMA42)
- 2 Commubox FXA195
- 3 USB
- 4 FieldCare
- 5 I/O card PLC/DCS passive
- 6 Field device (passive)



- 11 Operation of Commubox FXA195 in a control loop powered by a transmitter power supply. Via a resistor  $\geq 250 \Omega$  (recommended 270 to 330  $\Omega$ ) in the control loop (communication resistor of FXA195 off)
- 1 Active power supply (RNS221, RN221N-A, RN221N-B (Ex), RMA422, RMA42)
- 2 Commubox FXA195
- 3 USB
- 4 FieldCare
- 5 I/O card PLC/DCS passive
- 6 Field device (passive)



- 12 Operation of Commubox FXA195 in a control loop powered by a transmitter power supply. In the control loop (loop-resistance  $\geq 250 \Omega$ )
- 1 Active power supply (RNS221, RN221N-A, RN221N-B (Ex), RMA422, RMA42)
- 2 Commubox FXA195
- 3 USB
- 4 FieldCare
- 5 I/O card PLC/DCS passive
- 6 Field device (passive)

#### 5.2 Installing the Commubox FXA195 driver

The computer automatically recognizes the Commubox FXA195. If this is not the case, the driver must be installed as described in "Appendix A"  $\rightarrow \square$  178.

#### Installing the driver

- 1. Check the COM port: Select Configuration → Control Panel → System.
- 2. Click Device Manager.
- 3. Open **Ports** (COM and LPT).
  - ← The COM port is displayed and assigned to the Commubox.

#### 5.3 **Connection procedure**

### Establishing a connection

1. Create a project  $\rightarrow \cong 13$ .

- 2. In the "Network" dialog, right-click Host PC.
  - └ A drop-down list opens.

Network					
Network Tag	C	Channel	A	Device t	Physical Device
Host PC		Add Device			

### 3. Select **Add Device**.

└ The "Add New Device" dialog opens.

Filter						
Manufacturer:						
Device:				Fi	ter	
△ Device		Version	Class	Manufacturer	Protocol	
CDI Communication FX	(A291	V2.09.00 (2016	<b>T</b> -	Endress+Hauser	CDI	
CDI Communication TC	P/IP	V2.09.00 (2016	T .	Endress+Hauser	CDI TCP	
CDI Communication US	6B	V2.09.00 (2016	5	Endress+Hauser	CDIUSB	
CommDTM PROFIBUS	DP-V1	V5.00.2(22) (20	Q .	Softing Industrial	PROFIBL	
FF H1 CommDTM		V1.5.4.2 (2015	Q .	Endress+Hauser	FDT FIEL	
Flow Communication E	XA193/291	V3.27.00 (2015	Q	Endress+Hauser	ISS	
EXA520		V1.05.09 (2011	Q .	Endress+Hauser	HABT	
HABT Communication		V1.0.56 (2016-	Q .	CodeWrights G	HABT	
IPC (Level Pressure) F	XA193/291	V1 02 17 (2014	Q	Endress+Hauser	IPC	
PCP (Readwin) TXU10	J/FXA291	V1.01.18 (2014	v .	Endress+Hauser	PCP	
PB0Fldtm DPV1		V 2.20.0(121) (	Q	Softing Industrial	Profibus	
SEGNetwork		V1 10 00 343 (	dtmSn	Endress+Hauser	SEG5w	
	D ()					
Devices	Device	type (DTM) informati	on			
Device.	Endma	s+Hauser				
Manu facturer	Endres	0*1100001				
Manufacturer: Device ID / SubID:	17					
Manufacturer: Device ID / SubID: Manufacturer ID:						
Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision:	17					
Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision: Software revision;	17					
Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision: Software revision: Device revision:						
Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision: Software revision: Device revision: Profile revision:						

4. Select the **HART Communication** item and click **OK**.

← The HART CommDTM is added to the network.

- 5. In the "Network" dialog, right-click **HART Communication**.
  - 🕒 A drop-down list opens.



## 6. Select **Configuration**.

└ The "HART Communication (Configuration)" dialog opens.

COM4 (Commubox FXA195	USB HART Modem) 💌
Master	Secondary Master 💌
Preamble	5 💌
Number of communication retries	7
Start address	0 💌
End address	0 •
	EDM4 (Dommubox FXA192 Master Preamble Number of communication retries Start address End address

7. Define the parameters.

Communication interface: HART modem
 Serial interface: COMx, the interface is in the drop-down menu
 HART protocol master: Secondary Master
 HART protocol preamble: 5
 HART protocol number of communication retries: 3
 Address scan start address: 0
 Address scan end address: 0 (highest station address for HART Multidrop)

- 8. Click OK.
  - └ FieldCare returns to the "Network" dialog.
- 9. Right-click **HART Communication**.
  - └ A drop-down list opens.

Network Tag /		C Channel A
Host PC		
Sec. C	۳.	Add Device
	1	Delete Device
		Launch Wizard
	1.4	Create network

## 10. Select Create Network.

└ FieldCare now scans the network and indicates the result.



The DeviceDTM is added to the network tree and the DTM opens.



**11.** The DTMs are opened as follows if the Commubox FXA195 is connected to a HART Multidrop network and several devices are found:

In the "Network" dialog, right-click the device and select **Connect** or **Online Parameterize**.

**12.** Save the project  $\rightarrow \square$  13.

The project is saved.

If FieldCare cannot find the correct DTM, it will offer alternative versions, graded according to their suitability in the "Scan Result" dialog. The user has the choice of accepting a DTM of less quality, or canceling the scan.

If no new DTM is available, the user can still integrate the device by using the HART iDTM.

## 6 HART via Fieldgate FXA520 and Pepperl+Fuchs multiplexer

## 6.1 Use cases

To see the HART devices in the use cases detailed below, FieldCare requires:

- Fieldgate FXA520 CommDTM
- HART multiplexer master KFD2-HMM-16 (FDT) CommDTM
- HART DeviceDTMs

In addition, the computer must be assigned to a network address in same domain as Fieldgate FXA520 before it can connect with its CommDTM.

Fieldgate FXA520 must be commissioned and assigned a network IP address before a connection can be established.

For detailed information on "Fieldgate FXA520": Operating Instructions → 🗎 11

## 6.1.1 Parallel access to HART control loop with 4 to 20 mA

In this use case, the HART devices are connected to an analog I/O card (4 to 20 mA) of a programmable logic controller. Normally, the devices will be powered by the card, but in the case of 4-wire devices an external power supply will be required. Two-wire devices can also be used in active mode, in which case external power sources will also be required. The HART signal is accessed via a multiplexer and Fieldgate FXA520.



13 Parallel access to HART control loops with 4 to 20 mA

- 1 FieldCare
- 2 Ethernet
- *3 Fieldgate FXA520*
- 4 Pepperl+Fuchs HART multiplexer
- 5 Pepperl+Fuchs HART Termination Board
- 6 RS485
- 7 Controller with I/O cards

When the Pepperl+Fuchs KFD2-HMM-16 multiplexer is used it is possible to connect 30 devices to one Fieldgate FXA520. They can be arranged as 15 + 15 or as 16 + 14.

## 6.1.2 Direct/remote access to a HART monitoring system

This use case is a typical Fieldgate FXA520 inventory monitoring application where the process values are acquired via a HART multiplexer. The same architecture can be used to give FieldCare access to the devices for parameterization.



14 Direct/remote access to a HART monitoring system

- 1 FieldCare
- 2 Ethernet
- 3 Fieldgate FXA520
- 4 Pepperl+Fuchs HART multiplexer
- 5 Pepperl+Fuchs HART Termination Board
- 6 Power supply e.g. RN211N-B or RNS211
- 7 RS485



## 6.2 Connection procedure

The following example shows how the Fieldgate FXA520 can be commissioned with FieldCare. It is assumed that the FXA520 DTM is already installed.

## 6.2.1 Connecting and configuring Fieldgate FXA520

#### Establishing a connection

- **1.** Create a project  $\rightarrow \triangleq$  13.
- 2. In the "Network" dialog, right-click **Host PC**.
  - ← A drop-down list opens.

Network					
Network Tag	C	Channel	A	Device t	Physical Device
Host PG	•	Add Device			

## 3. Select Add Device.

└ The "Add New Device" dialog opens.

hiter						
Manufacturer:						
Device:				Fi	iter	
△ Device		Version	Class	Manufacturer	Protocol	
CDI Communication FX	A291	V2.09.00 (2016	<b>§</b> -	Endress+Hauser	CDI	
CDI Communication TC	P/IP	V2.09.00 (2016	Q .	Endress+Hauser	CDI TCP/	
CDI Communication US	CDI Communication USB		V .	Endress+Hauser	CDI USB	
CommDTM PROFIBUS	DP-V1	V5.00.2(22) (20	Q .	Softing Industrial	PROFIBU	
FF H1 CommDTM		V1.5.4.2 (2015	V -	Endress+Hauser	FDT FIELD	
Flow Communication FD	FF H1 CommDTM Flow Communication FXA193/291		Q -	Endress+Hauser	ISS	
FXA520		V1.05.09 (2011	Q -	Endress+Hauser	HART HART	
HART Communication		V1.0.56 (2016	υ.	CodeWrights G		
IPC (Level, Pressure) F.	XA193/291	V1.02.17 (2014	Ω.	Endress+Hauser	IPC	
PCP (Readwin) TXU10	I/FXA291	V1.01.18 (2014	V .	Endress+Hauser	PCP	
PROFIdtm DPV1		V 2.20.0(121) (	V .	Softing Industrial	Profibus D	
SEGNetwork		V1.10.00.343 (	💱 dtmSp	Endress+Hauser	SFG5xx	
<					2	
<	Device	type (DTM) information	ion		3	
<	Device CDI Co	type (DTM) informati mmunication FXA291	ion 1			
<	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	ion 1		3	
< Device: Manufacturer: Device ID / SubID: Manufacture ID:	Device CDI Co Endres	type (DTM) informati mmunication FXA29 s+Hauser	ion 1		>	
< Device: Manufacturer: Device ID / SubID: Manufacturer ID: Hardware meision:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA29 s+Hauser	ion 1	1	3	
Control of the second secon	Device CDI Co Endres 17	type (DTM) informati mmunication FXA29 s+Hauser	ion 1		>	
< Device: Manufacturer: Device ID / SubDr Manufacturer ID: Hardware revision: Software envision:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA291 s+Hauser	ion 1		)	
< Device: Marufacturer: Device ID / SubID: Marufacture ID: Hardware revision: Device revision: Device revision:	Device CDI Co Endres	type (DTM) informati mmunication FXA29 s+Hauser	ion 1		)	

4. Select the **FXA520** item and click **OK**.

← The FXA520 is added to the network.

5. In the "Network" dialog, right-click **FXA520**.

🛏 A drop-down list opens.



### 6. Select **Configuration**.

← The "FXA520 (Configuration)" dialog opens.

FXA520 (Configuration)		_ 🗆 ×
Language		
Access Mode:	Fieldgate direct	•
Connection Type:	LAN -> Fieldgate	•
Dial-up:	Fieldgate Service Adapter	
Communication Mode:	direct (Pass-Through-HART)	•
Remote IP Address:	192.168.178.140	
Number of communication retries:	2	•
Pass-Through-HART Port Number:	3222	_
Pass-Through-HART User Name:	super	_
Pass-Through-HART Password:	*****	
HTTP Port Number:	80	
VPI Device Name:		_
VPI User:		
VPI Password:		
VPI Login:	servlet/vpilogin	
VPI accept out-of-date certificate:	No	
Proxy Name:		_
Proxy Port Number:	0	_
Proxy User Name:		
Proxy Password:		
& F = P = 1		

7. Enter the following parameters, and press **Enter** to confirm each entry.

- If the user name and password of the FXA520 (default: super/super) have been changed, the values must be entered in the appropriate fields.
   Access Mode: Fieldgate direct
   Connection Type: LAN → Fieldgate
   Communication Mode: Direct (pass-through-HART)
   Remote IP Address: IP address of the Fieldgate (default: 192.168.252.1)
- 8. Close the "FXA520 (Configuration)" dialog by clicking **X** in the top right-hand corner.
- 9. In the "Network" dialog, right-click **FXA520**.
  - └ A drop-down list opens.

		La La
Network Tag /		C Chann
Host PC		
FXA520		4,
9		Add Device
	*	Delete Device
		Launch Wizard
9	*	Create network

#### 10. Select Create Network.

└ The "Select Communication Channel" dialog opens.

Select communication channel
The selected device masters several channels. Please select the channel you want to scan for connected devices.
3 Channels:
Channel name
RS485CH HART
Help OK Cancel

11. Select the **RS485CH** option.

12. Click OK.

└ The scan is started.

#### 13. Click OK.

← The **multiplexer DTM** is added to the network.



FieldCare is connected and configured.

If only one multiplexer is found, its DTM is added to the network. If there are two multiplexers or if the DTM quality does not equal "1", the "Scanning Result" dialog opens automatically.

## 6.2.2 Commissioning the Pepperl+Fuchs multiplexer

When the multiplexer is added to the network, the "Configuration" dialog of the multiplexer opens automatically. If this is not the case or if two multiplexers are connected to Fieldgate FXA520, you must invoke the "Configuration" dialog manually.

### Commissioning the multiplexer

1. Right-click the KFD2-HMM-16 (FDT) item and select Configuration.

└ The "Configuration" dialog opens.

Network Tag	C	Cha	nnel	A	Device typ	Physical Device	
Host PC							
😑 🚫 FXA520					EH FXA520		
3E LT 304	٩Þ	HAP	RTCH 0	3	El Liquica	FMI5x	
	1p	HAF	RTCH 0	2	El Prosoni	FMU4x	
- se TT301(1)	1D	HAP	RTCH 0	1	iTemp	TMT162	
💭 TT303	•	-	Add Dr	wice.	PRE IT	THT182	
		26	Tearer				
		2	Delete	Devic	e		
			Launch	Wiza	rd		
			Device	type	(DTM) info		
		1	Conne	t			

- 2. Enter all the necessary information, e.g. the tag and description.
- 3. Click the **X** in the top right-hand corner.
  - └ The multiplexer DTM closes.
- 4. In the "Network" dialog, right-click Multiplexer.
  - └ A drop-down list opens.

### 5. Select Add Device.

└ The "Add New Device" dialog opens.

Device		Version	
KFD0-HMS-16 (FDT)		v1.5.7 (2007-06-22)	
.1			
۹[			Þ
<b>ا</b>	Deuine tune (DTM) information		Þ
	Device type (DTM) information	1	Þ
Device: Mary facture:	Device type (DTM) information KFD0+MS-16 (FDT) PEPPER Jal (CHS GodH	1	Þ
Device:     Manufacturer:     Desice ID / SubD:	Device type (DTM) information KFD0+HMS-16 (FDT) PEPPERL+FUCHS GmbH	1	Þ
Device:     Manufacturer:     Device ID / SubID:     Manufacturer ID:	Device type (DTM) information KFD0-HMS-16 (FDT) PEPPERL+FUCHS GmbH	1	Þ
Device: Manufactuer: Device ID / SubID: Manufacturer ID: Hardware revision:	Device type (DTM) information KFDDHMS-16 (FDT) PEPPERL+FUCHS GmbH		
Device:     Manufacturer:     Device ID / SubID:     Manufacturer ID:     Hardware revision:     Software revision:	Device type (DTM) information KF00+MS-16 (FDT) PEPPERL+FUCHS GmbH		Þ
Device: Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision: Software revision: Device revision:	Device type (DTM) information KFD0-HMS-16 (FDT) PEPPERL-FUCHS GmbH		Þ
Device:     Manufacturer:     Device ID / SubID:     Manufacturer ID:     Hardware revision:     Device revision:     Device revision:     Device revision:	Device type (DTM) information KF00+HMS-16 (FDT) PEPPERL+FUCHS GmbH		
Device:     Device ID / SubID:     Manufactuer     Device ID / SubID:     Manufactuer ID:     Hardware revision:     Software revision:     Profile revision:     In concern:     Is generic:	Device type (DTM) information KF00-HMS-16 (FDT) PEPPERL+FUCHS GmbH		

6. Select the KFD2-HMM-16 (FDT) item and click OK.

The **multiplexer** is added to the network.

Although from the hardware point of view only one unit exists, at least two DTMs are required for the multiplexer head station. These comprise a **master KFD2-HMM-16** (Master) and a **slave KFD0-HMS-16 (Slave00)**. Additional slaves must be added according to the number of multiplexer channels in use.

#### Assigning device to channel

1. In the "Assign Device to Channel" dialog, select the **Slave00** item.

2. Click OK.

└ The slave is added to the "Network" dialog.

Network Tag	C	Channel	A	Device type (DTM)	Physical Device	
Host PC	-		-	the second s		
E (\$ FXA520	$\triangleleft \triangleright$			EN FXA520		
		RS485CH	0	KFD2-HMM-16 (FDT)	KFD2-HMM-16	
KFD0-HMS	. 1	SLAV00	•	KFD0-HMS-16 (FDT)		
KFD0-HMS.	. 4p	SLAV01		KFD0-HMS-16 (FDT)		

If a second master or additional slave is present, repeat Steps 1 and 2 to add it to the Network View.

Fieldgate FXA520 can handle a maximum of 30 devices with its Web server. For FieldCare the number is higher, but the FXA520 cannot be used to display the measured values.

#### **Creating a network**

1. In the "Network" dialog, right-click a **Slave**.

└ A drop-down list opens.



### 2. Select Create Network.

└ The "Select Communication Channel" dialog opens.



#### 3. Click OK.

 All the connected devices are scanned. The project looks something like this:

Network 9					
Network Tag	C	Channel	A.,	Device type (DTM)	Physical Device
Host PC	-		_	10.000 10.000	
😑 🐹 FXA520				EN FXA520	
		RS485CH	0	KFD2-HMM-16 (FDT)	KFD2-HMM-16
😑 💥 KFD0-HMS-16 (		SLAV00		KFD0-HMS-16 (FDT)	
±8± (2)	•	Loop00	0	C iTemp / TMT 162 / V	TMT162
💦 KFD0-HMS-16 (	4Þ	SLAV01		KFD0-HMS-16 (FDT)	

- 4. In the "Network" dialog, right-click a device.
  - └ A drop-down list opens.

#### 5. Select Online Parameterize.

└ The DeviceDTM opens. If the DeviceDTM is not connected, first select Connect. The device can now be configured in accordance with the Operating Instructions.



6. Save the project  $\rightarrow \cong 13$ .

## 7 HART via Pepperl+Fuchs LB/FB Remote I/O

## 7.1 Use case

This chapter describes how FieldCare should be configured for a plant that uses a Pepperl +Fuchs LB/FB Remote IO. The PC with FieldCare installed is connected to a PLC (e.g. a Melsec Q12 from Mitsubishi) via Ethernet. The PLC connected with the Remote IO via PROFIBUS DP; Remote I/O is connected to several HART field devices.

The following software packages must be installed and configured on the PC:

- Mitsubishi CommDTM: Download at http://www.mitsubishielectric.com → MXCommDTMPBDPsetup.exe
- CommDTM Remote IO: Download at http://www.pepperl-fuchs.com → DTM\_RemoteIO\_LB\_FB-setup-Vx.exe



Access via Pepperl+Fuchs LB/FB Remote I/O

## 7.2 Connection procedure

## Establishing a connection

- 1. Create a project  $\rightarrow \cong$  13.
- 2. In the "Network" dialog, right-click Host PC.
  - └ A drop-down list opens.



### 3. Select Add Device.

└ The "Add New Device" dialog opens.

Dia					
Filter					
Manufacturer:					
Device:				Fi	ter
△ Device		Version	Class	Manufacturer	Protocol
CDI Communication FX4	A291	V2.09.00 (2016	ST -	Endress+Hauser	CDI
CDI Communication TCI	P/IP	V2.09.00 (2016	σ.	Endress+Hauser	CDI TCP.
CDI Communication USB		V2.09.00 (2016	V .	Endress+Hauser	CDI USB
CommDTM PROFIBUS DP-V1		V5.00.2(22) (20	V -	Softing Industrial	PROFIBU
FF H1 CommDTM		V1.5.4.2 (2015	V -	Endress+Hauser	FDT FIEL
Flow Communication FX	A193/291	V3.27.00 (2015	V -	Endress+Hauser	ISS
FXA520 HART Communication IPC (Level, Pressure) FXA193/291 PCP (Readwin) TXU10/FXA291 PROFldtm DPV1		V1.05.09 (2011	Q .	Endress+Hauser	HART
		V1.0.56 (2016 🦉 - CodeWrights			HART
		V1.02.17 (2014 🦉 - E V1.01.18 (2014 💱 - E V 2.20.0(121) ( 💱 - S		Endress+Hauser	IPC PCP
				Endress+Hauser	
				Softing Industrial	Profibus (
SFGNetwork		V1.10.00.343 (	👽 dtmSp	Endress+Hauser	SFG5xx
<					3
<	Device	type (DTM) informati	on		;
< Device:	Device CDI Co	type (DTM) informati immunication FXA29	on I		3
< Device: Manufacturer:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on.		3
< Device: Manufacturer: Device ID / SubID: Here for the res	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on I		3
< Construction of the second s	Device CDI Co Endres 17	type (DTM) informati mmunication FXA291 s+Hauser	on		3
Cevice: Manufacturer: Device ID: / SubID: Manufacturer ID: Hardware revision: Seftware revision:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA291 s+Hauser	on		3
Cevice: Manufacturer: Device ID: /SubID: Manufacturer ID: Handware revision: Software revision: Device mexision:	Device CDI Co Endres 17	: type (DTM) informati mmunication FXA29 s+Hauser	on		3
Device:     Manufacturer:     Device ID: SubID:     Manufacturer ID:     Hardware revision:     Device revision:     Device revision:     Device revision:     Device revision:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on I		3

4. Select the **MXCommDTM-PBDP** item and click **OK**.

└ MXCommDTM-PBDP is added to the network.

Taur Taur Device: Fiber						
Device	Version	Class	Merufacturer	Protocol		
EtherNet/IP Comm Adopter	V1.5.0 (2015	🗑 dt	Schneider Electric	EtherNetP		
Flaw Communication FKA193/291	V3.26.00 (20	0	Endress+Heuser	155		
P544520	V1.05.09 (20	0	Endress+Heuser	HART		
HART Communication	V1.0.52 (201	0	Code/Wrights GmbH	HART		
IPC (Level, Pressure) FXA193/291	V1.02.17 (20	0	Endress+Houser	IPC		
Modbus Serial Communication DTM	V2.5.7 (2015	🗑 dt	Schneider Electric	MODBUS_SERIAL		
Modbus TCP Communication DTM	V2.5.7 (2015	🗑 d.	Schneider Electric	Modbus over TCP		
MKCommDTM-P8DP		Q -	Mitsubishi Electric Europe B.V.	Profibus DP/V1		
PCP (Readwin) TXU10/FXA291	V1.01.18 (20	0	Endness+Houser	PCP		
SEGNetwork	V1.06.00.285	5 d.	Endness+Houser	SFG5xx		



A different device-specific CommDTM must be used for other PLCs.

- 5. In the "Network" dialog, right-click **MXCommDTM-PBDP**.
  - └ A drop-down list opens.

## 6. Select Add Device.

└ The "Add New Device" dialog opens.

- 7. Select the LB 8109 LB-DPV1 UNICOM Interface item and click OK.
  - → LB 8109 LB-DPV1 UNICOM Interface is added to the network.

Mandlachree					
C Device	Version	Class	Menufecturer	Protocol	
FB 8205 FB-DPV1 Buskoppler	V1.4 (2007-0	🗑 re	PEPPERL+FUCHS GmbH	PROFIBUS DP/VI, P+FLB	
FB 8286 FB-EasyCom Buskoppler	V1.4 (2007-0	те	PEPPERL+FUCHS GmbH	PROFIBUS DP/V1. P+FLB	
FB 8209 FB-DPV1 UNICOM-Buskoppler	V1.4 (2007-0	😈 re	PEPPERL+FUCHS GmbH	PROFIBUS DP/V1, P+FLB	
LB 8105 LB-OPV1 Buskoppler	V1.4 (2007-0	🔞 re	PEPPERL+FUCHS GmbH	PROFIBUS DP/V1, P+FLB	
LB 8106 LB-EesyCom Buskoppler	V1.4 (2007-0	🗑 ге	PEPPERL+FUCHS GmbH	PROFIBUS DP/V1. P+FLB	
LB 8109 LB-OPV1 UNICOM-Buskoppler		C re			
Placeholder FieldDevice	V2.01.00 (20	0	Endress+Hauser, Metso Automation	HART, Profibus DP/V0, Pro	
Transparent Gateway/Device	V2.01.00 (20	· 0	Endress+Hauser, Metso Automation	HART, Profibus DP/V0, Pro	
- 8. In the "LB 8109 LB-DPV1 UNICOM Interface" dialog, right-click LB 8109 LB-DPV1 UNICOM Interface.
  - └ A drop-down list opens.



**10.** Select communication channels and slots that must be scanned.

└→ Cards are scanned.

- 11. Under Create Network Scan Result, select SLOT 03 and click Assign Device Type (DTM).
  - └ The "Assign Device Type (DTM)" dialog opens.

	d for scanned device				
Show all installed device types of	f this protocol				
DT Device Type (DTM)		Version	Class	Manufacturer	Used Protocol
signment ret					
1	Assigned device type (D)	EM9			
evice:	Assigned device type (D'	EM)			
evice:	Assigned device type (D	EM)			
svice : and/acturer svice ID / SubID:	Assigned device type (D'	[M]			
evice: ianufacturer: evice ID / SubID: ianufacturer ID:	Assigned device type (D'	(M)			
evice: anufacturer: evice: ID / SubID: anufacturer ID: anufacturer ID: anufacturer:	Assigned device type (D'	[M]			
evice: ierufacturer: evice ID / SubID: ierufacturer ID: andware revision: forkviere revision:	Assigned device type (D'	ΓM)			
I endecturer: endecturer: endecturer ID: andware revision; envision envision; envision envision;	Assigned device type (D'	[M]			
vice: andiscurer: evice ID / SubD: andiacturer ID: andiacturer ID: andivers revision: aftware motion: evice revision:	Anigred device type (D'	(M)			
I evice : land/acturer: evice ID / SubD: and/acturer ID: and/acture ID: and/actor ID:	Assigned device type (D'	(M)			
I and/acturer: work ID / SubD: and/acturer ID: and/acturer ID: downer revision: driverer revision: driverer revision: driverer revision: driverer revision: genetic: genetic: ed Protocol	Assigned device type (D'	(M)			
I wrote: Invidentumer: Invidentumer ID: Invidentumer ID: Invidentumer ID: Invidentumer ID: Invidentumer ID: Invidentumer Invidentumer: Invidentumer ID: Invidentumer Invidentumer Invidentumer In	Anigned device type (D'	(M)			

- 12. Tick the box Show All Installed Device Types of this Protocol.
  - ← All the device types installed for this protocol are displayed.



Network					4 v
Network Tag	C	Channel	A	Device L. Physical Device	
Host PC					
MX CommDTM PBD				🏴 м	
👍 — 🔜 LB 8109 LB-D		master1	61	E LB	
		Slot03	3	T. LB	
- 🛄	$\langle \rangle$	Slot 04	4	tB	
		Slot 05	5	18	
- 🛄	$\langle \rangle$	Slot 09	9	Barr LB	
- 🛄	$\langle \rangle$	Slot 10	10	aar LB	
🗔	$\langle \rangle$	Slot 13	13	Em LB	
		Slot 14	14	Emer LB	

Repeat the previous step for all the DeviceDTMs found and press **OK** to confirm. FieldCare can be used once all the DeviceDTMs have been assigned.

The Pepperl+Fuchs FB/LB can be used with a Fieldgate SFG500 in the same way.

# 8 HART via RS232 to RS485 converter and Pepperl+Fuchs multiplexer

## 8.1 Use cases

To see the HART devices in the use cases detailed below, FieldCare requires:

- RS232 to RS485 to converter (e.g. ExpertDAQ EX9520)
- HART multiplexer master KFD2-HMM-16 (FDT) CommDTM
- HART DeviceDTMs

## 8.1.1 Direct/remote access to a HART monitoring system

This use case is a typical application where the process values are acquired via a HART multiplexer (MUX). The same architecture can be used to give FieldCare access to the devices for parameterization.



■ 16 Direct/remote access to a HART monitoring system

- 1 FieldCare
- 2 RS232
- 3 RS232 to RS485 converter e.g. ExpertDAQ EX9520
- 4 Pepperl+Fuchs HART multiplexer (KFD2-HMM-16)
- 5 Pepperl+Fuchs HART termination board (FI-PFH-110469)
- 6 Power supply e.g. RN211N-B or RNS211
- 7 RS485

In this case, the devices must be powered, e.g. by a RNS221 or RN211N-B power unit for non-hazardous and hazardous areas respectively.

# 8.2 Connection procedure

The following example shows how the multiplexer can be commissioned with FieldCare. As a prerequisite, the HART Comm DTM must be installed and the PC must have a serial interface to COM1. In addition, the Pepperl+Fuchs drivers must be installed: DTM Collection HART Multiplexer/DTM Collection HART Multiplexer on the Pepperl+Fuchs homepage www.pepperl-fuchs.com.

## 8.2.1 Connecting and configuring Fieldgate SFG500

## Establishing a connection

- 1. Create a project  $\rightarrow \triangleq 13$ .
- 2. In the "Network" dialog, right-click Host PC.
  - └ A drop-down list opens.

Network					
Network Tag	C	Channel	A	Device t	Physical Device
Host PC		Add Device			

## 3. Select Add Device.

└ The "Add New Device" dialog opens.

T INCOM					
Manufacturer:					
Device:				Fi	ter
△ Device		Version	Class	Manufacturer	Protocol
CDI Communication F	KA291	V2.09.00 (2016	<b>1</b>	Endress+Hauser	CDI
CDI Communication T	CP/IP	V2.09.00 (2016	2.	Endress+Hauser	CDI TCP/
CDI Communication LI	SB	V2.09.00 (2016	<b>0</b> .	Endress+Hauser	CDLUSB
CommDTM PROFIBU	S DP-V1	V5.00.2(22) (20	÷.	Softing Industrial	PROFIBU
FF H1 CommDTM		V1.5.4.2 (2015	V	Endress+Hauser	FDT FIEL
Flow Communication F	XA193/291	V3.27.00 (2015	<b>v</b> .	Endress+Hauser	ISS
FXA520		V1.05.09 (2011	1.	Endress+Hauser	HART
HABT Communication		V1.0.56 (2016-	0	CodeWrights G	HABT
IPC (Level, Pressure)	FXA193/291	V1.02.17 (2014	0.	Endress+Hauser	IPC
PCP (Readwin) TXU1	0/FXA291	V1.01.18(2014	0	Endress+Hauser	PCP
PB0Fldtm DPV1		V 2.20.0(121) (	0	Softing Industrial	Profibus D
SEGNetwork		V1.10.00.343 (	tmSn.	Endress+Hauser	SEG5xx
٢					>
¢	Device	type (DTM) informat	ion		>
< Device:	Device CDI Co	type (DTM) informat	ion 1		>
< Device: Manufacturer:	Device CDI Co Endres	type (DTM) informat mmunication FXA29 s+Hauser	ion 1		>
< Device: Manufacturer: Device ID / SubID:	Device CDI Co Endres	type (DTM) informat mmunication FXA29 s+Hauser	ion 1		>
Construction     Construction     Construction     Construction     Construction	Device CDI Co Endres 17	type (DTM) informat mmunication FXA29 s+Hauser	ion 1		>
And	Device CDI Co Endres	type (DTM) informat immunication FXA29 s+Hauser	ion 1		>
Version: Manufacturer: Device ID / SubID; Manufacturer ID; Hardware revision; Software revision; Software revision;	Device CDI Co Endres	type (DTM) informat mmunication FXA29 s+Hauser	ion 1		>
Device:     Manufacturer:     Device ID / SubID:     Manufacturer ID:     Hardware revision:     Device revision:     Device revision:     Device revision:	Device CDI Co Endres 17	type (DTM) informat mmunication FXA29 s+Hauser	ion 1		>
Construction     C	Device CDI Cc Endres 17	type (DTM) informat mmunication FXA29 s+Hauser	ion 1		>

- 4. Select the HART Communication item and click OK.
  - ← The HART Communication DTM is added to the network.
- 5. In the "Network" dialog, right-click HART Communication.
  - └ A drop-down list opens.

## 6. Select **Configuration**.

└ The "HART Communication (Configuration)" dialog opens.

Communication interface	HART multiplexer	▼	
Serial Interface	COM1 (Communications Po	irt) 💌	
	Baudrate	9600 💌	
	RTS Control	Disable 💌	
HART protocol	Master	Primary Master 💌	
	Preamble	5 💌	
	Number of communication retries	7 🔹	
Address scan	Start address	1 •	
	End address	1 -	

#### 7. Define the parameters.

- Communication Interface: HART multiplexer
   Serial Interface: COM1
   Baud Rate: 9600
   RTS Control: Disable
   HART Protocol: Primary Master
   Preamble and Number of Communication Retries: leave default setting
   Address Scan: Start and end address set to 1
- 8. In the "Network" dialog, right-click the **HART Communication** item.
  - 🕒 A drop-down list opens.

## 9. Select **Create Network**.

Scanning is performed. If the message "Automatic DTM identification of one or more devices failed..." appears, click **OK** to confirm.

The KFD2-HMM-16(FDT) item is added to the network.



- 10. In the "Network" dialog, right-click the **KFD2-HMM-16(FDT)** item.
  - 🛏 A drop-down list opens.

## 11. Select Add New Devices.

└ The "Add New Device" dialog opens.

Add New Device				- • ×
Filter				Filter
Device	Version	CI	Manufacturer	Protocol
KF00-HMS-16 (FDT)	141510(2012-08-20)		PEPPERL+PUCHS GmbF	HMMS
•				•
Device:	KED0-HMS-16 (ED)	iniorm	ation	
Manufacturer:	PEPPERL+FUCHS	Gmbł	H	

- 12. Select the KFD0-HMS-16 item and click OK.
  - └ The "Assign Device to Channel" dialog opens.

🖾 Ass	ign Device to Char	nnel				×
Cha	nnels:					
	Channel Name		Count/ /	Assigne	ed De	*
SLA	V00					
SLA	V01					
SLA	V02					
SLA	V03					
SLA	V04					=
SLA	V05					
SLA	V06					
SLA	V07					
SLA	V08					
SLA	.V09					
SLA	.V10					
SLA	V11					
SLA	V12					-
<b>₹</b>	1 1 1 1				+	
н	elp		OK	С	ance	

- **13**. Select **Slav00** as the channel because the KFD2-HMM-16 is the master and slave and the slave automatically and unalterably has 0 as its address.
  - └ The **KFD0-HMS-16** is added to the network.
- 14. In the "Network" dialog, right-click the **KFD0-HMS-16** item.
  - └ The "Select Communication Channel" dialog opens.

🖼 Assign Device to Channel	
Channels:	
🗠 Channel Name	Count/ Assigned De 🗠
Loop00	1:1151 Rev 3
Loop01	1:1151 Rev 4
Loop02	
Loop03	
Loop04	E
Loop05	
Loop06	
Loop07	
LoopU8	
LoopU9	
Loop10	
Loop11	_
Loop12	
Help	OK Cancel

The channels correspond to the ports on the "KFD0-HMS-16" termination board.

- **15.** Typically select all the channels to which HART devices are connected and press **OK** to confirm.

All the connected devices are displayed and can be changed.

Network Tag	C	Channel	A	Device type (DTM)
UN Host PC				
HART Communication	$\langle   \rangle$			HART Communication
🦻 🚪 KFD2-HMM-16 (FDT)	$\langle   \rangle$	HARTCH	0	KFD2-HMM-16 (FDT)
KFD0-HMS-16 (FDT)	$\langle   \rangle$	SLAV00	-	KFD0-HMS-16 (FDT)
👕 1151 Rev 3	$\langle   \rangle$	Loop00	0	1151 Rev 3
🚏 1151 Rev 4	${}^{\triangleleft \triangleright}$	Loop01	0	1151 Rev 4



A successful connection is not possible via USB serial converter and RS232/RS485 interface converter.

# 9 HART via Rockwell Automation ControlLogix

## 9.1 Use case

The PlantPAx is a system to which different Rockwell Automation modules can be appended. The following range of I/O modules can be used:

- HART I/O 1756sc-IF8H, 1756sc-IF16H, 1756sc-OF8H
- FLEX I/O 1794sc-IF8IH
- POINT I/O 1734sc-IE4CH, 1734sc-IE2CH, 1734sc-OE2CIH
- COMPACT I/O 1769sc-IF4IH, 1769sc-IF20H

To see the HART devices in the use cases detailed below, FieldCare requires:

- HART CommDTM
- HART DeviceDTMs
- RSLinx Classic



Access via ControlLogix to a HART network

- 1 FieldCare
- 2 Ethernet
- 3 ControlLogix HART I/O
- 4 Flex I/O

**H** 

- 5 Point I/O
- 6 Compact I/O

# 9.2 Connection procedure

The DTM catalog must be updated before you can start connecting.

For detailed information on "Updating the DTM catalog": Getting Started  $\rightarrow$  🗎 11

### Establishing a connection

- **1.** Create a project  $\rightarrow \triangleq$  13.
- 2. In the "Network" dialog, right-click **Host PC**.
  - └ A drop-down list opens.



#### 3. Select Add Device.

└ The "Add New Device" dialog opens.

Filter					
Manufacturer:					
Device:				R	ter
△ Device		Version	Class	Manufacturer	Protocol
CDI Communication FX	A291	V2.09.00 (2016	ST -	Endress+Hauser	CDI
CDI Communication TC	P/IP	V2.09.00 (2016	Σ.	Endress+Hauser	CDI TCP/
CDI Communication US	B	V2.09.00 (2016	V -	Endress+Hauser	CDI USB
CommDTM PROFIBUS	DP-V1	V5.00.2(22) (20	Ψ.	Softing Industrial	PROFIBU
FF H1 CommDTM		V1.5.4.2 (2015	V -	Endress+Hauser	FDT FIEL
Flow Communication F	(A193/291	V3.27.00 (2015	V -	Endress+Hauser	ISS
FXA520		V1.05.09 (2011	V .	Endress+Hauser	HART
HART Communication		V1.0.56 (2016	Ψ.	CodeWrights G	HART
IPC (Level, Pressure) F.	XA193/291	V1.02.17 (2014	V -	Endress+Hauser	IPC
PCP (Readwin) TXU10	/FXA291	V1.01.18 (2014	V ·	Endress+Hauser	PCP
PROFIdtm DPV1		V 2.20.0(121) (	V -	Softing Industrial	Profibus D
SFGNetwork		V1.10.00.343 (	👽 dtmSp	Endress+Hauser	SFG5xx
<					>
	Device	type (DTM) informati	on		
Device:	CDI Co	mmunication FXA29			
Device: Manufacturer:	CDI Co Endres	mmunication FXA29 s+Hauser			
Device: Manufacturer: Device ID / SubID:	CDI Co Endres	mmunication FXA291 s+Hauser			
Device: Manufacturer: Device ID / SubID: Manufacturer ID:	CDI Co Endres	mmunication FXA291 s+Hauser			
Device: Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision:	CDI Co Endres 17	mmunication FXA291 s+Hauser			
Device: Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision: Software revision: Device mytikes:	CDI Co Endres	mmunication FXA291 s+Hauser			
Device: Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision: Software revision: Device revision: Device revision:	CDI Co Endres	mmunication FXA29' s+Hauser			

- 4. Select the **RSLinx 1756 Backplane** item and click **OK**.
  - ← The RSLinx 1756 Backplane is added to the network.
- 5. In the "Network" dialog, double-click **RSLinx 1756 Backplane** in the Device Type (DTM) column.
  - ← The "RSLinx 1756 Backplane (Configuration)" dialog opens.

Language		
3 🛅 📧 😻		Rockwe Automatio
	CIP Path: Select path: >>	
ممهمه به جر	Communication Timeout, msec: 4000	

- 6. Click Select Path.
  - ← The "Select 1756-Backplane" dialog opens.
- 7. Open the AB-ETHIP-1, Ethernet item. (This name can be selected individually!)

8. Select a **device** and click **OK**.

- └ The **device** is added to the network.
- 9. Enter the slot number and press Enter to confirm.

- 10. In the "Network" dialog, right-click the RSLinx 1756 Backplane item.
  - 🕒 A drop-down list opens.

Network			ņ	x
Network Tag	C	Channel A Device typ Physical Device		
Host PC				_
- C	40			
		Add Device		
		Delete Device		
		Launch Wizard		
		Create network		

#### 11. Select Create Network.

← FieldCare scans the network and indicates the result. The DeviceDTM is added to the network.

#### Save the project $\rightarrow \cong 13$ .

If no DeviceDTM is installed, FieldCare states that proper communication can only be ensured after the DTM has been installed.

There is no possibility to connect to the device if the matching DTM is not installed:

- Right-click **Device** and select **Connect**
- Right-click Device and select Online Parameterize

## 9.3 Access to device data

#### Device access

- 1. In the "Network" dialog, right-click a **device**.
  - └ A drop-down list opens.

### 2. Select Connect.

- └ The DeviceDTM is connected and all the arrows appear green.
- **3.** In the "Network" dialog, double-click the connected device in the Device Type (DTM) column.
  - └ The device data are displayed.
- 4. In the "Network" dialog, right-click a device.
  - └ A drop-down list opens.

### 5. Click **Observe**.

└ The measured values are displayed.

## FieldCare offers additional functions, such as:

- Switching device mode to connected or not connected
- Reading data from the device
- Writing data to the device
- Device-specific functions

# 10 HART via RSG45

## 10.1 Use case



🖻 18 Connection with RSG45 HART communication

- 1 FieldCare
- 2 Ethernet
- 3 Memograph M RSG45
- 4 Slot

To see all the devices on the HART segment, FieldCare requires:

- RSG45 HART CommDTM
- HART DeviceDTMs

# **10.2** Connection procedure

## Establishing a connection

- 1. Create a project  $\rightarrow \square$  13.
- 2. In the "Network" dialog, right-click **Host PC**.
  - └ A drop-down list opens.

Network					
Network Tag	C	Channel	A	Device t	Physical Device
Add Device					

### 3. Select Add Device.

└ The "Add New Device" dialog opens.

Eltor					
				<u> </u>	
Manufacturer:					
Device:				Fi	ter
△ Device		Version	Class	Manufacturer	Protocol
CDI Communication F	KA291	V2.09.00 (2016	S -	Endress+Hauser	CDI
CDI Communication T	CP/IP	V2.09.00 (2016	👽 -	Endress+Hauser	CDI TCP.
CDI Communication U	SB	V2.09.00 (2016	👽 -	Endress+Hauser	CDI USB
CommDTM PROFIBU	S DP-V1	V5.00.2(22) (20	V -	Softing Industrial	PROFIBU
FF H1 CommDTM		V1.5.4.2 (2015	44444	Endress+Hauser Endress+Hauser Endress+Hauser CodeWrights G Endress+Hauser Endress+Hauser Softing Industrial	FDT FIELD ISS HART HART IPC PCP Profibus D
Flow Communication F	XA193/291	V3.27.00 (2015 V1.05.09 (2011 V1.0.56 (2016 V1.02.17 (2014 V1.01.18 (2014 V 2.20.0(121) [			
FXA520					
HART Communication					
IPC (Level, Pressure) I	FXA193/291				
PCP (Readwin) TXU1	0/FXA291				
PROFIdtm DPV1					
SEGNaturat		10 10 00 2421	alanca	EndersedHauser	CECE
51 CHORNER		v1.10.00.343 (	v unsp	Engless#nausei	SPUCK
ST UNERFORK		¥1.10.00.343 (	V umsp	Enuressanduser	SPGDAX
<		v1.10.00.345 (	V UIIISP	Enviessynduser	SPUDX
<	Device	type (DTM) informat	ion	Enviessynduser	2
<	Device CDI Co	type (DTM) informat	on	Englessynduser	3
<	Device CDI Co Endres	<ul> <li>type (DTM) information FXA29</li> <li>+Hauser</li> </ul>	ion	Englessmause	374388
<	Device CDI Co Endres	type (DTM) informat environmentication FXA29 s+Hauser	ion	Erkurdssernausen	3743088
Source: Device: Dev	Device CDI Co Endres 17	+type (DTM) Informat mmunication FXA29 s+Hauser	ion	Erkurssernausen	370388
C Device: Manufacturer: Device () / SubD. Device () / SubD. Manufacturer ()D: Hadware revision:	Device CDI Co Endres 17	type (DTM) informat mmunication FXA29 e+Hauser	ion	Envirosarriausen	3743088
Controlled     C	Device CDI Co Endres 17	type (DTM) informat mmunication FXA29 s+Hauser	onisp	Enuressymouse	3743088
Conservation Con	Device CDI Co Endres 17	type (DTM) informat mmunication FXA29 e+Hauser	on 1	Envirosarriausen	3-0000

4. Select the **RSG45 HART Communication** item and click **OK**.

- ← RSG45 HART Communication is added to the network.
- 5. In the "Network" dialog, right-click **RSG45 HART Communication**.
  - ► A drop-down list opens.



- 6. Select **Configuration**.
  - └ The "RSG45 HART Communication (Configuration)" dialog opens.



- 7. On the "Configuration" tab, enter the RSG45 IP address, the RSG45 port and the address range for scanning the Memograph M RSG45, and then click **Apply**.
- 8. In the "Network" dialog, right-click **RSG45 HART Communication**.
  - └ A drop-down list opens.





## 9. Select Create Network.

└ The "Select Communication Channel" dialog opens.

Select communication channel	
The selected device masters several channels. Please select the channel you want to scan for connected devices.	
20 Channels:	
Channel name	
Slot 1 / Channel 1 HART	
Slot 1 / Channel 2 HART	
Slot 1 / Channel 3 HART	
Slot 1 / Channel 4 HART	
Slot 2 / Channel 1 HART	
Slot 2 / Channel 2 HART	
Slot 2 / Channel 3 HART	
Slot 2 / Channel 4 HART	
Slot 3 / Channel 1 HART	
Slot 3 / Channel 2 HART	
Slot 3 / Channel 3 HART	
Slot 3 / Channel 4 HART	
Slot 4 / Channel 1 HART	
Slot 4 / Channel 2 HART	
Slot 4 / Channel 3 HART	
Slot 4 / Channel 4 HART	
Slot 5 / Channel 1 HART	
Slot 5 / Channel 2 HART	
Slot 5 / Channel 3 HART	
Slot 5 / Channel 4 HART	
Help OK Cancel	

**10.** Select the channels to be scanned and click **OK**.

- └ FieldCare scans the selected channels and adds the devices found to the network.
- **11.** In the "Network" dialog, right-click a **device**.
  - └ A drop-down list opens.



#### 12. Select Connect.

└ The arrows next to the device appear green.

- **13.** In the **Network** dialog, right-click a **device**.
  - └ A drop-down list opens.



14. Select Online Parameterize.

└ The DeviceDTM opens.



The device can now be configured in accordance with the Operating Instructions. **15.** Save the project  $\Rightarrow \square$  13.

# 11 HART Multidrop or HART point-to-point connection via Fieldgate FXA520

## 11.1 Use cases

To see the HART devices in the use cases detailed below, FieldCare requires:

- HART CommDTM
- HART DeviceDTMs

Fieldgate FXA520 must be commissioned and assigned a network IP address before you can start connecting.

The computer must be assigned to a network address in same domain as Fieldgate FXA520 before it can connect with its CommDTM.

For detailed information on "Fieldgate FXA520": Operating Instructions  $\rightarrow \square 11$ 

For detailed information on "Setting up the IP address": Operating Instructions  $\rightarrow\,\boxminus\,11$ 

## 11.1.1 HART Multidrop

This use case is a typical Fieldgate FXA520 inventory monitoring application where the process values are acquired via a HART Multidrop bus. The same architecture can be used to give FieldCare access to the devices for parameterization.



I9 HART Multidrop via Fieldgate FXA520

- 1 FieldCare
- 2 Ethernet
- 3 Fieldgate FXA520 Multidrop power supply
- 4 Channel 0 with maximum 8 devices
- 5 Channel 1 with maximum 8 devices
- 6 Fieldgate FXA520

## 11.1.2 HART point-to-point connection

The two HART channels (4 to 20 mA) of the Fieldgate FXA520 can also be used to make point-to-point connections to individual HART devices.



20 HART point-to-point connection via Fieldgate FXA520

- 1 FieldCare
- 2 Ethernet
- 3 HART power supply
- 4 Channel 0
- 5 Channel 1
- 6 Fieldgate FXA520

# **11.2** Connection procedure

To establish the connection, the FXA520 DTM must be installed.

### Establishing a connection

- **1.** Create a project  $\rightarrow \square$  13.
- 2. In the "Network" dialog, right-click **Host PC**.
  - └ A drop-down list opens.



### 3. Select Add Device.

└ The "Add New Device" dialog opens.

				- 1		
Filter						
Manufacturer:						
Device:				R	ter	
△ Device		Version	Class	Manufacturer	Protocol	
CDI Communication FX	A291	V2.09.00 (2016	1 ·	Endress+Hauser	CDI	
CDI Communication TC	P/IP	V2.09.00 (2016	V ·	Endress+Hauser	CDI TCP/	
CDI Communication US	B	V2.09.00 (2016	V -	Endress+Hauser	CDI USB	
CommDTM PROFIBUS DP-V1		V5.00.2(22) (20	Ψ.	Softing Industrial	PROFIBU	
FF H1 CommDTM		V1.5.4.2 (2015	444444	Endress+Hauser	FDT FIELD	
Flow Communication FD	KA193/291	V3.27.00 (2015		Endress+Hauser	ISS HART HART IPC PCP Profibus DI	
FXA520		V1.05.09 (2011		Endress+Hauser CodeWrights G Endress+Hauser Endress+Hauser Softing Industrial		
HART Communication		V1.0.56 (2016				
IPC (Level, Pressure) F	XA193/291	V1.02.17 (2014 V1.01.18 (2014 V 2.20.0(121) (				
PCP (Readwin) TXU10	/FXA291					
PROFIdtm DPV1						
SFGNetwork		V1.10.00.343 (	👽 dtmSp	Endress+Hauser	SFG5xx	
٢					>	
<	Device	type (DTM) informat	ion		>	
< Device:	Device CDI Co	type (DTM) informat mmunication FXA29	ion 1		>	
< Device: Manufacturer:	Device CDI Co Endres	type (DTM) informat mmunication FXA29 s+Hauser	ion 1		>	
< Device: Manufacturer: Device ID / SubID: Manufacture ID:	Device CDI Co Endres	type (DTM) informat mmunication FXA29 s+Hauser	ion 1		>	
< Device: Manufacturer: Device ID / SubID: Manufacturer ID: Manufacturer ID:	Device CDI Co Endres	type (DTM) informat mmunication FXA29 s+Hauser	ion 1		>	
Construction of the second	Device CDI Co Endres 17	type (DTM) informat mmunication FXA29 s+Hauser	ion 1		>	
Cevice: Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision: Software revision: Software revision:	Device CDI Co Endres 17	type (DTM) informat mmunication FXA29 a+Hauser	ion 1		>	
Evrice:     Manufacture:     Device 10     Manufacture 10     Hardware revision:     Device revision:     Device revision:     Device revision:	Device CDI Co Endres 17	type (DTM) informat mmunication FXA29 s+Hauser	ion 1	1	>	
< Device: Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision: Software revision: Software revision: Profile revision: is genetici:	Device CDI Co Endres 17 No	type (DTM) informat mnunication FXA29 +Hauser	ion 1		>	

4. Select the **FXA520** item and click **OK**.

← The FXA520 is added to the network.

5. In the "Network" dialog, right-click **FXA520**.

🛏 A drop-down list opens.



### 6. Select **Configuration**.

← The "FXA520 (Configuration)" dialog opens.



- 7. Enter the following parameters in the "FXA520 (Configuration)" dialog and confirm each entry.
  - If the FieldCare user name and password have been changed, the values must be entered in the appropriate fields.
     Access Mode: Fieldgate direct
     Connection Type: LAN → Fieldgate

**Communication Mode:** Direct (pass-through-HART)

Remote IP Address: IP address of the Fieldgate (default: 192.168.252.1)

- 8. Close the "FXA520 (Configuration)" dialog by clicking **X** in the top right-hand corner.
- 9. In the "Network" dialog, right-click **FXA520**.
  - └ A drop-down list opens.

Network Tag /		C Chan
Host PC		4.
	1	Add Device
	1	Delete Device
	-	Launch Wizard
	7	Create network

#### 10. Select Create Network.

└ The "Select Communication Channel" dialog opens.

Select communication channel	×
The selected device masters several channels. Please select the channel you want to scan for connected devices.	
Channel name HARTCH 0 HART HARTCH 1 HART RS485CH HART	Ĩ
Help OK Cancel	

- **11.** Select the **HARTCHO** and/or **HARTCH1** option (select both in this case) and click **OK**.
  - └ The scan is started. The devices found are assigned to their DTMs and added to the project.

Network						Į.
Network Tag	C	Channel	A	Device typ	Physical Device	
Host PC	-					
E (* FXA520	•			ET FXA520		
	4b	HARTCH 0	3	El Liquica	FMI5x	
	4b	HARTCH 0	2	E Prosoni	FMU4x	
	4b	HARTCH 0	1	IT emp	TMT162	
	4b	HARTCH 1	0	IT emp	TMT182	

- **12.** In the "Network" dialog, right-click a device.
  - └ A drop-down list opens.



## 13. Select Connect.

- └ The connection to the DeviceDTM is established.
- 14. In the "Network" dialog, right-click a device.
  - └ A drop-down list opens.



### 15. Select Online Parameterize.

└ The DeviceDTM opens.



**16.** Save the project  $\rightarrow \square$  13.

# 12 HART point-to-point or HART Multidrop via MACTek Bluetooth modem

## 12.1 Use cases

To see the HART device, FieldCare requires:

- HART CommDTM
- HART DeviceDTMs

Bluetooth must be enabled on the computer.

The Bluetooth modem must be installed on the computer and the Bluetooth connection set up → 
 <sup>1</sup> 178.

## 12.1.1 Point-to-point connection

In a point-to-point connection, the MACTek modem is connected in parallel to the measuring device or in parallel to the communication resistor.



■ 21 Operation of a MACTek modem in a control loop (I/O card active/device passive or vice versa)

- 1 I/O card PLC/DCS active or passive
- 2 MACTek modem
- 3 Bluetooth
- 4 FieldCare
- 5 Field device passive or active

## 12.1.2 Multidrop connection

In a Multidrop connection, the MACTek modem is connected to the bus line.





- 1 I/O card PLC/DCS active or passive
- 2 MACTek modem
- 3 Bluetooth
- 4 FieldCare
- 5 Passive field device (0-15 devices)

# 12.2 Connection procedure

- 1. Switch on the **MACTek modem**.
- **2.** In the "Bluetooth Settings" dialog, select **Bluetooth**  $\rightarrow$  **New Connect**.



## Establishing a connection

- **1**. Create a project  $\rightarrow \square$  13.
- 2. In the "Network" dialog, right-click **Host PC**.



- 3. Select Add Device.
  - └ The "Add New Device" dialog opens.

Manufacturer:					
Device:				FI	ter
△ Device		Version	Class	Manufacturer	Protocol
CDI Communication FX4	291	V2.09.00 (2016	V -	Endress+Hauser	CDI
CDI Communication TCF	P/IP	V2.09.00 (2016	Q .	Endress+Hauser	CDI TCP/
CDI Communication USB		V2.09.00 (2016	V .	Endress+Hauser	CDI USB
CommDTM PROFIBUS DP-V1		V5.00.2(22) (20	Q .	Softing Industrial	PROFIBU
FF H1 CommDTM		V1.5.4.2 (2015	V -	Endress+Hauser	FDT FIEL
Flow Communication FX	A193/291	V3.27.00 (2015 V1.05.09 (2011 V1.0.56 (2016	44444	Endress+Hauser	ISS HART HART IPC PCP Profibus D
FXA520				Endress+Hauser	
HART Communication				CodeWrights G	
IPC (Level, Pressure) FX	A193/291	V1.02.17 (2014		Endress+Hauser	
PCP (Readwin) TXU10/	FXA291	V1.01.18 (2014 V 2.20.0(121) (		Endress+Hauser	
PROFIdtm DPV1				Softing Industrial	
SFGNetwork		V1.10.00.343 (	👽 dtmSp	Endress+Hauser	SFG5xx
					>
<					
<	Device	type (DTM) informati	on		
< Device:	Device CDI Co	type (DTM) informati mmunication FXA291	on		
< Device: Manufacturer:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on		
< Device: Manufacturer: Device ID / SubID:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on		
< Device: Manufacturer: Device ID / SubID: Manufacturer ID:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on		
Vevice: Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on		
Device: Manufacturer: Device ID / SubID: Manufacturer ID: Handware revision: Software revision:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA291 s+Hauser	on		
Device: Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision: Software revision: Device	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on		

- 4. Select the HART Communication item and click OK.
  - ← The HART Communication DTM is added to the network.
- 5. In the "Network" dialog, right-click **HART Communication**.
  - 🛏 A drop-down list opens.



## 6. Select **Configuration**.

└ The "COM40 (Configuration)" dialog opens.

	I HAN I modem	•
Serial Interface	COM40 (BT Port)	•
HART protocol	Master	Secondary Master 💌
	Preamble	5 🔻
	Number of communication retries	7 💌
Address scan	Start address	0 -
	End address	0 -
Multimaster and Burst	mode support	

- 7. Define the parameters.
  - Communication interface: HART modem
     Serial interface: COMx, the interface is in the drop-down menu
     HART protocol master: 5
     HART protocol preamble: 3
     HART protocol number of communication retries: 0
     Address scan start address: 0
     Address scan end address: 0 (highest station address for HART Multidrop)
- 8. Click OK.
  - └ FieldCare returns to the "Network" dialog.
- 9. Right-click **HART Communication**.
  - └ A drop-down list opens.



#### 10. Select Create Network.

└ FieldCare now scans the network and indicates the result.

Network					e (I)
Network Tag	C	Channel	A.,	Device ty	Physical Device
Host PC					
■ €€ 00M40	4			HART	
TT 303				qme Ti Ha	

The DeviceDTM is added to the network tree and the DTM opens.

TT303 (Online Parameter	rize)		
Language			
DeviceType: TMT182 I Device tag: TT303 I Status signal 🚰 CK I	PV: 367,03 Output current: 15,341 Device temperature: 25,80	degC mA degC	Endress+Hause
Address the status     Address the status	Instrume	ent health status	
Presci message PHART date code Sorial number Primware version Powice release PHART revision PHART revision			
	E C	remark health status	
Connected	[m] he de de de mo		• #

 The DTMs are opened as follows if the Commubox FXA195 is connected to a HART Multidrop network and several devices are found:
 In the "Network" dialog, right-click the device and select Connect or Online Parameterize.

Save the project  $\rightarrow \square$  13.

If FieldCare cannot find the correct DTM, it will offer alternative versions, graded according to their suitability in the "Scan Result" dialog. The user has the choice of accepting a DTM of less quality, or canceling the scan.

If no new DTM is available, the user can still integrate the device by using the HART iDTM.

# 13 HART via SFG250 Ethernet gateway

## 13.1 Use case



23 Connection with SFG250 HART Ethernet gateway

- 1 FieldCare
- 2 Ethernet
- 3 RNS221

f

4 HART SFG250 Ethernet gateway

Before a connection can be established between FieldCare and the device it is necessary to check whether the gateway is accessible in the network.

# 13.2 Connection procedure

## Establishing a connection

- **1.** Create a project  $\rightarrow \square$  13.
- 2. In the "Network" dialog, right-click Host PC.
  - ► A drop-down list opens.

Network					
Network Tag	C	Channel	A	Device t	Physical Device
Host PC	•	Add Device			

## 3. Select Add Device.

└ The "Add New Device" dialog opens.

Filter					
Manufacturer:					
Device:				F	ter
△ Device		Version	Class	Manufacturer	Protocol
CDI Communication FX	A291	V2.09.00 (2016	<b>V</b> -	Endress+Hauser	CDI
CDI Communication TC	P/IP	V2.09.00 (2016	V ·	Endress+Hauser	CDI TCP/
CDI Communication US	В	V2.09.00 (2016	V .	Endress+Hauser	CDI USB
CommDTM PROFIBUS	DP-V1	V5.00.2(22) (20	Q .	Softing Industrial	PROFIBU
FF H1 CommDTM		V1.5.4.2 (2015	V ·	Endress+Hauser	FDT FIEL
Flow Communication FD	A193/291	V3.27.00 (2015	V ·	Endress+Hauser	ISS
FXA520	FXA520		V -	Endress+Hauser	HART
HART Communication IPC (Level, Pressure) FXA193/291 PCP (Readwin) TXU10/FXA291 PR0Fldtm DPV1		V1.0.56 (2016	<b>U</b> .	CodeWrights G	HART
		V1.02.17 (2014	Q .	Endress+Hauser	IPC
		V1.01.18 (2014	<b>T</b> .	Endress+Hauser	PCP
		V 2.20.0(121) (	V .	Softing Industrial	Profibus D
SEGNetwork		V1.10.00.3431	😨 dtmSn	Endress+Hauser	SEG5xx
<					2
	Device	type (DTM) informati	00		
Device:	CDI Co	mmunication FXA291	1		
Manufacturer:	Endres	s+Hauser			
Device ID / SubID:					
Manufacturer ID:	17				
Hardware revision:					
Software revision:					
Device revision:					
Profile revision:					

- 4. Select the **isNet Lite** item and click **OK**.
  - └ IsNet Lite is added to the network.
- 5. In the "Network" dialog, right-click **isNet Lite**.
  - └ A drop-down list opens.



#### 6. Select **Configuration**.

← The "isNet Lite (Configuration)" dialog opens.



Enter the IP address, select channel and click OK.

- 8. In the "Add New Device" dialog, select the isNet H@rt(8 channels) item and click OK.
   IsNet H@rt(8 channels) is added to the network.
- 9. In the "Network" dialog, right-click isNet H@rt(8 channels).

   → A drop-down list opens.

### 10. Select Offline Parameterize.

└ The "isNet H@rt(8 channels) (Offline Parameterize)" dialog opens.





## 12. Select Online Parameterize.

└ The configuration can now be made.

# 14 HART via HIMA multiplexer HIMAX

## 14.1 Use case

A PC with FieldCare is connected via Ethernet to a HIMA multiplexer HIMAX to which several HART devices are connected.



🖻 24 Connection with HIMAX HART multiplexer

1 FieldCare

2 Ethernet

*3* HIMA multiplexer HIMAX

To see all the devices on the HART segment, FieldCare requires three DTMs:

- HIMA HART IP CommDTM
- HIMA X ComDTM
- HIMA HART DeviceDTM

In addition, two setups must be downloaded from the HIMA website (www.hima.com) and executed:

- HIMAX\_DTM\_SETUP\_1\_0\_0\_1
- EMUXCommDTM\_HIMA\_Setup\_1\_1\_0\_6

# 14.2 Connection procedure

### Establishing a connection

- **1.** Create a project  $\rightarrow \square$  13.
- 2. In the "Network" dialog, right-click Host PC.
  - └ A drop-down list opens.

Network					
Network Tag	C	Channel	A	Device t	Physical Device
Host PG		Add Device			

### 3. Select Add Device.

└ The "Add New Device" dialog opens.

Dave					
Hiter					
Manufacturer:					
Device:				FI	ter
△ Device		Version	Class	Manufacturer	Protocol
CDI Communication F	(A291	V2.09.00 (2016	ST -	Endress+Hauser	CDI
CDI Communication T	CP/IP	V2.09.00 (2016	V ·	Endress+Hauser	CDI TCP.
CDI Communication U	SB	V2.09.00 (2016	Q .	Endress+Hauser	CDI USB
CommDTM PROFIBU	5 DP-V1	V5.00.2(22) (20	Q -	Softing Industrial	PROFIBL
FF H1 CommDTM		V1.5.4.2 (2015	V .	Endress+Hauser	FDT FIEL
Flow Communication FXA193/291		V3.27.00 (2015	V .	Endress+Hauser	ISS
FXA520		V1.05.09 (2011	V .	Endress+Hauser	HART
HART Communication		V1.0.56 (2016	<b>T</b> .	CodeWrights G	HART
IPC (Level, Pressure) I	XA193/291	V1.02.17 (2014	<b>T</b>	Endress+Hauser	IPC
PCP (Readwin) TXU1	D/FXA291	V1.01.18 (2014	V .	Endress+Hauser	PCP
PROFIdtm DPV1		V 2.20.0(121) [	<b>U</b> .	Softing Industrial	Profibus [
SEGNetwork		V1.10.00.343 (	👿 dtmSp	Endress+Hauser	SFG5xx
					3
<					
<	Device	type (DTM) informati	on		
< Device:	Device CDI Co	type (DTM) informati mmunication FXA291	on		
< Device: Manufacturer:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on I		
< Device: Manufacturer: Device ID / SubID:	Device CDI Co Endres	type (DTM) informati mmunication FXA29 s+Hauser	on I		
< Device: Manufacturer: Device ID / SubID: Manufacturer ID:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA29 s+Hauser	on		
Cevice: Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA29 s+Hauser	on		
Contracturer: Device ID / SubID: Manufacturer ID: Hardware revision: Software revision:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA29 s+Hauser	on I		
< Device: Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision: Software revision: Device revision:	Device CDI Co Endres	type (DTM) informati mmunication FXA29' s+Hauser	on I		
< Device: Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision: Software revision: Profile revision: Profile revision:	Device CDI Co Endres	type (DTM) informati mmunication FXA29 s+Hauser	on I		

- 4. Select the HART IP Communication item and click OK.
  - ← HART IP Communication is added to the network.
- 5. In the "Network" dialog, right-click **HART IP Communication**.
  - → A drop-down list opens.
- 6. Select **Other Functions** → **DTM Addresses**.
  - └ The "HART IP Communication" configuration window opens.

Albier .	Set DTM Add	dresses			
	Device name	Tag	Bus Address	UDP Address	UDP Port
	X-COM-DTM		0	10.126.105.52	5094

- 7. The IP address of the multiplexer must be configured in the "UDP Address" field.
- 8. In the "Network" dialog, right-click HART IP Communication.
  - └ A drop-down list opens.

### 9. Select Add Device.

└ The "Add New Device" dialog opens.

Manufacturer: Device:	[ [				
A Device	Version	Class	Menufacturer	Protocol	
X-COM-DTM	V1.0.0.1 (2012-11-29)	0	HIMA Paul Hildebrandt GmbH&Co KG	HART_IP	

- 10. Select the **X-COM-DTM** item and click **OK**.
  - └ X-COM-DTM is added to the network.
- 11. In the "Network" dialog, right-click **X-COM-DTM**.
  - └ A drop-down list opens.

## 12. Select Connect.

 $\blacktriangleright$  The connection is established.

13. In the "Network" dialog, right-click Additional Functions → HART Modules.

- ← The available modules are added under the **X-COM-DTM** (X-HART-DTM items).
- 14. In the "Network" dialog, right-click **X-HART-DTM**.
  - 🛏 A drop-down list opens.

## 15. Select Add Device.

- └ The "Add New Device" dialog opens.
- 16. Select the **Create Network** item and click **OK**.

A dialog appears in which all the available HART channels are displayed.



In this dialog it is possible to disable HART channels that are not used and are excluded from subsequent scanning in order to speed up the process. After scanning, all the HART devices found are displayed in the network view and can be configured.

# 15 WirelessHART Adapter SWA70 via HART modem

## 15.1 Use case

With regard to operation with FieldCare, the WirelessHART Adapter SWA70 acts like all other HART devices. The connection can be established with a standard HART modem e.g. Commubox FXA191, Commubox FXA195 or MACTek.



25 Connection of a HART modem with the WirelessHART Adapter SWA70

- 1 FieldCare
- 2 Bluetooth
- 3 MACTek modem
- 4 WirelessHART Adapter terminals 7 and 8
- 5 HART Modem
- 6 USB or RS232



The HART modem can be connected either to **terminals 5 and 6** or to **terminals 7 and 8** of the WirelessHART Adapter.

For communication via a MACTek modem, a 250  $\Omega$  communication resistor must be used.

A 250  $\Omega$  communication resistor must be used or switched on for communication via Commubox FXA195.

If the WirelessHART Adapter is operated in a control loop with a communication resistor no additional resistor is needed.

The COM port number is assigned when installing the Commubox FXA195 or MACTek modem. This number is required later on.

To establish the connection via FieldCare, the COM port must be configured for the selected HART modem. The HART CommDTM and the SWA70 DTM are needed for the SWA70.

# **15.2** Connection procedure

Check whether the WirelessHART Adapter is connected to a power supply unit and is in the communication mode.

For detailed information on the "WirelessHART Adapter SWA70": Operating Instructions  $\rightarrow \ \textcircled{}$  11

### Establishing a connection

- **1.** Create a project  $\rightarrow \triangleq$  13.
- 2. In the "Network" dialog, right-click Host PC.
  - └ A drop-down list opens.

Network					
Network Tag	C	Channel	A	Device t	Physical Device
Host PG		Add Device			

### 3. Select Add Device.

└ The "Add New Device" dialog opens.

Filter					
Manu facturer	_				
Manufacturer.					
Device:				Fi	ter
△ Device		Version	Class	Manufacturer	Protocol
CDI Communication FX	A291	V2.09.00 (2016	<b>V</b> -	Endress+Hauser	CDI
CDI Communication TC	P/IP	V2.09.00 (2016	<b>V</b> .	Endress+Hauser	CDI TCP/
CDI Communication US	B	V2.09.00 (2016	<b>T</b> .	Endress+Hauser	CDI USB
CommDTM PROFIBUS	DP-V1	V5.00.2[22] (20	Q .	Softing Industrial	PROFIBU
FF H1 CommDTM		V1.5.4.2 (2015	Q .	Endress+Hauser	FDT FIELD
Flow Communication F2	<a193 291<="" td=""><td>V3.27.00 (2015</td><td><b>V</b> -</td><td>Endress+Hauser</td><td>ISS</td></a193>	V3.27.00 (2015	<b>V</b> -	Endress+Hauser	ISS
FXA520		V1.05.09 (2011	σ.	Endress+Hauser	HART
HART Communication		V1.0.56 (2016	<b>T</b> .	CodeWrights G	HART
IPC (Level, Pressure) F	XA193/291	V1.02.17 (2014	V .	Endress+Hauser	IPC
PCP (Readwin) TXU10/FXA291 PR0Fldtm DPV1		V1.01.18 (2014	V .	Endress+Hauser	PCP
		V 2.20.0(121) (	V .	Softing Industrial	Profibus D
SFGNetwork		V1.10.00.343 (	👽 dtmSp	Endress+Hauser	SFG5xx
<		(CTID: /			>
Deutee	Device	type (UTM) informati	on		
Manufacturar:	Endres	extension FAA231	0.2		
Device ID / SubID:	critices	0*1100001			
Manufacturer ID:	17				
Hardware revision:					
Software revision:					
Software revision: Device revision:					
Software revision: Device revision: Profile revision:					

- 4. Select the HART Communication item and click OK.
  - ← HART Communication DTM is added to the network.
- 5. In the "Network" dialog, right-click **HART Communication**.
  - └ A drop-down list opens.





← The "HART Communication (Configuration)" dialog opens.

Communication interface	HART modem	•
Serial Interface	COM8 (E+H Commubox FX	A195 USB HART Mo 💌
HART protocol	Master	Secondary Master 💌
	Preamble	5 -
	Number of communication retries	3
Address scan	Start address	14 💌
	End address	16 •

7. Enter the following parameters, and press Enter to confirm each entry.

- Communication interface: HART modem
   Serial port: e.g. COMx (port the modem is connected to)
   HART protocol master: Secondary Master
   HART protocol preamble: 5
   HART protocol number of communication retries: 7
   Address scan start address: 14 since scanning is quicker
   Address scan start address: 15 since this is the default address of the WirelessHART Adapter
- 8. Click **OK**.
- 9. In the "Network" dialog, right-click COM8.
  - └ A drop-down list opens.



- 10. Select Create Network.
  - The WirelessHART Adapter is added to the network and the WirelessHART Adapter DTM opens.

Network Tag	C Chann	el A., Device ty., Physics	al Device		
Host PC					
COM8	HARTC	HART H 15 E Wieles			
					_
PL Wireless Adapter WAD_	302 (Online Para vice Name: Wr	materize) elese/WRT Adapter / SWA70 / Y1.xx	Device Revision	ī	
-	Long Tag: Wr	eless Adapter WAD_302	Descriptor:	AREA 1, TANK 3	33
N	107 Status: 🛞 Fa	kre	Timestamp of Status:	14:50:52	Endress+Haus
E 🖶 🤣					
Online parameterization     Bentification	Long Tage	Wreless Adapter WAD_302			
Wireless Communication Wired Communication	Device Tag:	WAD_302			
Device Variable Mapping					
Application Settings	Descriptor:	AREA 1, TANK 3			
Power Supply     Power Supply	Descriptor: Date Code:	AREA 1, TANK 3	_		
Device Variable Mapping R Application Settings Power Supply	Descriptor: Date Code: Mescage:	AREA 1, TANK 3 01.06-2010 AREA 1 TANK MONTORING NETWORK	=		
Device Variable Mapping     Application Settings     Power Supply	Descriptor: Date Code: Message: Poling Address:	АНЕА 1, ТААК 3 [01.05.2010 [АНЕА 1 ТААК НОНТОВІНІ НЕТНОВК	15		
Device Variable Magning R Application Settings Power Supply	Descriptor: Date Code: Message: Poling Address: Serial Number:	AREA 1, TANK 3  RL06-2010  AREA 1 TANK HONTORING NETWORK	15		
eveko Valde Magno 9 Apelotani Settings Power Supply	Descriptor: Date Code: Message: Poling Address: Serial Number: Order Code:	AREA 1, 1996 3 [01.06.2010 [AREA 1 TARK HONTORISUS RETWORK [ [C0000601120 [SWATD-AREA IA1	25		
Perko Valde Magno Appledition Settings Power Supply	Descriptor: Date Code: Message: Poling Address: Serial Number: Order Code: Order Lidert:	PREA 1, TARK 3 (RL 06: 2010 PAREA 1 TARK HONORIDIS NETWORK (CROOMD 130 (SROOMD 130 SWATD ABALAIAL SWATD 200997	35		
Device Vindel Magney Repetition Home Power Supply	Descriptor: Date Code: Message: Polling Address: Senal Number: Order Code: Order Edent:	AREA 1, TANK 3  IRE 06:3010  AREA 1 TANK HONOROBIS INTWORK  CROSSID13D  DISAUTO ALALIAL  DI	35		
i Device Vindel Magno N. Agelocito Statiga I Power Supply	Descriptor : Date Code : Message : Polling Address : Senial Number : Onder Code : Onder Ident : Country Code :	AREA 1, 1444 3  FILOS 2010  FILOS 2010 FIL	15		

**11.** Save the project  $\rightarrow \square$  13.

For detailed information on "Configuring the WirelessHART Adapter SWA70": Operating Instructions  $\rightarrow \cong 11$ 

# 16 WirelessHART Fieldgate SWG70 via Ethernet

## 16.1 Use case

The WirelessHART Fieldgate SWG70 is configured via its Ethernet interface.



26 Connection with the WirelessHART Fieldgate SWG70 via Ethernet

1 FieldCare with address 192.168.1.xxx

2 Ethernet

*3 Fieldgate SWG70 with address* 192.168.1.1

Fieldgate SWG70 is supplied with the default address of 192.168.1.1. This matches the default address of the **HART IP CommDTM**.

The computer and the SWG70 must be in the same address domain (IP address, subnet mask). This must be taken into consideration if the address of the computer or SWG70 is changed.

To see the Fieldgate SWG70, FieldCare requires:

- HART IP CommDTM
- SWG70 DTM

The HART IP CommDTM and the SWG70-DTM are needed to connect via FieldCare.

## 16.2 Connection procedure

### Establishing a connection

**1**. Create a project  $\rightarrow \square$  13.

2. In the "Network" dialog, right-click Host PC. A drop-down list opens.

Network					
Network Tag	C	Channel	A	Device t	Physical Device
Host PG		Add Device			

### 3. Select Add Device.

└ The "Add New Device" dialog opens.

Filter					
T INCOM					
Manufacturer:					
Deuice:	_			B	ter
bonco.					
△ Device		Version	Class	Manufacturer	Protocol
CDI Communication FX4	291	V2.09.00 (2016	V -	Endress+Hauser	CDI
CDI Communication TCI	P/IP	V2.09.00 (2016	V ·	Endress+Hauser	CDI TCP/
CDI Communication US	3	V2.09.00 (2016	Q .	Endress+Hauser	CDI USB
CommDTM PROFIBUS	DP-V1	V5.00.2(22) (20	V -	Softing Industrial	PROFIBU
FF H1 CommDTM		V1.5.4.2 (2015	V -	Endress+Hauser	FDT FIEL
Flow Communication FX	A193/291	V3.27.00 (2015	V ·	Endress+Hauser	ISS
FXA520		V1.05.09 (2011	V .	Endress+Hauser	HART
HART Communication		V1.0.56 (2016	Ψ.	CodeWrights G	HART
IPC (Level, Pressure) F>	A193/291	V1.02.17 (2014	V -	Endress+Hauser	IPC
PCP (Readwin) TXU10/	FXA291	V1.01.18 (2014	👽 -	Endress+Hauser	PCP
PROFIdtm DPV1		V 2.20.0(121) (	V -	Softing Industrial	Profibus E
SFGNetwork		V1.10.00.343 (	👽 dtmSp	Endress+Hauser	SFG5xx
<					
	Device	type (DTM) informati	on		
Device:	CDI Co	mmunication FXA29			
Manufacturer:	Endres	s+Hauser			
Device ID / SubID:	17				
1 1 10	1/				
Manufacturer ID:					
Manufacturer ID: Hardware revision:					
Manufacturer ID: Hardware revision: Software revision:	-				
Manufacturer ID: Hardware revision: Software revision: Device revision: Profile revision:					

- 4. Select the **HART IP Communication** item and click **OK**.
  - └ HART IP Communication is added to the network.
- 5. In the "Network" dialog, right-click **HART IP Communication**.
  - └ A drop-down list opens.



### 6. Select **Add Device**.

└ The "Add New Device" dialog opens.

C Add New Device			
Device WirelessHART Fieldgate / WirelessHART Fieldgate /	SWG70 / V1.xx SWG70 / V2.xx	Version V1.0.0.3 (2012-08-08) V2.0.0.1 (2012-10-15)	
<			>
	Device type (DTM) informa	ation	
Device:	WirelessHART Fieldgate /	/ SW/G70 / V2.xx	
Manufacturer:	Endress+Hauser		
Device ID / SubID:	241/DT_SWG70EHV02D	D	
Manufacturer ID:	17		
Hardware revision:			
Software revision:	2		
Device revision:	2		
Profile revision:			



- 7. Select **WirelessHART Fieldgate** and click **OK**.
  - └ FieldCare automatically recognizes and selects the right DTM and the "Add New Device" dialog closes.

8. If the configured IP address (192.168.1.1) or the Ethernet port (5094) of the Fieldgate SWG70 has been changed or a new Fieldgate address must be entered, proceed as follows:

In the "Network" dialog, right-click HART IP Communication.

└ A drop-down list opens.

Host PC		
	gdd Devica Deleta Devica Luanch Vitaral Oralian entershink Sanfr rativach Sanfr rativach Grane at drives lik Device Spece (2016) arlo Grane at Gran	
9	grate to overce Save DTM data Restore DTM data Offine Parameterize Online Parameterize Colserve Confine ation	

### 9. Select **Other Functions** → **Set DTM Addresses**.

└ The "HART IP Communication (Set DTM Addresses)" dialog opens.



- **10.** Enter the new **IP address** and/or **Ethernet UDP port number**.
- 11. Click Update Changed Data.
- 12. Close the "HART IP Communication (Set DTM Addresses)" dialog.
- **13.** Right-click the **WirelessHARTFieldgate** item in the "Network" dialog.
  - └ A drop-down list opens.



#### 14. Select Connect.

- ← The HART IP CommDTM and WirelessHART Fieldgate are connected and all the arrows appear green.
- 15. In the "Network" dialog, click **WirelessHART Fieldgate**.
  - └ A drop-down list opens.

Network Tag	C.	Channel A., Device ty., Physical Device	
Host PC			
E 😪 HART IP Comm		· EN HART	
WitelessHA	<u>te</u>	Add Device	
	10	Delete Device	
		Launch Wizard	
	-	Greate petundi	
	18	Creace network	
		Yerity network	
		Generate device list	
		Device type (DTM) info	
	Fai	Disconnect	
	2	Read from device	
	-		
		Write to device	
		Save DTM data	
		Restore DTM data	
		Offline Parameterize	
		Colors Descentarios	

#### 16. Select Online Parameterize.

└ The "WirelessHART Fieldgate (Online Parameterize)" dialog opens.

Device NEIN	Noe Name: WivelessHART Fieldgate / SWG70 / Y2.xx Long Tag: Fieldgate_SWG70_01 07 Skatus: GOod		Device Revision Descriptor: Timestamp of Status:	2 AREA_1 TANK_3 14:42:16	Endress + Haus
Conter parameterization     Conter parameterization     Conter parameterization     Weeds Communication     Weeds Communication     Weeds Communication     Engineering	Device Long Tag: Device Tag: Descriptor: Date: Hessage: Serial Namber: Ext. Order Code: Order Code: Country Code:	Рибика, 544511, 21 F4, 400 (44, 41 Тили, 3 (44, 60 7) (44, 51 Тили, 3 (44, 51 Тили, 3 (54, 51 Тили, 5 (54, 51 Тили, 5 (54, 51 Тили), 5 (54, 51 Tunu), 5 (54, 51 Tun			

**17.** Expand all the submenus of the directory tree to reveal the parameter blocks.

The device can now be configured in accordance with the Operating Instructions.

The WirelessHART Fieldgate DTM can also be used to scan for WirelessHART Adapters and devices in the network.

For detailed information on "WirelessHART Fieldgate SWG70": Operating Instructions  $\rightarrow \cong 11$
# 17 Modbus via RS485 Modbus

### 17.1 Use case



🖻 27 Connection with Modbus via RS485 Modbus

- 1 FieldCare
- 2 RS485 Modbus
- 3 Field device

To see all the devices on the Modbus segment, FieldCare requires:

- Modbus DTM
- Modbus DeviceDTMs

## 17.2 Connection procedure

#### Establishing a connection

- **1.** Create a project  $\rightarrow \square$  13.
- 2. In the "Network" dialog, right-click **Host PC**.
  - └ A drop-down list opens.



### 3. Select Add Device.

└ The "Add New Device" dialog opens.

Filter					
Manufacturer:					
Device:				Fi	ter
△ Device		Version	Class	Manufacturer	Protocol
CDI Communication F>	KA291	V2.09.00 (2016	<b>V</b> -	Endress+Hauser	CDI
CDI Communication T(	CP/IP	V2.09.00 (2016	<b>V</b> .	Endress+Hauser	CDI TCP/
CDI Communication US	SB	V2.09.00 (2016	<b>T</b> .	Endress+Hauser	CDI USB
CommDTM PROFIBUS	S DP-V1	V5.00.2[22] (20	Q .	Softing Industrial	PROFIBU
FF H1 CommDTM Flow Communication FXA193/291		V1.5.4.2 (2015 V3.27.00 (2015	Q .	Endress+Hauser	FDT FIEL
			<b>T</b> .	Endress+Hauser	ISS
FXA520		V1.05.09 (2011 V V1.056 (2016 V V1.02.17 (2014 V V1.01.18 (2014 V V2.20.0121)( V	· ·	Endress+Hauser	HART HART IPC
HART Communication			σ.	CodeWrights G	
IPC (Level, Pressure) F	XA193/291		<b>0</b> .	Endress+Hauser	
PCP (Readwin) TXU10	0/FXA291		V -	Endress+Hauser	PCP
PROFIdtm DPV1			v .	Softing Industrial	Profibus D
SEGNetwork		V1.10.00.343 (	dtmSn	Endress+Hauser	SEG5xx
¢					>
	Device	type (DTM) informati	on		
Device:	CDI Co	mmunication FXA291			
Manufacturer:	Endres	s+Hauser			
Device ID / SubID:					
Manufacturer ID:	17				
lardware revision:					
Software revision:					
Device revision:					
Device revision: Profile revision:					

1. Select the Modbus Serial Communication DTM item and click OK.

└ The Modbus Serial Communication DTM is added to the network.

2. In the "Network" dialog, right-click **Modbus Serial Communication DTM**.

└ A drop-down list opens.

Network.		ų a
letwork Tag	C., Channel A., Device typ., Physical Device	
Host PC		
-6	Add Device	
	Delete Device	
	Launch Wizard	
	Create network	
	Yerify network	
	Generate device list	
	Device type (DTM) info	
	Connect	
	Read from device	
	Write to device	
	Save DTM data	
	Restore DTM data	
	Offline Parameterize	
	Online Parameterize	
	Observe	
	Configuration	

#### 3. Select **Configuration**.

└ The "Modbus Serial Communication DTM (Configuration)" dialog opens.

configuration   Runtime   Add						
	annual sear 1					
Lonrection Type						
Desarrae			_			
	menter: A letter					
Link parameters						
C AsteAdigtation		Delad	1			
Paty	Stop Del	Baul Kale				
C Note	9 100	18200	-			
C 046	C 28H					
or Even						
Giebai		Made				
Timeou	1. [3000	(* RTURBAD				
Det	r: 0 •	C ASCEPTION				

- 4. On the "Configuration" tab, select **COM3** for the COM port.
- 5. Select the "Request" tab.
- 6. For the request mode, select Single-point, enter the address 247 and click Apply.
   The changes are accepted and saved.
- 7. In the "Network" dialog, right-click **Modbus Serial Communication DTM**.
  - └ A drop-down list opens.

Network		÷ 1
Network Tag	C Channel A Device typ Physical Device	
	Add Device  Edited Device Laurch Wizard	
	Create network	

#### 8. Select Create Network.

 FieldCare scans the network and indicates the result. The MODBUS\_SERIALCommChannel is added to the network. The "Online Parameterize" dialog opens and the device can be parameterized.

# 18 EtherNet/IP via Ethernet

### 18.1 Use case



🖻 28 Connection with EtherNet/IP via Ethernet

- 1 FieldCare
- 2 Ethernet
- 3 Field device

To see all the devices on the Ethernet segment, FieldCare requires:

- EtherNet/IP CommDTM
- EtherNet/IP DeviceDTMs

## 18.2 Connection procedure

#### Establishing a connection

- **1.** Create a project  $\rightarrow \square$  13.
- 2. In the "Network" dialog, right-click **Host PC**.
  - └ A drop-down list opens.



### 3. Select Add Device.

└ The "Add New Device" dialog opens.

Filter					
Manufacturer:					
Device:				Fit	ter
△ Device		Version	Class	Manufacturer	Protocol
CDI Communication FX	A291	V2.09.00 (2016	<b>V</b> -	Endress+Hauser	CDI
CDI Communication 12 COI Communication US CommDTM PROFIBUS FF H1 CommDTM Flow Communication Flow Communication PKA520 HART Communication IPC (Level, Pressue) F PCP [Readym] TX/10 SPGDretwork	P/IP IB DP-V1 (A193/291 (A193/291 /FXA291	V208.00 (2016 V208.00 (2016 V500.222) (20 V15.4 2 (2015 V3.27.00 (2015 V1.05.09 (2011 V1.05.09 (2011 V1.05 (2016 V1.02.17 (2014 V.1.0.18 (2014 V2.20.01(21) ( V1.10.00.343 (	♥ - ♥ - ♥ - ♥ - ♥ - ♥ - ♥ - ♥ - ♥ - ♥ -	Endress-Hauer Endress-Hauer Endress-Hauer Endress-Hauer Endress-Hauer CodeWights G Endress-Hauer Softing Industrial Endress-Hauer	CDI TCP/ CDI USB PROFIBU FDT FIEL ISS HART HART IPC PCP Profibus D SFG5xx
	Device	type (DTM) informati	on		)
Manufacturer:	Endres	s+Hauser			
Device ID / SubID:					
Manufacturer ID:	17				
Hardware revision:					
Software revision:					
Device revision:					-
Deally and share					
Fronie revision:					

4. Select the **EtherNet/IP Comm Adapter** item and click **OK**.

← EtherNet/IP Comm Adapter is added to the network.

5. In the "Network" dialog, right-click **EtherNet/IP Comm Adapter**.

└ A drop-down list opens.

Network.		÷
Network Tag	C Channel A Device typ Physical Device	
Host PC		
6	P	
	Add Device	
	Delete Device	
	X 2000 Dente	
	Launch Wizard	
	Create network	
	LON .	
	Verify network	
	Generate device list	
	Device type (DTM) info	
	1 careed	
	AD Poweer	
	Read from device	
	Write to device	
	Save DTM data	
	Bestore DTM data	
	Office Demonstration	
	Online Parameterize	
	Ohmer er e	
	observe	

#### 6. Select **Configuration**.

└ The "EtherNet/IP Comm Adapter (Configuration)" dialog opens.

EtherNet	P Corea Adapter V1.8.2 alian 2/04	Schneide
Configuration Ruestere   Add	molatie   Soan	
General		
Hant Address	10126106131 • Releate	
Network adapter	Intel®109932/1080 MT Network Connection #2 8.acel Area Connection 21	
Menage Timeout :	(100)	

- 7. On the "Configuration" tab, enter the IP address of the PC under host address.
- 8. Select the "Request" tab.
- 9. For the request mode, select **Multi-point**, enter the **IP address** start address and click **Apply**.
  - └ The changes are accepted and saved.
- 10. In the "Network" dialog, right-click EtherNet/IP Comm Adapter.
  - └ A drop-down list opens.

Network		ų x
Network Tag	C Channel A Device typ Physical Device	
Host PL	4 S EbaN.,	
	Add Device	
	Paleta Davica	
	LX Entre Device	
	Tanucu Anizato"	
	Create network	

#### 11. Select Create Network.

└→ FieldCare scans the network and indicates the result. The **device** is added to the network.

The "Online Parameterize" dialog is displayed and the device can be parameterized.

# 19 PROFINET - PROFIBUS PA Softing Gateway

### 19.1 Use case

The Softing PROFINET – PROFIBUS PA Gateway pnGATE PA allows a PROFINET network to connect to a PROFIBUS PA segment. A PC with FieldCare is connected to the PROFINET network via a switch.

To see all the devices on the PROFIBUS PA segment, FieldCare requires:

- PROFIBUS DeviceDTMs
- PROFIdtm DPV1 CommDTM
- PROFIBUS driver PROFIboard



29 Connecting FieldCare with a PROFINET - PROFIBUS PA Gateway

- 1 FieldCare
- 2 Ethernet
- 3 Gateway
- 4 PROFINET
- 5 Gateway pnGATE PA
- 6 PROFIBUS PA

## 19.2 Setting up the gateway

Before a connection is established with FieldCare, it is necessary to configure the PROFIBUS Control Panel for the pnGATE and the IP address.

For detailed information in this regard, see the User Manual for pnGate PA.

W PROFIBUS	pnGate PA Node0		Add
HYUDbood SA     HOFIcod FCI     PR07bood FCI     PR07bood FCI     PR07bood FCI     PR07bood FCI     PR07b104     PR07	Item Interface Number Senial Number Firmware Type Firmware Version IP-Address IP-Port Device Names Alias Dev. Names	Data 0 1 16070015 PR0F1atack.Maiter PA PA-Matter 64 Co.00070 192.168.1.11 2557 V.YR0FBUS\Board/R-BA/Service V.YR0FBUS\BOARd/R-BA/SeVICE V.YR0FBUS\BOARd/R-BA/SA/SeVICE V.YR0FBUS\BOARD/R-BA/SA/SA/SEVICE V.YR0FBUS\BOARD/R-BA/SA/SA/SA/SA/SA/SA/SA/SA/SA/SA/SA/SA/SA	Remove Edit
This device is working properly	•	III •	

#### **Connection procedure** 19.3

### Establishing a connection

- **1**. Create a project  $\rightarrow \triangleq 13$ .
- 2. In the "Network" dialog, right-click **Host PC**.
  - ► A drop-down list opens.



#### 3. Select Add Device.

← The "Add New Device" dialog opens.

riter					
Manufacturer:					
Device:	-			FI	ter
ô. Derine		Manian	Class	Manufacture	Destand
CDI Communication Ex	6291	V2.09.00 (2016	Cidoo	EndresseHauser	CDI
CDI Communication TE	P/IP	V2 09 00 (2016	5	Endress+Hauser	CDLTCP
CDI Communication LIS	R	V2 09 00 (2016	5.	Endress+Hauser	CDLUSE
CommDTM PBOFIBUS	DP-V1	V5.00.2(22) (20	v	Softing Industrial	PROFIBI
FE H1 CommDTM		V1542(2015-	·	Endress+Hauser	FDT FIFI
Flow Communication E	KA193/291	V3.27.00 (2015	÷.	Endress+Hauser	ISS
EXA520		V1.05.09 (2011	Q .	Endress+Hauser	HABT
HABT Communication		V1.0.56 (2016-	Q .	CodeWrights G	HABT
IPC (Level, Pressure) F	XA193/291	V1 02 17 (2014 V - Endress+Hau		Endress+Hauser	IPC
PCP (Readwin) TXU10	/FXA291	V1.01.18 (2014	Q	Endress+Hauser	PCP
PBOFIdtm DPV1		V 2.20.0(121) ( 🦉 · Softing In		Softing Industrial	strial Profibus
SEGNetwork		V1.10.00.343 (	tmSn.	Endress+Hauser	SEG5xx
٢					
<	Device	type (DTM) informati	on		3
< Device:	Device CDI Co	type (DTM) informati	on		3
< Device: Manufacturer:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on		3
< Device: Manufacturer: Device ID / SubID: Device ID / SubID:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on		3
< Device: Manufacturer: Device ID / SubID: Manufacturer ID:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on		3
Construction of the second	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on		3
< Device: Manufacturer: Device ID / SubID: Manufacturer: ID: Hardware revision: Software revision:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA291 s+Hauser	on		>
< Device: Manfacturer: Device ID / SubID: Manfacturer ID: Hardware revision: Software revision: Device revision:	Device CDI Co Endres	type (DTM) information mmunication FXA291 +Hauser	on		3
< Device: Man/schurer: Device ID / SubD: Man/schurer ID: Hardware revision: Software revision: Polife revision: Polife revision:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA291 e+Hauser	on		3



- 4. Select the **PROFIdtm DPV1** item and click **OK**.
  - ← The PROFIdtm DPV1 is added to the network.

Board Name:	Node0	Station Address: 0	
Misc			
Baud Rate:	93.75kBt/s	Automatic Defaults for Baud Rate	
Max. Retry Limit:	1		
Gap Update Factor: Timing [bit times]	240	Highest Station Address:  126	2.56 ms
Gap Update Factor: Timing [bit times] Slot Time: Max. Station Delay:	[10 [240 [200	Highest Station Address:  126	2.56 ms 2.13 ms
Gap Update Factor: Timing [bit times] Slot Time: Max. Station Delay: Min. Station Delay:	[10 [240 [200 [45	Highest Station Address:  126	2.56 ms 2.13 ms 0.480 ms
Gap Update Pactor: Timing [bit times] Slot Time: Max. Station Delay: Min. Station Delay: Setup Time:	[240 [200 [45 [45]	Highest Station Address:  126	2.56 ms 2.13 ms 0.480 ms 0.480 ms
Gap Update Factor: Timing [bit times] Slot Time: Max. Station Delay: Min. Station Delay: Setup Time: Quiet Time:	10 240 200 45 45 0	Highest Station Address: [125	2.56 ms 2.13 ms 0.480 ms 0.480 ms 0.480 ms

- 5. The "Node Name" (default: Node0) entered previously in the PROFIBUS Control Panel must be selected in the "Board Name" field. The other parameters must be checked and modified as they can vary depending on the plant. The parameters in the Group Runtime Performance are supplied by the PLC and cannot be modified.
- 6. In the "Network" dialog, right-click the **PROFIdtm DPV1** item.
  - → A drop-down list opens.

#### 7. Select Create Network.

└ FieldCare now scans the network and adds all devices found to the network.



8. Save the project  $\rightarrow \square$  13.

#### 20 **PROFIBUS PA via Rockwell Automation** ControlLogix

#### 20.1 Use case

The PlantPAx architecture provides a manufacturer and user technology such that the input data and the output condition can be used by all ControlLogix controllers in the system.



🛃 30 ControlLogix access to a PROFIBUS PA network

- 1 FieldCare
- 2 Ethernet
- 3 ControlLogix 4
- 1788HP-EN2PAR 5 PROFIBUS PA

To see the PROFIBUS PA devices, FieldCare requires:

- HS EtherNet/IP DTM
- 1788-EN2PAR DTM
- PROFIBUS DeviceDTMs

#### 20.2 **Connection procedure**

The FieldCare catalog must be updated before you can start connecting. 1

For detailed information on "Updating the DTM catalog": Getting Started  $\rightarrow$  🗎 11

#### Establishing a connection

- **1**. Create a project  $\rightarrow \triangleq 13$ .
- 2. In the "Network" dialog, right-click **Host PC**.
  - ► A drop-down list opens.



- 3. Select Add Device.
  - └ The "Add New Device" dialog opens.

Device:				Fi	ter
△ Device		Version	Class	Manufacturer	Protocol
CDI Communication FX4	A291	V2.09.00 (2016	ST -	Endress+Hauser	CDI
CDI Communication TCF	P/IP	V2.09.00 (2016	V ·	Endress+Hauser	CDI TCP/
CDI Communication US	В	V2.09.00 (2016	Q .	Endress+Hauser	CDI USB
CommDTM PROFIBUS	DP-V1	V5.00.2(22) (20	Q -	Softing Industrial	PROFIBU
FF H1 CommDTM		V1.5.4.2 (2015	<b>1</b>	Endress+Hauser	FDT FIEL
Flow Communication FX	A193/291	V3.27.00 (2015	σ.	Endress+Hauser	ISS
FXA520		V1.05.09 (2011	v .	Endress+Hauser	HABT
HART Communication		V1.0.56 (2016	<b>0</b> .	CodeWrights G	HART
IPC (Level, Pressure) Ex	(A193/291	V1.02.17 (2014	5.	Endress+Hauser	IPC
PCP (Beadwin) TXU10/	EXA291	V1.01.18(2014	5.	Endress+Hauser	PCP
PBOEldtro DPV1	TTP LOT	V 2 20 0(121) (	· ·	Softing Industrial	Profibure D
CEGMohuodk		1/1 10:00 242 (	den Co	Endrose Hauser	CEGE
	Device	type (DTM) informati	on		,
Device:	CDICO	mmunication FXA29			
Device ID / SubID:	critics	a*1100301			
Manufacturer ID:	17				
Hardware revision:					
Software revision:					
Device revision:					
Profile revision:					
Is generic:	No				

└ The HS EtherNet/IP is added to the network.

In the "Network" dialog, right-click HS EtherNet/IP.
 A drop-down list opens.

- 6. Select Add Device.
  - └ The "Add New Device" dialog opens.

U OYM N	Vention	Class	Manufacturer	Protocol	
1756-ENBT 1788-EN2FFR	V2.003 (2008-0 V1.008 (2008-0	:	Hiprom Technol Hiprom Technol	HS Ethernet/IP (CIP) HS Ethernet/IP (CIP)	
1788EN2PAR	V1.005 (2008.0.	1	Hiptom Technol.	HS Ethemet/IP (CIP)	
× (					
	Device type (DT	M) informati	0		
Device:	1788-EN2PAR				
Manufacturer:	Horom Technology	icies			
Device ID / SubID:					
Manufacturer ID:					
Manufacturer ID: Hardware revision:					
Manufacturer ID: Hardware revision: Software revision:					
Manufacturer ID: Hardware revision: Software revision: Device revision:					
Manufacturer ID: Hardware revision: Software revision: Device revision: Profile revision:					

7. Select the **1788-EN2PAR** item and click **OK**.

- 8. In the "Network" dialog, double-click **1788-EN2PAR** in the "Device Type (DTM)" column.
  - └ The "1788-EN2PAR (Configuration)" dialog opens.

- 9. Enter the **Module IP Address** and the **Max Scan Address** and press Enter to confirm.
- **10.** In the "Network" dialog, right-click the **1788-EN2PAR** item.
  - └ A drop-down list opens.

Network		Ψ×
Network Tag	C Channel A Device typ Physical Device	
Host PC	4p - AHS Eh	
	Add Device	
	Delete Device	
	Launch Wizard	
	Create network	

11. Select Create Network.

- FieldCare scans the network and indicates the result. The **1788-EN2PAR-DTM** is added to the network.
- 12. In the "Network" dialog, right-click the **1788-EN2PAR** item.
  - └ A drop-down list opens.
- 13. Select Connect.
  - ← All the arrows appear green.
- 14. In the "Network" dialog, right-click the **1788-EN2PAR** item.
  - └ A drop-down list opens.
- 15. Select Online Parameterize.
  - └ The "1788-EN2PAR (Online Parameterize)" dialog opens.
- **16.** Save the project  $\rightarrow \square$  13.

The project is saved.

If no DeviceDTM is installed, FieldCare states that proper communication can only be ensured after the DTM has been installed.

There is no possibility to connect to the device automatically if the matching DTM is not installed.

Manually connecting to the device:

- Right-click **Device** and select **Connect**
- Right-click Device and select Online Parameterize

# 21 PROFIBUS DP/PA via Fieldgate FXA720

### 21.1 Use case

This use case is typical for the use of Fieldgate FXA720 to provide parallel access to a PROFIBUS control system, e.g. for device set-up, device diagnosis or condition monitoring. Fieldgate FXA720 operates as a Master Class 2 and uses non-cyclic communication.

A similar architecture, but not necessarily with a controller, could be used for the monitoring of tank inventory in connection with SupplyCare software. In this case FieldCare is used for set-up and diagnosis only.

To see the PROFIBUS DP/PA devices, FieldCare requires:

- PROFIdtm DPV1 CommDTM
- PROFIBUS CommDTM
- PROFIBUS DeviceDTMs

A transparent coupler is one that does not require a CommDTM to connect to the PROFIBUS PA devices beneath it. Pepperl+Fuchs DP/PA couplers are examples. If a Siemens coupler or link is used, a CommDTM is required for it. The procedure for connecting is analogous to that described in this chapter, the link being found during the creation of the network after the Fieldgate FXA720 CommDTM has been added to the FieldCare host.



S1 Fieldgate FXA720 access to a PROFIBUS DP/PA network

- 1 FieldCare
- 2 Ethernet
- 3 Fieldgate FXA720
- 4 PROFIBUS DP
- 5 PROFIBUS PA
- 6 Transparent DP/PA coupler
- 7 Controller with I/O cards

## 21.2 Commissioning the Fieldgate FXA720

### 21.2.1 Basic configuration

Before this procedure can be started, the IP address that Fieldgate is allocated within the control network must be known.

If the Web browser does not find the Web server, it is essential to check whether a proxy is in use and to switch it off if necessary.

#### Commissioning the Fieldgate FXA720

Set the IP address of the computer to the same domain as the Fieldgate FXA720's default address 192.168.253.1.

1. Start the **Web browser**.



- 2. Enter the Fieldgate FXA720's default address "192.168.253.1" into the address field of the browser and press Enter to confirm.
  - └ The browser makes a connection with the Fieldgate FXA720 and the "Login" dialog opens.



3. Enter **superb** as the password and click **Login**.

└ The Fieldgate FXA720 Web server opens. (Devices are not necessarily visible at this point).

Refresh				Endress+Hause	
Overview of Selected Devi	ces S	witch to Specialist Mode		Information & Configuration	
19.06.2007 09.42.37 (UTC	+0)	LiveList		XML Expor	
FXA720		Overview			
56 Next		Channel 1			
56 <u>(PIC 100</u>	CERABAR	Endre	ess+Hauser	653	
Point Name	Description	Current Value	Limit	Range	
FB0011_fb_input_analog	Pressure 100	0.978458 bar 19.06.2007 09:10:15	19.06.2007 09:42:37	Min: 0.9 bar Max 1.0 bar	
			and the second se		

#### 4. Click Switch to Specialist Mode.

└ The "Login" dialog opens.



- 5. Enter **admin** as the user name and **super** as the password and click **Login**.
- 6. Click Information & Configuration → PROFIBUS Setup.
- 7. Scroll down to the "Scan 1" dialog.
  - └ The "Scan 1" dialog opens.





└ This disables the PROFIBUS scan.

#### 9. Click Send.

└ Changes are downloaded to the Fieldgate FXA720.

#### **10.** Click **Information & Configuration → Network Setup**.

- **11.** Scroll down to the "Ethernet" dialog.
  - └ The "Ethernet" dialog opens.



- 12. Enter the IP address and Subnet Mask.
- 13. Click Send.
  - ← Parameters are downloaded to the Fieldgate FXA720.
- **14.** Close the Web browser and reset the IP address of the computer to one in the same domain as the new Fieldgate FXA720 IP address.
- **15.** Enter the new IP address in the Web browser once more to check the connection to Fieldgate FXA720.
- 16. Close the Web browser.

#### 21.2.2 Connection procedure

The Fieldgate FXA720 must be commissioned before it can be used. This is done by either running the set-up program supplied on the accompanying DVD or calling the PROFIBUS Control Panel Applet from the PROFIBUS DPV1 CommDTM.

For detailed information on "Fieldgate FXA720": Operating Instructions → 🗎 11

#### Starting the PROFIBUS Control Panel

- 1. Start the **PROFIBUS Control Panel Applet**.
- 2. In the "Network" dialog, right-click PROFIBUS DPV1 CommDTM.
  - 🛏 A drop-down list opens.





← The "PROFIBUS Control Panel" dialog opens.

PROFIBUS	FG series / PROFI	gate	Add
PROFIDA PROFID4 PBpo-PC104- PROFID4-5 PROFID4-5 PROFID4-5 PROFID4-5 PROFID4-5 PROFID4-5 PROFID4-7 PROFID4-7 PROFID4-7 PROFID4-7 PROFID4-7 PROFID4-7 PROFID4-7 PROFID4-7 PROFID4-7 PROFID4-7 PROFID4-7 PROFID4-7 PROFID4-5 PROFID4-	Item Firmware Version	Data (not available)	Bemove Edit
•	1		

For this to happen, the **PROFIBUS DVP1 CommDTM** must have been added to the HOST PC beforehand.

#### **PROFIBUS** set-up

1. In the "PROFIBUS Control Panel" dialog, select the FG series/PROFIgate item and click Add.

└ The "Select Node Name" dialog opens.

	×
The following information is used to access the PROFIBUS interface from an application. Please enter a symbolic node name.	
Symbolic Node Name:	
hadroorda	
	The following information is used to access the PROFIBUS interface from an application. Please enter a symbolic node name. Symbolic Node Name: PXA_720_DP_04

2. Enter a symbolic node name for the PROFIBUS DP channel (default value: Node 0) and click Next.

← The "Select Addresses for FG series / PROFIgate" dialog opens.

Select Addresses for FG serie	s / PROFIgate	×
	The IP address is used to connect systems independent of their location and the used physical medium. Please enter either the IP address or name of the FG series / PROFIgate and select the desired bus connector. FG series / PROFIgate Name or IP [132168.178.132] Bus connector: Bus 1	
	< <u>B</u> ack Next > Cance	el

- 3. Enter the IP address of the Fieldgate, select **Bus Connector** and click **Next**.
  - ← The "Select Timeouts for FG series / PROFIgate" dialog opens and the user can make the standard timeout setting.

Select Timeouts for FC	5 series / PROFIgate		×	
	For proper communication it is necessary to define timeouts. Please enter the timeout for connecting and the maximum idle time. Always enter the update interval for exchanging DP process images. This data can only be transferred after it has been previosuly modified.			
•	In order to detect a loss of co always enter a forced DP upo data can be transferreed with	nnection (disconnect), late interval so that out being updated first.		
	Timeout for Connect: Max Idle Time:	22000 ms		
	DP Update Interval:	100 ms		
	Forced DP Update Interval:	linn we		
	< <u>B</u> ack	Finish Cano	el	

- 4. Enter the "Timeout for Connect" and click **Finish**. These settings may be made by PROFIBUS specialists only.
  - ← The standard timeout settings are accepted and the configuration is completed. The "PROFIBUS Control Panel" dialog opens and the symbolic name of the Fieldgate is assigned to the "FG series/PROFIgate" item.

PROFIBUS	FG series / PROFIG	pate FXA_720_DP_04	Add
PROFIboard-ISA	Item	Data	Pamoun
PROFILU4 PBpro-PC104+ PBOFILU4-S	Interface Number Serial Number	0 053200356	Edit
	Firmware Type Firmware Version	DP/FMS Master PR0FI104 FMS/DPV1 5.27.0.00.r_me	
<ul> <li>PROFIcard / PROFIcard</li> <li>PROFlusb</li> <li>FG series / PROFIgat</li> </ul>	2 IP-Address IP-Port	192.168.178.132 2357	
? FXA_720_DP_04	Device Names	\\.\PROFIBUS\Board0\Board \\.\PROFIBUS\Board0\Pb0\Service \\.\PROFIBUS\Board0\Pb0\DpData	
	Alias Dev. Names	<pre>\\\PROFIBUS\FXA_720_DP_04\Boz \\\PROFIBUS\FXA_720_DP_04\Ser \\\PROFIBUS\FXA_720_DP_04\Dp[</pre>	
bis device is working proper	<u> </u>	<u> </u>	

#### 5. Click **Apply**.

The configuration is saved. The Fieldgate FXA720 device is ready if a green tick appears next to the symbolic name. If a red tick appears, check whether the PROFIBUS scan is switched off.

PROFIBUS	FG series / PROFI	pate FXA_720_DP_04	Add
PROFIboard-ISA	Item	Data	Paraous
	Interface Number Serial Number	0 053200356	Edit
PROFIboard-PCI PBpro-PCI	Firmware Type Firmware Version	DP/FMS Master PROFI104 FMS/DPV1 5.27.0.00.r_me	
<ul> <li>PROFIcard / PROFIcard 2</li> <li>PROFlusb</li> <li>FG series / PROFIgate</li> </ul>	IP-Address IP-Port	192.168.178.132 2357	
FXA_720_DP_04	Device Names	\\\PROFIBUS\Board0\Board \\\PROFIBUS\Board0\Pb0\Service \\\PROFIBUS\Board0\Pb0\DpData	
	Alias Dev. Names	\\\PROFIBUS\FXA_720_DP_04\Bos \\\PROFIBUS\FXA_720_DP_04\Ser \\\PROFIBUS\FXA_720_DP_04\Dp[	
<	•	<b>&gt;</b>	

6. For single-channel Fieldgates, click **OK**.

The configuration is saved and the configuration window closes.

#### **Connection procedure** 21.3

### Establishing a connection

- **1**. Create a project  $\rightarrow \triangleq 13$ .
- 2. In the "Network" dialog, right-click **Host PC**.
  - └ A drop-down list opens.



#### 3. Select Add Device.

└ The "Add New Device" dialog opens.

Manufacturer:					
Device:				Fi	ter
△ Device		Version	Class	Manufacturer	Protocol
CDI Communication F>	(A291	V2.09.00 (2016	<b>V</b> .	Endress+Hauser	CDI
CDI Communication T0	P/IP	V2.09.00 (2016	Q .	Endress+Hauser	CDI TCP
CDI Communication US	6B	V2.09.00 (2016	<b>V</b> .	Endress+Hauser	CDI USB
CommDTM PROFIBUS	DP-V1	V5.00.2[22] (20	· 3	Softing Industrial	PROFIBU
FF H1 CommDTM		V1.5.4.2 (2015	V .	Endress+Hauser	FDT FIEL
Flow Communication F	XA193/291	V3.27.00 (2015	<b>V</b> -	Endress+Hauser	ISS
FXA520		V1.05.09 (2011	<b>V</b> .	Endress+Hauser	HART
HART Communication		V1.0.56 (2016	0.	CodeWrights G	HABT
IPC (Level, Pressure) P	XA193/291	V1.02.17 (2014	· .	Endress+Hauser	IPC
PCP (Readwin) TXU10	)/FXA291	V1.01.18 (2014	V -	Endress+Hauser	PCP
PROFIdtm DPV1		V 2.20.0(121) (	<b>0</b> -	Softing Industrial	Profibus I
SFGNetwork		V1.10.00.343 (	💱 dtmSp	Endress+Hauser	SFG5xx
SFGNetwork		V1.10.00.343 (	🦁 dtmSp	Endress+Hauser	SFG5xx
SFGNetwork		V1.10.00.343 (	👽 dtmSp	Endress+Hauser	SFG5xx
<	Device	V1.10.00.343 (	on	Endress+Hauser	SFG5xx
<	Device CDI Co	V1.10.00.343 ( type (DTM) informati mmunication FXA29	on 1	Endress+Hauser	SFG5xx :
<	Device CDI Co Endres	V1.10.00.343 ( type (DTM) informat mmunication FXA29 s+Hauser	on 1	Endress+Hauser	SFG5xx
<  SFGNetwork <  SFGNetwork  SFGNetwork  Manufacturer: Device:	Device CDI Co Endres	V1.10.00.343 ( type (DTM) informat mmunication FXA29 s+Hauser	on 1	Endress+Hauser	SFG5xx
SFGNetwork     Compared and a second and and a second and a second and a second and a secon	Device CDI Co Endres	V1.10.00.343 ( type (DTM) informat mmunication FXA29 s+Hauser	V dtmSp	Endress+Hauser	SFG5xx
SFGNetwork     Compared and a second and and a second and a second and a second and a secon	Device CDI Co Endres 17	V1.10.00.343 ( type (DTM) informat mmunication FXA29 s+Hauser	on 1	Endress+Hauser	SFG5xx
SFGNetwork     Compared and a second a second and a second a	Device CDI Co Endres	V1.10.00.343 ( type (DTM) informat mmunication FXA29 s+Hauser	on 1	Endress+Hauser	SFG5xx
SFGNetwork     C     SFGNetwork     C     Manufacturer     Device:     Manufacturer     Device to SubD     Manufacturer     Device revision:     Device revision:     Device revision:	Device CDI Co Endres 17	V1.10.00.343 ( bype (DTM) informat mmunication FKA29 +Hauser	v dtmSp	Endress+Hauser	SFG5xx



4. Select the **PROFIdtm DPV1** item and click **OK**.

← The PROFIdtm DPV1 is added to the network.



If the Fieldgate FXA720 has not yet been set up, it can be set up now.

- 5. In the "Network" dialog, right-click the **PROFIdtm DPV1** item.
  - └ A drop-down list opens.



#### 6. Select Configuration.

← The "PROFIdtm DPV1 (Configuration)" dialog opens.

Board Name:	FXA_720_D 💌	Station Address:	0
Misc			
Baud Rate:	93.75kBit/s 💌	Automatic Default	for Baud Rate
Max. Retry Limit:	1		
Gap Update Factor:	10	Highest Station Addre	ss: 126
Setup Time:	250		4.00 ms
Setup Time:	250		2.67 ms
Target Botation Time:	85000		- 907 ms
Scan Range			
Start Address:	0	End Address:	126

7. Check that the PROFIBUS bus parameters are exactly the same as those used in any Master Class 1 in the network. The default parameters are the ones recommended for use with a particular baud rate. They can be adjusted by deactivating the automatic defaults.

Select **Board-Name** from the drop-down menu.

- 8. Enter the **PROFIBUS Address** of the Fieldgate FXA720.
- 9. Select the **Baud Rate** that is used by the PROFIBUS network.
- 10. Enter the **Start and End Address** for the scan range and click **OK**.
  - ← The changes are saved and FieldCare returns to the "Network" dialog.
- **11.** In the "Network" dialog, right-click the **PROFIdtm DPV1** item.
  - 🛏 A drop-down list opens.



#### 12. Select Create Network.

└ FieldCare now scans the network and adds all devices found to the network.

					۹×
C	Channel	A	Device typ	Physical Device	
-		-			
AD.		0	PROFI		
4	Channel	11	Ceraba	Cerabar S	
4p	Channel	13	El Liquiph	Liquiphant	
4b	Channel	20	Temp	TMT184	
		C Channel	C         Channel         A           ⟨b         0            ⟨b         Channel         11           ⟨b         Channel         13           ⟨b         Channel         20	C         Channel         A         Device typ           3D         0         4         PROFL           4)         Channel         11         687 Ceraba           4)         Channel         213         537 Liquiph           4)         Channel         20         637 Liquiph	C         Channel         A         Device typ         Physical Device           B         0         4         PRDFI         4         Physical Device           C         0         1         PRDFI         4         Physical Device           C         0         1         PRDFI         4         Physical Device           C         0         1         Expendential         5         Physical Device           4>         Dramet         13         Efficience         Thirthe Manual Device         1           4>         Dramet         13         Efficience         Thirthe Manual Device         1

- **13.** In the "Network" dialog, right-click a **device**.
  - └ A drop-down list opens.

Network						Į.
Network Tag	C	Chann	el A	Device typ	Physical Device	
Host PC	1			and the second second		
😑 🔨 PROFidtm DPV1			0	PROFI		
			Add Dev Delete D	vice Device Wizard	par S phant 184	
		17. 		type (DTM) info.		

#### 14. Select Connect.

← The connection to the device is established.

- **15.** In the "Network" dialog, right-click a **device**.
  - ► A drop-down list opens.



### 16. Select Online Parameterize.

← The **DeviceDTM** opens.



**17.** Save the project  $\rightarrow \square$  13.

# 22 PROFIBUS DP/PA via Fieldgate SFG500

### 22.1 Use case

Fieldgate SFG500 is connected to the Ethernet backbone via the LAN 1 Ethernet socket and the PROFIBUS DP segment. The segment itself is connected to a PLC or DCS, which acts as Class 1 master. PROFIBUS PA devices are connected to the network via the coupler.

To see all the devices on the PROFIBUS DP/PA segment, FieldCare requires:

- SFGNetwork DTM
- PROFIBUS DeviceDTMs



32 Fieldgate SFG500 access to a PROFIBUS DP network

- 1 FieldCare
- 2 Ethernet
- 3 FieldgateSFG500
- 4 PROFIBUS DP
- 5 PROFIBUS PA
- 6 Transparent DP/PA coupler
- 7 Controller with I/O cards

## 22.2 Connection procedure

#### Establishing a connection

- **1.** Create a project  $\rightarrow \square$  13.
- 2. In the "Network" dialog, right-click **Host PC**.
  - └ A drop-down list opens.





└ The "Add New Device" dialog opens.

Filter						
Manufacturer:						
Device:				FI	ter	
△ Device		Version	Class	Manufacturer	Protocol	
CDI Communication FX	A291	V2.09.00 (2016	1 ·	Endress+Hauser	CDI	
CDI Communication TC	P/IP	V2.09.00 (2016	Q .	Endress+Hauser	CDI TCP	
CDI Communication US	В	V2.09.00 (2016	Q -	Endress+Hauser	CDI USB	
CommDTM PROFIBUS	CommDTM PROFIBUS DP-V1		Q -	Softing Industrial	PROFIBL	
FF H1 CommDTM		V1.5.4.2 (2015	V -	Endress+Hauser	FDT FIEL	
Flow Communication FX	A193/291	V3.27.00 (2015	V .	Endress+Hauser	ISS	
FXA520		V1.05.09 (2011	V .	Endress+Hauser	HART	
HART Communication		V1.0.56 (2016	V -	CodeWrights G	HART	
IPC (Level, Pressure) F	KA193/291	V1.02.17 (2014	- T	Endress+Hauser	IPC	
PCP (Readwin) TXU10	/FXA291	V1.01.18 (2014	- T	Endress+Hauser	PCP	
PROFIdtm DPV1		V 2.20.0(121) [	<b>V</b> .	Softing Industrial	Profibus	
SFGNetwork		V1.10.00.343 [	👽 dtmSp	Endress+Hauser	SFG5xx	
¢						
<	Device	tune (DTM) informati	ion			
< Device:	Device CDI Co	type (DTM) informati	ion 1			
< Device: mufacturer:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	ion 1		3	
< Device: Manufacturer: Device ID / SubID:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	ion 1		;	
< Device: Manufacturer: Device ID / SubID: Manufacturer ID:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA29 s+Hauser	ion 1			
< Manufacturer: Device (D / SubID: Manufacturer (D: Manufacturer (D:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA29 =+Hauser	ion 1			
< Marufacturer: Device (D / SubiD: Marufacturer ID: Hardware revision: Software revision:	Device CDI Co Endres	type (DTM) informati mmunication FXA29 s+Hauser	ion 1			
< Device: Manufacturer: Device ID / SubID: Hardware revision: Software envision: Device revision:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA29 s+Hauser	ion 1		3	
C Device: Manufacture: Device ID / SkiD: Manufacture rolo: Manufacture rolo: Device revision: Device revision: Device revision:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA29 =Hauser	ion 1			
K Marufachare Marufachare Nadashare (D) Nadashare (D) Nadashare Na	Device CDI Co Endres	type (DTM) informati mmunication FXA29 =Hauser	ion 1		3	



4. Select the **SFGNetwork** item and click **OK**.

└ The SFGNetwork is added to the network.



- 5. In the "Network" dialog, right-click the **SFG500 Network** item.
  - └ A drop-down list opens.



#### 6. Select Create Network.

└ The Ethernet network is scanned and all the available Fieldgate SFG500s and the connected devices are added.



If there is only one Fieldgate SFG500 in the network, the connection is established and the "SFG500 (Configuration)" dialog opens.

ff SFG500_DB00	01240A0 (Configuration)	
	Device Name: \$PG\$00	(EII)
n 🖻 🖉		
Identification:	Serial Number	
Serial Number: ;	/ DB0001240A0	
IP Address: ,	10.126.84.201	
Device Tag: ,	/ SFG500_DB0001240A0	
Connected	🕼 Database	1.

If no DTM has been found, it is possible that the UDP ports are blocked.

For detailed information on "FieldCare SFE500 Windows Firewall": Operating Instructions  $\rightarrow \square 11$ 

In the "Network" dialog, right-click the SFG500 Network item.
 A drop-down list opens.



8. Select Add Device and click OK.

└ The CommDTM is added to the network.



**9.** If several Fieldgate SFG500s and connected devices are found, these are automatically added to the network.

If any of the devices has a DTM whose quality is less than "1", the Scanning Result dialog opens. Click **OK** before the devices are added to the network.

**10.** If only one device is found, the DTM is opened automatically.

If more than one device is found, the "Connect After Scanning" message appears. Click **OK** to acknowledge this message.



- 11. In the "Network" dialog, right-click a **device**.
  - └ A drop-down list opens.



#### 12. Select Connect.

└ The connection to the device is established. This is indicated by a green arrow.

13. In the "Network" dialog, right-click a **device**.

└ A drop-down list opens.



### 14. Select Online Parameterize.

└ The DeviceDTM opens.



The device can now be configured. **15.** Save the project  $\rightarrow \triangleq 13$ .

# 23 PROFIBUS DP/PA via multiple Fieldgate SFG500 devices

### 23.1 Use case

For simplicity the devices connected to segments 2 – 5 are not shown. All Fieldgate SFG500s are connected to the Ethernet backbone via the LAN 1 Ethernet socket and share a common Ethernet IP address domain. One Fieldgate SFG500 is connected to each PROFIBUS DP segment. The PROFIBUS DP segments do not necessarily have to be connected to a single PLC. PROFIBUS PA devices are connected to the PROFIBUS DP segments via couplers.

To see all the devices on the PROFIBUS DP/PA segment, FieldCare requires:

- SFGNetwork DTM
- PROFIBUS DeviceDTMs



33 Fieldgate SFG500 access to multiple PROFIBUS DP networks

- 1 FieldCare
- 2 Ethernet
- 3 FieldgateSFG500
- 4 PROFIBUS DP with segment 1-5
- 5 DP/PA coupler
- 6 PROFIBUS PA
- 7 PLC/DCS
- 8 Control network

# 23.2 Connection procedure

#### Establishing a connection

**1.** Create a project  $\rightarrow \triangleq$  13.



Filter					
Manufacturer:				_	
Device:				Fi	ter
△ Device		Version	Class	Manufacturer	Protocol
CDI Communication F>	KA291	V2.09.00 (2016	<b>V</b> .	Endress+Hauser	CDI
CDI Communication T0	CP/IP	V2.09.00 (2016	Q .	Endress+Hauser	CDI TCP
CDI Communication US	SB	V2.09.00 (2016	<b>V</b> .	Endress+Hauser	CDI USB
CommDTM PROFIBUS	5 DP-V1	V5.00.2(22) (20	0 .	Softing Industrial	PROFIBL
FF H1 CommDTM		V1.5.4.2 (2015	0	Endress+Hauser	FDT FIEL
Flow Communication F	XA193/291	V3.27.00 (2015	<b>V</b> .	Endress+Hauser	ISS
EXA520		V1.05.09 (2011	0	Endress+Hauser	HABT
HABT Communication		V1.0.56 (2016-	0	CodeWrights G	HABT
IPC (Level Pressure) P	XA193/291	V1 02 17 (2014	0	Endress+Hauser	IPC
PCP (Beadwin) TXI I1(	1/EX6291	V1.01.18(2014	- T	Endress+Hauser	PCP
PBOFIdtm DPV1		V 2 20 0(121) (	÷.	Softing Industrial	
SEGNetwork		V1.10.00.343 (	dtmSn.	Endress+Hauser	SEG5xx
٢					3
<	Device	type (DTM) informati	ion		3
< Device:	Device CDI Co	type (DTM) informati mmunication FXA29	ion 1		3
< Device: Manufacturer:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	ion 1		3
C Device: Manufacturer: Device ID / SubID: Device ID	Device CDI Cc Endres	type (DTM) informati mmunication FXA291 s+Hauser	ion 1		3
Device:     Manufacturer:     Device ID / SubID:     Manufacturer ID:     Handware available:	Device CDI Cc Endres 17	type (DTM) informati mmunication FXA29' s+Hauser	ion 1		
< Device: Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision: Software meision:	Device CDI Co Endres	type (DTM) informati mmunication FXA29' s+Hauser	ion 1		3
Device:     Device ID / SubID:     Manufacturer ID     Manufacturer ID:     Hardware revision:     Software revision:     Software revision:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA29 s+Hauser	ion 1		
Device: Marufacturer: Device ID / SubID: Marufacturer ID: Hardware revision: Device revision: Device revision: Device revision:	Device CDI Co Endres	type (DTM) informati mmunication FXA29 e+Hauser	ion 1		3

- 4. Select the **SFGNetwork** item and click **OK**.
  - └ The SFGNetwork is added to the network.
- 5. In the "Network" dialog, right-click **SFGNetwork**.
  - └ A drop-down list opens.
- 6. Select **Connect**.
- 7. The connection to the device is established and is indicated by a green arrow.
- 8. In the "Network" dialog, right-click the SFG500Network item.
  - 🛏 A drop-down list opens.
- 9. Select Create Network.
  - └ FieldCare scans the Ethernet network.

 If more than one device is found, the Connect After Scanning message appears. Click OK.
 Connect after scanning



FieldCare adds the Fieldgate SFG500s found and the connected devices to the network.



For detailed information on "FieldCare SFE500 Windows Firewall": Operating Instructions  $\rightarrow \cong 11$ 

**11.** If any of the devices has a DTM whose quality is less than "1", the Scanning Result dialog opens.

Click **OK** before the devices are added to the network.

└ The "Network" dialog opens.

letwork.						
Network Tag	Connection	Channel	Address	Device type (DTM)	Physical Device	
Host PC						
<ul> <li>Of SEGNetwork</li> </ul>	-40-		0	SFGNetwork		
SFG500_C/9000424640		SFSNetwork/Channel		CC 5FG500		
- <u>36</u> 0-300EE8	4	SFG500Channel	12	CT iTemp / TMT 184 / P	TMT184	
- se 0<300830	4	SFG500Channel	13	Temp / TMT 184 / P.	TMT184	
- pt 0430034D	92	SFG500Channel	14	TiTenp / TMT 184 / P.	TMT184	
- M G-3000EB3	4	SFG500Channel	15	CT iTenp / TMT 104 / P	TMT104	
se 0-300EAF	40	SFG500Channel	16	CT iTemp / TMT 184 / P	TMT184	
- se 0<300CD5	4	SFG500Channel	17	TiTemp / TMT 184 / P.	TMT184	
- a 0.300955	- to	SFG500Channel	18	TiTemp / TMT 184 / P_	TMT184	
- m 0-300EC8	4	SFG500Channel	19	CT iTemp / TMT 184 / P	TMT184	
343000-0 36	40	SFG500Channel	20	CT iTemp / TMT 104 / P.	TMT104	
	4	SFG500Channel	21	TiTemp / TMT 184 / P_	TMT184	
a 0/30094F	Sec	SFG500Channel	22	TiTenp / TMT 184 / P_	TMT184	
- mi (0-300E PS	10	SFG500Channel	23	T (Tenp / TMT 184 / P.	TMT184	
- JAC (0-0300EB1	50	SFG500Channel	24	CT iTemp / TMT 184 / P.	TMT184	
- 6- 0-300EEE	4.	SF6500Channel	25	TiTemp / TMT 184 / P.	TMT184	
a ITEMP TMT84 54	6	SF6500Channel	74	TTEMP / THT84 / PA	ITEMP TMT84	
SFG500_DE0002243A0		SFGNetwork/Overnel		SFG500		
- 2 SFG500_D80008243AD	4	SFGNetwork/Channel	3	(17 SFG500		
SFG500_E2000724040		SFGNetworkChannel	4	4 SF0500		
SFG500 E20005240A0	4.	SEGNetworkDharmel	5	SFG/500		-

**12.** Save the project  $\rightarrow \square$  13.

# 24 PROFIBUS DP/PA via Fieldgate SFG500 and Siemens link

### 24.1 Use case

When operating with a Siemens DP/PA coupler or link, the component architecture can be as shown in the following graphic.

The Fieldgate SFG500 is connected to the Ethernet backbone via the LAN 1 Ethernet socket. PROFIBUS PA devices are connected to the network via the Siemens coupler/link. The same architecture can be used for Fieldgate FXA720 in combination with Siemens DP/PA link.

To see all the devices on the PROFIBUS DP/PA segment, FieldCare requires:

- SFGNetwork DTM
- PROFIBUS CommDTM
- PROFIBUS DeviceDTMs



34 Fieldgate SFG500 access to a PROFIBUS DP network via Siemens coupler/link

- 1 FieldCare
- 2 Ethernet
- 3 FieldgateSFG500
- 4 PROFIBUS DP
- 5 PROFIBUS PA
- 6 Siemens link/ DP/PA coupler
- 7 PLC/DCS
- 8 Control network

# 24.2 Connection procedure

#### Establishing a connection

1. Create a project  $\rightarrow \square$  13.

- 2. In the "Network" dialog, right-click Host PC.
  - 🛏 A drop-down list opens.



#### 3. Select Add Device.

└ The "Add New Device" dialog opens.

Filter					
Manufacturer:					
Device:				Fi	ter
△ Device		Version	Class	Manufacturer	Protocol
CDI Communication Ex	A291	V2.09.00 (2016	1 ·	Endress+Hauser	CDI
CDI Communication TC	P/IP	V2.09.00 (2016	<b>T</b> .	Endress+Hauser	CDI TCP/
CDI Communication US	B	V2.09.00 (2016	ΰ.	Endress+Hauser	CDI USB
CommDTM PBOEIBUS	DP-V1	V5.00.2(22) (20	<b>0</b>	Softing Industrial	PROFIBIL
FF H1 CommDTM		V1.5.4.2 (2015	ΰ.	Endress+Hauser	FDT FIEL
Flow Communication E	KA193/291	V3.27.00 (2015.	<b>0</b> .	Endress+Hauser	
FXA520		V1.05.09 (2011	0	Endress+Hauser	HABT
HART Communication		V1.0.56 (2016	ΰ.	CodeWrights G	HABT
IPC (Level, Pressure) F	XA193/291	V1.02.17 (2014	σ.	Endress+Hauser	IPC
PCP (Readwin) TXU10	VFXA291	V1.01.18 (2014	Q .	Endress+Hauser	PCP
PROFIdtm DPV1		V 2.20.0(121) (	<b>0</b> .	Softing Industrial	Profibus D SEG5xx
SEGNetwork		V1.10.00.343 (	tmSn	Endress+Hauser	
۲					>
	Device	type (DTM) informati	on		
Device:	CDI Co	mmunication FXA291			
Aanufacturer:	Endres	s+Hauser			
Device ID / SubID:					
Manufacturer ID:	17				
lardware revision:					
Software revision:					
Device revision:					
rofile revision:					

- 4. Select the **SFGNetwork** item and click **OK**.
  - └ The SFGNetwork is added to the network.
- 5. In the "Network" dialog, right-click **SFGNetwork**.
  - └ A drop-down list opens.
- 6. Select **Connect**.
- 7. The connection to the device is established and is indicated by a green arrow.
- 8. In the "Network" dialog, right-click the **SFG500Network** item.
  - └ A drop-down list opens.

#### 9. Select Create Network.

└ FieldCare scans the PROFIBUS network for the Siemens link and the "Create Network - Scan Result" dialog opens.

hannel: Add: 1	Status	Offine/Device	DTM Quality	Device type (DTM)	Class (DTM)	Action	
(SFG500Cha R	New device	1	2	CommDTM DP/PA Link	1	Add to project	
ITM assignment de DTM assignment de DTM quality level	tails Status and stails for device at 1 Mi	Laction details   t (SEG500Channel 7 anufacturer ID and D	) Device Type ID of it	ne assigned device type (DT)	4) match those of t	he hardware information	n.
DTM assignment de DTM assignment de DTM quality level	teils Status and stalls for device a	Laction details t (SFG500Channel 7 anufacturer ID and D	) Device Type ID of It Online devic	te assigned device type (DT) ce information	4) match those of t Suggested	he hardware information device type (DTM) infor DR 201 Link	n. matio
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DTM assignment de DTM assignment de DTM quality level DTM quality level DEVICE_ID Manufacturer: Ident Number IGSD	telit   Status and stalls for device a 	I action details   It (SFG500Channel 7 anufacturer ID and D	Device Type ID of th	ne assigned device type (DT) ce information	4) match those of t Suggested CommDTM Trebing 5 H (040/52	he hardware information device type (DTM) infor DP/PA Link limitedt Proze&automat	n. Imation
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DTM assignment de DTM assignment de DTM quality level DEVICE_ID Manufacturer Ident Number (SSI DEVICE_MAN_ID HARDWARE_REV	telit: Status and etails for device at 	Laction details   It (SEG500Channell 7 anufacturer ID and D	Device Type ID of th Deline device 0x8052	he assigned device type (DT) ce information	4) match those of t Suggested ConnDTM Treting 5 H Dx8052 42	he hardware information device type (DTM) infor DP/PA Link Instead Proze&utomat	n. imation ion Gr
DTM assignment de DTM assignment de DTM quality level DEVICE_ID Menufacturer: Ident Number (SSI DEVICE_MAN_ID HARDWARE_REV SOFTWARE_REV	taits   Status and etaits for device at 1 Mi 2017 Sub ID VISION TSION	I action datals     (SEG500Channel 7 anufacturer ID and D	Device Type ID of th Online device 0x8052	ne assigned device type (DTH ce information	4) match those of t Suggested CommDTM Trebing 5 F (M4052 42	he hardware information device type (DTM) infor DP/PA Link Instadt Prozečautomat	n. emation ion Gr
DTM assignment de DTM assignment de DTM quality level DEVICE_ID Manufacturer: Indert Nunker (ISSE DEVICE_MAN_ID HARDWARE_REV SOFTWARE_REV Device revision:	tails   Status and stails for device a 	I action details (SE0500Chamel 7 anufacturer ID and D	Device Type ID of th Deline devi 0x8052	ne assigned device type (DTI ce information	4) match those of t Suggested Corrent T M Trebing 5 F Direbing 5 F Direbing 5 F	he hardware information device type (DTM) infor DP/PA Link limited: Prozeišautomat	n. emation ion Gr
DTM assignment de DTM assignment de DTM quality level DEVICE_ID Manufacturet Ident Number (ISSI DEVICE_MAN_ID HARDWARE_REV Device avvision:	talt:   Status and etails for device a <u>I</u> Mi D17 Sub ID 7/SUD N TSION	I action details    SF65000Charnell 7 anufacturer ID and E	Device Type ID of th Device Type ID of th Defice devis	ne assigned derice type (DTI ce information	4) match those of t Suggested Comm0 TM Trebing 5 F 0x8052 42	he hardware information device type (DTM) info DP/PA Link limited Proze&autonal	n. ion Gr
DTM assignment de DTM quality level DEVICE_JD Manufacturer. Ident Number (ISS DEVICE_MN_JD HARDWARE_REV Device nevision: Profile revision: Profile revision:	tait:   Status and staits for device a I Mi D) / Sub ID //SIDN TSIDN	Laction details (ISEG500Charmel 7 anufachuret ID and D	Oreine devi      Oreine devi      Oreine devi      Oreine devi	ne assigned dervice type (DTI ce information	4) match those of t Suggested ConvnDTM Trething 5 + 0x8052 42 No	he hardware information device type (DTM) infor DP/PA Link insted Prozebautomat	n emation ion Gr
DTM assignment de DTM quality level DEVICE_ID Manufacture: Ident Number (ISS DEVICE_MM_ID EVICE_MM_ID EVICE_MM_ID EVICE_MM_ID DEVICE_MIN_ID DEVICE environ: Is general: Used Photocol	telit   Status and staliz for device a D1 / Sub ID D1 / Sub ID VISION	Laction dotals (ISEG500Charmet 7 anufacturet ID and C	Chine Type ID of th Drilne devia 0x8052	re assigned device type (DTI ce information DPAV1	4) match those of 1 Suggested Corrent TM Tretaing & F 0x8052 42 42 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	he hardware information device type (DTM) infor DP/PA Link limited Prozebautonal DP/V1	n. tion Gr
DTM assignment de DTM quality level DEVICE_ID Manufachuer Ident Number (ISSI DEVICE_MAN_ID HARDWARE_REV SOFTWARE_REV Device revision: Profile revision: Profile revision: Lis general: Used Protocol	tait:   Status and staits for device a I Mi D) / Sub ID //SIDN ISIDN	Laction details (ISEG500Charmet 7 anufacturet ID and C	) Invice Type ID of th Deline devia 0x8052 PROFIBUS	re assigned device type (DTI ce information DP/V1	4) match those of 1 Suggested Corren0 TM Trebing & F 0x8052 42 42 No PROFIBUS	he hardware information denice type (DTM) infor DP/PA Link imited ProzeBautonal DP/V1	n matio
DTM assignment de DTM assignment de DTM quality level DEVICE_ID Manufacturer Ident Number (SSE DEVICE_MAN_ID Number, MARE_REV SOFTWARE_REV SOFTWARE_REV Device revision: Poblie revision: Is generic:	talt   Status and stalts for device a I Mi D1 / Sub ID //SION ISION	Laction details (ISEG500Charnel 7 anufachuret ID and D	Oreine devi      Oreine devi      Oreine devi      Oreine devi	ne assigned dervice type (DTI ce information	4) match those of t Suggested Convol TM Treteing & F Dx8052 42 No	he hardware information device type (DTM) infor DP/PA Link insted Proce8automat	n ion l
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If no DTM has been found, it is possible that the UDP ports are blocked.



For detailed information on "FieldCare SFE500 Windows Firewall": Operating Instructions  $\rightarrow \square 11$ 

#### 10. Click **OK**.

└ The CommDTM of the DP/PA link is added to the network.



- **11.** In the "Network" dialog, right-click the **DP/PA Link** item.
  - └ A drop-down list opens.

#### 12. Select Create Network.

└ The segment to which the DP/PA link is connected is scanned for devices. The "Create Network - Scanning Result" dialog opens.

hannel: Add: Status	Offine/Device	DTM Quality	Device type (DTM)	Clatz (DTM)	Action
[Channel 0.29] Se New device found	-/DP/PA.Coupler	7 5	Placeholder FieldDevi		Add to project
Channel 0.51 Rev device found	-A.T 501	8 1	Protonic M / FMI Idv	Level	Add to repert
IChannel 0.721 at New device found	JET 502	22 1	Provid / 72 / PA / V1	Elow	Add to project
ferrande er tel 22 Herr de lee loans	711.00%		TIVINITY IS THE TIME		Print to proposi
DTM assignment details for device at [Char DTM quality level Assigned	snel 0.5] I device type (DTM) e	wactly matches th	e hardware information with a	el IDs and revision.	
DTM assignment details for device at [Char DTM quality level	i device type (DTM) e	wastly matches th	e hardware information with a	el IDs and revision.	
DTM assignment details for device at [Dhar DTM quality level	i device type (DTM) e	wactly matches th Online device info	e hardware information with a mation	II IDs and revision.	e type (DTM) information
DTM essignment details for device at [Diar DTM quality level 🔄 Assigned DEVICE_ID	i device type (DTM) e	wactly matches th Online device info PROSONIC M	e hardware information with a mation	II Ds and revision. Suggested device Protonic N / FMI	e type (DTM) information J4x / PA / V4.xx
DTM assignment details for device at [Dise DTM quality level 3] Assigned DEVICE. ID Manufacturet	i device type (DTM) e	wactly matches the Online device info PROSONIC M Endress-Hauser	e hardware information with a	II Ds and revision. Suggested device Proconic M / FMI Endess+Hauser	e type (DTM) information 34x / PA / V4 xx
DTM quality level DTM quality level DEVICE_ID Mendachuer: Ident Number (ISD) / Sub ID	i device type (DTM) e	oractly matches the Online device info PROSONIC M Endress-Hauser DATS2C	e hardware information with a	Suggested devico Proconic M / FMI Endress+Hauter Dx152C:0x9700/	e type (DTM) information J4x / PA, 7V4.xx Prosonic M / PMU4x / P
DTM assignment details for device at [Dhar TM quality level DEVICE_ID Mendachuet: Gister Number (SSD) / Sub ID DEVICE_MAN_ID	rei 0.5] device type (DTM) e	wactly matches th Online device info PROSONIC M Endress-Hauser 0x152C 17	e hardware information with a	IIDs and revision. Suggested devic Prosonic M / FMI Endress+Hauser 0x152C::0x9700/ 17	e type (DTM) information J4x / PA, 7V4 xx Prosonic M / FMU4x / P
DTM assignment details for device at [Dhar TM quality level 3] Assigned DEVICE. [D Manufachant Gent Number (SSD) / Sub ID DEVICE, MAN, ID DEVICE, RAYSION	rei 0.5] irei 0.5] i device type (DTM) e	oractly matches the Online device info PROSONIC M Endress+Hauser DMS2C 17	e hardware information with a mation	II Dis and revision. Suggested device Prosonic M / FMI Endess+Hauser Drif52C:0x9700/ 17	e type (DTM) information J4x / PA / V4 so: Procorric M / FMU4x / P
DTM exignment details for device at [Diar DTM quality level DEVICE_ID Mendacturet: Ident Number (ISD) / Sub ID DEVICE_MAN_ID HAR/DWARE_REVISION SD FTWARE_REVISION	i device type (DTM) e	sectly matches th Online device info PROSONIC M Endress-Hauser Dx152C 17 01.04.00	n hardware information with a	II D s and revision. Suggested devic Prosonic M / FMI Endress-Hauser 0x152C-0x9700/ 17	n type (DTM) information 14x / PA, 7V4.set Proconic M / FMU4x / P
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DTM acceptonent details for device at [Disp TTM quality level DEVICE_ID Monta handlers DEVICE_ID Monta handlers DEVICE_MANL Monta handlers DEVICE_MANL DEVICE_MANL DEVICE_MANL DEVICE_MANL Device methods Device metho	J device type (DTM) e	oracity matches the PROSONIC M Endress-Hauser DATE 17 01.04.00 01.04.00 3.0 PROFIBUS DPA/	n hardware information with a	II D s and revision. Suggested device Prosonic M / FMI Enders-Hauser 0x152C-0x9700/ 17 01.04.00 3.0 PROFIBUS DPA	n type (DTM) information J4x / PA / V4 so Prosonic M / FMU4x / P
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OTM automate deals for device all Davies of Dim Quality level DTM Quality level DFMCL_ID DFMCL_ID Monde Nature (STS) DFML_QUALITY (Stab ID DFML_QUALIT	J device type (DTM) e	oractly matches the PROSONIC M Endress-Hauser (MSSC 01.04.00 01.04.00 3.0 PROFIBUS DP/V YMLNR 011D 5	s hardware information with a	IIIDs and revision. Suggested device Prosonic M / FMI Endress-Hauser Dx1502-0x9700/ 17 01.04.00 3.0 No PROFIBUS DPA	e type (DTM) information Jar J PA / V4-se Photonic M / FMU4s / P 1
OTM acigonest deals to device al Dav OTM acigonest deals to device al Dav OTM acidy level BCVICE_ID Mandatower Mandatower BCVICE_ID Davage region SIGTPUARE_REVISION Davage region SIGTPUARE_REVISION SIGTPUARE_REVISION SIGTPUARE_REVISION Davage region SIGTPUARE_REVISION Davage region SIGTPUARE_REVISION Davage region SIGTPUARE_REVISION SIGTPUARE SIGTPUARE_REVISION SIGTPUARE SIGTPUARE SIGTPUARE_REVISION SIGTPUARE	J device type (DTM) e	ovacilly matches the PROSONIC M PROSONIC M DATSOC 10104.00 01.04.00 3.0 PROFIBUS DPAV YMILNR 01D 5	s hardware information with a	II Ds and revision. Suggested device Protonic M / FMI Endess-Hauter Dx152C-0x9700/ 17 01.04.00 3.0 No PROFIBUS DPA	e type (DTM) information J4k / PA / V4 sx Presonic M / PMU4k / P

#### 13. Click OK.

└ If the "Connect After Scanning" option is selected under **Extras** the "Connect After Scanning" dialog opens.



The devices are added to the network.



The DeviceDTMs can be opened.

**14.** Save the project  $\rightarrow \triangleq$  13.

# 25 PROFIBUS DP/PA and HART via Fieldgate SFG500 and Siemens ET200M/iSP

### 25.1 Use case

This chapter describes how FieldCare should be configured for a plant that uses a Siemens ET200M/iSP-type Remote I/O. The PC with FieldCare installed is connected to an SFG500 via Ethernet. The SFG500 is connected via Profibus DP to an ET200M/iSP, which is connected to the field devices via HART. A cyclic master is required for the operation of the plant.



■ 35 Fieldgate SFG500 access to Siemens ET200M/iSP

- 1 FieldCare
- 2 Ethernet/IP
- 3 FieldgateSFG500
- 4 PROFIBUS DP5 Master
- 6 Siemens ET200 Remote I/O

# 25.2 Connection procedure

#### Establishing a connection

- **1.** Create a project  $\rightarrow \square$  13.
- 2. In the "Network" dialog, right-click Host PC.
  - └ A drop-down list opens.

Network					
Network Tag	C	Channel	A	Device t	Physical Device
Host PG		Add Device			

3.	Select Add Device.

└ The "Add New Device" dialog opens.

		🖽 Add New Device				-		]
		Fiter	_					
		Device:					Filter	
			-	[	1			
		CDI Communication FXA2	291	Version V2.09.00 (2016	Class	Manufacturer Endress+Hauser	Protocol CDI	
		CDI Communication USB Communication USB Communication USB FF H1 CommUnication FXA FKA520 HART Communication IPC (Level, Pressure) FX4 PCP (Readwin) TXU10/F	/IP IP-V1 I93/291 I93/291 XA291	V2.09.00 (2016 V2.09.00 (2016 V5.00.2(22) (20 V1.5.4.2 (2015 V3.27.00 (2015 V1.05.09 (2011 V1.0.56 (2016 V1.0.56 (2016 V1.02.17 (2014 V1.01.18 (2014		Endress+Hauser Endress+Hauser Softing Industrial. Endress+Hauser Endress+Hauser CodeWrights G Endress+Hauser Endress+Hauser	CDI TCP/II CDI USB PROFIBUS FDT FIELC ISS HART HART IPC PCP	
		PROFIdm DPV1 SFGNetwork		V 2.20.0(121) ( V1.10.00.343 (	🦁 . 🦁 dtmSp	Softing Industrial. Endress+Hauser	Profibus Df SFG5xx >	
		-	Device	e type (DTM) informat	tion			
		Device: Manufacturer:	CDI Co Endres	ommunication FXA29 ss+Hauser	1			
		Manufacturer ID:	17					
		Software revision:						
		Profile revision: Is generic:	No					
		1				ОК	Cancel	
4.	Sele	ect the <b>SFGI</b>	Jetv	<b>vork</b> ite	m ar	nd click	OK.	
	L	The SFGNe	two	rk is ad	ded t	o the n	etwor	'k.
5	In ti	he "Network	" di:	alog ric	tht-cl	ick SEG	Nota	zork
٦.	111 (1	A dram day	- uit	int on on			I VCLW	
	-	A drop-dov	VII II	ist open	IS.			
6.	Sele	ect <b>Connect</b>	•					
	L	The connec	tior	n to the	devid	e is est	ablisł	ned and is indicated by a green arrow.
7.	In tl	he "Network	dia	alog. ric	iht-cl	ick the	SFG5	00Network item.
	L	A drop-dov	vn li	ist open	ıs.			
8.	Sele	ect <b>Create N</b>	letw	vork.				
	L	When you a found. The	scar n sc	n at the an agai	SFGN n on	Vetworl the SFC	c leve 3500	l, all the SFG500s on the Ethernet are level to see the ET200M/iSP.

FieldCare scans the Ethernet network and displays the available devices.

				EN SFGNetwork
SFG500_PB_TEST_RACK	4p	SFGNetwo 1		SFG500
SFG500_PB_RIO_Lab_Test	4b	SFGNetwo 2		SFG500
	4p	SFG500Ch 5		Re Placeholder FieldDevice
	4b	SFG500Ch 6		Re Placeholder FieldDevice
- dia	4b	SFG500Ch 8		CommDTM ET 200M
	4b	SFG500Ch 2	3	Receholder FieldDevice
- da	4b	SFG500Ch 9	8	CommDTM ET 200 SP
	4b	SFG500Ch 1	01	Placeholder FieldDevice

- 9. In the "Network" dialog, right-click CommDTM.
  - └ A drop-down list opens.

- 10. Select Create Network.
  - └ The "Communication Channel" dialog opens.



- **11.** Select all the channels that should be scanned.
  - └ The channels are scanned. The HART devices connected to the ET200M/iSP are displayed and can be used.

**12.** Save the project  $\rightarrow \square$  13.

# 26 PROFIBUS DP/PA and HART via Fieldgate SFG500 and Turck Remote I/O

### 26.1 Use case

When operating with a Turck EXCOM Remote I/O a component architecture can be used. The Fieldgate SFG500 is connected to the Ethernet backbone via the LAN 1 Ethernet socket. PROFIBUS PA devices are connected to the network via e.g. a transparent coupler. The HART devices (4 to 20 mA) are connected point-to-point to the Turck Remote I/O which in turn is connected to the PROFIBUS DP segment.

To see all the devices on the PROFIBUS DP/PA segment, FieldCare requires:

- SFGNetwork DTM
- Licensed Turck CommDTM EXCOM
- PROFIBUS DeviceDTMs
- HART DeviceDTMs



36 Fieldgate SFG500 access to HART devices via Turck Remote I/O

- 1 Control network
- 2 PLC/DCS
- 3 FieldCare
- 4 Fieldgate SFG500 Access Point
- 5 Ethernet
- 6 PROFIBUS DP
- 7 Turck EXCOM Remote I/O
- 8 HART 4 to 20 mA
- 9 DP/PA coupler
- 10 PROFIBUS PA

## 26.2 Connection procedure

#### Establishing a connection

**1**. Create a project  $\rightarrow \square$  13.

2.	In the "Network" dialog, right-click <b>Host PC</b> .
	└ A drop-down list opens.
	Network Network Tag C Channel A Device t. Physical Device
	Add Device
3.	Select Add Device.
	└╾ The "Add New Device" dialog opens.
	Add New Device
	Mandacturer. Device: Filter
	Device     Version     Class     Manufacturer     Protocol     Class     Manufacturer     Protocol     Class     Manufacturer     Manufacturer     Potocol     Class     Manufacturer     Class     Manufacturer     Potocol     Class     Manufacturer     Potocol     Man
	CDI Communication TCP1/P V 2/3900 (2016. ♥ - Endest+Hauer CDI TCP/II CDI Communication USB V 2090 (2016. ♥ - Endest+Hauer CDI USB Comm/TM PROFBUS DPV1 V 500 (221) CD. ♥ - Softing IndustalPROFBUS
	FF H1 CommOTM         V1.5.4.2 (2015
	HAH Lommunoston         V1.305 (2019
	SFGNetwork V1.10.00.343 ( 🦉 dmSp Endress+Hauser SFG5w
	< >
	Device:         CD1/information           Device:         CD1 Communication FXA21           Manufacturer:         Endess
	Device ID / SubD: Marufacturer ID: 17 Hardware erwision: Software minision:
	Device revision: Profile revision: In generic: No
	OK Cancel
4.	Select the <b>SFGNetwork</b> item and click <b>OK</b> .
	└ The SFGNetwork is added to the network.
5.	In the "Network" dialog, right-click <b>SFGNetwork</b> .
6	- A drop-down list opens.
0.	<ul> <li>The connection to the device is established and is indicated by a green arrow</li> </ul>
7.	In the "Network" dialog, right-click to select the <b>SFGNetwork</b> item.
	└ A drop-down list opens.
8.	Select <b>Create Network</b> .
	Next Ty Constant Constant Solar So Solar Solar S
	If only one Fieldgate is found, its DTM is opened automatically.
	Alternatively, the CommDTM can be added manually.
i	If no DTM has been found, it is possible that the UDP ports are blocked.
	For detailed information on "FieldCare SFE500 Windows Firewall": Operating Instructions $\rightarrow \cong 11$
9.	In the "Network" dialog, right-click <b>SFG500</b> .
10	- A drop-down list opens.
10.	<ul> <li>The connection to the device is established and is indicated by a green arrow</li> </ul>
	······································

11. In the "Network" dialog, right-click **SFG500**.

└ A drop-down list opens.

#### 12. Select Create Network.

➡ FieldCare scans the PROFIBUS network for the Turck Remote I/O. The CommDTM of the excom is added to the network.



If the message "Connect After Scanning" appears, this can be selected or not. It is advisable to disable this option.

ispla	Project DTM Catalog Scanning Tag Management W@M Plant
Att	er Scanning
	•
F	Connect after scanning if only one device is found and automatically
	open the DTM in the Online window
	open the DTM in the Online window
-	open the DTM in the Online window
	open the DTM in the Online window
	open the UTM in the Online window
Edt Vew	Severative ITP Code: Jan Index Educ Jak



■ 37 Scan FieldCare/excom if there is a connection after scanning.

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an -				8 ×				
ok Taj	Correction Diamel	400%	Device type (21%)	Physical Devi				
Heal PC								
STORAGE STORAGE	1		EH street					
1			EH store					
even (PA	() possoure	- 55	f and the second second					
			-					

38 Scan FieldCare/excom if there is no connection after scanning.

 If the "Connect After Scanning" option is selected under Extras the "Connect After Scanning" dialog opens. Click OK.

Ŷ	than one device was found. The option will be ignored for this scanning session. Please connec and open DTMs manually!
---	--

- 14. In the "Network" dialog, right-click the excom DP-N item.
  - └ A drop-down list opens.
- 15. Select Connect.
  - └ The connection to the device is established and is indicated by a green arrow.
- 16. In the "Network" dialog, right-click the excom DP-N item.
  - └ A drop-down list opens.

#### 17. Select Create Network.

- ← The devices found are added to the network.
- **18.** If the "Connect After Scanning" option is selected under **Extras** the "Connect After Scanning" dialog opens.

Click OK.

į	"Connect after scanning" is marked, but more than one device was found. The option will be ignored for this scanning session. Please connect and open DTMs manually!
	ОК

19. In the "Network" dialog, right-click an excom module.

20. Select Connection.

- 21. In the "Network" dialog, right-click an **excom module**.
- 22. Select Create Network.
- **23.** Save the project  $\rightarrow \square$  13.

#### Other functions via HART devices

In the "Network" dialog, right-click the excom DP-N item.
 A drop-down list opens.

- 2. Select **Other Functions** → **HART Devices**.
  - ← The "Excom DP-N (HART-LiveList)" dialog opens.

			names data in the
45	SFG500Dramel	55	<b>1</b> mar 194
te to device	Internal bus	0	GOP-N
e DTM data	Internal bus	1	DM80-N
tore DTM data	Internal bus	2	DM80-N
	Internal bus	3	DF20-N F
ine Parameterize	Internal bus	4	DHO-N
ine Parameterize	internal bus	5	DO40N
erve	Internal bus	6	AIH40-N 1H
figuration	Ch01	0	Cerabar S /
phosis	0102	0	CIII (TEMP / T.
Itional Eunctions	About		
nnel functions	Register		
ice in Web	Historical	Diagnosis	
umentation +	Firmware	update	
ert/Eport +	Export		
	to device     to device     to device     to TM des     to Parameterize     ine Parameterize	et o denice Veneral bus et o denice Veneral bus 101M data Veneral bus tore OTM data Veneral bus Veneral bus	Image: second

Excom does not have a HART LiveList as an additional function.

- Turck excom Remote I/O is successfully tested with:
- FieldCare SFE500
  - FieldCare version 2.11.00
  - DTM for Fieldgate SFG500 version 1.09.00
  - DTM for excom Remote I/O system version 1.12.4
- FieldgateSFG500
- Fieldgate SFG500 with firmware 01.09.00-03131
- Turck excom Remote I/O system Turck GPD-IS with Firmware 2.2
# 27 PROFIBUS DP/PA and HART via Fieldgate SFG500 and Stahl Remote I/O

### 27.1 Use case

When operating with a Stahl CPM 9440 Remote I/O the component architecture can be as shown in the following graphic. The Fieldgate SFG500 is connected to the Ethernet backbone via the LAN 1 Ethernet socket. PROFIBUS PA devices are connected to the network via e.g. a transparent coupler. The HART devices (4 to 20 mA) are connected point-to-point to the Stahl Remote I/O which in turn is connected to the PROFIBUS DP segment.

To see all the devices on the PROFIBUS DP/PA segment, FieldCare requires:

- SFGNetwork DTM
- PROFIBUS CommDTM
- PROFIBUS DeviceDTMs
- HART DeviceDTMs



39 Fieldgate SFG500 access to HART devices via Stahl Remote I/O

- 1 Control network
- 2 PLC/DCS
- 3 FieldCare
- 4 Fieldgate SFG500 Access Point
- 5 Ethernet
- 6 PROFIBUS DP
- 7 Stahl CPM 9440 Remote I/O
- 8 HART 4 to 20 mA
- 9 DP/PA coupler 10 PROFIBUS PA
- 10 PROFIBUS PA

### 27.2 Connection procedure

### Establishing a connection

**1**. Create a project  $\rightarrow \triangleq$  13.

2.	In t	he "Network	dia	alog. right-cl	lick <b>Hos</b>	t PC.	
	╘╼	A drop-dov	vn li	st opens.			
		Network Network Tag C Cha	nnel A	Device t Physical Dev	ice		
		Add	Device				I
3.	Sel	ect <b>Add Dev</b>	ice.	Dorrigo" diplo	aonona		
	-		ew		g opens		7
		Add New Device					
		Manufacturer: Device:				Filter	
		Device     CDI Communication FXA     CDI Communication TCP	291 /IP	Version Class V2.09.00 (2016 ) - V2.09.00 (2016 ) -	Manufacturer Endress+Hauser Endress+Hauser	Protocol CDI CDI TCP/II	
		CDI Communication USB CommDTM PROFIBUS D FF H1 CommDTM	P-V1	V2.09.00 (2016 💱 - V5.00.2(22) (20 💱 - V1.5.4.2 (2015 💱 -	Endress+Hauser Softing Industrial Endress+Hauser	CDI USB PROFIBUS FDT FIELC	
		Flow Communication FX4 FX4520 HART Communication IPC (Level, Pressure) FX4	193/291	V3.27.00 (2015 V - V1.05.09 (2011 V - V1.0.56 (2016 V - V1.02.17 (2014 V -	Endress+Hauser Endress+Hauser CodeWrights G Endress+Hauser	HART HART IPC	
		PCP (Readwin) TXU10/F PR0Fldtm DPV1 SFGNetwork	XA291	V1.01.18(2014 😨 V 2.20.0(121) ( 🦉 V1.10.00.343 ( 💱 dtmSp.	Endress+Hauser Softing Industrial. Endress+Hauser	PCP Profibus DF SFG5xx	
		Device:	Device	type (DTM) information		>	
		Manufacturer: Device ID / SubID: Manufacturer ID:	Endres 17	s+Hauser			
		Software revision: Device revision: Profile revision:					
		Is generic:	No		ОК	Cancel	
/1	Sol	act the SEGN	Joty	vork item a	nd click	0K	
т.	501 L <b>ə</b>	The SFGNe	two	rk is added t	to the n	etwor	k.
5.	In t	he "Network	dia	alog, right-c	lick <b>SFG</b>	Netw	vork.
	<b>└</b> ►	A drop-dov	vn li	st opens.			
6.	Sel L	ect <b>Connect</b> The connec	rtior	to the devi	re is est	ahlish	ned and is indicated by a green arrow
7.	In t	he "Network	dia:	alog, right-cl	lick to s	elect	the SFG500 Network item.
	╘╼	A drop-dov	vn li	st opens.			
8.	Sel	ect <b>Create</b> N	letw	ork.			
	4	FieldCare s	cans	s the Ethern	et netw	ork ai	nd displays the available devices.
		Technark           Network Tag           Hot PC           It of 19 Officerrork           Reg 19 Officerrork           Reg 19 Officerrork		Connection Disnot Addre	II Device type (DTM) Phy II (STGNetwork III (STGNetwork)	a : nical Device	
		If only one	Fiel	daate is fou	nd. its D	) TM is	s opened automatically.
		Alternative	ly, t	he CommDI	TM can	be ad	ded manually.
i	If no	o DTM has b	een	found, it is	possible	e that	the UDP ports are blocked.
Ĩ	For Inst	detailed information $\rightarrow$	orma 🗎 1	ation on "Fie 1	ldCare S	SFE5(	)0 Windows Firewall": Operating
9.	In t ⊾	he "Network A drop-dov	t" dia vn li	alog, right-cl st opens.	lick <b>SFG</b>	500.	
10.	Sel	ect <b>Connect</b>		*			
	╘╼	The connec	tior	to the devi	ce is est	ablisł	ied and is indicated by a green arrow.

- 11. In the "Network" dialog, right-click **SFG500**.
  - └ A drop-down list opens.

#### 12. Select Create Network.

└→ FieldCare scans the PROFIBUS network for the Stahl Remote I/O. The "Create Network - Scanning Result" dialog opens.

hannel : Addt Status	Offine/Device	DTM Quality	Device type (DTM)	Class (DTM)	Action
(SFG500Cha 😨 New device.	. 1	1 2	CPM 9440		Add to project
M quality level	at (SFG500Channel 1 Ianulacturer ID and D	20) Yevice Type ID of It	te assigned device type (D	TM) match those of	the hardware information
TM quality level	t (SFG500Channet 1 Ianufacturer ID and D	20) Vervice Type ID of It Online devi	te assigned device type (D ce information	TM) match those of Suggested	the hardware information device type (DTM) infor
IM quality level	et (SPG500Channet 1 Ianufacturer ID and D	20) revice Type ID of th Online devi	re assigned device type (D ce information	TM) match those of Suggested CPM 9440	the hardware information device type (DTM) infor
IM analytice declar to declar it dec	t (SFG500Channet 1 Ianufacturer ID and D	20) revice Type ID of It Online devi	te assigned device type (D ce information	TM) match those of Suggested CPM 9440 R. STAHL	the hardware information I device type (DTM) infor Schaltgeräte GribH
IN any liner boar to device a I availy level	et (SFG500Channet 1 lanufacturer ID and D	20) revice Type ID of th Online devi Dx434.	ne assigned device type (D ce information	TM) match those of Suggested CPM 9440 R. STAHL Dx45A/944	the hardware information I device type (DTM) infor Schattgeräte GribH 60/22-01-21
IN aquality level	et (SFIs500Channel: 1 Ianufacturer ID and D	20) revice Type ID of th Online devi Dx434.	ne assigned device type (D ce information	TM) match those of CPM 9440 R. STAHL Dot93/944 158	the hardware information I device type (DTM) infor Schaltgeräte GribH 10/22-01-21
The quality level	et (SFIs500Channel 1 lanufacturer ID and D	20) revice Type ID of It Online devi	ne assigned device type (D ce information	TM) match those of CPM 9440 R. STAHL Dx492/944 158	the hardware information I device type (DTM) infor Schattgeräte GmbH 10/22 01-21
IE vice_ideversion	et (SF 6500Channel 1 Ianufacturer ID and D	20) revice Type ID of th Online devi	re assigned device type (D	TM) match those of CPM 9440 R. STAHL Dr43/34/94/ 158	the hardware information (device type (DTM) infor Schattgeräte GribH (0/22-01-21
The applyment dock to drive a Image of the applyment dock to drive a formation of the applyment of the applyment formation of the applyment of the applyment formation of the applyment of the applyment percent of the applyment of the applyment of the applyment percent of the applyment of the applyment of the applyment percent of the applyment of	et (SF 6500Channel 1 Ianufacturer ID and D	20) Levice Type ID of I Driline devi Dr4SA	ne assigned device type (D	TM) match those of Suggested CPM 9440 R: STAHL Dot32/344 158	the hardware information I device type (DTM) infor Schaftgeräte GribH IO/22-01-21
The autophysics document document The quality level Manufacture: dent Number (ISD) / Sub ID DeVICE_MAN, ID BAPDWARE_REVISION DOFTWARE_REVISION DOFTWARE_REVISION Dotter service: hother existence operation:	It ISFERSUCCAMENTE lanufacturer ID and D	20) Revice Type ID of It Drifne devi Dr4SA	ne assigned device type (D ce information	TM) match those of CPM 9440 R: STAHL 0x454/944 158	the hardware information I device type (DTM) infor Schaltgeräte GnibH I0/22-01-21
In augment solar to treve : If quality level II	It (SFGSUUCharnet 1 anuliacharer ID and E	Drilne devi Drilne devi Dx49A PROFIBUS	ne assigned device type (D ce information DPA/1	TM) match those of Suggested CPM 9440 R: STAHL Do45x/34- 158 No PROFIBU:	the hardware internation (device type (DTM) infor Schattgeräte GnibH 10/22-01-21
Im subpliere could device a EVICE_ID EVICE_ID EVICE_ID EVICE_ID EVICE_VOID EVICE EVICE_VOID EVICE_VOID EVICE_VOID EVICE	It (SFGS00Charnet 1 anufacturer ID and D	20) Ervice Type ID of II DwSA PROFIBUS	re assigned device type (D ce information DPAN1	TM) match those of CPM-9440 PL STAHL Dx83x/34 158 No PROFIBUS	the hardware information I device type (DTM) infor Softatgerate GmbH 00/2201-21
In adaption council of PCCE [] DEVICE [D Territor And Annual Council of Tech ID DEVICE ADAR Territor Annual Council of Tech ID DEVICE ANALI DEVICE ANALIA DEVICE SERVICE DEVICE DEVICE DEVICE DEVICE DEVICE SERVICE DEVICE DEVICE DEVICE SERVICE DEVICE SERVICE DEVICE SERVICE DEVICE SERVICE DEVICE DEVICE DEVICE DEVICE DEVICE SERVICE DEVICE DEVICE DEVICE DEVICE DEVICE DEVICE DEVICE DEVICE DEVICE DEVICE DEVICE DEVICE	It (SFGSOUCharnet 1 anufacturer ID and C	20) Drilne devi Dr4SA PR0F8BUS 120	re assigned devce type (D ce information	TM) match those of Suggested CPM 9440 R: STAHL De583/S44 158 No PROFIBUS	the hardware information denice type (DTM) infor Schalgenbe GribH 10/22-01-21

#### 13. Click OK.

└ The CommDTM of the Stahl Remote I/O is added to the network.



- **14.** If more than one device is found, the "Connect After Scanning" message appears. Click **OK**.
- 15. In the "Network" dialog, right-click to select the **Stahl Remote I/O** item.
  - └ A drop-down list opens.
- 16. Select Create Network.
  - └→ The segment to which the Stahl Remote I/O is connected is scanned for devices. The "Create Network - Scanning Result" dialog opens.

hannel: Addt	Status	Ottline/Device	DTM Quality	Device type (DTM)	Class (DTM)	Action
[Channel 0:29]	New device found	-/DP/PA Coupler	2 5	Placeholder FieldDevi		Add to project
[Channel 0.5]	New device found	-/LT 501	8 1	Prosonic M / FMU4x	Level	Add to project
[Channel 0.72]	New device found	-/FT 502	5 1	Prowitl / 72 / PA / V1	Flow	Add to project
TM accignment of	erais   Status and action letais for device at IChar	rel 0.51				
TM assignment o TM quality level	details for device at [Chan U Assigned	nel 0.5] device type (DTM) e	stactly matches the	hardware information with a	IIDs and revision.	
TM assignment of TM quality level	Setails for device at [Chan US Assigned	nel 0.5) device type (DTM) e	watly matches the	hardware information with a	IIDs and revision.	
TM accignment of TM quality level	etails for device at [Chan Stalls for device at [Chan Stalls for device at [Chan at [Chan]	nel 0.5] device type (DTM) e	wacily matches the Online device info	hardware information with a	IIDs and revision. Suggested device	type (DTM) information
TM accignment o TM quality level	erens i Statut and accorr letaits for device at [Chan U Assigned	nel 0.5] device type (DTM) e	wacily matches the Online device info PROSONIC M	hardware information with a	IIDs and revision. Suggested device Prosonic M / FMU	type (DTM) information Hz / PA / V4 xx
TM assignment o TM quality level IEVICE_ID fanulacturer.	every   Shatu and accord letails for device at [Chan 3] Assigned	nel 0.5] device type (DTM) e	sactly matches the Online device infor PROSONIC M Endress+Hauser	hardware information with a	IID's and revision. Suggested device Prosonic M / FMU Endress+Hauser	s type (DTM) information Mix / PA, / V4.sx
EVICE_ID fanulacturer.	every   Salati and accord details for device at [Chan 32] Assigned	onan j nel 0.5] device type (DTM) e	wactly matches the Online device infor PROSONIC M Endress+Hauser 0x152C	hardware information with a	I Dis and revision. Suggested device Prosonic M / FML Endress-Hauser 0x152C:0x9700/	s type (DTM) information Mix / PA, 7V4.sec Prosonic M / FMU44 / Pr
TM assignment o TM quality level DEVICE_ID Aanufacturer dent Number (SS DEVICE_MAN_ID	every   Statut and accorr latalit for device at [Chan 3] Assigned (D) / Sub ID	onan ( nel 0.5) device type (DTM) e	sactly matches the Online device infor PROSONIC M Endress+Hauser 0x152C 17	hardware information with a	I Dis and revision. Suggested device Prosonic M / FML Endress-Hauser 0x152C: 0x9700/ 17	type (DTM) information Mx / PA / V4.sx Prosonic M / FMU4x / P
TM assignment o TM quality level DEVICE_ID Aerulachurer dent Number ISS DEVICE_MAN_IE 40RDWARE_RE	Example and account of a count of	onan ( nel 0.5) device type (DTM) e	sactly matches the Online device infor PROSONIC M Endress+Hauser Dx152C 17	hardware information with a	IID's and revision. Suggested device Prosonic M / FML Endress+Hauser 0x1522:0x9700// 17	t type (DTM) information Max / Ph. / V4.se Prosonic M / FMU4a / Pr
DEVICE_ID Annulachurer dert Number (GS DEVICE_MAN_IC ARDWARE_RE SOFTWARE_RE	El Saladi año acom detals for device al [Dan El Assigned i0] / Sub ID ) VISION VISION	onan ( nel 0.5) device type (DTM) e	oxactly matches the Online device infor PROSONIC M Endress-Hauser Dx152C 17 01.04.00	hardware information with a	IIDs and revision. Suggested device Protonic M / FML Endress-Hauter 0x1522:0x6700/ 17	s type (DTM) information Mr / PA /V4.ss Prosonic M / FMU4a / P.
DEVICE_ID Annulachurer dent Number IGS DEVICE_ID Annulachurer dent Number IGS DEVICE_MAN_IC ANDWARE_RE SOFTWARE_RE Device revision:	Energy Salut and account and account and account and account and provide a Data of the straight of the straigh	onan ( nell 0.5) device type (DTM) e	sectly matches the Online device info PROSONIC M Endress-Hauser 0x152C 17 01.04.00 01.04.00	hardware information with a	I D s and revision. Suggested device Prosonic M / FMU Enders-Hauter 0x152C:0x9700/ 17 01.04.00	s type (DTM) information Max / PA, 7V4.se Prosonic M / FMU4a / Pr
DEVICE_ID Anndacturer dert Number (S DEVICE_ID Anndacturer dert Number (S DEVICE_MAN_IC AARDWARE_RE Device revision Polife revision	Elever j Saladi and adout details for device at [Dan U] Assigned (D) / Sub ID (D) / Sub ID	onam   nel 0.5] device type (DTM) e	ovacily matches the PRIOSONIC M Endress-Hauser 0x152C 17 01.04.00 01.04.00 3.0	hardware information with a	IIDs and revision. Suggested device Proportic M / FML Endress-Hauper Du152C 0x87007 17 01.04.00 30	type (DTM) information J4r / PA / V4.sx Prosonic M / FMU4e / Pr
TM accignment of TM accignment of TM quality level DEVICE_ID Manufacturer derit Number (05 EVICE_MAN_IC AARDWARE_RE DEVICE_MAN_IC AARDWARE_RE Device revision: s genetic	Elevent Statut and account details for device at [Dan 3] Assigned (0) / Sub ID () VISION VISION	omann   enl 0 5] device type (DTM) e	osocily matches the Online device infor Endress+Hauser 0x152C 17 01.04.00 01.04.00 3.0	hardware information with a	IIDs and revision. Suggested device Proconic M / FML Endess-Hauser Dx152C-0x9700/ 17 01.04.00 3.0 No Procenue option	s type (DTM) information Mx / PA / V4.sx Protonic M / FMU4x / P.
TM assignment of TM quality level DEVICE_ID Manufacturer dent Nunber [35 DEVICE_MAN_ID ANDWARE_RE SOFTWARE_RE SOFTWARE_RE SOFTWARE_RE Jevice revision Phole revision Jeed Photocol	IDI / Sub ID VISION VISION VISION VISION	obian   eko 5] device type (DTM) e	Socily matches the PROSONIC M Endess:House Outso:House Outso: 17 01.04.00 01.04.00 3.0 PROFIBUS DP/V1 PROFIBUS DP/V1	hardware information with a	IIDs and revision. Suggested device Prosonic M / FMU Enders-Hauer Du152C-0x9700/ 17 01.04.00 3.0 No PROFIBUS DPAY	stype (DTM) information Mar / PA / V4 set Prosonic M / FMU4a / Pr 1
DEVICE_ID DEVICE_ID devidesheet Sent Number (SS EVICE_MAN_ID GARDWARE_RE OFTWARE_RE OFTWARE_RE OFTWARE_RE Service revision: balle revision: Service revisi	ID/ Sub ID VISION UM	obiani j eko 55 device type (DTM) e	Chine device infor PROSONIC M PROSONIC M Endess-Hause 0152C 17 01.04.00 01.04.00 3.0 PROFIBUS DP/V1 YMUNR 01D 5	hardware information with a	IDs and revision. Suggested device Process M / Faule DetS2C-0x97004 17 01.04.00 3.0 No PROFIBUS DPAV	s type (DTM) information Ma / PA / VA ox Presonic M / PMU4a / P 1
TM assignment of TM assignment of TM quality level DEVICE_ID Manufacturer dent Number [35 DEVICE_MAN_LI AADWARE_RE SOFTWARE_RE Device revision Prolite revision Prolite revision Prolite revision Prolite revision Serreic Jard Photocol DEVICE_SER_IN Bus address	ensering a statute and addome details for device at [Ohan <u>Statute</u> ] Assigned <u>Statute</u> <u>ID17 Sub ID</u> <u>VISION</u> <u>VISION</u> <u>VISION</u> <u>VISION</u>	obian   eniOS] device type (DTM) e	Stactly matches the PROSONIC M Endress Hauser (M152C 107 01.04.00 3.0 PROFIBUS DPAY YMUNR 011D 5	hardware information with a	IIDs and revision. Suggested device Prosonic M / FML Enderss-Hauser 01.04.00 3.0 No PROFIBUS DP/V	s type ID TM) information Mar / PA, 7/43 ar Prosonic M / PMU4s / P 1

### 17. Click **OK**.

└ The CommDTM is added to the network.



**18.** If the "Connect After Scanning" option is selected under **Extras** the "Connect After Scanning" dialog opens.

Click **OK**.



19. In the "Network" dialog, right-click to select the CPM 9440 item.
A drop-down list opens.

#### 20. Select Connect.

- → The connection to the device is established and is indicated by a green arrow.
- 21. In the "Network" dialog, right-click to select the CPM 9440 item.
  - └ A drop-down list opens.

### 22. Select Create Network.

└ The "Select Communication Channel" dialog appears.



#### 23. Select Communication Channel.

└ The devices found are added to the **network**.



24. If the "Connect After Scanning" option is selected under **Extras** the "Connect After Scanning" dialog opens.

Click **OK**.

•	I"Connect after scanning" is marked, but more than one device was found. The option will be ignored for this scanning session. Please connec and open DTMs manually!
	1

**25.** Save the project  $\rightarrow \square$  13.

### Other functions via HART devices

- 1. In the "Network" dialog, right-click to select the **CPM 9440** item.
  - → A drop-down list opens.

### 2. Select **Other Functions** → **HART Devices**.

└ The "CPM 9440 (HART-LiveList)" dialog opens.



# 28 PROFIBUS DP/PA via Softing PBproUSB modem

### 28.1 Use case

The Softing PBproUSB modem allows a computer or laptop to connect to a PROFIBUS DP segment via USB

The PROFIBUS PA devices can be accessed via a DP/PA coupler.

To see all the devices on the segment of the PROFIBUS DP/PA, FieldCare requires:

- PROFIBUS DeviceDTMs
- PROFIdtm DPV1 CommDTM
- PROFIBUS driver PROFIboard



■ 40 Connection of a PBproUSB modem with a PROFIBUS PA segment

- 1 FieldCare
- 2 USB
- 3 PBproUSB modem
- 4 DP/PA coupler
- 5 PROFIBUS PA

### 28.2 Connection procedure

PBproUSB must be commissioned before it can be used. For this, the user calls the PROFIBUS Control Panel Applet from the PROFIBUS DPV1 CommDTM.

### Starting the PROFIBUS Control Panel

1. Start the **PROFIBUS Control Panel Applet**.

- 2. In the "Network" dialog, right-click **PROFIBUS DPV1 CommDTM**.
  - → A drop-down list opens.



3. Select Other Functions → PROFIBUS Control Panel Applet.

└ The "PROFIBUS Control Panel" dialog opens.

DDOELLand ICA	FG series / PROFIgate		[	Add
PROFILOA PROFILOA PBpo-PC104+ PROFILOA-S PROFILOA-S PROFILOA-S PROFILOA-VROFILOA-CA PROFILOA-PROFILOA-CA FG series / PROFILOA-	Item Data Firmware Version - cnot i	svailable>		<u>Remove</u>

For this to happen, the **PROFIBUS DVP1 CommDTM** must have been added to the **HOST PC** beforehand.

### **PROFIBUS** set-up

1. In the "PROFIBUS Control Panel" dialog, select the **PBproUSB** item and click **Add**.

└ The "Select Node Name" dialog opens.

Select Node Name	The following information is used to access
Name?	the PROFIBUS interface from an application. Please enter a symbolic node name.
	Symbolic Node Name: Node()
	< Back Next > Cancel

2. Enter a symbolic node name for the PROFIBUS DP channel (default value: Node 0) and click **Next**.

**3.** Do not change the default settings (auto) for the serial number of the device. Click **Finish**.

└→ The "PROFIBUS Control Panel" dialog returns and the symbolic name of the PBproUSB modem is assigned to the PBproUSB item.

	PROFIUSD Nodeu		Add
- PROFIboard ISA	Item	Data	Deman
- PROFloard 2  PROFlusb	Interface Number Serial Number	0 «unknown»	 Edit
PROFILIAS PROFILIAS PROFILIAS PBpro PC104+ / PBpro PC11 -PBpro PC1 -PBpro PC4 -PBpro PC4 -PBpro ETH / FG series	Firmware Type Firmware Version	FROPIstock Moster (unknown)	

#### 4. Click **Apply**.

The configuration is saved. The device is ready if a green tick appears next to the symbolic name. If a red tick appears, check whether the PROFIBUS scan is switched off.

PROFIBUS	PROFIBUS		Add
- PROFIboard ISA PROFIboard PCI	Item	Data	
- PROFicard 2	Installation API and Driver	Version 5.45.11	Pletitione
PROFlusb	Protocol Driver	5 45 10 00 release (Build 800)	Edit
Vode0	V5 Hardware Driver	5.45.11.00 release (Build 800)	
-PROFI104	V6 Hardware Driver	6.25.10.00.release (Build 800)	
- PROFITUA-S	PnP Hardware Driver	5.45.10.00.release (Build 800)	
PBpro PCI / PBpro PCI / PBpro PCI /	USB Hardware Driver	6.25.10.00.release (Build 800)	
-PBoro PCle	Application Program Interface	5.46.1.00 release (Build 800)	
- PBpro ETH / FG series	Control Panel Applet	5 46 3 00 release (Build 800)	
m +	+ [	•	

5. For single-channel Fieldgates, click **OK**.

The configuration is saved and the configuration window closes.

### 28.3 Connection procedure

#### Establishing a connection

- **1.** Create a project  $\rightarrow \square$  13.
- 2. In the "Network" dialog, right-click Host PC.
  - └ A drop-down list opens.

Network					
Network Tag	C	Channel	A	Device t	Physical Device
Host PC	•	Add Device			

- 3. Select Add Device.
  - └ The "Add New Device" dialog opens.

T ILCI					
Manufacturer:					
Device:				FI	lter
△ Device		Version	Class	Manufacturer	Protocol
CDI Communication F	XA291	V2.09.00 (2016	V -	Endress+Hauser	CDI
CDI Communication T	CP/IP	V2.09.00 (2016	V ·	Endress+Hauser	CDI TCP/
CDI Communication U	SB	V2.09.00 (2016	V .	Endress+Hauser	CDI USB
CommDTM PROFIBU	S DP-V1	V5.00.2(22) (20	Q .	Softing Industrial	PROFIBU
FF H1 CommDTM		V1.5.4.2 (2015	V -	Endress+Hauser	FDT FIEL
Flow Communication R	XA193/291	V3.27.00 (2015	Q .	Endress+Hauser	ISS
FXA520		V1.05.09 (2011	V .	Endress+Hauser	HART
HART Communication	1	V1.0.56 (2016	V .	CodeWrights G	HART
IPC (Level, Pressure)	FXA193/291	V1.02.17 (2014	V -	Endress+Hauser	IPC
PCP (Readwin) TXU1	0/FXA291	V1.01.18 (2014	V -	Endress+Hauser	PCP
PROFIdtm DPV1		V 2.20.0(121) (	Q .	Softing Industrial	Profibus D
SFGNetwork		V1.10.00.343 (	🐺 dtmSp	Endress+Hauser	SFG5xx
SFGNetwork		V1.10.00.343 (	👽 dtmSp	Endress+Hauser	SFG5xx
SFGNetwork c		V1.10.00.343 (	🦁 dtmSp	Endress+Hauser	SFG5xx
SFGNetwork	Device	V1.10.00.343 ( type (DTM) informati	V dtmSp	Endress+Hauser	SFG5xx
SFGNetwork c	Device CDI Co	V1.10.00.343 ( type (DTM) informati mmunication FXA291	v dtmSp	Endress+Hauser	SFG5xx
SFGNetwork <	Device CDI Co Endres	V1.10.00.343 ( type (DTM) informati mmunication FXA291 s-Hauser	v dtmSp	Endress+Hauser	SFG5xx
SFGNetwork s levice: levice: levice: levice: levice.lo / SubID:	Device CDI Co Endres	V1.10.00.343 ( type (DTM) informati mmunication FXA291 s+Hauser	🦁 dtmSp	Endress+Hauser	SFG5**
SFGNetwork c Device: device: device: device: device: device: Device: D: devic	Device CDI Co Endres 17	V1.10.00.343 ( type (DTM) informati mmunication FXA291 s+Hauser	v dtmSp	Endress+Hauser	SFG5**
SFGNetwork	Device CDI Co Endres 17	V1.10.00.343 ( type (DTM) informati mmunication FXA291 s+Hauser	on	Endress+Hauser	SFG5**
SFGNetwork	Device CDI Co Endres 17	V1.10.00.343 ( type (DTM) informati mmunication FXA291 s+Hauser	on	Endress+Hauser	>
SFBNetwork C SPECIAL Control C	Device CDI Co Endres 17	V1.10.00.343 ( type (DTM) informati mmunication FKA291 e+Hauser	on	Endress+Hauser	>

- 4. Select the **PROFIdtm DPV1** item and click **OK**.
  - └ The PROFIdtm DPV1 is added to the network.



5. In the "Network" dialog, click the **PROFIdtm DPV1** item.
 The configuration dialog of the DTM opens.

oard-Name:	Node0		Advesse:	jo	
schiedenes					
udrate:	93.79x8t/s	•		🔽 Automatische Voreinstellungen für Baudra	
x. Retry Linit:	1				
e Update Factor:	10		Highest Station Address:	126	
verhaten (Bt-Zete	n]				
Time:	4000				42.7 ms
. Station Delay:	1000				10.7 ms
Station Delay:	450				4.00 ms
ap Time:	250				2.67 mp
st Time:	p				Ome
get Rotation Time:	85000				907 ma
Derech			Endedness	1100	
arberech atadresse:	0		La rubba tracte.		

The Node Name (default: NodeO) entered previously in the PROFIBUS Control Panel must be selected in the "Board Name" field. The other parameters must be checked and modified as they can vary depending on the plant.

- 6. In the "Network" dialog, right-click the **PROFIdtm DPV1** item.
  - └ A drop-down list opens.





### 7. Select Create Network.

└ FieldCare now scans the network and adds all devices found to the network.



Save the project  $\rightarrow \square$  13.

# 29 PROFIBUS DP via PROFIBUS modem and WAGO Remote I/O

### 29.1 Use case

This chapter describes how FieldCare should be configured for a plant that uses a WAGO Remote I/O. The PC with FieldCare installed is connected to a PROFIBUS modem via Ethernet. A Softing PBproUSB, for example, can be used for this. The modem is connected to the WAGO Remote I/O via PROFIBUS DP. The WAGO Remote I/O is connected to HART field devices by HART via one or more WAGO modules. A cyclic master is essential for the operation of the plant. A PROCENTEC ProfiCore, for example, can be used for this.



■ 41 Access to PROFIBUS DP via PROFIBUS modem and WAGO Remote I/O

- 1 FieldCare
- 2 Ethernet/IP
- 3 PROCENTEC ProfiCore
- 4 Softing modem
- 5 PROFIBUS DP
- 6 WAGO Remote I/O

The plant described in this chapter uses a Softing profiUSB with commDTM PROFIdtm DPV1 as the PROFIBUS modem and a PROCENTEC ProfiCore as the cyclic master. Alternatively, other suitable PROFIBUS devices can also be used.

### 29.2 Connection procedure

### Establishing a connection

- **1.** Create a project  $\rightarrow \triangleq$  13.
- 2. In the "Network" dialog, right-click **Host PC**.
  - → A drop-down list opens.



### 3. Select Add Device.

└ The "Add New Device" dialog opens.

The second s				- 1	- X
Filter					
Manufacturer:				_	
Device:				Fi	ter
		Version	Class	Manufacturer	Protocol
CDI Communication FX	A291	V2.09.00 (2016	S -	Endress+Hauser	CDI
CDI Communication TC	P/IP	V2.09.00 (2016	V -	Endress+Hauser	CDI TCP/
CDI Communication US	B	V2.09.00 (2016	Υ.	Endress+Hauser	CDI USB
CommDTM PROFIBUS	DP-V1	V5.00.2(22) (20	Ψ.	Softing Industrial	PROFIBU
FF H1 CommDTM		V1.5.4.2 (2015	Q -	Endress+Hauser	FDT FIEL
Flow Communication FD	(A193/291	V3.27.00 (2015	Q -	Endress+Hauser	ISS
FXA520		V1.05.09 (2011	V -	Endress+Hauser	HART
HART Communication		V1.0.56 (2016	Υ.	CodeWrights G	HART
IPC (Level, Pressure) F.	XA193/291	V1.02.17 (2014	Q -	Endress+Hauser	IPC
PCP (Readwin) TXU10	/FXA291	V1.01.18 (2014	V -	Endress+Hauser	PCP
PROFIdtm DPV1		V 2.20.0(121) (	Q .	Softing Industrial	Profibus E
SFGNetwork		V1.10.00.343 (	👽 dtmSp	Endress+Hauser	SFG5xx
<					,
<	Device	type (DTM) informat	ion		>
< Device:	Device CDI Co	type (DTM) informat mmunication FXA29	ion 1		3
< Device: Manufacturer:	Device CDI Co Endres	: type (DTM) informat mmunication FXA29 s+Hauser	ion 1		)
< Device: Manufacturer: Device ID / SubID:	Device CDI Co Endres	type (DTM) informat mmunication FXA29 s+Hauser	ion 1		)
< Device: Manufacturer: Device ID / SubID: Manufacturer ID:	Device CDI Co Endres 17	type (DTM) informat mmunication FXA29 s+Hauser	ion 1		)
Manufacturer: Device 10 / Sub10: Manufacturer ID: Hardware revision:	Device CDI Cc Endres 17	type (DTM) informat mmunication FXA29 s+Hauser	ion 1		2
< Device: Manufacturer: Device ID / SubID: Manufacturer ID: Handware revision: Software revision:	Device CDI Cc Endres	type (DTM) informat mmunication FXA29 s+Hauser	ion 1		)
Construction of the second	Device CDI Cc Endres	type (DTM) informat mmunication FXA29 s+Hauser	ion 1		)
Device: Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision: Software revision: Device revision: Perifier ervision: Perifier ervision:	Device CDI Cc Endres	ttype (DTM) informat mmunication FXA29 s+Hauser	ion 1		3

- 4. Select the **DTM** modem and click **OK**. If a Softing modem is used, PROFIdtm DP-V1 is the correct DTM.
  - └ The modem is added to the network.

Host PC
 ⊡\_% PROFidm DPV1
 4
 0
 □\_% PROFidm DPV1

- 5. In the "Network" dialog, right-click **PROFIdtm DPV1**.
  - └ A drop-down list opens.
- 6. Select **Configuration**.
  - └ The "Configuration" dialog opens.

lisc			
Baud Rate:	93.75kBit/s	<ul> <li>Automatic Default</li> </ul>	s for Baud Rate
Max. Retry Limit:	1	-	
Gap Update Factor:	10	Highest Station Address: 126	
Slot Time:	1240		2.00 ms
Slot Time:	1240		2.00 ms
Slot Time: Max. Station Delay:	200		2.13 ms
Slot Time: Max. Station Delay: Min. Station Delay:	200 45		2.13 ms 0.480 ms
Slot Time: Max. Station Delay: Min. Station Delay: Setup Time:	240  200  45  45		2.13 ms 0.480 ms 0.480 ms
Slot Time: Max. Station Delay: Min. Station Delay: Setup Time: Quiet Time:	240  200  45  45  0		2.13 ms 0.480 ms 0.480 ms 0 ms

- 7. Adjust the configuration parameters of the modem individually.
- In the case of the Softing modem, these are the timing parameter and the baud rate in particular. These parameters can vary depending on the plant. If these parameters are not correct, the following settings cannot be made correctly since the device list is empty, for instance.
- 8. Select the modem in the "Network" dialog.
  - └ A drop-down list opens.
- 9. Select Create Network.
  - ← The Remote I/O is found and appears in the structure.
- 10. Select **Remote I/O** and click **Disconnect** in the context menu.

### **11.** Select **Remote I/O** and click **Configuration**.

└ The "WAGO Configuration" dialog opens.

Device	Information Module Configuration	Parameterization		
#	Slot	Module	U.	
01	Slot(1), Process Data Interface	750-333 No PI Channel		
02	Slot(2)	75x-482 2AI/4-20 mA/SE		1
03	Slot(3)			L
04	Slot(4)			
05	Slot(5)			
06	Slot(6)			
07	Slot(7)			
08	Slot(8)			
00	C1-x(0)			

- 12. Select the "Module Configuration" tab in the dialog. The first slot (1) is occupied by the WAGO head module and cannot be edited. Set all the modules on the head module.
- 13. Select **Remote I/O** and click **Connect** in the context menu.
  - ← Remote I/O is online: this is indicated by a green background.

#### 14. Select **Devicelist** and click **Additional Function**.

└ The Devicelist of the Remote I/O opens.



Recursive scanning cannot be performed with the Wago Remote I/O. Therefore, all the devices connected to the Remote I/O and displayed in the device list must be added manually.

15. Click **Add Device** in the context menu.

← The "Add New Device" dialog appears.

1	Device: 0750-0333 PROFIBUS Description: 750 Remote 10	/HART Gateway	A F	-
Device	Information Module Configuration	Parameterization		
#	Slot	Module	U.	
01	Slot(1), Process Data Interface	750-333 No PI Channel		- 1
02	Slot(2)	75x-482 2AI/4-20 mA/SE		1
03	Slot(3)			L
04	Slot(4)			
05	Slot(5)			
06	Slot(6)			
07	Slot(7)			
08	Slot(8)			
09	Slot(9)			

#### 16. Select Device.

← The "Assign Device to Channel" dialog opens.

Assign Device to Ch	nannel	
Channels:		
Channel Name	Count/Assigned Device(s)	
M02_Ch01	1 : Cerabar S / PMx 7x / V	
M02_Ch02		
M02_Ch03		
M02_Ch04		
M02_Ch05		
MUZ_LNU6		

#### 17. Assign the channel to the device.

└ The device appears in the network structure and can be used.



# 30 PROFIBUS DP via PROCENTEC ProfiCore

### 30.1 Use case

This chapter describes how FieldCare should be configured for a plant that uses a PROCENTEC ProfiCore. The PC with FieldCare installed is connected to a PROCENTEC ProfiCore via Ethernet. The ProfiCore is connected via PROFIBUS DP to a PROFIBUS DP/PA coupler which is connected to the field devices via PROFIBUS PA.

The following software packages must be installed and configured on the PC:

- PCD setup
- CommDTM PROCENTEC DP-V1 master
- ProfiTrace

These can be downloaded from the PROCENTEC site at www.procentec.com



42 Access to PROFIBUS DP via PROCENTEC ProfiCore

- 1 FieldCare
- 2 USB
- 3 PROCENTEC ProfiCore
- 4 PROFIBUS DP
- 5 DP/PA coupler

# **30.2** Connection procedure

### Establishing a connection

- **1**. Create a project  $\rightarrow \blacksquare$  13.
- 2. In the "Network" dialog, right-click Host PC.
  - └ A drop-down list opens.

Network					
Network Tag	C	Channel	A	Device t	Physical Device
Host PG	•	Add Device			

- 3. Select Add Device.
  - └ The "Add New Device" dialog opens.

Device:					
Device:					
				F	iter
△ Device		Version	Class	Manufacturer	Protocol
CDI Communication F	XA291	V2.09.00 (2016	<b>§</b> -	Endress+Hauser	CDI
CDI Communication T	CP/IP	V2.09.00 (2016	Ω.	Endress+Hauser	CDI TCP.
CDI Communication L	JSB	V2.09.00 (2016	V -	Endress+Hauser	CDI USB
CommDTM PROFIBU	IS DP-V1	V5.00.2(22) (20	Ψ.	Softing Industrial	PROFIBL
FF H1 CommDTM		V1.5.4.2 (2015	Q -	Endress+Hauser	FDT FIEL
Flow Communication	FXA193/291	V3.27.00 (2015	Q -	Endress+Hauser	ISS
FXA520		V1.05.09 (2011	Q -	Endress+Hauser	HART
HART Communication	n	V1.0.56 (2016	V -	CodeWrights G	HART
IPC (Level, Pressure)	FXA193/291	V1.02.17 (2014	- T	Endress+Hauser	IPC
PCP (Readwin) TXU1	0/FXA291	V1.01.18 (2014	- T	Endress+Hauser	PCP
PROFIdtm DPV1 SFGNetwork		V 2.20.0(121) (	0.	Softing Industrial	Profibus (
		V1.10.00.343 (	🤨 dtmSp	Endress+Hauser	SFG5xx
<					,
<	Device	type (DTM) informat	ion		3
< Device:	Device CDI Co	s type (DTM) informat	ion 1		3
< Device: Manufacturer:	Device CDI Co Endres	e type (DTM) informat mmunication FXA29 is+Hauser	ion 1		3
< Device: Manufacturer: Device ID / SubID:	Device CDI Co Endres	s type (DTM) informat mmunication FXA29 s+Hauser	ion 1		3
<     Device: Manufacturer: Device ID / SubID: Manufacturer ID:	Device CDI Cc Endres 17	⊧type (DTM) informat mmmunication FXA29 s+Hauser	ion 1	1	2
Cevice: Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision: Cevice: Hardware revision:	Device CDI CC Endres 17	s type (DTM) informat mmmunication FXA29 s+Hauser	ion 1		3
< Device: Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision: Software revision:	Device CDI Co Endres 17	s type (DTM) informat ommunication FXA29 s+Hauser	ion 1		3
Device:     Manufacturer:     Device ID / SubID:     Manufacturer ID:     Hardware revision:     Device revision:     Device revision:     Device revision:	Device CDI Cc Endres 17	stype (DTM) informat mmunication FXA29 s+Hauser	ion 1		3
Device:     Manufacturer:     Device ID / SubID:     Manufacturer ID:     Handware revision:     Software revision:     Perifie revision:     Prefie revision:	Device CDI Cc Endres 17	type (DTM) informat mmunication FXA29 s+Hauser	ion 1		3
Cevice: Man/acturer: Device ID / SubID: Man/acturer ID: Hardware revision: Software revision: Device revision: Device revision: Is genetic: Is genetic:	Dewicz CDI Cc Endrer 17 No	s type (DTM) informat mmunication FXA29 s+Hauser	ion 1		3
¢ Device: Mandacturer Device (D / Sub)t: Mandacturer (D): Mandacturer (D): Mandacturer (D): Mandacturer (D): Mandacturer (D): Device revision: Profile revision: Profile revision: Is genete:	Device CDI Cc Endree 17 No	s type (DTM) informat mmunication FXA29 s+Hauser	ion 1		Cancel

Interfac	es:		
Location	1	Add	
		Remove	
		Modify	
	Interface Settings Interface Name Driver Serial Nr.	Location 1 motifrace, ProfiCaptan V2,9,2,0000	
		Ok Cancel	

### 5. Click Add.

4.

└ The "Interface Settings" dialog opens.

erface Settings	-	X
Interface Name	Location 1	
Driver	ProfiTrace/ProfiCap	tain V2_9_2_0000
Serial Nr.	12346788657	(Leave empty if serial nr. is irrelevant)
	Ok	Cancel

- 6. Enter values for the fields Interface Name (user-definable), Driver = Profitrace/..., serial number of the Procentec Device and confirm.
  - └ The interface is created and can be assigned.
- 7. In the "Network" dialog, right-click **PROFIdtm**.
  - └ A drop-down list opens.

### 8. Select **Configuration**.

└ The "Configuration" dialog opens.

Communical PROCENTER	ion DP-V1 Master			
Bus Parameter				
Board Name:	Location 1 💌	Slot Time:	4008	
Baud Rate:	93.75 kbps 💌	Min. Station Delay:	11	Use Standard Bus Paramete
Station Address:	•	Max. Station Delay:	1005	Autodetect Bus Parameters
Highest Station Address:	126 •	Setup Time:	113	Start
Max. Retry Limit:	5	Quiet Time:	9	Stop
Target Rotation Time:	20000	Gap Update Factor:	1	
Scan Range				
Scan Range Begin:	0 -	Scan Range End:	126 -	

#### 9. Click on the **Bus Parameter** tab.

└ The bus parameters appear.

- **10.** In the "Bord Name" field, select the Interface Name entered and click **Start**.
  - └ The bus parameters are read and saved.
- **11.** In the "Network" dialog, right-click **PROFIdtm**.
  - └ A drop-down list opens.
- 12. Select Create Network.

The network is scanned and all the field devices connected to the PROCENTEC ProfiCore are displayed and can be used.

# 31 PROFIBUS via modem PBI-Plus/smar

### 31.1 Use case

This chapter describes how FieldCare should be configured for a smar PBI-Plus PROFIBUS modem. The PC with FieldCare installed is connected to a smar PBI-Plus PROFIBUS modem via USB. The PROFIBUS modem is connected directly to the field devices by PROFIBUS technology via PROFIBUS PA.

The following software packages must be installed and configured on the PC:

- Device library CD smar Device Library v1\_23 PROFIBUS
- Device driver Driver\_USB.rar



43 Access to PROFIBUS via smar modem PBI-Plus

- 1 FieldCare
- 2 USB
- 3 PROFIBUS modem smar PBI-Plus
- 4 PROFIBUS PA

The software packages can be downloaded from the manufacturer's website www.smar.com or from its support website support.smar.com.

#### Installation of the smar device library

Start setup as an administrator, default installation.

#### Connect PBI-Plus modem with PC

A popup appears.

The popup does not appear if the modem is not connected to a PROFIBUS device.

### Installing the USB driver (Windows 7)

Unpack to Driver\_USB.rar \Driver\_USB\Windows 7 (64 or 32 bit version).

In Windows Device Manager, set the USB driver of the USB port: \Driver\_USB\Windows 7 (64 or 32 bit version).



### 31.2 Connection procedure

In the Device Manager specify the port via which the PBI-Plus is connected to the PC via USB (here COM2).

File Action View Help			
> ->	5		
ECHREIPCPC0080	USB Serial	Port (COM2) Pro	operties
Computer ControlVault Device	General	Port Settings D	river Details
<ul> <li>Disk drives</li> <li>Display adapters</li> </ul>	4	USB Serial Port	(COM2)
Human Interface Devices		Device type:	Ports (COM & LPT)
DE ATA/ATAPI controllers		Manufacturer:	FTDI
<ul> <li>Traging devices</li> <li>Explorates</li> </ul>		Location:	Location 0
Mice and other pointing devices	Devic	e status	
Monitors     Metwork adapters     Ports (COM & LPT)     Forts (COM & LPT)     Forts (Port (LPT1)     FOR Serial Port (COM2)     Processors	This	device is working	properly.

The picklists do not expand in the edit mode. The selected value is entered using the keyboard. 1-9 for port, L/N for interface. Furthermore, the device must be offline for these settings.

9 is the maximum value for the port. If the port in the Device Manager is higher, the modem must be connected manually beforehand with another port via the **advanced port settings**, permitted value range is 1 - 9.

OM Port Number: COM2	nced Settings for CO	/14	
SB Transfer Sizes elect lower settings to correct performance problems at low baud rates.	COM Port Number:	COM2	
elect lower settings to correct performance problems at low baud rates.	JSB Transfer Sizes		
	Select lower settings to	correct performance problems at low baud rates.	

### Establishing a connection

**1**. Create a project  $\rightarrow \blacksquare$  13.

- 2. In the "Network" dialog, right-click **Host PC**.
  - 🛏 A drop-down list opens.



- 3. Select Add Device.
  - └ The "Add New Device" dialog opens.

	C Add New Device				-		
	Filter Manufacturer:	_					
	Device:	-				Filter	
	Device     COLCommunication PXA     CDL Communication PXA     CDL Communication TXP     CDL Communication TXP     CDL Common TM FMORTBUS     First Commonication FXA     FixAS20     HAR1 Communication     IPC (Level, Pressure) PXV     PCP (Readwing) TXP     PCP (Readwing) TXP     PCP (Readwing) TXP     SPGNetwork	191 /IP IP-V1 193/291 x193/291 x193/291 x4291	Version V2 09 00 (2016. V2 09 00 (2016. V2 09 00 (2016. V5 00 2(22) (20. V1 0.5 02) (2015 V1 0.5 09 (2011 V1 0.5 62) (2011 V1 0.5 62) (2011 V1 0.1 7 (2014 V1.01.18 (2014 V1.01.01 (2014) V1.10.00.343 (	Class	Manufacturer Endress+Hauser Endress+Hauser Softing Industrial. Endress+Hauser Endress+Hauser Endress+Hauser Endress+Hauser Endress+Hauser Endress+Hauser	Protocol CDI TCP/II CDI TCP/II CDI USB PROFIBUS FDT FIELC ISS HART HART HART HART HART PCP Profibus Df SFG5xx	
	<ul> <li>Evice:</li> <li>Manufacturer:</li> <li>Device: 10 / Sub10:</li> <li>Manufacturer 10:</li> <li>Hardware revision:</li> <li>Software revision:</li> <li>Device revision:</li> </ul>	Device CDI Cor Endress 17	ype (DTM) informat munication FXA29 +Hauser	ion 1		> 	
	Profile revision: Is generic:	No					
					OK	Cancel	
5.	<ul> <li>PBI is addee</li> <li>In the "Network</li> <li>A drop-dov</li> <li>Select Offline F</li> <li>The "PBI (O</li> <li>FBI (Offine-Parametrieurg)</li> <li>PBI PLUS</li> <li>PBI PLUS</li> <li>PBI PLUS</li> <li>Off-line Parametrize</li> <li>Off-line Parametrize</li> <li>Change Slave Addres</li> </ul>	d to d to vn li: Para fflin *	the net log, rig st open <b>meteri</b> e Paran Configure : Serial Port Interface	work ht-cl s. ze. meter	c. ick <b>PBI</b> rize)" di <sup>ri</sup>	-Plus. alog c	pens.
7.	Set the <b>Port</b> an	d In	terface	and	click W	rite.	
8.	In the "Network	dia.	log. ria	ht-cl	ick <b>PBI</b>	-Plus	
	↦ A drop-dov	vn li	st open	s.			
9.	Select <b>Add Dev</b> <b>b</b> The "Add N	<b>ice</b> . ew I	Device"	dialo	g opens	5.	
10.	Select the suita	ble o	levice I	DTM.			
The	device can now l	be co	onnecte	ed and	d used.		
i	The version num not be possible	nber to es	and pa tablish	arame a con	eter (bu nnectio	is add n to ti	ress) must match as otherwise it might ne device.

# 32 PROFIBUS via SFG500 with the Heartbeat VerificationDTM

### 32.1 Use case

The following example shows how the VerificationDTM is used in FieldCare. In the plant, a PROFIBUS device is directly connected to the PC via a Fieldgate SFG500. It is possible to transfer the Heartbeat data from the PC to the W@M portal via the VerificationDTM upload function.

Other areas of application of the VerificationDTM include plants in which:

- HART devices are connected to the Fieldgate SFG500 via a PROFIBUS HART gateway
- HART devices via a gateway (e.g. SFG250 IsNET) with PC/FieldCare
- or Ethernet/IP PROFINET networks are connected to the PC/FieldCare via CDI TCP/IP DTM

Networks that communicate via FOUNDATION Fieldbus are not supported by the VerificationDTM. Additional information can be found in the documentation for the VerificationDTM.



44 Access to PROFIBUS via SFG500 with the Heartbeat VerificationDTM

- 1 FieldCare
- 2 W@M Portal
- 3 FieldgateSFG500
- 4 PROFIBUS DP
- 5 PLC

# 32.2 Connection procedure

System requirements: The VerificationDTM must be installed on the PC, the setup for the VerificationDTM can be found in the FieldCare Download Area of the Endress+Hauser website. https://portal.endress.com/webdownload/ FieldCareDownloadGui/

### 32.2.1 Scanning the network

### Establishing a connection

**1.** Create a project  $\rightarrow \triangleq$  13.

- 2. In the "Network" dialog, right-click Host PC.
  - └ A drop-down list opens.



3. Select Add Devic
---------------------

└ The "Add New Device" dialog opens.

Manufacturer:					
Device:				Fit	ter
△ Device		Version	Class	Manufacturer	Protocol
CDI Communication FX4	A291	V2.09.00 (2016	V -	Endress+Hauser	CDI
CDI Communication TCF	P/IP	V2.09.00 (2016	<b>V</b> .	Endress+Hauser	CDI TCP/
CDI Communication USI	В	V2.09.00 (2016	V .	Endress+Hauser	CDI USB
CommDTM PROFIBUS	DP-V1	V5.00.2(22) (20	V .	Softing Industrial	PROFIBU
FF H1 CommDTM		V1.5.4.2 (2015	V -	Endress+Hauser	FDT FIEL
Flow Communication FX	A193/291	V3.27.00 (2015	<b>V</b> -	Endress+Hauser	ISS
FXA520		V1.05.09 (2011	Q .	Endress+Hauser	HART
HART Communication		V1.0.56 (2016	<b>T</b> .	CodeWrights G	HART
IPC (Level, Pressure) FX	A193/291	V1.02.17 (2014	Q .	Endress+Hauser	IPC
PCP (Readwin) TXU10/	FXA291	V1.01.18 (2014	τ.	Endress+Hauser	PCP
PROFIdtm DPV1		V 2.20.0(121) [	<b>U</b> .	Softing Industrial	Profibus D
SFGNetwork		V1.10.00.343 (	👿 dtmSp	Endress+Hauser	SFG5xx
¢					>
¢	Device	type (DTM) informati	on		>
c Device:	Device CDI Co	type (DTM) informati mmunication FXA291	on		>
s Device: Aanufacturer:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on		>
c Jevice: Aarufacturer: Jevice ID / SubiD:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on		>
c Janufacturer: Jevice ID / SubID: Janufacturer ID:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA291 s+Hauser	on		>
c Anufacturer: Jevice ID / SubID: Jerufacture ID: Jerufacture ID: Jerufacture ID: Jerufacture ID:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA29 s+Hauser	on		>
c Device: Arrufacturer: Vervice 10 / Sub10: Arrufacturer 1D. Arrufacturer iD. Saftware revision: Software revision:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA29 s+Hauser	on		>
s Vervice: Vervice ID / SubID: Vervice ID / SubID: Vervice revision: Joftware revision:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA29 s+Hauser	on		>

- 4. Select the **SFGNetwork** item and click **OK**.
  - ← The SFGNetwork is added to the network.
- 5. In the "Network" dialog, right-click SFGNetwork.
  - ► A drop-down list opens.

### 6. Select **Create Network**.

➡ The SFGNetwork is scanned, all the Fieldgate SFG500s connected in the network, along with the individual devices, are found and shown in the network view.



In the example below, a Fieldgate SFG500 with a Promag 100 heartbeat device is found at address 25. A VerificationDTM is assigned to this device. An additional, separate VerificationDTM must be assigned in each case for every additional Heartbeat device in the network. A unique DTM address guarantees the assignment.

### 32.2.2 Adding/configuring the VerificationDTM

The steps below are repeated for all the heartbeat devices in an SFG500 network:

1. In the "Network" dialog, right-click SFGNetwork.

└ A drop-down list opens.

#### 2. Select Add Device.

└ The "Add New Device" dialog opens.

3. Select VerificationDTM. ← The VerificationDTM is added to the network. SFGNetwo... 1 ETT SFG500 🛓 – 📃 SFG500 Sy - () A005\_1\_P8\_0P SFG500Ch... 22 💡 Placeholde FT01\_1\_P8\_DP SFG500Ch... 25 E Promag 100 / 5x18 / DP / FW 1.01.22 / D 4. In the "Network" dialog, right-click SFGNetwork. └ A drop-down list opens. 5. Select **Other Functions** → **Disconnect**. ← SFG500 is disconnected. It is only possible to select the Set DTM Address item if you are disconnected from the SFG500. 6. In the "Network" dialog, right-click **SFGNetwork**. └ A drop-down list opens. 🛓 -- 🔜 SFO 0 SFGNetwork 4--Add Device... 22 Placeholder FieldDevic 01 Delete Device 25 Promag 100 / 5x1B / DF 0 0 Flow Verification DTM P Launch Wizard.. <u>C</u>reate network Verify network Generate device list Device type (DTM) info.. -Connect 2 Read from device ing. Check and configure the settin 9 Write to device sing. Check and configure the settir Save DTM data Restore DTM data



7. Select Other Functions → Set DTM Address.

.

Offline Parameteriz

└ The dialog of the SFG500 opens.

FieldCare (2150) - Plant Acad Managem	IN PRO-28			
Elle Edit View Device Op	eration DTM_Gatalog _loois _Window Egitras _Help			
19 🚵 🐸 🔛 🤤	0 11 1 12 13 13 13 10 1	1 % % <b>%</b> · 💩 🛼	Se he Se	
		+ x (PODD Systematical (Cardigaration) x (PODD S	Internetic Gir 194 Addres	0 *
etnob. Tag	Co. Davel A. Device type DTH	Evvice Name: 1710		
A STATIONA	C C Statement	10.0		
A THE STORY Laborator	Strame 1 CT stom			
L O versene				
- O ACCONTRA	All strongs, 22 All Heorydae all avea			
- () HOUTHUR	() 170500025 (1) Porag 108/5/8/207/79/181 is / Devite	- D.B. 🗢		
- O a	STESSON. 0 Rev Velicatos D/H Postus DPM			
		1 Device Name	Ownika Tag	#39mm
		Plastalar Felderce	ACR, 1, FE, DP	22
		Pronog 308 ( Sk18 ( OF / FW 1.81 at / Dev Rev. 2	VT0L_1.99.0P	3
		They had only from the ball on the ball	100	5

This contains a list of all the devices and verification DTMs that are assigned to the Fieldgate SFG500.

Communication log

Set DTM Address

8. Select the **DTM** that has just been added. Enter the **DTM address** and press **Enter** to confirm. Then click Update.

└ The DTM is updated in the network.



Once a VerificationDTM has been added and configured for every heartbeat device, they can be used to read out the heartbeat data.



The DTM address and device address must match (here = 25 / Promag100) to be able to assign the VerificationDTM to a device.

The option "Show archive tree" must be selected in the top left in the DTM toolbar so that all the functions of the DTM are displayed, particularly the Verification and Archive File tabs.

	C Print to PDF C Print to printer Print to WBM Printer
0010 Mot read     0011 Mot read     0012 Mot read     0012 Mot read     0013 Mot read     0013 Mot read     00014 Not read     00015 Not read     00016 Not read	Parer [C+H PeldCare Page layout Fortrat Color monochrone Double-sided [Single-sided - PDF seting] Color end for an end of the side of the

#### 32.2.3 Reading out the heartbeat data

1. In the "Network" dialog, right-click **VerificationDTM**.

► A drop-down list opens.

#### 2. Select **Connect Device**.

└ The device is connected.

- 3. Double-click VerificationDTM.
  - └→ VerificationDTM opens.

After selecting one of the data records 9-16, the heartbeat data are read automatically and cached in the selected data record. In this way, different versions of the device parameters can be stored in the data records for later use or analysis.

#### 32.2.4 Uploading the heartbeat data to W@M

The stored heartbeat data of a data record can be transferred to the W@M Portal.

Vetication 2016/0613,1521-65     ● (V K722(E15000 - F101_169_DP     Proses 100     ● (V Vetication dat     ● (000 Parsed     ● 0001 Net read     ● 0012 Net read     ● 0013 Net read     ● 0015 Net read	Layout options   Print perviser Print options   C Print to printer Print to printer Printer [Ex+1PlatCare Printer [Ex+1PlatCare] Printer [Ex+1PlatCare] Printe
--	--

In the "VerificationDTM" dialog, switch to the Layout Options tab.

- ► A list of data records opens.
- 2. Select the data records that should be transferred to W@M.
- 3. In the "VerificationDTM" dialog, switch to the **Print Options** tab and select **Print to W@M**.
- 4. Click the **Print Button** in the title bar.

Start uploading to W@M.

The devices can be assigned between FieldCare and W@M via the TAG and the serial number. These must be provided in W@M.

FieldCare must be configured for integration of Heartbeat verification in W@M Portal.

For detailed information on "Integrating Heartbeat verification in W@M Portal", see FieldCare Operating Instructions.  $\rightarrow \ \textcircled{}$  11

### Verifying the upload

- 1. In the "Network" dialog, right-click the device to be verified.
  - 🛏 A drop-down list opens.

#### 2. Select **Device in Web** → **Show Device-specific Details**.

W@M is loaded and the device data are displayed. The "Attachment" tab contains a list of the reports most recently transferred with the heartbeat data of the device.



# 33 FOUNDATION Fieldbus H1 via Field Controller SFC162

### 33.1 Use case

When operating as a visitor, the Field Controller SFC162 provides a parallel path to devices in an existing system and is used to commission devices, to change their settings or to monitor their condition. This assumes that the system is operating, i.e. a project has been downloaded to the Field Controller and devices.

The Field Controller SFC162 is normally used to configure the transducer blocks only. For some devices, the Field Controller SFC162 can also be used to configure the input and output blocks, but normally not the logic and control blocks.

For detailed information on "Field Controller SFC162": Operating Instructions  $\rightarrow$  🗎 11

To see all the devices on the FOUNDATION Fieldbus H1 segment, FieldCare requires:

- FOUNDATION Fieldbus CommDTMFOUNDATION Fieldbus DeviceDTMs
- For devices without native DTMs, the iDTM for FOUNDATION Fieldbus



45 Field Controller SFC162 access to a FOUNDATION Fieldbus H1 network

- 1 FieldCare
- 2 Field Controller SFC162
- 3 Ethernet
- 4 FOUNDATION Fieldbus H1
- 5 DCS

# 33.2 Commissioning the Field Controller SFC162

### 33.2.1 Setting up the IP address of the Field Controller SFC162

For this procedure, it is necessary to know the IP address of the Fieldgate within the control network.

Do not restart the Field Controller SFC162 with the new address before Visitor mode has been selected.

### Setting up the IP address of the Field Controller SFC162

Set the IP address of the computer to the same domain as the Field Controller SFC162's default address 192.168.164.100. See **Appendix A** or consult your system administrator for information on this procedure.



- 2. If you have Application Designer installed on your computer, call HS Network Setup: Select Programs → Endress+Hauser → ControlCare → Tools → HS Network Setup. Otherwise call up the Web server and enter the address 192.168.164.100 . Then proceed with Step 5.
  - **HS Network Setup** starts and searches for devices in the Ethernet network.



All devices in the network appear, irrespective of their IP domain.

- If this is not the case:
  - Disable the proxy server of the Web browser
  - Windows firewalls may not block the execution of the program
  - Check cables and switches
  - If there are several Field Controllers with the same IP address, only connect one with the network
- If the computer has more than one NIC, it is necessary to select the card you want to use for communication with the Field Controllers.
   Tick Active NIC and click Save.
- 4. Note the IP address of the active card as this is used by FieldCare.
- Double-click the Field Controller whose address is to be changed or enter 192.168.164.100 in the Web browser.
  - └ The Web browser of the Field Controller opens.

	🎧 🔎 Search 🎇 Pavorites 📢	8) 🖉 😓 😓 🖏			
kress 🕘 http://192.168.164.1	44/index.html	💌 🔁 😡	Links <sup>39</sup>	Convert .	Selec
ControlCare Field Controller	Endress+H	auser 🔝			
avigation:	Electronic Name Plate	ver (controller molec)			
Home Information	Device Tag				
E G Setup E G Live List H1	Order Code	70103455			
Punction Block List	Serial Number	66001724030			
a cogood	Firmware Version	1.05.00			
	ENP Version	2.00.00			
	Operating Mode				

The Web server only opens if the host computer and the Field Controller have IP addresses in the same IP domain.

If the Web server still does not open, make sure that the proxy server of the browser is disabled.

6. Expand the "Setup" node and click **Network**.

- 7. Enter **pcps** as the user name and **pcps** as the password.
  - └ The "Network Configuration" dialog opens.

) Back + 🕑 - 💌 😰 🦿	Search	👷 Fevorites 🕢 🔗 🌭	🖂 🔜 🚳			
dress () Http://10.125.35.190/			• 🔁 👳	Links <sup>19</sup>	Convert	• 🔂 Select
ControlCare Field Controller		Endress+Hauser				
Welcome to ControlCare F	eld Controller S	FC162 Webserver (VisitorMod	e)			
avigation:	Network Con	mguradon 				
Home	DHOP:	<ol> <li>Enabled</li> </ol>				
Setup	IP address:	10.125.35.190				
Network	Netmask:	255.0.0.0				
P Calve List H1	MAC address;	00:07:05:43:00:66				
Function Block List	Default	0.0.0.0				
E. Ciamontalia	gamma, .					

8. Enter the required IP address.

- 9. Enter a **netmask** (e.g. 255.0.0.0., but usually 255.255.255.0).
- **10.** If required, enter a **default gateway** (usually xxx.xxx.1 selected domain) and click **Update**.

11. Confirm the message that the Field Controller SFC162 must be restarted.

The IP address is set up.

### 33.2.2 Selecting the Visitor mode

There can be up to four Field Controller SFC162s in any one network. However, each controller must be assigned a different H1 address by running the option under **Step 2** above.

### Selecting the Visitor mode

- 1. Return to the home page and click **Change**.
  - └ The frameware home screen opens.



- 2. Select **Factory init in Visitor mode (H1-address 0xFC)** and click **Restart**.
- 3. Enter **pcps** as the user name and **pcps** as the password to confirm the Field Controller SFC162 restart.
  - The Field Controller SFC162 changes its mode from Controller (default setting) to Visitor.
    - The Field Controller is restarted as Visitor.
- 4. Set the **address** of the host computer to the same domain as that of the **Field Controller SFC162 Visitor** (e.g. 10.125.35.200).

### 33.2.3 Selecting the network interface card (NIC) for FieldCare

If the host computer has more than one NIC, the one used for the Ethernet connection to the controller and visitor must be specified, otherwise the applications running on Ethernet select the first they find by default. For Application Designer, ticking and storing the active NIC in HS Network Setup causes the associated .ini files to be updated.

For FieldCare these changes have to be made by hand.

#### Selecting the network interface card (NIC) for FieldCare

- 1. Select Program Files → Common Files →Codewrights → HSEsvr2 → endressoleserver.ini.
- 2. Open the **endressoleserver.ini** file with Notepad.
- 3. Search for the **NIC Adapter** entry.
- 4. Set a ; in front of the line **DEFAULT\_NIC = NIC**.
- 5. Remove the ; from the line **NIC =** and add the NIC address (e.g. NIC = 10.125.35.200).



6. Save and close the **endressoleserver.ini** file.

The Visitor Function can now be used.

### 33.3 Connection procedure

### Establishing a connection

- 1. Create a project  $\rightarrow \triangleq 13$ .
- 2. In the "Network" dialog, right-click Host PC.
  - └ A drop-down list opens.



### 3. Select Add Device.

└ The "Add New Device" dialog opens.

Manufacturer:					
Device:				Fit	ter
△ Device		Version	Class	Manufacturer	Protocol
CDI Communication FX	A291	V2.09.00 (2016	V -	Endress+Hauser	CDI
CDI Communication TC	P/IP	V2.09.00 (2016	V ·	Endress+Hauser	CDI TCP/
CDI Communication US	SB	V2.09.00 (2016	Q .	Endress+Hauser	CDI USB
CommDTM PROFIBUS	DP-V1	V5.00.2(22) (20	Q .	Softing Industrial	PROFIBU
FF H1 CommDTM		V1.5.4.2 (2015	V -	Endress+Hauser	FDT FIEL
Flow Communication Flow	KA193/291	V3.27.00 (2015	Ω.	Endress+Hauser	ISS
FXA520		V1.05.09 (2011	V .	Endress+Hauser	HART
HART Communication		V1.0.56 (2016	V .	CodeWrights G	HART
IPC (Level, Pressure) F	XA193/291	V1.02.17 (2014	Q .	Endress+Hauser	IPC
PCP (Readwin) TXU10	I/FXA291	V1.01.18 (2014	V .	Endress+Hauser	PCP
PROFIdtm DPV1		V 2.20.0(121) [	Q .	Softing Industrial	Profibus D
SFGNetwork		V1.10.00.343 [	👽 dtmSp	Endress+Hauser	SFG5xx
¢					>
κ	Device	type (DTM) informati	on		>
c Device:	Device CDI Co	type (DTM) informati mmunication FXA291	on		>
c Device: Aanufacturer:	Device CDI Co Endres	type (DTM) informati mmunication FXA29' s+Hauser	on		>
: Ievice: Ianufacturer: Ievice ID / SubID:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on		>
vevice: Ianufacturer: Jevice ID / SubID: fanufacturer ID:	Device CDI Co Endres	type (DTM) informati mmunication FXA29' s+Hauser	on		>
kevice: Ianufacturer: Ievice ID / SubID: Ianufacture ID: Ianufacture ID: Ianufacture revision:	Device CDI Co Endres	type (DTM) informati mmunication FXA29 s+Hauser	on		>
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c Manufacturer: Device ID / SubID: Aarufacturer ID: Fardware revision: Joftware revision: Device revision:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 a+Hauser	on		>

- 4. Select the **SFC162 CommDTM** item and click **OK**.
  - └ The SFGNetwork is added to the network.
- 5. In the "Network" dialog, right-click **SFC162 CommDTM**.
  - └ A drop-down list opens.
- 6. Select **Configuration**.
  - └ FieldCare scans the network for all the Ethernet devices and displays them in the list of HS devices.

	guraciony			
ànaða				
📅 🗉 🤣				
Device Type: SPC162	IP Address: 192.168.178	.123		
Device Tag: PC_FF_0	1 Serial #: 7200142403	)		
Status: O CommDT	M assigned			
HSE Live List				
Device Tag	Device Class Device Address	Device Id	Dev. Rev.	DD Rev
€FC_FF_01	Bridge 10.125.35.190	4528482010E+H-SFC16272001424030	5	1
Tag Assignment				
Assign Offine Tag				
Tag FC FF 01				
				1
NO OT THE THE				-
			_	_

- 7. To connect the Field Controller SFC162 Visitor, click the appropriate line (e.g. 10.125.35.190).
  - A tick appears next to the Field Controller SFC162 Visitor and the entry appears green.
- 8. In the "Network" dialog, right-click **SFC162 CommDTM**.
  - ► A drop-down list opens.



### 9. Select Create Network.

└ The "Select Communication Channel" dialog opens.



- 10. Select the channels to be scanned. Deselect all other channels and click **OK**.
  - - FieldCare scans the selected channels and adds the devices found to the network.



- 11. In the "Network" dialog, right-click a device.
  - └ A drop-down list opens.



- 12. Select Connect.
  - └ The arrows next to the device appear green.
- 13. In the "Network" dialog, right-click a device.
  - └ A drop-down list opens.



### 14. Select Online Parameterize.

└ The DeviceDTM is added to the network tree and the DTM opens.

103_FF(1) (Online Parameter	ue)	
ANDR .		
DeviceType: Cerabar 5	(PMx 7x / PF / X3.00.xx Device Revision: 6 Primary Value Table: 6,749 mbar	
Device ID: 0x3007	FO Tag FF_303_FF Secondary Value Value 23,3 %	
Status signal 🛃 OK		
Diagnosis		
This percent	Instrumental Health Status	
Pos. Zero Adjust	mod amontal modific otatao	
Tree. Input Value		
Camping Value		
Secto		
Einek Made		
Inline	· 2 바 두 국 국 Dagnoss	
vected S Device		

The device can now be configured.

For detailed information on "Field Controller SFC162 Visitor": Operating Instructions  $\rightarrow \cong 11$ 

### 33.4 Upload the project

After the devices have been configured, their settings must be uploaded to the Field Controller SFC162 and engineering tool. Depending upon the tool and the task (commissioning or replacement) this can be normally done for the entire fieldbus or for individual devices.

For detailed information on "Field Controller SFC162 Visitor": Operating Instructions  $\rightarrow \cong 11$ 

# 34 FOUNDATION Fieldbus H1 Bench mode via Field Controller SFC162

### 34.1 Use case

In Bench mode operation, two scenarios exist:

- Devices are configured prior to being installed in the plant
- Devices are already installed in the plant but the Field Controller SFC162 is not in operation

In the first case, the devices will normally be configured on a point-to-point basis, i.e. one device at a time, unless a powered network structure exists. In the second case, the network exists, but it must be powered before the devices can be configured.

As far as the Field Controller SFC162 is concerned, Bench mode operation requires that it operates as a controller, since there will normally be no other LAS (link active scheduler) in the network.

To see all the devices on the FOUNDATION Fieldbus H1 segment, FieldCare requires:

- FOUNDATION Fieldbus CommDTM
- FOUNDATION Fieldbus DeviceDTMs
- For devices without native DTMs, the iDTM for FOUNDATION Fieldbus



Bench mode architecture showing point-to-point connection

- 1 FieldCare
- 2 Ethernet
- 3 Field Controller SFC162
- 4 FOUNDATION Fieldbus H1

This chapter describes the point-to-point scenario. It shows how a device tag and device address can be assigned to a device. For information about the configuration of the devices, please refer to the appropriate manual.

The DeviceDTMs differ from device to device in the functions which can be configured:

- All DTMs allow the configuration of the resource and transducer blocks
- Some DTMs allow the configuration of the device input/output blocks
- To date, no DTM allows the configuration of the tag and address. This can only be done with the Field Controller SFC162 CommDTM

The upload to the control system may also differ depending upon the manufacturer, type and condition of the device. Endress+Hauser devices delivered fresh from the factory will usually upload all the function blocks they support including logic and control blocks, although the latter cannot be configured via DTMs.

Should a device have been subject to a download from a control system, then any block not instantiated by the engineering tool will not be part of the upload. For a TMT162 temperature transmitter, for example, if only one analog input block has been instantiated

for a project, only this block will be uploaded, although three blocks are offered in the DTM. Configuring the two other blocks in FieldCare will not cause them to be uploaded.

## 34.2 Commissioning the Field Controller SFC162

### 34.2.1 Setting up the IP address of the Field Controller SFC162

For this procedure, it is necessary to know the IP address of the Fieldgate within the control network.

Do not restart the Field Controller SFC162 with the new address before Visitor mode has been selected.

For detailed information on "Setting up the FieldCare IP address": Operating Instructions  $\rightarrow \cong 11$ 

#### Setting up the IP address of the Field Controller SFC162

- **1**. Set the IP address of the computer to the same domain as the Field Controller SFC162's default address 192.168.164.100.
- 2. If you have Application Designer installed on your computer, call **HSE Network Setup**:

Select **Programs**  $\rightarrow$  **Endress+Hauser**  $\rightarrow$  **ControlCare**  $\rightarrow$  **Tools**  $\rightarrow$  **HSE Network Setup**. Otherwise call up the Web server and enter the address **192.168.164.100**. Then proceed with **Step 5**.

HSE Network Config	Tool		
Computer Name: STC NIC IP Address 192:168:164:99	HPS 435 Active NIC	Endr	ess+Hauser 🔛
HSE Device connect	ed to NIC IP 192 168 164 99		
Device IP Address	Device Tag		Device Active
		1535 1030105 11 055103 05001 734030	0.17

All devices in the network appear, irrespective of their IP domain. If this is not the case:

Check that the proxy server of the Web browser is switched off.

Check that the Windows firewall is not blocking the program (switch off the firewall).

Check all cables and switches.

If two or more Field Controllers with the same IP address are found, disconnect all but one from the network.

3. If the computer has more than one NIC, it is necessary to select the card you want to use for communication with the Field Controllers.

Tick Active NIC and click Save.

4. Note the IP address of the active card as this is used by FieldCare.

- 5. Double-click the Field Controller whose address is to be changed or enter 192.168.164.100 in the Web browser.
  - ← The **Web browser** of the Field Controller opens.

	e Gah		
) Back • 💬 - 💌 🙎 🔇	🎧 🔎 Search 🤺 Pavorites 🤞	Ə 🔒 🌭 🖂 📙 🖏	
dress 🕘 http://192.168.164.144/	ndex.htnl	ي 🛃 💌	Links » Convert • 🔂 Select
ControlCare Field Controller	Endress+H	auser 🔛	
Welcome to ControlCare F	ield Controller SFC162 Webser	ver (Controller Mode)	
Savigation:	Electronic Name Plate		
Home	Device Tag		
	a. 1 1.		
8 🛄 Sebup 8 🛄 Live List HI	Urder Lode	70103455	
Call Setup     Call Live List H1     Call Function Block List     Diagnostic	Serial Number	66001724030	
Carl Setup     Carl Live List H1     Carl Live List H1     Carl List     Carl Diagnostic	Serial Number Firmware Version	1.05.00	
Constant      Constant	Under Lode Serial Number Firmware Version ENP Version	70103433 66001724030 1.05.00 2.00.00	
P → Solup → Live List H1 → Runction Block List → Runction Block	Order Lode Serial Number Firmware Version ENP Version Operating Mode	2.00.00	

The Web server only opens if the host computer and the Field Controller have IP addresses in the same IP domain.

If the Web server still does not open, make sure that the proxy server of the browser has been disabled.



6. Expand the "Setup" node and click **Network**.

7. Enter **pcps** as the user name and **pcps** as the password.

← The "Network Configuration" dialog opens.



- 8. Enter the required **IP address** (e.g. 10.125.35.190).
- 9. Enter a **netmask** (e.g. 255.0.0.0., but usually 255.255.255.0).
- 10. If required, enter a **default gateway** (usually xxx.xxx.1 selected domain) and click Update.

**11.** Confirm the message stating that the Field Controller SFC162 must be restarted.

The IP address is changed.

#### 34.2.2 Select Visitor mode

There can be up to four Field Controller SFC162s in any one network. However, each controller must be assigned a different H1 address by running the option under **Step** 2 above.

### Selecting the Visitor mode

- 1. Return to the home page and click **Change**.
  - └ The frameware home screen opens.

Edb Harry Francisco Taulo Male		
Eak new Pavarkes Toos Hep		
Favorites 🙀		
ControlCare Field Controller SFC162 Web Server	💁 * 🔯 · 🖃 🖶 * Page - Safety + Tools -	0.
ControlCare Field Controller Welcome to ControlCare Field Controller	Endress+Hauser E	
avigation: Firmware re	start options	
Internation     Setup     Setup	n vistor mode (H1 address (MEr) 🐱 🤇 Restart	
<ul> <li>Userostic</li> </ul>		

2. Select the Factory Init in Visitor Mode (H1 Address 0xFC) option and click Restart.

- 3. Enter **pcps** as the user name and **pcps** as the password to confirm the Field Controller SFC162 restart.
  - The Field Controller SFC162 changes its mode from Controller (default setting) to Visitor.

The Field Controller is restarted as Visitor.

4. Set the address of the host computer to the same domain as that of the **Field Controller SFC162 Visitor** (e.g. 10.125.35.200).

### 34.2.3 Selecting the network interface card (NIC) for FieldCare

If the host computer has more than one NIC, the one used for the Ethernet connection to the controller and visitor must be specified, otherwise the applications running on Ethernet select the first they find by default. For Application Designer, ticking and storing the active NIC in HSE Network Setup causes the associated .ini files to be updated.

For FieldCare these changes have to be made by hand.

#### Selecting the network interface card (NIC) for FieldCare

- 1. Select Program Files → Common Files →Codewrights → HSEsvr2 → endressoleserver.ini.
- 2. Open the **endressoleserver.ini** file with Notepad.
- 3. Search for the "NIC Adapter" entry.
- 4. Set a ; in front of the line **DEFAULT\_NIC = NIC**.
- Remove the ; from the line NIC = and add the NIC address (e.g. NIC = 10.125.35.200).



6. Save and close the **endressoleserver.ini** file.

The Visitor Function can now be used.

# 34.3 Connection procedure

### 34.3.1 Connection with the Field Controller SFC162 CommDTM

### Establishing a connection

**1.** Create a project  $\rightarrow \triangleq 13$ .

- 2. In the "Network" dialog, right-click Host PC.

Network					
Network Tag	C	Channel	A	Device t	Physical Device
Host PC		Add Device			

### 3. Select Add Device.

└ The "Add New Device" dialog opens.

Filler					
Manufacturer:					
Device:				R	ter
		Version	Class	Manufacturer	Protocol
CDI Communication FXA	291	V2.09.00 (2016	V -	Endress+Hauser	CDI
CDI Communication TCF	/IP	V2.09.00 (2016	τ.	Endress+Hauser	CDI TCP/
CDI Communication USE	1	V2.09.00 (2016	σ.	Endress+Hauser	CDI USB
CommDTM PROFIBUS	DP-V1	V5.00.2(22) (20	<b>U</b> .	Softing Industrial	PROFIBU
FF H1 CommDTM		V1.5.4.2 (2015	V .	Endress+Hauser	FDT FIEL
Flow Communication FX	193/291	V3.27.00 (2015	σ.	Endress+Hauser	ISS
FXA520		V1.05.09 (2011	V .	Endress+Hauser	HART
HART Communication		V1.0.56 (2016	<b>T</b> .	CodeWrights G	HART
IPC (Level, Pressure) FX	A193/291	V1.02.17 (2014	Q .	Endress+Hauser	IPC
PCP (Readwin) TXU10/	FXA291	V1.01.18 (2014	<b>V</b> -	Endress+Hauser	PCP
PROFIdtm DPV1		V 2.20.0(121) (	<b>U</b> .	Softing Industrial	Profibus D
SFGNetwork		V1.10.00.343 (	👽 dtmSp	Endress+Hauser	SFG5xx
					>
<					
٢	Device	type (DTM) informati	on		
Cevice:	Device CDI Co	type (DTM) informati mmunication FXA291	on I		
< Device: Manufacturer:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on I		
< Device: Manufacturer: Device ID / SubID:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on I		
< Device: Manufacturer: Device ID / SubID: Manufacturer ID:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA291 s+Hauser	on		
Cevice: Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on I		
Construction of the second	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on I		
Cevice: Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision: Device revision: Device revision: Device revision:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on		

- 4. Select the SFC162 CommDTM item and click OK.
  - └ The SFGNetwork is added to the network.
- 5. In the "Network" dialog, right-click **SFC162 CommDTM**.

### 6. Select **Configuration**.

└ FieldCare scans the network for all the Ethernet devices and displays them in the list of HSE devices.



- 7. To connect the Field Controller SFC162 Visitor, click the appropriate line (e.g. 10.125.35.190).
  - └ A tick appears next to the Field Controller SFC162 Visitor and the entry appears green.
# 34.3.2 Assigning the device tag or H1 address

#### Assigning the device tag or address

In the "Network" dialog, right-click SFC162 CommDTM.
 A drop-down list opens.



## 2. Select Connect.

- └ The arrows next to the device appear green.
- 3. In the "Network" dialog, right-click SFC162 CommDTM.
  - └ A drop-down list opens.



- 4. Select **Other Functions** → **Set Device Tag/Address**.
  - ← The list of H1 devices is displayed.
- 5. Click the **device** (e.g. TMT162).
  - └ The input boxes at the bottom edge of the page are activated.
- 6. Enter the **device tag**.
  - └ The tag is changed in the list and the entry is set to red.
- 7. Enter the **device address**.
  - └ The address is changed in the list and the entry is set to red.

		te ragi Hatres	•_/					
guage								
m 🗉 🤣								
Device Type:	570162	IP Address:	192.168.178.123					
Device Tag	FC_FF_01	Serial #1	72001424030					_
States: O	CommD1M as	signed						
ive List								
Port 1 Port 2 P	or3 Por4							
Device Tag	Device Class	Device Address	Device Id	Manufacturer	Tupe	Day, Bay,	DD Rev	
FC_FF_01 I	Bridge	16 (0x10)	4528482010E+H-5FC16272001424030	452b48 (Endress+Hauser)	2010 (SFC162)	5	1	
COL INCOME THE REAL PROPERTY.	for the	11/0.481	4510 401055 040530 0000	450hd8 (FreitenseHauser)	1056 (Provid 72)	1	1	
@FT_102.FF 1	Dalic	Te for ref						
GH102H 1	Date	24 (611)	*********					
Device Tag	Date	FT_102_FF	Boot 1	Iperational Class:	Basic		1	
Device Tag	DARC	FT_102_FF 24 (0118)	Boot	Iperational Class:	Baic		×	
Device Tag Device Address	Date	FT_102_FF 24 (0/18)	Boot	Iperational Class:	Basic		×	
Device Tag Device Address First Unpolled Nad	de Address:	FT_102_FF 24 (0+18)	Boot	operational Class:	Basic		I	

## 8. Click Apply.

└ Changes are saved and downloaded to the device.

The icon at the start of the line appears in full color if the changes are accepted.

- If there are more devices in the network, the tags and addresses of all participants can be changed before **Apply** is pressed.
  - When all devices return to the network, the H1 list can be closed.

## 34.3.3 Creating a FOUNDATION Fieldbus network

#### **Creating a FOUNDATION Fieldbus network**

- 1. In the "Network" dialog, right-click **SFC162 CommDTM**.
  - └ A drop-down list opens.



#### 2. Select Create Network.

└ The "Select Communication Channel" dialog opens.



- 3. Select the **channels** to be scanned. Deselect all other channels and click **OK**.
  - ← Scanning starts.

FieldCare scans the selected channels and adds the devices found to the network.



# 34.3.4 Opening the DeviceDTM

#### Opening the DeviceDTM

- 1. In the "Network" dialog, right-click a **device**.
  - └ A drop-down list opens.

		r r	
Network Lag	C Channel	A Device typ Physical Device	
Host PC			
🖃 😪 SFC162 Comm	4b	<ul> <li>EII SFC16</li> </ul>	
E.A.MARKET, MARKET, MARK	1 •	Add Device Delete Device Launch Wizard	
		Device type (DTM) info	

#### 2. Select **Connect**.

└ The arrows next to the device appear green.

- 3. In the "Network" dialog, right-click a **device**.
  - 🕒 A drop-down list opens.



## 4. Select Online Parameterize.

└ The DeviceDTM is added to the network tree and the DTM opens.

11_102_FF(1) (Online Parameterize)	د اهند
70.07 7 m m A 9	
Developie         Proved / 12 / IF / 13.0 Developiesen         Output tables         0,00000         %           Developie         Do 2006         P0 Tag:         P1_302_/IF         Induse Tables         0,0000         %           Status regred         Q K         P0 Tag:         P1_302_/IF         Induse Tables         0,0000         %	E
Alter and a second seco	
Instrumental Health Status	
米 種 Measuring Valuer 米 種 System Units	
De Cometion	
10 Totaler 1	
R D Comunication	
R System Parameter	
in de Senor Dula 21 de Supervision	
20 Smulat, System 30 Sector Version	
来 優 Ang. Wedan 茶酒 Nangan Mada	
a foot Mode	
<u> </u>	
Cal Date Diff of the field Chapters	

The device can now be configured.

For detailed information on "Field Controller SFC162 Visitor": Operating Instructions  $\rightarrow \cong 11$ 

# 34.4 Upload the project

After the devices have been configured, their settings must be uploaded to the Field Controller SFC162 and engineering tool. Depending upon the tool and the task (commissioning or replacement) this can be normally done for the entire fieldbus or for individual devices.

# 35 FOUNDATION Fieldbus H1 via the National Instruments FBUS card

# 35.1 Use cases

The National Instruments PCPC-FBUS card allows a computer or laptop with a PC interface to connect to a FOUNDATION Fieldbus H1 segment.

The National Instruments software delivered with the card must be installed on the computer, configured and ready for use.

If the PC-FBUS card is connected to an active FOUNDATION Fieldbus H1 segment, it is important to read the manufacturer's instructions with regard to uploading modified device settings to the controller.

To see all the devices on the FOUNDATION Fieldbus H1 segment, FieldCare requires:

- FOUNDATION Fieldbus CommDTM
- FOUNDATION Fieldbus DeviceDTMs
- For devices without native DTMs, the iDTM for FOUNDATION Fieldbus

# 35.1.1 Connection to a FOUNDATION Fieldbus H1 segment

To connect the PC-FBUS card to a FOUNDATION Fieldbus H1 segment, the positive and negative signal cables from the NI adapter piece must be connected to the bus line, e.g. via a bus distributor.



47 Connection of an NI-PC-FBUS card to a FOUNDATION Fieldbus H1 segment

- 1 DCS
- 2 Adapter
- 3 Adapter cable
- 4 NI-PC-FBUS card
- 5 FieldCare
- 6 FOUNDATION Fieldbus H1

# 35.1.2 Point-to-point connection in Bench mode

In **Bench mode**, the devices are connected to the NI-PC-NBS card one by one in order to configure the device address and device parameters. This requires a bus distributor, for example, with a fieldbus power supply.



■ 48 Use of the NI-PC-NBS card in Bench mode

- 1 FOUNDATION Fieldbus H1
- 2 Power conditioner/bus distributor
- 3 Adapter
- 4 Adapter cable
- 5 NI-PC-NBS card
- 6 FieldCare

# 35.2 Connection procedure

- Click Start → Programs →National Instruments → NI-FBUS → NI-FBUS Communications Manager.
  - └ The NI card opens.

#### Establishing a connection

- **1.** Create a project  $\rightarrow \square$  13.
- 2. In the "Network" dialog, right-click Host PC.
  - └ A drop-down list opens.

Network					
Network Tag	C	Channel	A	Device t	Physical Device
Host PG		Add Device			

#### 3. Select Add Device.

└ The "Add New Device" dialog opens.

Fiter					
Manufacturer:				_	
Device:				Fi	ter
△ Device		Version	Class	Manufacturer	Protocol
CDI Communication F>	(A291	V2.09.00 (2016	<b>9</b> .	Endress+Hauser	CDI
CDI Communication T(	P/IP	V2.09.00 (2016	T .	Endress+Hauser	CDI TCP/
CDI Communication U	6B	V2.09.00 (2016	V .	Endress+Hauser	CDI USB
CommDTM PROFIBUS	DP-V1	V5.00.2(22) (20	Q	Softing Industrial	PROFIBU
FF H1 CommDTM		V1.5.4.2 (2015	Q .	Endress+Hauser	FDT FIEL
Flow Communication F	XA193/291	V3.27.00 (2015	<b>T</b> -	Endress+Hauser	ISS
FXA520		V1.05.09 (2011	V .	Endress+Hauser	HART
HART Communication		V1.0.56 (2016	v .	CodeWrights G	HART
IPC (Level, Pressure) F	XA193/291	V1.02.17 (2014	Q	Endress+Hauser	IPC
PCP (Readwin) TXU10	)/FXA291	V1.01.18 (2014	v .	Endress+Hauser	PCP
PROFIdtm DPV1		V 2.20.0(121) (	<b>T</b> .	Softing Industrial	Profibus D
SFGNetwork		V1.10.00.343 (	🤨 dtmSp	Endress+Hauser	SFG5xx
<					>
<	Device	type (DTM) informati	on		>
c Device:	Device CDI Co	type (DTM) informati mmunication FXA291	on.		>
< Device: Manufacturer: Device ID / SubDr.	Device CDI Co Endres	type (DTM) informati mmunication FXA29* s+Hauser	on		>
c Device: Jevice ID / SubID: Jevice ID / SubID:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on I		>
Construction of the second	Device CDI Co Endres 17	type (DTM) informati mmunication FXA291 s+Häuser	on		>
Vevice: Manufacturer: Device ID / SubID: Manufacturer ID: Handware revision: Software revision:	Device CDI Cc Endres 17	type (DTM) informati mmunication FXA291 s+Hauser	on		>
C Service: Manufacturer: Service ID / Sub1D: Manufacturer ID: Manufacturer ID: Saftware revision: Software revision:	Device CDI Cc Endres	type (DTM) informati mmunication FXA29 s+Hauser	on		>
Cevice: Marufacturer: Venon ID / SubDr. Manufacturer ID: Manufacturer ID:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA29 s+Hauser	on		>



- └ The FF H1 CommDTM is added to the network.
- 5. In the "Network" dialog, right-click **FF H1 CommDTM**.
  - ← A drop-down list opens.

#### 6. Select **Configuration**.

← The "FF H1 CommDTM" dialog opens and FieldCare asks for the link to the FOUNDATION Fieldbus network.

FC FF H1	CommDTM	. 💶 🗖 🔀
Link name:	interface0-0	•
	OK	Cancel

- 7. Select the **NI Card Link** from the drop-down menu and click **OK**.
- 8. In the "Network" dialog, right-click **FF H1 CommDTM**.
  - A drop-down list opens.



#### 9. Select Create Network.

- ← FieldCare now scans the network.
  - The DeviceDTM is added to the network and opened.

		E 10 8
anguage		
Devicinge CDP 3418 Device Tag: Dr., 14185-1138 Data agent 10 Takes	Prince veter 1: 0.00 °C IDCNEP Prince veter 2: IDCNOT ANALYSIS °C RCYcles IDDE TO Prince Veter Lock: National	Editers+Haus
See See Solowyoota Solowyota Solo	Instrument health status	
	20 Interesting to part of consistent operations (sector Constitution)     20 Interesting to part of constantian operations     20 Interesting to part of constantian operations     20 Interesting to part operations	
	A Out of Specification	
	Maintenance Required	
C.	a) a   इन्द्र क ख्रम्स	
Corvected 0 0 beau	8	

**10.** Save the project  $\rightarrow \square$  13.

The project is saved.

If FieldCare cannot find the correct DTM, it will offer alternative versions, graded according to their suitability in the "Scan Result" dialog. The user has the choice of accepting a DTM of less quality, or canceling the scan.

If no new DTM is available, the user can still integrate the device by using the HART iDTM.

- 1. The DTMs are opened as follows if the NI FBUS card is connected to a FOUNDATION Fieldbus H1 segment and several devices are found:
  - In the "Network" dialog, right-click **Device Node**.
  - 🛏 A drop-down list opens.
- 2. Select **Connect**.
- 3. In the "Network" dialog, right-click **Device Node**.
  - 🛏 A drop-down list opens.
- 4. Select Online Parameterize.

# 36 FOUNDATION Fieldbus H1 via Softing FFusb modem

# 36.1 Use cases

The Softing FFusb modem allows a computer or laptop to connect to a FOUNDATION Fieldbus H1 segment via USB.

Install the Softing FFusb software on the computer before the USB connection is made (the software can also be downloaded from the Softing site).

The FFusb CommDTM must be licensed, otherwise it only runs for 15 minutes in demonstration mode.

The FieldCare DTM catalog must be updated.

If the FFusb modem is connected to an active FOUNDATION Fieldbus H1 segment, it is important to read the manufacturer's instructions with regard to uploading modified device settings to the controller.

To see all the devices on the FOUNDATION Fieldbus H1 segment, FieldCare requires:

- FFusb CommDTM
- FOUNDATION Fieldbus DeviceDTMs
- For devices without native DTMs, the iDTM for FOUNDATION Fieldbus

# 36.1.1 Connection to a FOUNDATION Fieldbus H1 segment

To connect the FFusb modem to a FOUNDATION Fieldbus H1 segment, the positive and negative signal cables must be connected to the bus line, e.g. via a bus distributor.



49 Connection of an FFusb modem to a FOUNDATION Fieldbus H1 segment

- 1 DCS
- 2 FFusb modem
- 3 USB
- 4 FieldCare
- 5 FOUNDATION Fieldbus H1

# 36.1.2 Point-to-point connection in Bench mode

In **Bench mode**, the devices are connected to the FFusb modem one by one in order to configure the device address and device parameters. This requires a bus distributor, for example, with a fieldbus power supply.



☑ 50 Use of the FFusb modem in Bench mode

- 1 FOUNDATION Fieldbus H1
- 2 Power conditioner/bus distributor
- 3 FFusb modem
- 4 USB
- 5 FieldCare

# 36.2 Connection procedure

- Before establishing a connection:
  - Install the FFusb software
  - Connect the FFusb modem to the USB port

## Establishing a connection

- **1.** Create a project  $\rightarrow \square$  13.
- 2. In the "Network" dialog, right-click Host PC.
  - └ A drop-down list opens.

Network						
Network Tag	C	Cł	hannel	A	Device t	Physical Device
Host PG	Ŀ,	A	dd Device			

## 3. Select Add Device.

└ The "Add New Device" dialog opens.

Filter					
Manufacturer:					
Device:				Fit	ler
△ Device		Version	Class	Manufacturer	Protocol
<b>CDI Communication F</b>	KA291	V2.09.00 (2016	V -	Endress+Hauser	CDI
CDI Communication TI	CP/IP	V2.09.00 (2016	<b>V</b> -	Endress+Hauser	CDI TCP
CDI Communication U	SB	V2.09.00 (2016	<b>V</b> -	Endress+Hauser	CDI USB
CommDTM PROFIBU:	S DP-V1	V5.00.2[22] (20	Q .	Softing Industrial	PROFIBL
FF H1 CommDTM		V1.5.4.2 (2015	V .	Endress+Hauser	FDT FIEL
Flow Communication F	XA193/291	V3.27.00 (2015	V -	Endress+Hauser	ISS
FXA520		V1.05.09 (2011	V .	Endress+Hauser	HART
HART Communication		V1.0.56 (2016	v .	CodeWrights G	HABT
IPC (Level, Pressure) F	XA193/291	V1.02.17 (2014	Q	Endress+Hauser	IPC
PCP (Readwin) TXU1	0/FXA291	V1.01.18 (2014	<b>T</b> .	Endress+Hauser	PCP
PROFIdtm DPV1		V 2.20.0(121) (	V .	Softing Industrial	Profibus E
SFGNetwork		V1.10.00.343 (	👿 dtmSp	Endress+Hauser	SFG5xx
<					3
<	Device	type (DTM) informati	on		
< Device:	Device CDI Cc	type (DTM) informati	on		3
< Device: Manufacturer:	Device CDI Co Endres	type (DTM) informati mmunication FXA29 s+Hauser	on		2
< Device: Manufacturer: Device ID / SubID:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on		2
< Device: Device ID / SubID: Manufacturer ID:	Device CDI Co Endres 17	type (DTM) Informati mmunication FXA29 s+Hauser	on	1	2
<  Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA29 s+Hauser	on		2
Device: Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision: Software revision:	Device CDI Co Endres	type (DTM) informati mmunication FXA29 s+Hauser	on		3
< Device: Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision: Software revision:	Device CDI Co Endres 17	: type (DTM) informati mmunication FXA29 s+Hauser	on		3

- 4. Select FF USB and click OK.
  - └ The FF USB CommDTM is added to the network.
- 5. In the "Network" dialog, right-click **FF USB**.
  - └ A drop-down list opens.

## 6. Select **Configuration**.

← The standard parameters for a FOUNDATION Fieldbus Visitor open.

FFUSB (Configuration)		
Device: Product: Vendor:	FF-USB FFusbDtm Softing AG	
Address Settings		
Node ID	253	_
First Unpolled Node ID	20	_
Unpolled node count	0	_
<b>Time Schedule</b> Slot Time Maximum Response Delay Minimum Inter PDU Delay	8  10  16	-
Default Scan Range		
Scan Begin	16	_
Scan End	255	
Default	Apply Close	

7. Change the scan range to suit the addresses on the segment.

- 8. Other parameters should be changed by a fieldbus expert only. Click **OK**.
  - ← The changes are accepted and the "Network" dialog opens.
- 9. Right-click FF USB.
  - └ A drop-down list opens.

Network					٦. x
Network Tag Host PC	C C	hannel	A	Device ty	Physical Device
E-CFH Co	te Te	Add Dev Delete D Launch V	ice evice Vizard.		
	18	Greate n	etwork	6	

#### 10. Select Create Network.

← The DeviceDTM is added to the network and opens.

Instrument health status	
👻 🕺 Failure	
✓ #84: Sensor broak Gene:	
<ol> <li>Else its interruption of service or sensite wining</li> <li>Incorrect setting turitype of connection in parameter "Denoor Connection"</li> </ol>	
Plannedg: 1) Plannindlick kriednic connective or regilare sensor. 2) Cardigue connectigue di zanaection.	
V Function Check	
A Out of Specification	
Maintenance Required	
	Verified and the second s

**11.** Save the project  $\rightarrow \square$  13.

The project is saved.

If FieldCare cannot find the correct DTM, it will offer alternative versions, graded according to their suitability in the "Scan Result" dialog. The user has the choice of accepting a DTM of less quality, or canceling the scan.

If no new DTM is available, the user can still integrate the device by using the HART iDTM.

1. The DTMs are opened as follows if the NI FBUS card is connected to a FOUNDATION Fieldbus H1 segment and several devices have been found:

In the "Network" dialog, right-click **Device Node**.

- └ A drop-down list opens.
- 2. Select Connect.
- 3. In the "Network" dialog, right-click **Device Node**.
  - └ A drop-down list opens.
- 4. Select Online Parameterize.

# 37 ISS interface via FXA193 modem

# 37.1 Use case

The FXA193 modem provides a direct connection to Proline flowmeters.

The connection socket for communication can either be found inside the electronic housing or the connection housing. Please consult the appropriate Operating Instructions for further details. The following graphic shows the necessary connections.



■ 51 ISS interface connection using FXA193 modem

- 1 FieldCare
- 2 RS232
- 3 FXA193 modem
- 4 Cable and adapter
- 5 Proline flowmeter electronic compartment or connection compartment
- 6 Power supply

The FXA193 modem must be used with the so-called **Proline cable**, which comprises two components: a cable and an adapter.

The FXA193 modem is a serial modem with a Sub-D9 connector. It is recommended that only a native serial port be used. The use of USB/Serial converters is not recommended. If the desktop computer has no RS232 serial port, it is recommended that either a PCI or a PCIe card be used. For laptop computers either a PC or Express Card can be used.

To connect to flow devices via the protocol (ISS), FieldCare requires:

- ISS CommDTM
- ISS DeviceDTM library

# 37.2 Connection procedure

## Establishing a connection

- **1.** Create a project  $\rightarrow \triangleq$  13.
- 2. In the "Network" dialog, right-click Host PC. → A drop-down list opens.





└ The "Add New Device" dialog opens.

Filter						
Manufacturer:						
Device:				H	ter	
△ Device		Version	Class	Manufacturer	Protocol	
CDI Communication FXA	291	V2.09.00 (2016	S -	Endress+Hauser	CDI	
CDI Communication TCF	/IP	V2.09.00 (2016	Ω.	Endress+Hauser	CDI TCP/	
CDI Communication USE		V2.09.00 (2016	Q -	Endress+Hauser	CDI USB	
CommDTM PROFIBUS	DP-V1	V5.00.2(22) (20	Q -	Softing Industrial	PROFIBU	
FF H1 CommDTM		V1.5.4.2 (2015	Ψ.	Endress+Hauser	FDT FIEL	
Flow Communication FX	193/291	V3.27.00 (2015	Ψ.	Endress+Hauser	ISS	
FXA520		V1.05.09 (2011	Q .	Endress+Hauser	HART	
HART Communication		V1.0.56 (2016	V -	CodeWrights G	HART	
IPC (Level, Pressure) FX	A193/291	V1.02.17 (2014	- T	Endress+Hauser	IPC	
PCP (Readwin) TXU10/	FXA291	V1.01.18 (2014	V .	Endress+Hauser	PCP	
PROFIdtm DPV1		V 2.20.0(121) (	V .	Softing Industrial	Profibus E	
SFGNetwork		V1.10.00.343 [	👽 dtmSp	Endress+Hauser	SFG5xx	
٢					3	
	Device	type (DTM) informati	ion			
Device:	CDI Co	mmunication FXA291	1			
Manufacturer:	Endres	ss+Hauser				
Device ID / SubID:	1.0					
Manufacturer ID:	17					
Hardware revision:						
0.0						
Software revision:						
Software revision: Device revision:						
Software revision: Device revision: Profile revision:	No					

- 4. Select the Flow Communication FXA193/291 item and click OK.
  - └ The Flow Communication FXA193/291 is added to the network.
- 5. In the "Network" dialog, right-click Flow CommDTM.
  - 🛏 A drop-down list opens.



## 6. Select **Configuration**.

└ The "Flow Communication FXA193/291 (Configuration)" dialog opens.

port: Commune Advect Port (COM1)

7. Set the COM port to which the FXA193 modem is to be connected and then press **Enter**.



- └→ The "Flow Communication FXA193/291 (Configuration)" dialog closes and the "Network" dialog opens.
- 9. Right-click Flow CommDTM.
  - └ A drop-down list opens.



#### 10. Select Create Network.

└→ FieldCare scans the network and indicates the result. The DeviceDTM is added to the network.

Network Tag	C	Channel	A	Device type (DTM)
Host PC				
E Ref Flow Communication FXA193/291	•		-	EI Flow Communication FXA193/291
	46	Service		ET Flow Device FXA193/291

**11.** Configure the device according to its Operating Instructions.

Save the project  $\rightarrow \square 13$ .

If no DeviceDTM is installed, FieldCare states that proper communication can only be ensured after the DTM has been installed.

There is no possibility to connect to the device automatically if the matching DTM is not installed.

Manually connecting to the device:

- Right-click  $\ensuremath{\textbf{Device}}$  and select  $\ensuremath{\textbf{Connect}}$
- Right-click Device and select Online Parameterize

# 38 ISS interface via FXA291 modem

# 38.1 Use case

Some older flowmeters do not use the connector shown in the previous graphic.

In this case the FXA291 modem must be used to connect to FieldCare. The connection socket for communication can either be found inside the electronic housing or the connection housing. Please consult the appropriate Operating Instructions for further details. The following graphic shows the necessary connections.



■ 52 ISS interface connection using FXA291 modem

- 1 FieldCare
- 2 USB
- 3 FXA291 modem
- 4 Cable and adapter
- 5 Proline flowmeter electronic compartment or connection compartment
- 6 Power supply

To connect to flow devices via the protocol (ISS), FieldCare requires:

- CommDTM
- DeviceDTM library

# 38.2 Connection procedure

Normally the computer automatically recognizes the FXA291 modem. If this is not the case, the driver must be installed  $\rightarrow \bigoplus 178$ .

FieldCare establishes a connection to the FXA291 modem as described in **Chapter 37.2**  $\rightarrow \cong$  155.

# 39 IPC interface for level/pressure via FXA193 modem

The IPC interface does not apply for all level devices. Information on this can be found in the Operating Instructions for the device in question.

# 39.1 Use case

For communication with level and pressure devices via the IPC protocol, connectivity is provided with the FXA193 modem in combination with the so called ToF cable.

The connection socket for communication is the same as the one used to connect the device display. Please consult the appropriate Operating Instructions for further details. The following graphic shows the necessary connections.



■ 53 IPC interface connection using FXA193 modem

- 1 FieldCare
- 2 RS232
- 3 FXA193 modem
- 4 Cable and adapter
- 5 Level or pressure device display connection compartment
- 6 Power supply

The FXA193 modem is a serial modem with a Sub-D9 connector. For this application it can be connected to either a native serial port or a USB/serial converter. To connect to devices via the IPC protocol, FieldCare requires:

- IPC CommDTM
- IPC DTM library

# **39.2** Connection procedure

## Establishing a connection

- 1. Create a project  $\rightarrow \cong$  13.
- 2. In the "Network" dialog, right-click **Host PC**.
  - └ A drop-down list opens.



## 3. Select Add Device.

└ The "Add New Device" dialog opens.

				-	u x
Filter					
Manufacturer:					
Device:				F	ter
△ Device		Version	Class	Manufacturer	Protocol
CDI Communication FX	(A291	V2.09.00 (2016	<b>§</b> -	Endress+Hauser	CDI
CDI Communication TI	CP/IP	V2.09.00 (2016	Ω.	Endress+Hauser	CDI TCP/
CDI Communication U	SB	V2.09.00 (2016	Q -	Endress+Hauser	CDI USB
CommDTM PROFIBU:	S DP-V1	V5.00.2(22) (20	Ψ.	Softing Industrial	PROFIBU
FF H1 CommDTM		V1.5.4.2 (2015	V -	Endress+Hauser	FDT FIEL
Flow Communication F	XA193/291	V3.27.00 (2015	ψ.	Endress+Hauser	ISS
FXA520		V1.05.09 (2011	V .	Endress+Hauser	HART
HART Communication		V1.0.56 (2016	<b>V</b> -	CodeWrights G	HART
IPC (Level, Pressure) F	XA193/291	V1.02.17 (2014	<b>U</b> .	Endress+Hauser	IPC
PCP (Readwin) TXU1	0/FXA291	V1.01.18 (2014	- T	Endress+Hauser	PCP
PROFIdtm DPV1		V 2.20.0(121) (	<b>V</b> .	Softing Industrial	Profibus D
CECN-hund			and to the		
SFGNetwork		v1.10.00.343 (	V dtmSp	Endress+Hauser	SFGbxx
SFGNetwork		V1.10.00.343[	V dtmSp	Endress+Hauser	SFuber
SFGNetwork		V1.10.00.343 (	V dimSp	Endress+Hauser	SPlabxx >
SFGNetwork	Device	v1.10.00.343 (	ion	Endress+Hauser	>Flabxx
<	Device CDI Cc	type (DTM) informat	ion	Endress+Hauser	>Flabxx
<	Device CDI Co Endres	v1.10.00.343 [ type (DTM) informat mmunication FXA29 s+Hauser	ion	Endress-Hauser	>Flabxx
< Contract of the second secon	Device CDI Cc Endres	v1.10.00.343 ( type (DTM) informat mmunication FXA29 s+Hauser	on 1	Endress+Hauser	SPlabox >
SFGNetwork < Device: Manufacturer: Device 1D / Sub1D; Manufacturer 1D;	Device CDI Co Endres 17	v1.10.00.343 ( type (DTM) informat mmunication FXA29 s+Hauser	ion	Endress-Hauser	> >
SFGNetwork     C     SPGNetwork     C     Monutacture:     Device:     Manufacture:     Device:     Manufacture:     Device:     Manufacture:     Device:     Manufacture:     Device:     Manufacture:     Device:     Manufacture:     Device:	Device CDI Cc Endres 17	v1.10.00.343 ( type (DTM) informat inmunication FXA29 s+Hauser	ion	Endress-Hauser	>
SFGNetwork     Construction     Con	Device CDI Co Endres 17	v1.10.00.343 ( type (DTM) informat mmunication FXA29 s+Hauser	orn 1	Endress-Hauser	>>
SFGNetwork  Cervice:  Cervice:  Cervice:  Cervice:  Cervice:  Cervice: Cerv	Device CDI Co Endres 17	v1.10.00.343 ( type (DTM) informat mmmulication FXA29 s+Hauser	ofm5p	Endress-Hauser	>>
SFGNetwork     Compared and a second and and a second and a second and a second and a secon	Device CDI Co Endres 17	v1.10.00.343 ( type (DTM) information mmunication FXA29 s+Hauser	ofm5p	Endress-Hauser	>>

- 4. Select the **IPC FXA193/291** item and click **OK**.
  - ← The IPC CommDTM is added to the network.
- 5. In the "Network" dialog, right-click **IPC DTM**.
  - └ A drop-down list opens.



# 6. Select **Configuration**.

└ The "IPC FXA193/291 (Configuration)" dialog opens.



7. Set the COM port to which the FXA193 modem is to be connected.

8. Press **Enter** and then click the **X** in the top right.

- ← The "IPC FXA193/291 (Configuration)" dialog closes and the "Network" dialog opens.
- 9. In the "Network" dialog, right-click **IPC CommDTM**.
  - └ A drop-down list opens.



#### 10. Select Create Network.

└→ FieldCare scans the network and indicates the result. The DeviceDTM is added to the network.



**11.** Configure the device according to its Operating Instructions.

Save the project  $\rightarrow \square 13$ .

If no DeviceDTM is installed, FieldCare states that proper communication can only be ensured after the DTM has been installed.

There is no possibility to connect to the device automatically if the matching DTM is not installed.

Manually connecting to the device:

- Right-click **Device** and select **Connect**
- Right-click Device and select Online Parameterize

# 40 IPC interface for level/pressure via FXA291 modem

The IPC interface does not apply for all level devices. Information on this can be found in the Operating Instructions for the device in question.

# 40.1 Use case

For communication with level and pressure devices via the IPC protocol, connectivity can be provided with the FXA291 modem in combination with the so called ToF cable.

The connection socket for communication is the same as the one used to connect the device display. Please consult the appropriate Operating Instructions for further details. The following graphic shows the necessary connections.



■ 54 IPC interface connection using FXA291 modem

- 1 FieldCare
- 2 USB
- *FXA291 modemCable and adapter*
- 5 Level or pressure device display connection compartment
- 6 Power supply

To connect to devices via the IPC protocol, FieldCare requires:

- IPC CommDTM
- IPC DTM library

# 40.2 Connection procedure

Normally the computer automatically recognizes the FXA291 modem. If this is not the case, the driver must be installed  $\rightarrow \square$  178.

FieldCare establishes a connection to the FXA291 modem as described in **Chapter 39.2**  $\rightarrow \cong$  159.

# 41 CDI interface via FXA291 modem

# 41.1 Use case

All new and projected Endress+Hauser field devices use CDI communication as standard for the protocol. The FXA291 modem provides connectivity to all Endress+Hauser devices using the so called CDI plug. The following graphic shows the necessary connections.



☑ 55 CDI interface connection using FXA291 modem

- 1 FieldCare
- 2 USB
- 3 FXA291 modem
- 4 Cable and adapter
- 5 Proline flowmeter electronic compartment or connection compartment
- 6 Power supply

To connect to devices via the CDI protocol, FieldCare requires:

- CDI CommDTM
- CDI DTM library

# 41.2 Connection procedure

Normally the computer automatically recognizes the FXA291 modem. If this is not the case, the driver must be installed  $\rightarrow \square$  178.

## Establishing a connection

**1.** Create a project  $\rightarrow \square$  13.

2. In the "Network" dialog, right-click Host PC.

└ A drop-down list opens.

Network					
Network Tag	C	Channel	A	Device t	Physical Device
Host PG	•	Add Device			



└ The "Add New Device" dialog opens.

Image         Manufacture:         Filter           Device:         Filter         Filter           CDI Communication (VSB)         Version         Class         Manufacture:         Protocol           CDI Communication (VSB)         V2080 (02016V         EndersHauer         CDI COmmunication (VSB)         V2080 (02016V)         EndersHauer         CDI USB	Filter					
Manufacturer:         Device         Version         Class         Manufacturer         Protocol           CD1 Communication (FVA291 CD1 Communication (FVA291 CD1 Communication (FVA291 CD1 Communication (FVA291 CD1 Communication (FVA291 CD1 Communication (FVA3921 FVA200 (Q2105	T NCOT					
Device:         File:           O Device:         Version         Class         Manufacturer         Protocol           CDI Communication (SV201 CDI Communication (SV201 Communication	Manufacturer:					
Device         Version         Class         Manufacturer         Protocol           CDI Communication TCP/IP         V208 00 (2016.         1         Endest-Haurer         C01           CDI Communication TCP/IP         V208 00 (2016.         1         Endest-Haurer         C01 USB           CDI Communication TCP/IP         V208 00 (2016.         1         Endest-Haurer         C01 USB           CDI Communication TV4 R3021         V10 208 00 (2016.         1         Endest-Haurer         C01 USB           FM T CommUnication TV4130221         V10 208 00 (2016.         1         Endest-Haurer         C01 USB           FOW Communication TV4130221         V10 208 00 (2016.         1         Endest-Haurer         F01 FIEL           FDV Communication TV4130221         V10 208 (2011	Device:				Fi	ter
Device         Version         Class         Manufacturer         Protocol           CD1 Communication FXA231         V20800 (2016).         C         Endes+Haurer         CD1 TCP/ CD1 Communication TCP/IP           CD1 Communication TSP         V20800 (2016).         V         Endes+Haurer         CD1 TCP/ CD1 Communication FX433231           FXD0022         V20800 (2016).         V         Endes+Haurer         CD1 TCP/ CD1 Communication FX433231           FW0025         V500 (222) (2017).         V         Endes+Haurer         FVF TPI FV1 Commonication FX433231           FW0025         V10 (22) (2017).         V         Endes+Haurer         FVF TFI FV1 Commonication           FV0127         V10 327 (2012).         V         Endes+Haurer         FVF TFI FV1 Commonication           FV01167         V10 32 (2017).         V         Endes+Haurer         FVF           FV0127         V10 32 (2017).         V         Endes+Haurer         FVF           FV014040         V10 02 (2017).         V         Endes+Haurer         FVF           FV0160400         V10 03 (2017).         V         Softing Industrial.         Probleu C           FV0160400         V10 01 (2017).         V         Softing Industrial.         Probleu C           FV0160400         V10 01 (		1				
CDI Communication PX3231         V2080 001016         CI         Endes+Hauer         CDI CDI CDI           CDI Communication USB         V2080 00216         V         Endes+Hauer         CDI ICP/           CDI Communication USB         V2080 00216         V         Endes+Hauer         CDI ICP/           CDI Communication USB         V2080 00216         V         Endes+Hauer         CDI ICP/           CDI Communication USB         V2080 00216         V         Endes+Hauer         CDI ICP/           FM To CommUnication PX332211         V500 222 (200 S)         V         Endes+Hauer         FDF FIE           PAX20         V10 22 700 (2015)         V         Endes+Hauer         FDF FIE           PCR (Passive) PX432231         V10 22 700 (2015)         V         Endes+Hauer         HART           PCR (Passive) PX432231         V10 21 7 (2014)         V         Endes+Hauer         PCP           PPD File advin() PX106/V4231         V10 11 8 (2014)         V         Endes+Hauer         PCP           SPBNetwork         V1.100.0.343 [         V         Endes+Hauer         SPG56x           Device:         CDI Communication PX231         Mm Sp_         Endes+Hauer         SPG56x           SPBNetwork         V1.100.0.343 [         V <t< th=""><th>△ Device</th><th></th><th>Version</th><th>Class</th><th>Manufacturer</th><th>Protocol</th></t<>	△ Device		Version	Class	Manufacturer	Protocol
CDI Communication TCP/IP         V2.08.00 (2016	CDI Communication FX	(A291	V2.09.00 (2016	V -	Endress+Hauser	CDI
CD1 Communication USB         V2.08.00 (2016	CDI Communication TC	CP/IP	V2.09.00 (2016	V ·	Endress+Hauser	CDI TCP/
ComoDM PR0RBUS DPVI FFH II ComODM Powerson PA133/231         V5 00.222 (20V)         Softing Induitinial.         PR0 PDVI V1 5.4 2 (2015).         FD F FEL         PD F FEL         PD F FEL           Power Communication PA133/231         V1 0.5 14 2 (2015).         V1         Endes:+Hauser         PD F FEL           PA620         V1 0.5 16 (2015).         V1         Endes:+Hauser         PD F FEL           PPC (Bevelly Pa10/D67A/231         V1 0.5 12 (2015).         V1         Endes:+Hauser         PD F FEL           PPC (Bevelly Pa10/D67A/231         V1 0.5 12 (2015).         V1         Endes:+Hauser         PD F FEL           PPC (Bevelly Pa10/D67A/231         V1 0.5 12 (2015).         V1         Endes:+Hauser         PD F FEL           PPC (Bevelly Pa10/D67A/231         V1.0 15 (2014).         V1         Endes:+Hauser         PD F FEL           PPC (Bevelly Pa10/D67A/231         V1.0 16 (2014).         V1         Softing Induitabil.         Pr0 Fel           SFIDHawork         V1.10 10 343 [V         V1.10 10 343 [V         V1.10 10 343 [V         Softing Induitabil.         Pr0 Fel           Pr0 Felder Pa10/DF PA231         PD Felder Pa10/DF PA231         PD Felder Pa10/DF PA231         PD Felder Pa10/DF PA231         PD Felder Pa10/DF PA231           Provide Pa10/DF PA231         PD Felder Pa10/DF PA231         PD Feld	CDI Communication US	6B	V2.09.00 (2016	Q .	Endress+Hauser	CDI USB
FF H1 CorenoTM         V1 5.4 2 (2015	CommDTM PROFIBUS	DP-V1	V5.00.2(22) (20	V -	Softing Industrial	PROFIBU
PROCOmmunication PA133/231         V3 22/0 (2015	FF H1 CommDTM		V1.5.4.2 (2015	V -	Endress+Hauser	FDT FIEL
PV8200         V1.05.09 (2011 *         Endes:+Hauer         HART           HART Comminication         V1.05 (2015 *         Endes:+Hauer         HART           IPC [Level, Pessure] FX438/231         V1.05 (2015 *         Endes:+Hauer         IPC           PDP (Paskinght D101/0754/231         V1.01 (18 (2014 *)         Endes:+Hauer         IPC           PPC (Paskinght D101/0754/231         V1.01 (18 (2014 *)         Endes:+Hauer         IPC           SF0/Hework         V1.10.00.343 [ *         Stiting Induitial Profibur DP         V2.20.0(121)[ *         Stiting Induitial Profibur DP           SF0/Hework         V1.10.00.343 [ *         *         Endes:+Hauer         SF05/x           V1.10.00.343 [ *         *         Endes:+Hauer         SF05/x           V1.10.00.343 [ *         *         Endes:+Hauer         SF05/x           Markature         Endes:+Hauer         SF05/x         SF05/x           Device:         CDI Comminication FXA251         Endes:+Hauer         SF05/x           Markature         Endes:+Hauer         SF05/x         SF05/x         SF05/x           Device:         CDI Comminication FXA251         SF05/x         SF05/x         SF05/x           Device:         CDI Comminication         SF05/x <td< td=""><td>Flow Communication Flow</td><td>XA193/291</td><td>V3.27.00 (2015</td><td>V .</td><td>Endress+Hauser</td><td>ISS</td></td<>	Flow Communication Flow	XA193/291	V3.27.00 (2015	V .	Endress+Hauser	ISS
HART Communication         V1.058 (2016)         V1.058 (2016)         CodeWrights E         HART           PCD (Laved, Persuer (PA130231)         V1.0217 (2014)         V         Endest-Hauser         PCP           PCD (Pasce), Persuer (PA130231)         V1.01217 (2014)         V         Endest-Hauser         PCP           PCD (Pasce), Persuer (PA130231)         V1.01217 (2014)         V         Endest-Hauser         PCP           SFDNetwork         V1.010.0343 ()         V         dmSp         Endest-Hauser         PCP           SFDNetwork         V1.010.0343 ()         V         dmSp         Endest-Hauser         PCP           Person Dr / Subition         Profile         PCP         PCP         PCP         PCP           Person Dr / Subition         PCP         PCP         PCP         PCP         PCP           Person Dr / Subition         PCP         PCP         PCP         PCP         PCP           Person Dr / Subition         PCP         PCP         PCP         PCP         PCP           Person Person Profile         PCP         PCP         PCP         PCP         PCP           Person Person Person         PCP         PCP         PCP         PCP         PCP	FXA520		V1.05.09 (2011	V .	Endress+Hauser	HART
IPC [Level: Pescuel PA138/231     V1.02.17 (2014\$)     Endes:+Hourer     IPC       PPC (Paskyh) (2010/95/231     V1.01.91 (2014\$)     Endes:+Hourer     IPC       PPC (Paskyh) (2010/95/231     V1.01.91 (2014\$)     Softing Industrial     PPDP       PPOFIdam DPV1     V2.20.0121 [L\$)     Softing Industrial     Poptibul C       SFGNetwork     V1.10.00.343 [L\$)     Endes:+Haurer     SFG5xx       V1.100.0343 [L\$)     Device type (DTM) information     SFG5xx     SFG5xx       Device:     CDI Communication FXA231     Endes:+Hourer     SFG5xx       Bevice trainer:     Endes:Hourer     SFG5xx     SFG5xx       Device:     CDI Communication FXA231     SFG5xx     SFG5xx       Device:     CDI Communication FXA231     SFG5xx     SFG5xx       Device:     Device type (DTM) information     SFG5xx     SFG5xx       Device:     CDI Communication FXA231     SFG5xx     SFG5xx       Device:     Device type (DTM) information     SFG5xx<	HART Communication		V1.0.56 (2016	V .	CodeWrights G	HART
PCP (Readwin) 72(110/FX4231         V1.0.118 (2014V)         Endess+Hauer         PCP           PROFId-mD PV1         V2.20(172)1(V)         ·         Setimp IndustrialPontibut C         Pontibut C           SFGNetwork         V1.00.0343[V)         ·         Setimp IndustrialPontibut C         SFGSox           SFGNetwork         V1.10.00.343[V)         ·         Setimp IndustrialPontibut C         SFGSox           Vector         V1.10.00.343[V)         ·         Setimp IndustrialPontibut C         SFGSox           Vector         V1.10.00.343[V)         ·         Setimp IndustrialPontibut C         SFGSox           Vector         VI.10.00.343[V)         ·         ·         SFGSox         SFGSox           Vector         VECtor         ·         ·         ·         SFGSox         SFGSox           Vector         VECtor         ·         ·         ·         ·         ·         ·           Vector         VECtor         ·         ·         ·         ·         ·         ·           Performance         ·         ·         ·         ·         ·         ·         ·           Settor         ·         ·         ·         ·         ·         ·	IPC (Level, Pressure) F	XA193/291	V1.02.17 (2014	Q .	Endress+Hauser	IPC
PROFilem DPV1     V 2.20.0(121) [ 0* - Softing Industrial Problem ISFB/Network     Softing Industrial Problem IS       SFB/Network     V1.10.00.343 [ 0* dmSp Enders+Hauser     SpGSort       Device type (DTM) information     Softing Industrial Problem IS     SpGSort       Device type (DTM) information     Softing Industrial Problem IS     SpGSort       Mandacturer     CDI Communication FXA251     Softing Industrial Problem IS       Bevice ID / Subility     CDI Communication FXA251     Softing Industrial Problem IS       Bevice ID / Subility     Total Softing Industrial Problem IS     Softing Industrial Problem IS       Bevice ID / Subility     Total Softing Industrial Problem IS     Softing Industrial Problem IS       Bevice ID / Subility     Total Softing Industrial Problem IS     Softing Industrial Problem IS       Bevice ID / Subility     Total Softing Industrial Problem IS     Softing Industrial Problem IS       Bevice ID / Subility     Total Softing Industrial Problem IS     Softing Industrial Problem IS       Bevice ID / Subility     Total Softing Industrial Problem IS     Softing Industrial Problem IS       Bevice ID / Subility     Total Softing Industrial Problem IS     Softing Industrial Problem IS       Bevice ID / Subility     Total Softing Industrial Problem IS     Softing Industrial Problem IS	PCP (Readwin) TXU10	J/FXA291	V1.01.18 (2014	<b>V</b> -	Endress+Hauser	PCP
SFBNetwork V1.10.00.343 ( V	PROFIdtm DPV1		V 2.20.0(121) (	<b>U</b> .	Softing Industrial	Profibus D
Control of the evident of the e	SFGNetwork		V1.10.00.343 (	👽 dtmSp	Endress+Hauser	SFG5xx
C     Device type (DTM) information Device: CDI Communication FXA291 Manufacturer: Endress +Hauaer Manufacturer ID: 17 Ma						
Device type (DTM) information Device: CDI Communication FXA291 Manufacturer: Endess+Houser Manufacturer ID: 17 Hardware revision: Software revision: Profe revision: Profe revision: Profe revision: Ne						
Device type (DTM) information Device: CDI Communication FXA291 Endess+Hauser Device 10 / SubID: Manufacturer ID: 17 Manufacturer ID: 17 Software revision: Software revision: Profile revision: Note: Revision: Revision: Note: Revision: Revi						>
Device: CDI Communication FXA291 Manufacturer: Endress+Hauser Device ID / SubID: Varufacturer ID: 17 17 4ardware revision: Software revision: Profile revision: Profile revision: Note: Revision: Revision: Note: Revision: Re	<					
Manufacturer         Endess+Hauser           Device ID / SubDr            Manufacturer ID         17           Hardware revision:            Software revision:            Profer revision:            Profer revision:            In campoint:	<	Device	type (DTM) informati	on		
Device ID (2 SubI):	< Device:	Device CDI Co	type (DTM) informati mmunication FXA291	on I		
Marufacturer ID: 17 Hardware revision: Software revision: Profile revision: Profile revision: In canodri International Internationea Inte	< Device: Manufacturer:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on I		
AndWare revision: Device revision: Profile revision: Profile revision: In another International Inte	< Device: Manufacturer: Device ID / SubID:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on		
Jordivare revision: Profile revision: Profile revision: No.	< Device: Manufacturer: Device ID / SubID: Manufacturer ID:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on I		
Device revision: Profile revision:	< Device: Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on I		
rome revision.	Device:     Manufacturer:     Device ID / SubID:     Manufacturer ID:     Handware revision:     Software revision:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on I		
	Device:     Manufacturer:     Device ID / SubID:     Manufacturer ID:     Hardware revision:     Device revision:     Device revision:     Device revision:	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on I		

4. Select the CDI Communication FXA291 item and click OK.

- └ The CDI Communication FXA291 is added to the network.
- 5. In the "Network" dialog, right-click **CDI Communication FXA291**.
  - └ A drop-down list opens.



## 6. Select **Configuration**.

└ The "CDI Communication FXA291 (Configuration)" dialog opens.



7. Set the COM port to which the FXA291 modem is to be connected and then press **Enter**.

8. Do not change the baud rate unless this is explicitly required in the Operating Instructions for the device.

9. Click the **X** in the top right.

← The "CDI Communication FXA291 (Configuration)" dialog closes and the "Network" dialog opens.

10. In the "Network" dialog, right-click CDI Communication FXA291 (Communication).

└ A drop-down list opens.



## 11. Select Create Network.

← FieldCare scans the network and indicates the result. The DeviceDTM is added to the network.



- **12.** Configure the device according to its Operating Instructions.
- **13.** Save the project  $\rightarrow \square$  13.

The project is saved.

If no DeviceDTM is installed, FieldCare states that proper communication can only be ensured after the DTM has been installed.

There is no possibility to connect to the device automatically if the matching DTM is not installed.

Manually connecting to the device:

- Right-click **Device** and select **Connect**
- Right-click Device and select Online Parameterize

# 42 CDI interface via TXU10 modem

# 42.1 Use case

The TXU10 modem is a USB/CDI modem that may be used with FieldCare for configuring the following devices:

- RIA45/46, RMA42, RIA14/16, all new and projected devices
- Together with M12 adapter: TMR3x

Devices without digital communication such as TMT180/181/121, TTR3x, PTP3x, PTC31, DTT3x, RIA452, RIA141, TMT111 and TMR31x (with M12 adapter) cannot be configured by FieldCare but require the **Readwin2000** software, which can be optionally purchased with the modem. See the **Readwin2000 BA137R/09/en** manual for more information. The FXA291 modem provides connectivity to all Endress+Hauser devices using the so called CDI plug. The following graphic shows the necessary connections.



■ 56 CDI interface connection using TXU10 modem

- 1 FieldCare
- 2 USB
- 3 TXU10 modem
- 4 Cable
- 5 Indicators, process transmitter or TMT3x (with M12 adapter)
- 6 Power supply

To connect to devices via the CDI interface, FieldCare requires:

- CDI CommDTM
- CDI DTM library

# 42.2 Connection procedure

Normally the computer automatically recognizes the FXA291 modem. If this is not the case, the driver must be installed  $\rightarrow \cong 178$ .

## Establishing a connection

- **1**. Create a project  $\rightarrow \square$  13.
- 2. In the "Network" dialog, right-click **Host PC**.
  - └ A drop-down list opens.

Network					
Network Tag	C	Channel	A	Device t	Physical Device
Host PG		Add Device			

- 3. Select Add Device.
  - └ The "Add New Device" dialog opens.

T IN OT					
Manufacturer:					
Device:	[			Fi	ter
△ Device		Version	Class	Manufacturer	Protocol
CDI Communication FX	A291	V2.09.00 (2016	VT -	Endress+Hauser	CDI
CDI Communication TC	P/IP	V2.09.00 (2016	v .	Endress+Hauser	CDI TCP/
CDI Communication US	B	V2.09.00 (2016	τ.	Endress+Hauser	CDI USB
CommDTM PROFIBUS	DP-V1	V5.00.2(22) (20	V .	Softing Industrial	PROFIBU
FF H1 CommDTM		V1.5.4.2 (2015	V .	Endress+Hauser	FDT FIEL
Flow Communication FD	(A193/291	V3.27.00 (2015	σ.	Endress+Hauser	ISS
FXA520		V1.05.09 (2011	Q .	Endress+Hauser	HART
HART Communication		V1.0.56 (2016	<b>T</b> .	CodeWrights G	HART
IPC (Level, Pressure) F.	XA193/291	V1.02.17 (2014	<b>T</b>	Endress+Hauser	IPC
PCP (Readwin) TXU10	/FXA291	V1.01.18(2014	v .	Endress+Hauser	PCP
PROFIdtm DPV1		V 2.20.0(121) [	Q .	Softing Industrial	Profibus D
SFGNetwork		V1.10.00.343 [	🦁 dtmSp	Endress+Hauser	SFG5xx
<					>
¢	Device	type (DTM) informati	on		>
< Device:	Device CDI Co	type (DTM) informati mmunication FXA291	on	 	>
< Device: Manufacturer:	Device CDI Co Endres	type (DTM) informati mmunication FXA29: s+Hauser	on		>
< Device: Manufacturer: Device ID / SubID;	Device CDI Co Endres	type (DTM) informati mmunication FXA291 s+Hauser	on		>
< Device: Manufacturer: Device ID / subID: Manufacturer ID:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA291 s+Hauser	on		>
Cevice: Manufacturer: Device ID / SubID: Manufacturer ID: Hardware revision:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA291 s+Hauser	on		>
< Device: Manufacturer: Device ID / SubID: Manufacturer ID: Aadvare revision: Software revision:	Device CDI Co Endres 17	type (DTM) informati mmunication FXA291 s+Hauser	on		>
< Manufacturer: Device 10 / SubID: Manufacturer ID: Hardware revision: Software revision: Device revision:	Device CDI Co Endres	type (DTM) informati mmunication FXA29 s+Hauser	on		>

- 4. Select the CDI Communication FXA291 item and click OK.
  - ← The **CDI Communication FXA291** is added to the **network**.
- 5. In the "Network" dialog, right-click **CDI Communication FXA291**.
  - └ A drop-down list opens.



## 6. Select **Configuration**.

└ The "CDI Communication FXA291 (Configuration)" dialog opens.

CDI Communication FXA291 (Configurati	on)		
			Œ
Later Value Professional Company and Communication Band rates Band rates Communication Band rates Communication Communi	Selected CDM port: Baud rate:	Commissions Port (COH1)	×
∞ 0			

7. Set the COM port to which the FXA291 modem is to be connected and then press **Enter**.

8. Do not change the baud rate unless this is explicitly required in the Operating Instructions for the device.

- 9. Click the **X** in the top right.
  - └→ The "CDI Communication FXA291 (Configuration)" dialog closes and the "Network" dialog opens.
- 10. Right-click CDI Communication FXA291.
  - └ A drop-down list opens.



#### 11. Select Create Network.

└→ FieldCare scans the network and indicates the result. The DeviceDTM is added to the network.



- 12. Configure the **device** according to its Operating Instructions.
- **13.** Save the project  $\rightarrow \square$  13.

The project is saved.

If no DeviceDTM is installed, FieldCare states that proper communication can only be ensured after the DTM has been installed.

There is no possibility to connect to the device automatically if the matching DTM is not installed.

Manually connecting to the device:

- Right-click **Device** and select **Connect**
- Right-click Device and select Online Parameterize

# 43 CDI interface via direct USB connection

# 43.1 Use case

A number of CDI capable field devices can be connected directly to a computer via an standard USB (A-B) cable. Currently these are:

EngyCal

RA33



■ 57 CDI interface connection via direct USB connection

- 1 FieldCare
- 2 USB
- 3 Cable
- 4 EngyCal, RA33
- 5 Power supply

To connect to devices via the CDI interface, FieldCare requires:

- CDI CommDTM
- CDI DTM library

# 43.2 Connection procedure

## Establishing a connection

- **1**. Create a project  $\rightarrow \square$  13.
- In the "Network" dialog, right-click Host PC.
  A drop-down list opens.

Network					
Network Tag	C	Channel	A	Device t	Physical Device
HostPC	2	Add Device			

#### 3. Select Add Device.

└ The "Add New Device" dialog opens.

Manufacturer	_				
Device:				Fil	ter
		Version	Class	Manufacturer	Protocol
CDI Communication F>	(A291	V2.09.00 (2016	S -	Endress+Hauser	CDI
CDI Communication T(	CP/IP	V2.09.00 (2016	Ω.	Endress+Hauser	CDI TCP
CDI Communication US	6B	V2.09.00 (2016	Q .	Endress+Hauser	CDI USB
CommDTM PROFIBUS	DP-V1	V5.00.2(22) (20	Ψ.	Softing Industrial	PROFIBI
FF H1 CommDTM		V1.5.4.2 (2015	Ψ.	Endress+Hauser	FDT FIE
Flow Communication F	XA193/291	V3.27.00 (2015	ψ.	Endress+Hauser	ISS
FXA520		V1.05.09 (2011	V .	Endress+Hauser	HART
HART Communication		V1.0.56 (2016	υ.	CodeWrights G	HART
IPC (Level, Pressure) F	XA193/291	V1.02.17 (2014	<b>T</b> .	Endress+Hauser	IPC
PCP (Readwin) TXU10	)/FXA291	V1.01.18(2014	<b>0</b> .	Endress+Hauser	PCP
		110.00.0000000	15	Cotting Industrial	Profibure
PROFIdtm DPV1		V 2.20.0[121]]		Solung muusuidi	110110010
PROFIdtm DPV1 SFGNetwork		V 2.20.0(121) ( V1.10.00.343 (	dtmSp	Endress+Hauser	SFG5xx
PROFldtm DPV1 SFGNetwork		V 2.200[21][ V1.10.00.343 (	dtmSp	Endress+Hauser	SFG5xx
PROFldtm DPV1 SFGNetwork		V 2.200(121) [ V1.10.00.343 [	dtmSp	Endress+Hauser	SFG5xx
PROFldm DPV1 SFBNetwork	Device	v 2.200(121) ( v1.10.00.343 ( type (DTM) informati	on	Endress+Hauser	SFG5xx
PROFIdm DPV1 SF6Network <	Device CDI Co	V 2.200()21) ( V1.10.00.343 ( type (DTM) informati mmunication FXA29	ion 1	Endress+Hauser	SFG5xx
PROFIdm DPV1 SFGNetwork < Device: Manufacturer: Manufacturer:	Device CDI Co Endres	V 2 200(121) ( V1.10.00.343 ( type (DTM) informati s+Hauser	ion	Endress-Hauser	SFG5xx
PROFIdm DPV1 SFGNetwork C Device: De	Device CDI Co Endres	V 2 200(121) ( V1.10.00.343 ( type (DTM) informati mmunication FXA291 e+Hauser	ion	Endress-Hauser	SFG5xx
PROPIdim DPV1 SFGNetwork Content of the second seco	Device CDI Co Endres 17	V 2 200(121) [ V1.10.00.343 ( type (DTM) informati mmunication FXA29 s+Hauser	dtmSp	Endress-Hauser	SFG5xx
PROPIdim DPV1 SPEDNetwork < Device: Device: Device ID / SubD. Device ID / SubD. Hardware revision:	Device CDI Co Endres 17	V 2 200(121) ( V1.10.00.343 ( type (DTM) informati mmunication FXA29 +Hauser	dtmSp	Endress-Hauser	SFG5xx
PROPIdim DPV1 SFGNetwork	Device CDI Co Endres 17	v 2.200(121) ( v1.10.00.343 ( type (DTM) informati mmunication FXA23 +Hauser	dmSp	Endress-Hauser	SFG5xx
PROPIdim DPV1 SPEDNetwork SPEDNetwork Comparison Device: Manufacture: Device: Manufacture: Device: Manufacture: Device: Manufacture: Device: Manufacture: Device: Manufacture: Device: Manufacture: Device: Device: Manufacture: Device: Manufacture: Device: Manufacture: Device: Manufacture: Device: Manufacture: Device: Manufacture: Device: Manufacture: Device: Device: Manufacture: Device: Manufacture: Device: Device: Manufacture: Device: Device: Manufacture: Device: Manufacture: Device:	Device CDI Co Endres 17	V 2200(121) ( V1.10.00.343 ( type (DTM) informati mmunication FXA291 s+Hauser	dmSp	Endres:+Hauser	SFG5xx

#### 4. Select the CDI Communication USB item and click OK.

- └ The CDI Communication USB is added to the network.
- 5. Connect the CDI-USB to the computer or laptop.
  - When the USB device is connected for the first time, the driver (CDIUSB) is installed.

This installation does not require administration rights.

- 6. In the "Network" dialog, right-click **CDI Communication USB**.
  - └ A drop-down list opens.



#### 7. Select Create Network.

└→ FieldCare scans the network and indicates the result. The DeviceDTM is added to the network.



- 8. Configure the **device** according to its Operating Instructions.
- 9. Save the project  $\rightarrow \square$  13.

The project is saved.

If no DeviceDTM is installed, FieldCare states that proper communication can only be ensured after the DTM has been installed.

There is no possibility to connect to the device automatically if the matching DTM is not installed.

Manually connecting to the device:

- Right-click **Device** and select **Connect**
- Right-click Device and select Online Parameterize

# 44 CDI interface via Ethernet TCP/IP

# 44.1 Use case

A number of CDI capable field devices can be connected directly to a computer via a standard Ethernet cross-cable with RJ45 connector. Examples include:

- Promass 100
- Promag 100
- Promag 400

The following graphic shows the necessary connections. If the connection is made via a switch a straight-through cable can be used. For the location of the Ethernet interface, please see the Operating Instructions of the device concerned.



58 CDI interface via direct Ethernet connection

- 1 FieldCare
- 2 Ethernet
- 3 Category 5 cross-cable
- 4 Device e.g. Promass 100, Promag 400
- 5 Power supply

To connect to devices via the CDI interface, FieldCare requires:

- CDI CommDTM
- CDI DTM library

# 44.2 Setting up the computer

When using the Ethernet TCP/IP connection it is important to note that the computer and device must have IP addresses within the same domain.

## **Computer setup**

 Change the computer's IP address to the same IP address range and subnet mask as the default address of the device. The procedure for Windows 7 is described in Appendix A.

The computer is set up.

If the IP address of the device is changed during the configuration, FieldCare will lose contact with the device. In this case, it is necessary to change the computer's address to an address in the new domain and then restart the application.

# 44.3 Connection procedure

When using the Ethernet TCP/IP connection it is important to note that the computer and device must have IP addresses within the same domain.



## Establishing a connection

**1**. Create a project  $\rightarrow \triangleq$  13.

- 2. In the "Network" dialog, right-click Host PC.
  - └ A drop-down list opens.

Network						
Network Tag	C	Channel	A	Device t	Physical Device	
Host PG		Add Device				

#### 3. Select Add Device.

└ The "Add New Device" dialog opens.

T INVIT					
Manufacturer:					
Device:				Fi	ter
△ Device		Version	Class	Manufacturer	Protocol
CDI Communication FX	KA291	V2.09.00 (2016	1 ·	Endress+Hauser	CDI
CDI Communication TI	CP/IP	V2.09.00 (2016	<b>V</b> .	Endress+Hauser	CDI TCP
CDI Communication U	SB	V2.09.00 (2016	<b>V</b> -	Endress+Hauser	CDI USB
CommDTM PROFIBU:	S DP-V1	V5.00.2(22) (20	С. S С. E С. E С. E С. E	Softing Industrial	PROFIBU FDT FIEL ISS HART HART IPC PCP
FF H1 CommDTM		V1.5.4.2 (2015		Endress+Hauser	
Flow Communication F	XA193/291	V3.27.00 (2015		Endress+Hauser	
FXA520		V1.05.09 (2011		Endress+Hauser	
HART Communication		V1.0.56 (2016		CodeWrights G	
IPC (Level, Pressure) F	XA193/291	V1.02.17 (2014		Endress+Hauser	
PCP (Readwin) TXU1	0/FXA291	V1.01.18 (2014		Endress+Hauser	
PB0Eldtm DPV1		V 2.20.0(121) (	v .	Softing Industrial	Profibus D
CEGNaturali					
SFGNetwork		V1.10.00.343 (	🐺 dtmSp	Endress+Hauser	SFG5xx
SFGNetwork		V1.10.00.343 (	👽 dtmSp	Endress+Hauser	SFG5xx
SFGNetwork		V1.10.00.343 (	👽 dtmSp	Endress+Hauser	SFG5xx
<	Device	V1.10.00.343 (	on	Endress+Hauser	SFG5xx
Contraction of the second	Device CDI Co	V1.10.00.343 ( type (DTM) informat mmunication FXA29	ion	Endress+Hauser	SFG5xx
SFBNetwork     SFBNetwork     Manufacturer: Manufacturer:	Device CDI Co Endres	V1.10.00.343 ( type (DTM) informat mmunication FXA29 s+Hauser	on	Endress+Hauser	SFG5xx
Fightanica V     SFGNetwork     SFGNetwork     SFGNetwork     SFGNetwork     Manufacturer:     Device:     Device:     Manufacturer:     Device:     Manufacturer:     Device:	Device CDI Co Endres	V1.10.00.343 ( type (DTM) informat mmunication FXA29 s+Hauser	on	Endress+Hauser	SFG5xx
SFENetwork     SFENetwork     Construction     Device:     Manufacture:     Device:     Manufacture:     Device:     Manufacture:     Device:     Manufacture:     Device:     Device	Device CDI Co Endres 17	V1.10.00.343 ( type (DTM) informat mmunication FXA29 s+Hauser	on 1	Endress+Hauser	SFG5xx
SFDNetwork     S	Device CDI Co Endres 17	V1.10.00.343 ( type (DTM) informat mmunication FXA29 s+Hauser	on 1	Endress+Hauser	SFG5xx
SFGNetwork     SFGNetwork     Construction     Const	Device CDI Co Endres	V1.10.00.343 ( type (DTM) informat mmunication FXA29 +Hauser	v dtmSp	Endress+Hauser	SFG5xx
SFGNetwork     SFGNetwork     Constant     Constant	Device CDI Co Endres 17	V1.10.00.343 ( type (DTM) informat mmunication FXA29 +Hauser	V dtmSp	Endress+Hauser	SFG5xx



- 4. Select the CDI Communication TCP/IP item and click OK.
  - └ The CDI Communication TCP/IP is added to the network.
- 5. In the "Network" dialog, right-click **CDI Communication TCP/IP**.
  - └ A drop-down list opens.



## 6. Select Add Device.

└ The "Add New Device" dialog opens.

Add New Device					
Device		Version			
EngyCal / RH33 / CDI /	FW 1.01.zz	V1.1.6.3352 (2011-07-20)			
EngyCal / RH33 / CDI /	FW 1.02.zz	V1.1.6.3352 (2011-07-20)			
EngyCal / RH33 / CDI /	FW 1.03.zz	V1.1.6.3352 (2011-07-20)			
EngyCal / RS33 / CDI /	FW 1.01.zz	V1.1.6.3352 (2011-07-20)			
EngyCal / RS33 / CDI /	FW 1.02.zz	V1.1.6.3352 (2011-07-20)			
EngyCal / RS33 / CDI /	FW 1.03.zz	V1.1.6.3352 (2011-07-20)			
Promag 400 / 5x48xx / I	ART / FW 1.00.22 / .	V1.0.0.0 (2012-02-27)			
Promass 100 / 8x1Bxx /	EIP / FW 1.00.zz / D.	. V1.0.0.0 (2012-02-27)			
RA33 / CDI / FW 1.00.z	z	V1.1.6.3352 (2011-07-20)			
RA33 / CDI / FW 1.01.z	2	V1.1.6.3352 (2011-07-20)			
RA33 / CDI / FW 1.03.z	z	V1.1.6.3352 (2011-07-20)			
	Device type (DTM) i	nformation			
Device:	Promag 400 / 5x48	x / HART / FW 1.00.zz / Dev.Rev. 1			
Manufacturer:	Endress+Hauser				
Device ID / SubID:	71/HA_11_47_010	_5x4B(ld: Device.HA_11_47_0101_5x4B			
Manufacturer ID:	17				
Hardware revision:					
Software revision:	1				
Device revision:	1				
Profile revision:					
Is generic:	No				
Help		OK Cancel			

- 7. Select **DeviceDTM** and click **OK**.
  - └ The DeviceDTM is added to the network and the "CDI Communication TCP/IP (Configuration)" dialog opens.

(Configuration)			×
Label IV By Communication parameters as Dy Prinning 000/5468/ar/14881/Phr/1062r/Dev/Rev.1	IP Address Port Timeout	[192168.1.212 [0000 [10[LAN]	• seconds

- 8. Specify the IP address of the device which the computer is connected to and then press **Enter**.
- 9. Change the port and then press **Enter**.
- 10. Click the **X** in the top right.
  - └→ The "CDI Communication TCP/IP (Configuration)" dialog closes and the "Network" dialog opens.
- **11.** Connect the device to the computer via the Ethernet cable.
- 12. In the "Network" dialog, right-click CDI Communication TCP/IP.
  - └ A drop-down list opens.

Network Tag	C (	Channel A., Device typ., Physical Device	
Host PC	-	200 CDL C-	
Promag 40	、加	Add Device	
	32	Delete Device	
		Launch Wizard	
		Greate network	
		Verify network	
		Generate device list	
		Device type (DTM) info	
	1	Connect	

- 13. Select Connect.
  - └ The arrows next to the device appear green.

- **14.** In the "Network" dialog, right-click a device node.
  - 🛏 A drop-down list opens.



## 15. Select Connect.

- └ The arrows next to the device appear green.
- **16.** In the "Network" dialog, right-click a device node.
  - └ A drop-down list opens.

## 17. Select Online Parameterize.

- └ The DeviceDTM opens in the online mode.
- **18.** Configure the device according to its Operating Instructions.
- **19.** Save the project  $\rightarrow \square$  13.

The project is saved.

- **R** Check the following if the device does not connect to FieldCare:
  - The computer and the device must have the same IP addresses in the same range
    - The Ethernet cable must be suitable for the connection used
    - Use the correct DTM

# 45 PCP interfaces via the FXA291/TXU10 modem

# 45.1 Use case

The TXU10 or FXA291 modem may also be used with FieldCare for configuring the following devices:

- Thermophant
- Ceraphant
- Flowphant
- RIA1x



- ☑ 59 PCP interface connection using a TXU10 modem
- 1 FieldCare
- 2 USB
- 3 TXU10 modem
- 4 Cable
- 5 Type
- 6 Power supply



■ 60 PCP interface connection using an FXA291 modem

- 1 FieldCare
- 2 USB
- 3 FXA291 modem
- 4 Cable and adapter
- 5 Type
- 6 Power supply

To connect to devices via the PCP protocol, FieldCare requires:

- PCP CommDTM
- PCP DTM library

# 45.2 Connection procedure

Normally the computer automatically recognizes the FXA291 modem. If this is not the case, the driver must be installed  $\rightarrow \square$  178.

## Establishing a connection

**1.** Create a project  $\rightarrow \square$  13.



- **4.** Set the COM port to which the TXU10/FXA291 modem is to be connected and then press **Enter**.
- 5. Set the number of retries (for example to 3) and then press **Enter**.
- 6. Change the **device address**.
- 7. Change the **baud rate** if this is explicitly required in the Operating Instructions for the device.
- 8. Click the **X** in the top right.
  - ← The "PCP TXU10/FXA291" dialog closes and the "Network" dialog opens.
- 9. In the "Network" dialog, right-click PCP TXU10/FXA291.
  - └ A drop-down list opens.



#### 10. Select Create Network.

- └→ FieldCare scans the network and indicates the result. The DeviceDTM is added to the network.
- **11.** Configure the device according to its Operating Instructions.
- **12.** Save the project  $\rightarrow \square$  13.

The project is saved.

If no DeviceDTM is installed, FieldCare states that proper communication can only be ensured after the DTM has been installed.

There is no possibility to connect to the device automatically if the matching DTM is not installed.

Manually connecting to the device:

- Right-click **Device** and select **Connect**
- Right-click Device and select Online Parameterize

# 46 Appendix

# 46.1 Appendix A - Installing a USB modem driver

Before the modem can be used, the USB modem driver must be installed on the computer.

# Installing the modem driver

- 1. Connect the connector of the modem to the corresponding port.
  - └ The computer detects the modem as a new piece of hardware. The "Found New Hardware" message opens.
- 2. Select the **No, Not This Time** option and click **Next**.
- 3. Click Next.
- 4. Insert the DVD delivered with the modem into the DVD drive and click Next.Follow the instructions of the wizard to install the modem as external hardware.
- 5. Unplug the USB connector when the installation is finished.
- 6. Restart the computer.
  - └ When the USB connector is plugged into the computer again the modem will be recognized.
- 7. To check the COM port, select **Settings**  $\rightarrow$  **Control Panel**  $\rightarrow$  **System**.
- 8. Click **Device Manager**.
- 9. Open the Ports (COM and LPT) node.
  - └ COM port opens.

The USB modem driver is installed.

# 46.2 Appendix B - Replacing the iDTM with a DeviceDTM

iDTM allows the integration of devices that have no appropriate DTM available. It has, however, less functionality than a DTM.

If appropriate DTMs become available, the devices that were integrated into the FieldCare project with the iDTM can be operated with this DTM. For this purpose, the iDTM must be replaced with the DeviceDTM.

After replacement, the saved information of the iDTM must be entered again manually in the new DTM.

For detailed information on "FieldCare: Installation of DTM library: Getting Started  $\rightarrow \cong 11$ 

For detailed information on "FieldCare: Updating the DTM catalog": Getting Started  $\rightarrow~\textcircled{}$  11

# Replacing an iDTM with a DeviceDTM

- 1. Install the **DTM**.
- 2. Update the FieldCare **DTM catalog**.
- 3. In the "Network" dialog, right-click a **device node**.
  - └ A drop-down list opens.



## 4. Select Device Type (DTM) Info.

← The "Device Type (DTM) Information" dialog opens.

hannel: Addt	Status	Offine/Device	DTM Quality	Device type (D	Class (DTM)	Action
(HARTCH 0)	Device used in project	Yokogawa EJ	<u>땡</u> 1	EJX Rev 1	Pressure	
M assignment IM assignmen IM quality leve	details Status and action d details for device at (HART( Assigned d	etaic   [H:0] evice type (DTM) ex	actly matches the	hardware informatio	n with all IDs and revi	ision
		Online device infor	nation	Projet	t device type (DTM)	information
Device:	,	Online device inforr EJX	nation	Projet EJX F	ct device type (DTM) Nev 1	information
Device: Manufacturer:		Online device inforr EJK Yokogawa	nation	Projec EJX F Yoko	ot devrice type (DTM) Nev 1 parria	information
Device: Manufacturer Device ID (Cmd	0 Byte 2) / Sub Id	Online device infor E.D. Yokogawa 81	nation	Projec EJX F Yoko 81	ct device type (DTM) lev 1 gama	information
Device: Manufacturer: Device ID (Cmc Manufacturer ID	0 Byte 2) / Sub Id (Cmd 0 Byte 1)	Online device infor EJX Yokogawa 81 55	nation	Projec E.D.C.F Yoko 81 55	ct device type (DTM) Rev 1 gama	information
Device: Manufacturer Device ID (Cmd Manufacturer ID Hardware revisi	0 Byte 2) / Sub Id (Cmd 0 Byte 1) on (Cmd 0 Byte 7)	Online device infor EJX Yokogawa 81 55 1.0	nation	Projes E.D.C.F Yoko 81 55	ct device type (DTM) Rev 1 gama	information
Device: Marufacturer Device ID (Croc Marufacturer ID Hardware revisi Software revisio	0 Byte 2) / Sub Id [Cred 0 Byte 1] on [Cred 0 Byte 7] n (Cred 0 Byte 6]	Dnline device infor EJX Yokogawa 81 55 1.0 1	nation	Projes E.D.X F Yoko 81 55	t device type (DTM) Sev 1 parra	information
Device: Marufacturer Device ID (Croc Marufacturer ID Hardware revisio Software revisio Command revisio	0 Byte 2) / Sub Id (Crid 0 Byte 1) in (Crid 0 Byte 7) in (Crid 0 Byte 6) in (Crid 0 Byte 5)	Online device inforr EJX Yokogawa 81 55 1.0 1 1	nation	Ptojes EJX F Yoko 81 55 1	t device type (DTM) fev 1 parro	information
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Device: Manufacturer: Device ID (Crod Manufacturer IC Hardware revisio Software revisio Software revisio Profile revision Profile revision	0 Byte 2) / Sub Id [(End 0 Byte 1) an [Cind 0 Byte 7] n [Cind 0 Byte 6] an (Cind 0 Byte 5] Cind 0 Byte 4]	Drifine device inforr EIX Yokogawa 81 55 1.0 1 1 5 5	nation	Projes E.V.F. Yoko 81 55 1 1 1 No	it device type (DTM) lev 1 рана	information
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Device: Manufacturer: Device ID (Cmd Manufacturer IC Hardware revisio Software revisio Command revision ( Software revision ( Software revision ( Software) Profile revision ( Is genetic: Used Photocol Sofial number IC	0 Byte 21 / Sub Id (Cnd 0 Byte 1) nn (Cnd 0 Byte 1) nn (Cnd 0 Byte 7) nn (Cnd 0 Byte 5) Cnd 0 Byte 5) Cnd 0 Byte 5) md 0 Byte 1)	Dnline device infor EJX Yokogawa 81 55 1.0 1 1 5 5 HART 1002382	nation	Projes ELX F Yoko 81 1 55 55 1 1 1 1 No HAR1 1002	et denice type (DTM) fer 1 passa passa 1 322	information

A list of all the suitable DTMs appears.

- 5. Select the **DeviceDTM**.
- 6. If the DTM should be replaced for several devices:

Tick the **Save Assignment for All Devices of Same Type** check box and click **OK**. The "Assign Device Type (DTM)" dialog opens.

7. Click Yes.

└ The "Device Type (DTM) Information" dialog opens.

8. Click **OK**.

└ The changes are accepted.

The iDTM has been replaced by the DeviceDTM.

# 46.3 Appendix C - PROFIBUS PA Profile

If no native DeviceDTMs are available for devices up to PA Profile 3.0, it is possible to use a PROFIBUS PA Profile. The following profiles are available for the devices:

- Actuator Profile DTM
- Discrete Input Profile DTM
- Discrete Output Profile DTM
- Flow Profile DTM
- Level Profile DTM
- Pressure Profile DTM

eviceType: Pressure Profile DTM roduct designation: CERABAR M	Endress+Hauser
lagoos: ● Fabre in neascenert. Label ● Onine: ● Onin	
한 월 Standurd Parameters 한 월 Standurd Parameters 한 월 Standurdon 만 월 Warnings and Alarms 만 월 Scaling 석 패 파 아 제 파 아 에 제 파 아 제 파 어 제 퍼 어 제 파 어 제 퍼 어 제 파 어 제 퍼 어 에 제 퍼 어 제 퍼 어 에 제 퍼 어 제 퍼 어 제 퍼 어 제 퍼 어 제 퍼 어 제 퍼 어 제 퍼 어 제 퍼 어 제 퍼 어 제 퍼 어 제 퍼 어 제 퍼 어 제 퍼 어 에 거 제 퍼 어 에 게 거 제 퍼 어 게 거 제 퍼 어 에 게 거 제 퍼 어 게 거 제 퍼 어 게 거 제 퍼 어 게 거 제 퍼 어 에 거 제 퍼 어 에 거 제 퍼 어 에 게 거 제 퍼 어 게 거 제 퍼 어 제 퍼 어 제 퍼 어 제 퍼 어 제 퍼 어 제 퍼 어 제 퍼 어 제 퍼 어 제 머 어 에 게 저 어 제 퍼 어 에 게 저 어 게 거 제 퍼 어 에 게 저 어 에 게 거 제 퍼 어 에 게 거 제 퍼 어 에 게 거 제 퍼 어 에 게 거 제 퍼 어 에 게 거 제 퍼 어 에 게 거 제 퍼 어 에 게 거 제 퍼 어 에 게 거 제 퍼 어 에 게 거 제 퍼 어 에 게 거 제 퍼 어 에 게 거 제 퍼 어 에 거 제 거 제 거 제 거 제 거 제 거 제 거 제 거 제 거 제 거	

🖻 61 Pressure Profile DTM

# 46.4 Appendix D - Generic HART

If a native DeviceDTM is not available for HART/HART7, the Generic HART DTM can be used.

The Generic HART DTM has the following options:

- Identify device
- Configure device
- Trend values with archive function
- Device diagnosis
- Device calibration

For more details, please refer to the online help of the Generic HART DTM.

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Parameter	Parameter Overview (Tex.)							
Primary Variable Secondary Variable	Parameters completely read on	Read all device parameter	•					
Guatemary Variable Dynamic Variable Assignmen HART Parameter	Identification	Display and configure TAG, user message and further device	e identification parameters					
	Primary Variable Display and configure unit, measuring range and further settings of primary device variable (PV)							
	Secondary Variable	Display and configure unit and further settings of secondary	device variable (SV)					
	Tertary Variable	Display and configure unit and further settings of testiany dev	rce variable (TV)					
	Quaternary Variable	Deplay and configure unit and further settings of quaternary device variable (2V)						
	Dynamic Variable Assignments	Configure the assignment of device variables to PV/SV/	rv/av					
	HART Parameter	Configure number of response preambles and other HART p	notocol parameters					

62 Generic HART DTMs

# 46.5 Appendix E - Fieldgate SFG500 error information

All the devices connected to the PROFIBUS are displayed in the Fieldgate SFG500 Web application. Detailed information about the cause of the error can be displayed here. The Web application can be started in FieldCare:

- **1.** In the "Network" dialog, right-click to select the SFG500 item. The SFG500 must be online for this (green background)
  - ► A drop-down list opens.
- 2. Select the **Additional Functions** → **Embedded Webserver** item.

The SFG500 Web application not only displays the PROFIBUS devices in a livelist but also the HART devices behind Remote I/Os (ET200M/iSP, Stahl IS1, Turck excom, ABB S900) and also PROFIBUS PA devices behind Siemens Link.

If HART/PA devices are not recognized when scanning or connecting, the user can check here whether the devices are even on the bus or whether the Remote I/Os have been configured.

Start Network Ass	ets Events S	ettings Informatio	**					13. Au	g 2015 G	2.42.53	Call Login
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				Devices: 6	2	😳 o	<b>V</b> 3	<u> </u>	۰	0	1
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	\$905	v			151_2	3	93	ahl		0x049A	
	5006	•			WAGO	750-333 P	10 W	GO Kentak	ttech	0x8754	^
	5008	V			ET 20	OM (IM153-3	0 \$1	EMENS AG		0x801E	
	5023										
	5098	v			ET 20	DISP (IM152	SI	EMENS AG		0x8110	
	\$101				excorr	(Modus 1)	Ha	ns Turck Gr	πрн	OxFF9F	
	Details	of Slave: [S02]	1] LB/FB 8x05H/	0PV1 V6 **							
	9	Device doesn't ac DE 05 00 PP 17 10 0 Please check nets	coept configuration of 7 A7 63 00 00 00 00 43 work configuration of	lata; Device Status: n 18 83 80 80 84 40 46 8 f cyclic Master	101 OK 14 41 AS 54 43	as 64 43 As					

Detailed information can be displayed for every entry.


## Remote I/O devices

Remote I/O devices must generally be configured by a cyclic master for it to be possible to scan for HART devices.



Multiple remote I/O devices cannot be operated on the bus with two acyclic masters.

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