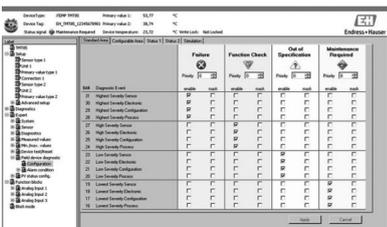
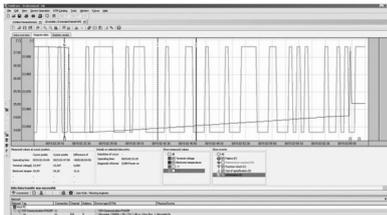
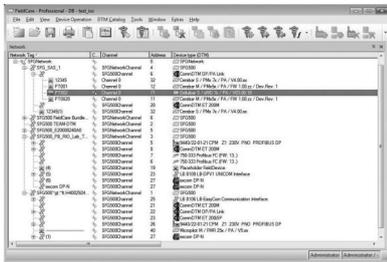


# Technical Information

## FieldCare SFE500

### Universal device configuration



### Universal field device configuration tool for HART, PROFIBUS and FOUNDATION Fieldbus

#### Application

- Configuration and management of smart field devices in a facility
- Easy device configuration, maintenance management, condition-based maintenance and life cycle management
- Can be adapted to different needs depending on the license, and is therefore upgradeable at any time

#### Your benefits

- Supplied with a complete library of certified DTMs (Device Type Manager) for operation of all Endress+Hauser field devices, has CommDTMs for HART, PROFIBUS, FOUNDATION Fieldbus and Endress+Hauser protocols
- Operates all third-party gateways, actuators, remote I/O systems and sensors supporting the FDT standard
- Ensures full functionality for all Endress+Hauser and third-party devices with DTMs and offers generic profile operation for any third-party fieldbus device that does not have a vendor DTM
- Integrates all registered HART and FOUNDATION Fieldbus field devices without DTMs through iDTM technology
- Scans, identifies, assigns DTMs and adds devices to network automatically
- Enables connection to the Endress+Hauser life cycle management tool (LCM)

## Function and system design

### Function

FieldCare enables the configuration of smart field devices in an application. All configuration and communication information is carried in Device Type Management (DTM) programs (DeviceDTMs and CommDTMs) supplied by the individual vendor. If a DTM is not available, access is possible via iDTM for HART and FOUNDATION Fieldbus.

FieldCare has the following advantages:

- Open technology, independent of device and system supplier
- Independent of device type (sensor, actuator, remote I/O etc.)
- Full support of installed base
- Full device functionality
- Independent of communication protocol: HART, PROFIBUS, FOUNDATION Fieldbus, Modbus, EtherNet/IP
- Vertical integration by **nested communication**

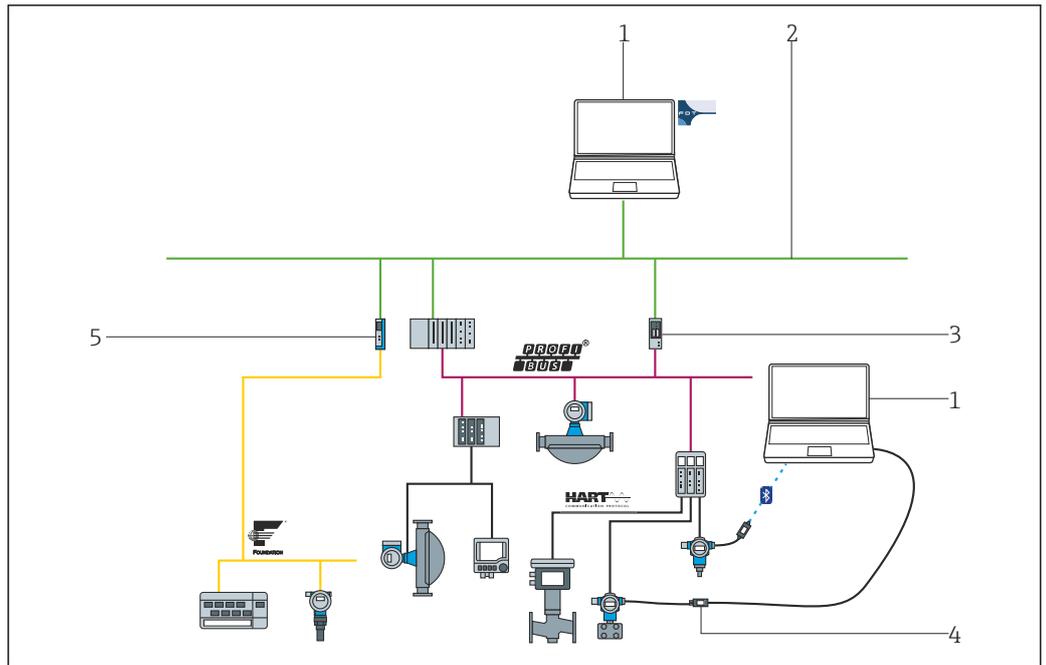


### System design

#### Network connection

Depending on the communication interface offered by the field device, FieldCare may be connected via a network or point-to-point to a powered field device. The software is installed on a Windows PC, laptop or tablet, and the connection made via a network card, an appropriate interface card or a USB or Bluetooth modem. Access may be via a gateway with CommDTM, or if it supports FDT, via a controller. The physical architecture is mirrored by the **nested** CommDTMs and DeviceDTMs.

The devices are configured via DeviceDTMs. If the device does not have a native DTM, but is registered at FieldComm Group, then it can be operated by the appropriate iDTM. Interfaces such as PROFIBUS DP/PA couplers must be either transparent or be supplied with a CommDTM if access is to be made to the connected devices. Field devices with 4 to 20 mA, binary or pulse/frequency outputs cannot be operated.

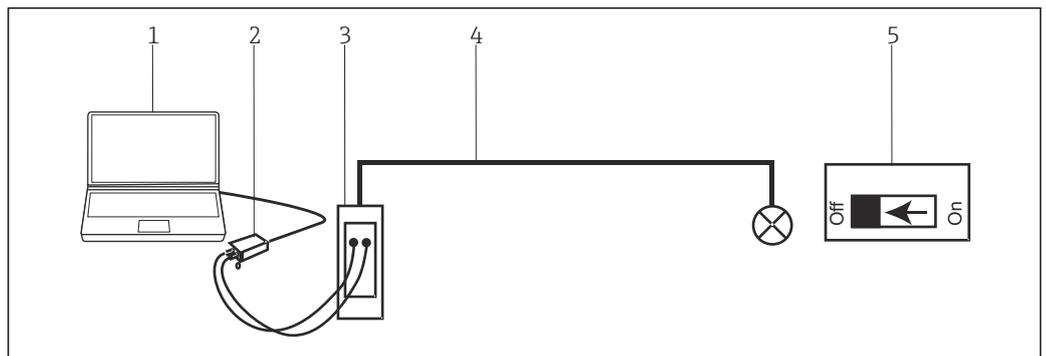


1 FieldCare architecture showing central access to a HART, FOUNDATION Fieldbus and PROFIBUS network via gateway and Ethernet

- 1 FieldCare
- 2 Ethernet
- 3 Ethernet/PROFIBUS gateway e.g. Fieldgate SFG500
- 4 Commubox FXA195 for HART
- 5 Ethernet/FOUNDATION Fieldbus gateway

**HART point-to-point connection**

Fig. 2 shows a HART point-to-point connection via a HART power supply using the FXA195 USB/HART modem. Since the power supply has a communication resistor, the communication resistor of the FXA195 must be switched off. The connection can be made at the power supply module or the device terminals as required.



2 Point-to-point connection with a HART field device

- 1 FieldCare
- 2 USB connection
- 3 HART power supply e.g. RMA422, RN221N with communication resistor
- 4 HART 4 to 20 mA
- 5 FXA195 modem

If there is no communication resistor in the 4 to 20 mA signal loop, the USB modem FXA195 should be connected via the HART terminals of the field device. In this case, the communication resistor in the modem must be switched on.

## System integration

### CommDTMs

### FieldCareCommDTMs

Description	Protocol	Application
CDI communication	Endress+Hauser	FXA291: CDI interface, CDI USB, CDI TCP/IP
IPC FXA193/FXA291	Endress+Hauser	FXA193/FXA291: IPC level/pressure interface
PCP TXU10/FXA291	Endress+Hauser	TXU10/FXA291: PCP interface
ISS FXA193/FXA291	Endress+Hauser	FXA193/FXA291: ISS flow interface
FXA520	HART	FXA520 Ethernet/HART gateway: pass through connection to HART devices
HART Communication	HART	FXA195 or Mactek VIATOR (USB/HART or RS-232C/HART) HART point-to-point connection
DP/PA Link	PROFIBUS	Siemens DP/PA Link: Connection to PROFIBUS PA devices
ET 200M	PROFIBUS	Siemens ET-200M: RIO PROFIBUS DP/HART
ET 200iSP	PROFIBUS	Siemens ET-200iSP: RIO PROFIBUS DP/HART
PROFI dtm DPV1	PROFIBUS	FXA720/ PCMCIA PROFIBUS card: Ethernet/PROFIBUS DP connection
PROFIBUS Master DV-V1	PROFIBUS	SOFTING TH LINK: Ethernet/PROFIBUS DP connection
SFG500	PROFIBUS	SFG500: PROFIBUS Master
FOUNDATION Fieldbus H1 CommDTM	FOUNDATION Fieldbus	National Instruments PCMCIA FBUS card: connection to FOUNDATION Fieldbus H1

Please pay attention to the individual release notes for the FieldCare communication DTMs. The system requirements of the DTMs may differ from the FieldCare system requirements.

### Third-party DTMs

Endress+Hauser recommends an integration test for the use of third-party DTMs, particularly if the DTMs are not certified. A number of DTMs for third-party remote I/Os are known to support FieldCare depending on the network architecture. More information is available from Endress+Hauser.

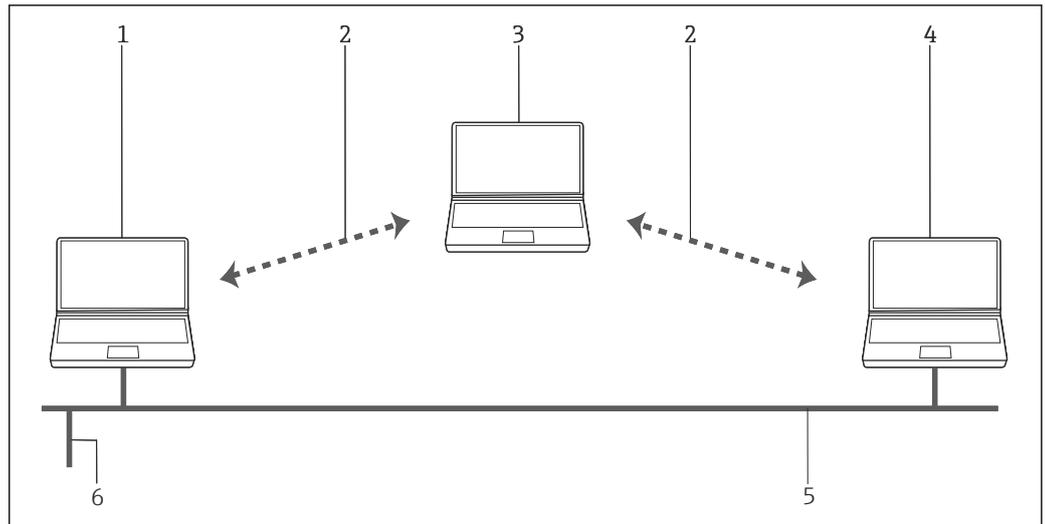
### Security recommendations

- Restrict physical and electronic access to field devices, networks, computers and systems to a group of authorized persons and use a role-based access system
- Use a correctly configured firewall that blocks all data that do not comply with security specifications; disable ports that are not used and use a Demilitarized Zone or an Intrusion Detection System to enhance security
- Establish an organized, real-time patch management process for all products, e.g. operating systems, internet browsers, programs, apps, databases and drivers.
- Run anti-virus software on the PC
- Establish detailed guidelines and processes to only allow authorized persons access to the PC or other equipment
- Only use hardware, software, firmware and other electronic content from trusted sources

### Interfaces to Endress+Hauser tools and databases

#### LCM interface (optional)

FieldCare can be connected to the LCM databases (W@M Portal or Enterprise). This allows the user access to the common equipment record, spare part finder etc. as well as various LCM applications such as comparison of current to historic configurations.



3 Interface to LCM

- 1 FieldCare
- 2 Internet interface
- 3 W@M Portal
- 4 W@M Enterprise
- 5 Ethernet
- 6 Network connection

#### SOAP and e-mail interface (option)

The optional Condition Monitoring module can exchange data with other tools via an e-mail or XML file.

#### Launch interface

FieldCare can be embedded into or started from any SCADA application by using a launch interface.

## Operability

### Operation

- Standard configurable Windows graphical user interface with icons, short cuts etc.
- Creation of projects in network (communication) and plant (logistic) views
- Projects created manually or automatically with a project setup wizard
- Standard windows functions for saving, opening, printing, editing projects, changing workspace etc.
- FieldCare languages: DE, EN, FR, IT, ES, ZH, JA, RU
- DTM graphical user interface and language dependent on device and supplier

## Software Specification

### FieldCare

- Configuration and commissioning of Endress+Hauser and third-party devices based on DTM technology
- Supports HART, PROFIBUS, FOUNDATION Fieldbus, Modbus and EtherNet/IP protocols
- Support of Endress+Hauser protocols to access our instruments independent of fieldbus protocol
- Includes CommDTMs for HART, PROFIBUS, FOUNDATION Fieldbus, the Endress+Hauser interface and gateways for remote service
- Plant View: logical view of plant with tagging and archiving
- Document Management: storage of key documents under the device tag
- Inventory View: list of all devices in the plant
- LCM Connectivity: ability to connect to LCM database via networks or Internet
- Project Management: import/export of projects and settings
- Reports: configurable and printable reports of device settings, plant configuration etc.

- User Management: configurable list of users
- Typically up to 1200 field devices, more on request
- iDTM HART operates third-party HART devices without DTM in FieldCare, contains more than 1400 registered HART EDDs from approx. 110 device manufacturers
- iDTM FOUNDATION Fieldbus operates third-party FOUNDATION Fieldbus field devices without DTM in FieldCare, contains more than 570 registered FOUNDATION Fieldbus field devices from approx. 80 device manufacturers

#### Condition monitoring (option)

Extracts data from selected devices and, based on the way they are set up, creates alarms via e-mail or through the operator workstation to alert users of a potential need for maintenance. The operator is given additional device data to allow him to make informed decisions.

- Independent solution for the maintenance task
- Focus on critical devices and beneficial information
- NE107 compliant
- Support for HART field devices with relevant DTD
- Support for PROFIBUS field devices - Profile 3.0 and higher - with relevant DTD

#### Supplied support software

- Microsoft .NET Version 3.5 SP1
- Microsoft Management Console version 1.2 <sup>1)</sup>
- Microsoft SQL Server 2014 Express SP1 <sup>1)</sup>
- Microsoft Windows Installer 4.5 <sup>2)</sup>

#### Software required

- Microsoft .NET 3.5 SP1
- Microsoft .NET 4.x
- PDF reader

## System requirements

#### Operating systems

Version	End of Microsoft support (mainstream)	End of Microsoft advanced support	Status of FieldCare support
Windows 7 Professional SP1 (x32+x64)	January 2015	January 2020	OK
Windows 7 Ultimate SP1 (x32+x64)	January 2015	January 2020	OK
Windows 7 Enterprise SP1 (x32+x64)	January 2015	January 2020	OK
Windows Server 2008 R2 SP1	January 2015	January 2020	OK
Windows 8.1	January 2018	January 2023	OK
Windows 8.1 Professional	January 2018	January 2023	OK
Windows 8.1 Enterprise	January 2018	January 2023	OK
Windows 10	October 2020	October 2025	OK

#### Hardware

Item	Recommended
Processor type	Pentium IV 3 GHz CPU AMD 3 GHz CPU
Working memory	4 GB RAM

1) Program is installed automatically by the FieldCare Installation Manager, if not already available or if a compatible version is not installed.

2) Program is installed automatically by the FieldCare Installation Manager, if not already available.

Item	Recommended
Hard-disk capacity (status July 2016 with FieldCare package 1.28.00)	10.0 GB for full installation plus 4.5 GB in a temporary folder during installation on system partition  Partial installation as follows: <ul style="list-style-type: none"> <li>■ 500 MB FieldCare</li> <li>■ 1.8 GB System Components</li> <li>■ 6.5 GB Endress+Hauser DTM library (HART, PROFIBUS, FOUNDATION fieldbus, EtherNet/IP, Modbus)</li> <li>■ 800 MB Endress+Hauser protocols DTM library</li> <li>■ 400 MB Endress+Hauser iDTM library</li> </ul>
Monitor resolution	1024 x 768, 64,000 colors

## Ordering information

### Product structure

Detailed information about the product structure is available:

- In the Product Configurator on the Endress+Hauser website: [www.endress.com](http://www.endress.com) → Select country → Products → Software solutions by Endress+Hauser → FieldCare
- From the Endress+Hauser Sales Center: [www.addresses.endress.com](http://www.addresses.endress.com)

## Documentation

### Process Solutions

Fields of Activity FA00017S/04/EN

### Plant Asset Management

Fields of Activity FA00024S/04/EN

### FieldCare

- Competence Brochure CP00001S/04/EN
- Getting Started BA00027S/04/A2
- Tutorial for FieldCare projects BA00065S/04/EN

[www.addresses.endress.com](http://www.addresses.endress.com)

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