Operating Instructions
Field Xpert SMT70

Universal, high-performance tablet PC for device
configuration in Ex Zone 2 and non-Ex areas

Endress+Hauser [EH]

People for Process Automation

Change history

Product version	Operating Instructions	Changes	Comments
1.00.xx	BA01709S/04/EN/01.17	-	-
1.02.xx	BA01709S/04/EN/02.18	New chapter 8.5	HART via PROFINET via Fieldgate PAM SFG600
1.03.xx	BA01709S/04/EN/03.18	New chapter 8.6 New chapter 8.7 New chapter 8.8 New screenshots	Automatic DTM update Uploading HART device report to IIoT Library RFID
1.04.xx	BA01709S/04/EN/04.19	New screenshots Chapter 1.2.3 Chapter 4.2.2 Chapter 8.2 Chapter 8.4 Chapter 8.7.1 Chapter 8.7.2 Chapter 8.8	- New symbols Manufacturer address "Bluetooth" connection Renewing the license Offline use case Link to Netilion Library Uploading a photo to the Netilion Library
1.05.xx	BA01709S/04/EN/05.20	New screenshots Chapter 1.2.3 Chapter 4.2.1 Chapter 8.2 Chapter 8.4 Chapter 8.7 Chapter 8.8 Chapter 8.9	- New symbols Nameplate "Bluetooth" and "WLAN" connection Renewing the license New Netilion Library chapter Scanner App Uploading a Heartbeat Verification report to the Netilion Library
1.06.xx	BA01709S/04/EN/06.22	New screenshots Chapter 5.3 Chapter 10.1 Appendix	Screenshots in English from this version Software update service Battery Protecting mobile devices
1.07.xx	BA01709S/04/EN/07.22	Chapter 1.2.3 Chapter 1.3 Chapter 8 Chapter 8.3.6	Updated explanation of symbols Acronyms used Screenshots modified New Bluetooth

Table of contents

1   About this document

1.1   Document function

These Operating Instructions contain all the information that is required in various phases of the life cycle of the device: from product identification, incoming acceptance and storage, to mounting, connection, operation and commissioning through to troubleshooting, maintenance and disposal.

1.2   Symbols

1.2.1   Safety symbols

⚠ DANGER
This symbol alerts you to a dangerous situation. Failure to avoid this situation will result in serious or fatal injury.

⚠ WARNING
This symbol alerts you to a dangerous situation. Failure to avoid this situation can result in serious or fatal injury.

⚠ CAUTION
This symbol alerts you to a dangerous situation. Failure to avoid this situation can result in minor or medium injury.

NOTICE
This symbol contains information on procedures and other facts which do not result in personal injury.

1.2.2   Symbols for certain types of information

Symbol	Meaning
✔	**Permitted** Procedures, processes or actions that are permitted.
✔✔	**Preferred** Procedures, processes or actions that are preferred.
✘	**Forbidden** Procedures, processes or actions that are forbidden.
ℹ	**Tip** Indicates additional information.
📖	Reference to documentation.
📄	Reference to page.
🖼	Reference to graphic.

Symbol	Meaning
▶	Notice or individual step to be observed.
1., 2., 3....	Series of steps.
└▶	Result of a step.
?	Help in the event of a problem.
👁	Visual inspection.

1.2.3   Field Xpert symbols

Symbol	Meaning
⏻	Switch tablet on and off.
⊞	Windows button
((γ))	Wireless communication (WLAN, WWAN, GPS, Bluetooth)
⎁	Battery
⟠	Opens the Offline Dynamic Installed Base Analysis (DIBA)
🏠	Open the home screen of the device configuration software.
‹	Jump back to the last page opened.
☰	Information and software settings.
?	Additional information about the software.
—	Minimize the program.
⤢	Enable full screen.
⤡	Disable full screen.
✕	Close the program.
▲	Scroll up

Symbol	Meaning
▼	Scroll down
↻	Update
⌄	Expand information.
⌃	Collapse information.
▶	Connect automatically
⛛	Connect with wizard (manual connection)
📶	Connect with Endress+Hauser WLAN and Bluetooth devices
N◉	RFID
☁	Cloud
☆	Favorites
⌨	Keypad
📷	Camera
↗	Link to Netilion Library
📎	Attach photos and PDFs to an asset in Netilion Library
▶	Start
🗑	Trash

1.3   Acronyms used

Acronyms	Explanation
DFS	Dynamic Frequency Selection
DTM	Device Type Manager
FCC	Federal Communications Commission

Acronyms	Explanation
HF	High frequency [RF = radio frequency]
MSD	Menu Structure Description
SD	Secure Digital
WWAN	Wireless Wide Area Network

1.4   Documentation

Field Xpert SMT70
Technical Information TI01342S/04/EN

Field Xpert SMT77
• Technical Information TI01418S/04/EN
• Operating Instructions BA01923S/04/EN

Fieldgate PAM SFG600
• Technical Information TI01408S/04/EN
• Brief Operating Instructions KA01400S/04/EN

1.5   Registered trademarks

Windows 10 IoT Enterprise® is a registered trademark of Microsoft Corporation, Redmond, Washington, USA.

Intel® Core™ is a registered trademark of Intel Corporation, Santa Clara, USA.

Durabook is a registered trademark of Twinhead International Corp., Taiwan.

FOUNDATION™ Fieldbus is the trademark of the FieldComm Group, Austin, TX 78759, USA.

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

PROFIBUS® is a registered trademark of the PROFIBUS User Organization, Karlsruhe/ Germany.

Modbus is the registered trademark of Modicon, Incorporated.

IO-Link® is a registered trademark of the IO-Link Community c/o PROFIBUS User Organization, (PNO) Karlsruhe/ Germany - www.io-link.com

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

2   Basic safety instructions

The Operating Instructions supplied with the device and containing the safety instructions of the tablet PC manufacturer must be observed.

2.1   Requirements for the personnel

The personnel for installation, commissioning, diagnostics and maintenance must fulfill the following requirements:
▶ Trained, qualified specialists must have a relevant qualification for this specific function and task.
▶ Are authorized by the plant owner/operator.
▶ Are familiar with federal/national regulations.
▶ Before starting work, read and understand the instructions in the manual and supplementary documentation as well as the certificates (depending on the application).
▶ Follow instructions and comply with basic conditions.

The operating personnel must fulfill the following requirements:
▶ Are instructed and authorized according to the requirements of the task by the facility's owner-operator.
▶ Follow the instructions in this manual.

2.2   Designated use

The tablet PC for device configuration enables mobile plant asset management in hazardous and non-hazardous areas. It is suitable for commissioning and maintenance staff to manage field instruments with a digital communication interface and to record progress. This tablet PC is designed as a complete solution and is an easy-to-use, touch-enabled tool which can be used to manage field instruments during their entire life cycle. It provides extensive, pre-installed driver libraries and offers access to the "Industrial Internet of Things" as well as to information and documentation during the entire life cycle of the device. The tablet PC offers a modern software user interface and the option of online updates based on a secure Microsoft Windows 10 multi-functional environment.

2.3   Workplace safety

The tablet PC is used for device configuration. Incorrect configurations may lead to unwanted or hazardous situations in a plant. The device configuration software is already installed on the tablet PC upon delivery. These Operating Instructions describe how to commission and operate the tablet PC.

> ■ Commissioning→ 🗎 20
> ■ Operation → 🗎 22

2.4   Operational safety

Risk of injury!
▶ Operate the device in proper technical condition and fail-safe condition only.
▶ The operator is responsible for interference-free operation of the device.

Modifications to the device

Unauthorized modifications to the device are not permitted and can lead to unforeseeable dangers:
▶ If, despite this, modifications are required, consult with Endress+Hauser.

Repair

To ensure continued operational safety and reliability:
▶ Carry out repairs on the device only if they are expressly permitted.
▶ Observe federal/national regulations pertaining to repair of an electrical device.
▶ Use only original spare parts and accessories from the manufacturer.

2.5   Product safety

The tablet PC is designed in accordance with good engineering practice to meet state-of-the-art safety requirements, has been tested, and left the factory in a condition in which it is safe to operate.

It fulfills general safety requirements and legal requirements. It also conforms to the EC directives listed in the device-specific EC Declaration of Conformity. The manufacturer confirms this by affixing the CE mark to the device.

2.6   IT security

Our warranty is valid only if the device is installed and used as described in the Operating Instructions. The device is equipped with security mechanisms to protect it against any inadvertent changes to the settings.
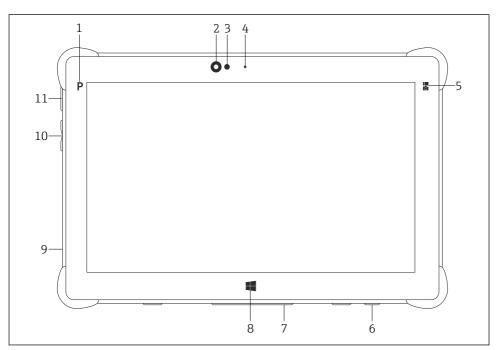
IT security measures, which provide additional protection for the device and associated data transfer, must be implemented by the operators themselves in line with their security standards.

3   Product description

With an ultra-compact form factor, the tablet PC meets the most demanding requirements, such as ingress protection (IP65) and shock resistance (4-foot drop-test and MIL-STD 810G). The additional screen protector offers complete protection in harsh working environments. The tablet PC's good ergonomic features also protect workers' health, keeping physical strain to a minimum.

With the increasing popularity of 4G/LTE connectivity in hazardous areas, the tablet PC ensures swift and seamless access to data. However, in situations where not even WLAN is available, the optional docking station with an Ethernet interface gives the tablet PC the necessary flexibility to link into existing network infrastructures. In addition, the latest Bluetooth standards are also supported.

After use in the field, the tablet PC can be used as an office PC with the optional office docking station, allowing the tablet to be seamlessly integrated into the office and business networks.
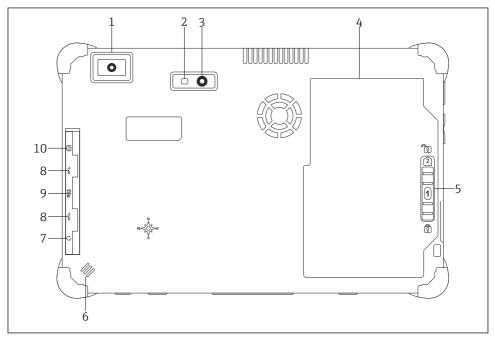
⊡ *1   Front view of tablet PC*

1   Program button
2   Front camera
3   Ambient light sensor
4   Microphone
5   Function key
6   DC socket (underside)
7   Dock connector (underside)
8   Windows button
9   Slot for Kensington lock (left side)
10   Volume buttons (left side)
11   On/off button (left side)

Component	Description
Program button	Go to user-defined program
Front camera	For video recordings (e.g. at video conferences)
Ambient light sensor	Measures the current ambient lighting conditions
Microphone	To record ambient sounds
Function key	The key function can be assigned via the "Quick Menu"
DC socket	For connecting the power adapter
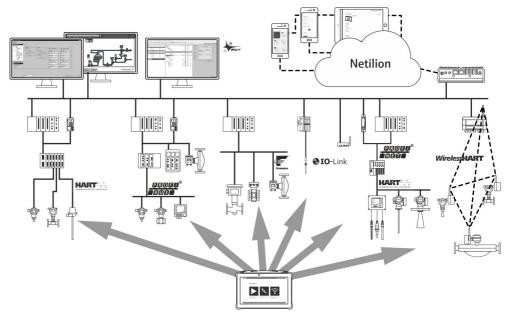
Component	Description
Dock connector	For connecting the tablet PC to a docking station
Windows button	Launch the Windows start screen
Slot for Kensington lock	For connecting a Kensington-compatible security lock
Volume buttons	For setting the volume
On/off button	For switching the tablet PC on or off

⊡ 2   Rear view of tablet PC

1   Barcode scanner
2   Camera LED flash
3   Camera
4   Battery compartment
5   Button to unlock the battery compartment
6   Loudspeaker
7   Combined audio jack
8   2 x USB 3.0
9   Memory card slot for Micro SD memory cards
10   SIM card slot

Component	Description
Barcode scanner	For scanning barcodes.
Camera LED flash	For additional lighting in poor light.
Camera	For taking pictures.
Battery compartment	Contains the battery.
Button to unlock the battery compartment	Press down the button and hold to unlock the battery compartment.
Loudspeaker	For sound
SIM card slot	For inserting a SIM card for WWAN (LTE+GPS).
2 x USB 3.0	For connecting USB 3.0 peripheral devices. ⚠ **WARNING** **The use of the USB ports in the hazardous area is not permitted** and can cause an explosion. ▶ In the hazardous area, always use an Ex tablet with the MACTek VIATOR Bluetooth HART modem or the mobiLink.
Memory card slot	For inserting Micro SD memory cards, and SD, SDXC, SDHC memory cards using an adapter.
Combined audio jack	For connecting headphones, external loudspeakers or a microphone.

3.1   Product design

🖼 *3   Network architecture*

3.2   Application

The tablet PC for device configuration enables mobile plant asset management in hazardous and non-hazardous areas. It is suitable for commissioning and maintenance staff to manage field instruments with a digital communication interface and to record progress. This tablet PC is designed as a complete solution and is an easy-to-use, finger-operated tool which can be used to manage field instruments during their entire life cycle. It provides pre-installed driver libraries and offers access to the "Industrial Internet of Things" as well as to information and documentation during the entire life cycle of the device. The tablet PC offers a modern software user interface and the option of online updates based on a secure Microsoft Windows 10 multi-functional environment.
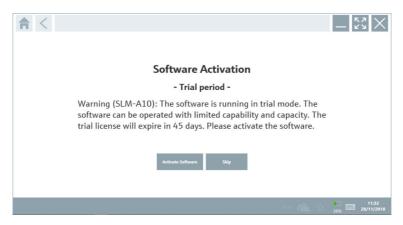
3.3   License model

The device configuration software is already installed on the tablet PC upon delivery.

To use the software as designated, the software must be activated. A user account is required in the Endress+Hauser software portal for this purpose. This account might first need to be created via the "Create account" function.

Activating the device configuration software package

1. Double-click **Field Xpert** on the start screen.
   ↳ The software licensing page opens.

2. Click **Activate Software**.
   ↳ The dialog box where you can enter the software portal data opens.

3. Enter the **E-mail address** and **Password** and click **Activate**.
   ↳ The dialog box with the message "The application has been activated successfully." opens.
4. Click **Show license**.
   ↳ The dialog box with the licensing information opens.
5. Click **Close**.

The home screen of the device configuration software program opens.

4   Incoming acceptance and product identification

4.1   Incoming acceptance

Visual inspection
- Check the packaging for visible damage arising from transportation
- Open the packaging carefully
- Check the contents for visible damage
- Check that the delivery is complete and nothing is missing
- Retain all the accompanying documents

The device may not be put into operation if the contents are found to be damaged beforehand. In this case, please contact your Endress+Hauser Sales Center: www.addresses.endress.com

Return the device to Endress+Hauser in the original packaging where possible.

Scope of delivery
- Field Xpert SMT70 tablet PC with handle
- AC charger (100 to 240 V_{AC}, 1.5 A, 50 to 60 Hz) with connecting cable as per order
- Software and interfaces/modem as per order
- Operating Instructions with safety instructions from Ecom

4.2　Product identification

4.2.1　Nameplate

1　Endress+Hauser software ID
2　Endress+Hauser product name
3　Endress+Hauser serial number
4　Manufacturer nameplate
5　Manufacturer model number
6　Manufacturer technical information
7　Manufacturer serial number

4.2.2　Manufacturer's address

Ecom Instruments GmbH is responsible for the tablet hardware and produces it exclusively for Endress+Hauser.

Hardware

Ecom Instruments GmbH

Industriestraße 2

97959 Assamstadt

Germany

www.ecom-ex.com

Software

Endress+Hauser Process Solutions AG

Christoph Merian-Ring 12

4153 Reinach

Switzerland

www.endress.com

4.3   Storage and transport

ℹ️ Always use the original packaging when transporting the product.

4.3.1   Storage temperature

−20 to 60 °C (−4 to 140 °F)

5   Installation

5.1   System requirements

ℹ️ The software is already installed on the tablet PC upon delivery.

5.2   Installing the software

The device configuration software is already installed on the tablet PC upon delivery. The device configuration software must be activated.

ℹ️ Licensing model → 🖹 13

5.3   Updating the software

ℹ️ Software update service

The inclusive maintenance period starts with the creation of the license and ends automatically after one year (reference date). Irrespective of when the software update service is purchased, each additional software update service subsequently purchased will follow on from the last reference date without interruption. If the purchase date is after the reference date, the new maintenance period will first cover the gap between the reference date and the creation of the software update service that has been purchased.

It is also important to note that software updates can also be loaded at a later point in time provided that the software release has been released within a valid, active maintenance period.

1. Click the ? icon on the home page of the device configuration software.
   - ↳ The dialog box with the licensing information opens.
2. Click the **Update** tab.
   - ↳ The dialog box with the update information opens.

3. Click **Check for updates**.
   - ↳ The device configuration software searches for updates.

5.4   Removing the software

The device configuration software may not be uninstalled.

6   Operation

Avoid damage to the housing and components:
▶ Always place the device on a stable surface.
▶ Do not cover the ventilation opening, or block it by other objects.
▶ Keep the device away from liquids.
▶ Do not expose the device to direct sunshine or very dusty conditions.
▶ Do not expose the device to excess heat or humidity.

6.1   Status indicators

The status indicators on the interface of the tablet PC are lit as soon as the corresponding functions are active.

🔲 4   *Status indicator*

Symbol	Meaning	Description
⏻	Power	The LED is lit green when the system is in operation. The LED flashes when the system is in sleep mode.
((ᵧ))	Wireless communication	Indicates the status of wireless communication (WLAN, WWAN or Bluetooth). The LED is lit blue if at least one wireless communication option is active.
		ℹ️ The "Quick Menu" application must be installed to be able to display the status for wireless communication.
🔋	Battery	Indicates the battery charge state:
		• Green, battery is fully charged
		• Amber, battery is charging
		• Flashing amber, error while charging
		• Red, battery less than 10 % charged
		• Off, battery is empty

6.2   Shutting down the tablet PC

ℹ️ Make sure you shut down the tablet PC properly, as this is the only way to avoid losing unsaved data.

▶ Tap the **Windows icon** → ⏻ → **Shut down**.

The tablet PC shuts down.

ℹ️ Do not disconnect the power source until the tablet PC is switched off completely.

6.3   Switching off the tablet PC

▶ Press and hold the ⏻ button until the power LED flashes.
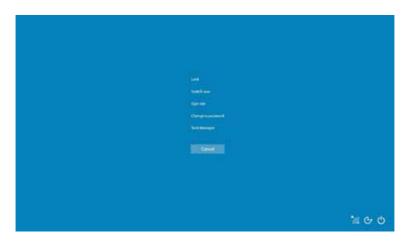
The tablet PC is in sleep mode.

6.4   Security screen

ℹ️ If the tablet PC is used without an external keyboard, the Ctrl+Alt+Del key combination is replaced by the key combination of simultaneously pressing the ⏻ and ⊞ keys.

1. Press the ⏻ and ⊞ keys simultaneously.
   - ↳ The tablet PC switches to the Windows security screen.

2. Select an action.
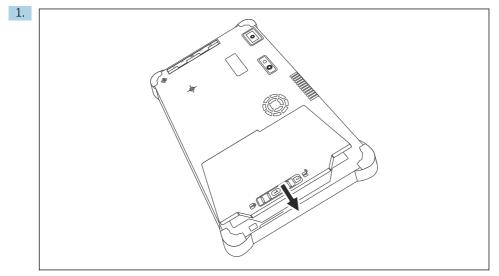
Possible actions:
- Lock the device
- Change to another user
- Log out
- Change the password
- Open Task Manager
- Shut down or restart the device

7 Commissioning
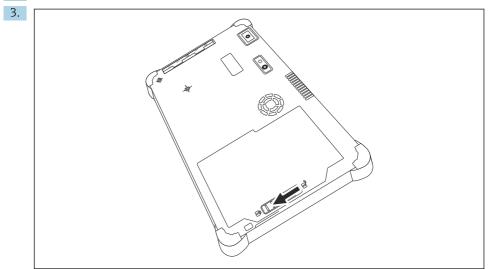
The tablet PC can be powered by the AC adapter or the lithium ion battery.

7.1   Inserting the battery

1.

Insert the battery in the battery compartment.

2.   Press down until the battery clicks into place.

3.

Slide the battery lock into the "Locked" position.

The battery is inserted.

7.2   Charging the battery

ℹ️ Due to transport safety regulations, the lithium ion battery is not fully charged when purchased.

1. The battery must be inserted.
   Connect the AC adapter to the DC socket of the tablet PC.
2. Connect the AC adapter to the power cable.
3. Connect the power cable to a power outlet.

7.3   Switching on the tablet PC

▶ Press and hold the ⏻ button until the power LED is lit.

The tablet PC starts.

7.4   Connecting the AC adapter

The AC adapter powers the tablet PC and charges the battery.

ℹ️ When using the AC adapter:

Place the device sufficiently close to a power outlet that the power cable can still reach the outlet.

Only operate the device with the type of power source indicated on the device nameplate.

Disconnect the AC adapter from the power outlet if the device will not be used for an extended period.

1. Connect the AC adapter to the DC socket of the tablet PC.
2. Connect the AC adapter to the power cable.
3. Connect the power cable to a power outlet.

ℹ️ The tablet PC may only be used with the corresponding AC adapter.

If the tablet PC is connected to a socket and the battery is inserted, the tablet PC is powered via the socket.

8   Operation

NOTICE
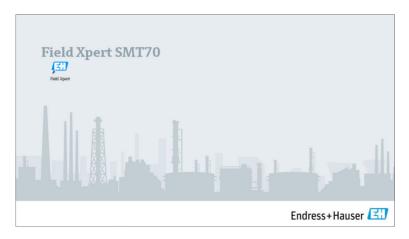
The use of unsuitable objects to operate the device
can damage the screen.
▶ Do not use pointed objects for the screen.

8.1   How to start

i The user must accept the terms of use the first time the device configuration software is started.

▶ Double-click **Field Xpert** on the start screen.
  ↳ The device configuration software starts.

8.2   Establishing a connection to the device

A connection can be established in one of three ways:
- Automatically
- Using a wizard (manually)
- Wi-Fi and Bluetooth

Connect the desired modem or interface. Wait until the modem or interface has been detected (e.g. USB icon).

The following modems/interfaces are supported by the tablet PC:

Communication protocol	Connection	Modems/interfaces
HART		Commubox FXA195 4 to 20 mA
		MACTek Bluetooth modem 4 to 20 mA
		Memograph RSG45 (4 to 20 mA)
		MACTek USB modem (4 to 20 mA)
		FieldPort SFP20
		Fieldgate SFG250
		Tank Scanner NXA820
WirelessHART		WirelessHART adapter SWA70
		WirelessHART adapter SWG70
HART via PROFINET		Fieldgate PAMSFG600
	ℹ️ The Remote Wizard connection is visible in combination with the Fieldgate PAM SFG600.	
PROFIBUS		Softing PROFIusb
		Softing PBpro USB

Communication protocol	Connection	Modems/interfaces
		FieldPort SFP20
		Fieldgate SFG500
FOUNDATION Fieldbus		NI USB
		FieldPort SFP20
		Softing FFusb
Modbus		Modbus serial
Endress+Hauser service interfaces		Commubox FXA291 CDI
		Commubox FXA291 IPC, ISS, PCP
		Commubox FXA193 IPC, ISS
		TXU10 V2 CDI
		TXU10 V2 PCP
		TXU10 V1 PCP, CDI
		CDI USB
		CDI TCP/IP
Bluetooth		Endress+Hauser Bluetooth devices, also level and pressure devices in some cases

A0041855

Communication protocol	Connection	Modems/interfaces
Wi-Fi	 A0041855	Endress+Hauser Wi-Fi devices
IO-Link	 	FieldPort SFP20

"Automatic" connection

▶

Tap the ▶ icon.
↳ The device configuration software establishes a connection to the connected device.

"Assistant" connection

1.

Tap the icon.

↳ An overview of all the protocols available opens.

2. Select a communication protocol.
    ↳ An overview of all the modems available opens.

3. Select a modem.
    ↳ The device can be configured.

"Wireless" connection

▸

Tap the 📶 icon.

↳ The live list appears with all the available Endress+Hauser Wi-Fi and Bluetooth
  devices. This list can be filtered for Wi-Fi and Bluetooth devices.

"Bluetooth" connection

1. Tap the 🔵 icon to filter for Bluetooth devices.

2. Tap the ▶ icon next to the device that should be configured.
    ↳   The Login dialog box appears.

3. Enter the **User Name** (admin) and **Password** and tap **Login**.
    ↳   The DTM (default) or the MSD opens.

ℹ The initial password corresponds to the serial number of the device.

Please contact the Endress+Hauser sales organization to receive the reset code.

"WLAN" connection

1. Tap the 🛜 icon to filter for WLAN devices.

2. Tap the ▶ icon next to the device that should be configured.
   ↳ The Connect to WLAN device dialog box appears.

3. Enter the **Password** and tap **Connect**.
   ↳ The connection window opens.
4. Do not change the IP address - leave it as is.
5. Tap the ▶ icon.
6. Tap **Vendor specific**.
7. The DeviceDTM opens and the device can be configured.

ℹ The initial password corresponds to the serial number of the device.

ℹ Tap **Click here to connect** to establish the connection directly via an IP address.

8.3   Information and software settings

▶ Click the ☰ icon in the main menu.
   ↳ An overview of all the information and settings opens.

8.3.1   DTM catalog

▶ Click the **DTM Catalog** tab.

   ↳ An overview of all the DTMs available opens.

Device driver offline view

▶ Double-click the desired device driver.

The offline view of the device driver opens.

   ℹ This function is only possible if the device driver supports the offline view.

   ℹ If other device drivers (DTMs) are required, they can be installed additionally. After an automatic or manual ⟳ update, these drivers appear in the DTM catalog.
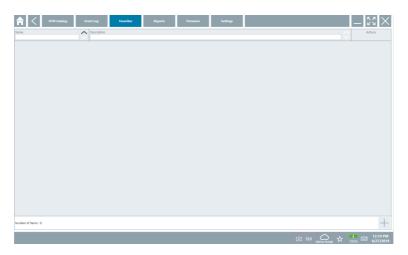
8.3.2   Event log

▶ Click the **Event Log** tab or the gray status bar.
  ↳ An overview of all the events opens.

> If event logs are already listed, they can be deleted using the **Clear** button.

8.3.3   Favorites

▶ Click the **Favorites** tab or the ☆ icon.
  ↳ An overview of all the favorites opens.
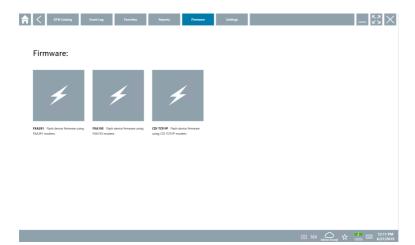
8.3.4   Managing reports

1. Click the **Reports** tab.
   ↳ The overview with the "Manage saved device reports" folder opens.

2. Click the "Manage saved device reports" folder.
   ↳ An overview of all the saved device reports opens.
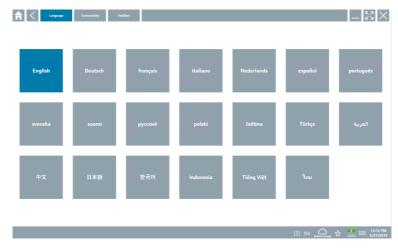
8.3.5   Firmware

▶ Click the **Firmware** tab.
   ↳ An overview of the firmware opens.

8.3.6   Settings

Language

1. Click the **Settings** tab.
   - ↳ The **Language** tab opens with an overview of all the languages available.

2. Select the desired language.
3. Click the ☒ icon.
   - ↳ The device configuration software closes.
4. Restart the device configuration software.
   - ↳ The selected language is saved.

Connection

▶ Click the **Connectivity** tab.
  ↳ An overview of all the connections opens.

ℹ️ The "Connectivity" tab is relevant only in conjunction with the Fieldgate PAM SFG600 HART via PROFINET → 🖹 40.

Netilion

▶ Click the **Netilion** tab.
  ↳ An overview of data storage settings opens.

Bluetooth

▶ Click the **Bluetooth** tab.
  ↳ The Bluetooth device security data function opens.

8.4 Additional information about the software

▶ Click the ? icon.
  ↳ An overview of all the additional information opens.

8.4.1 License

▶ Click the **License** tab.
  ↳ The dialog box with the licensing information opens.

Renewing the license

Field Xpert SMT71 must be ordered when the maintenance contract has expired. After Field Xpert SMT71 has been successfully ordered, the customer receives notification in the Field Xpert software (software version 1.05 and higher).

For software versions up to 1.04:

1. After Field Xpert SMT71 has been successfully ordered:
   Click the **License** tab.

2. Click **Update license**.

3. Sign in once with email and password in the software portal.
   ↳ The license has been renewed.
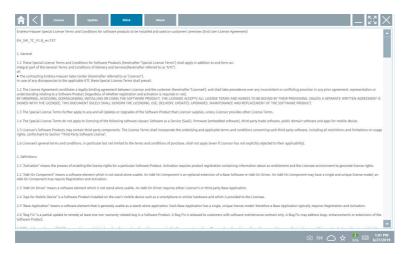
8.4.2 Update

▶ Click the **Update** tab.
   ↳ The window with the updates opens.
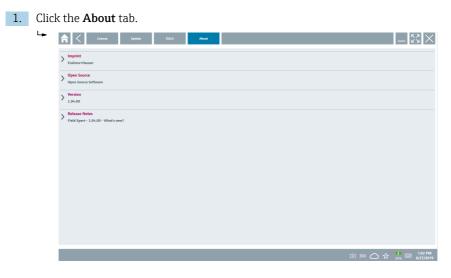
8.4.3 EULA

▶ Click the **EULA** tab.

    ↳ The window with the Endress+Hauser Terms and Licensing Conditions opens.

8.4.4 Info

This tab contains information about the software currently installed, the manufacturer and the software source text.

1.   Click the **About** tab.

    An overview of all the information opens.

2.   Click the ⊙ icon to view the information.

8.5   Fieldgate PAM SFG600 HART via PROFINET

The Fieldgate PAM SFG600 is a device configuration management gateway and supports HART devices via PROFINET networks. The HART devices must have a unique device TAG. Also, the devices must be in operation with a PROFINET controller and operated via the Siemens assembly ET200SP IM 155-6PN HF with the 4xl 2-wire HART analog modules with HART capabilities.
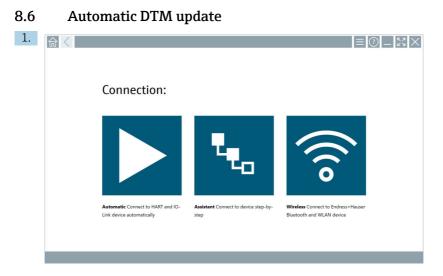
For detailed information on "Fieldgate PAM SFG600", see the Brief Operating Instructions → 🔖 7

▶

Click the 🔲 icon.
↳   The **Communication server** overview opens.

8.6   Automatic DTM update

1.

Click the ☁ icon in the status bar.
↳ The "Sign in to Netilion Library" dialog box opens.

2.   Click **Sign in**.
3.   Choose subscription (Basic/Plus/Premium).
4.   Sign in with the Netilion data.
↳ The tablet searches for DTMs in the background, and they are downloaded.
5.   Confirm download.
↳ Installation starts.

8.7 Netilion Library

8.7.1 Uploading a device report to the Netilion Library

This function is possible with HART, PROFIBUS, FOUNDATION Fieldbus and IO-Link devices as well as via the Endress+Hauser Service interface (CDI).

1.

Click the ☁ icon in the status bar.

↳ The "Sign in to Netilion Library" dialog box opens.

2. Click **Sign in**.

3. Choose subscription (Basic/Plus/Premium).

4. Connect device and open DTM.
   ↳ Device is automatically stored in the Netilion Library.
5. Click "Save device report"'.
   ↳ The device report is appended to the device in the Netilion Library.

8.7.2 Uploading a photo to the Netilion Library

1. Establish a connection to the device and open the DTM.
   Click the ▣ icon.
   ↳ The camera opens.
2. Create a device photo.
   ↳ The "New image found"' dialog box opens.
3. Click **Yes**.
   ↳ The photo is uploaded to the Netilion Library for the existing asset.

Uploading a photo from Camera Roll

1. Establish a connection to the device and open the DTM.
   Click the 🔖 icon.
   ↳ The dialog box opens.
2. Select the file type.
3. Select the photo from a directory in Field Xpert.
4. Click **Yes**.
   ↳ The photo is uploaded to the Netilion Library for the existing asset.

8.7.3 Uploading a PDF to the Netilion Library

1. Establish a connection to the device and open the DTM.
   Click the 🔖 icon.
   ↳ The dialog box opens.
2. Select the file type.
3. Select the PDF from a directory in Field Xpert.
4. Click **Yes**.
   ↳ The PDF is uploaded to the Netilion Library for the existing asset.

8.7.4 Uploading parameter data records to the Netilion Library

1. Click the ☁ icon in the status bar and sign in.
2. Connect device and open DTM.
3. In the **Program functions** menu, click **Save device data**.
   ↳ The parameter data records are uploaded to the Netilion Library for the existing asset.

8.7.5   Offline use case

ℹ️ Scanned devices, new photos, device reports (PDF) and parameter records are automatically saved in the offline cache. They are uploaded automatically once a new Internet connection is established.
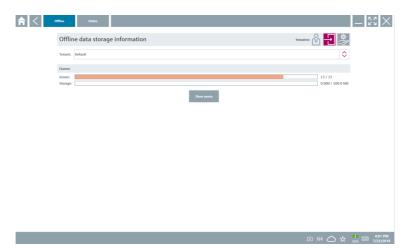
1.

Click the ☁ icon in the status bar.

↳ The "Sign in to Netilion Library'" dialog box opens.

2. Click the **Offline** tab.
    ↳ The "Offline data storage information"' dialog box opens.

3. Click **Show assets**.
    ↳ An overview of all assets and documents appears.

4. Click the 🗑 icon to remove assets and documents.
5. Click the **Online** tab and sign in.
6. Click **Upload asset data**.
    ↳ The dialog box with all of the data to upload opens.
7. Click **Upload**.

8.7.6   Link to Netilion Library

1. Click the ↗ icon in the status bar.
    ↳ The Netilion Library dialog box opens.
2. Sign in to the Netilion Library.

8.8   Scanner App

1.

Click the ⊡ icon in the status bar.
↳ The wizard to create a device in the Netilion Library is started.
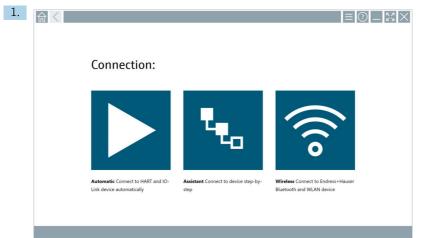
2. Follow the instructions of the wizard and enter or select the data step by step.

3. Click **Save**.
   ↳ The device is stored in the Netilion Library.

4. When the wizard has completed all the steps, it starts again automatically so that another device can be entered.
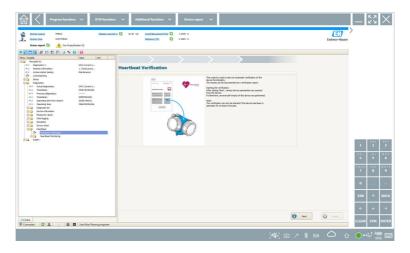
ℹ️ The Scanner App also works in offline mode. Data already saved in the Netilion Library are not available offline.

8.9   Uploading a Heartbeat Verification report to the Netilion Library

1.
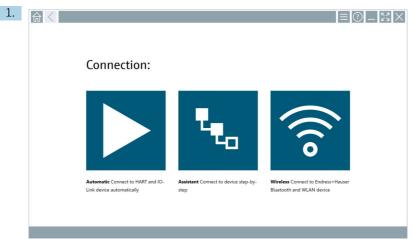
Click the ▶ icon.
↳ A connection to the desired device is established.

2. Start the Heartbeat wizard.

3. Follow the Heartbeat wizard and start a Heartbeat Verification.

4. When the Heartbeat Verification is finished, save the result as a PDF.
   ↳ A dialog appears where you can select the storage location for the PDF file.

5. Select the storage location and click **Save**.
   ↳ A dialog for saving in the Netilion Library appears.

6. Click **Yes**.
   ↳ A dialog appears where you can select the document type.

7. Select Heartbeat Verification Report and click **Yes**.
   ↳ The Heartbeat Verification Report is uploaded to the Netilion Library for the existing asset.

8.10   RFID

1.

   Click the ⬛ icon in the status bar.
   ↳ The "RFID TAG Editor" dialog box opens.

2. Plug in the RFID scanner.

3. Click **Read tag**.

4. Place the RFID tag on the scanner, and click **Device Viewer**.
   ↳ The Device Viewer opens in Internet Explorer.

5. Change the tag or serial numbers and click **Write tag**.
   ↳ The RFID tag is changed.

9 Maintenance

9.1 Battery

Please note the following if the battery is used:
- Charge and discharge the battery at room temperature
- The battery operating life depends on several factors:
  - Number of charge and discharge cycles
  - Ambient conditions
  - State of charge during storage
  - Demands placed on the battery
- Predominant battery usage will negatively affect the device performance
- Batteries can discharge outside the device

> The deterioration in performance can increase with the battery operating life due to the stress from daily charging and discharging.
>
> Li-ion batteries are usually replaced after 300 to 500 charge cycles (complete charge/discharge cycles) or if the battery capacity has reached 70 to 80 %.
>
> The actual number of cycles varies depending on the pattern of use, temperature, age and other factors.

> To avoid permanent degradation of the battery capacity due to self-discharging, the batteries must never be discharged to under 5 %.

⚠ WARNING

Dropping, crushing or any other improper handling of the battery
can cause a fire or chemical burns.
▶ Always use the battery properly.

NOTICE

The battery cannot be charged if temperatures are too low or too high.
This prevents potential damage to the battery.
▶ Only charge the battery at a temperature of approximately 20 ℃ (68 ℉).

⚠ CAUTION

Damaged or leaking batteries
can cause personal injury.
▶ Handle the battery with utmost care.

⚠ CAUTION

If the battery overheats or there is a smell of burning during the charging process,
leave the area immediately.
▶ Notify safety personnel immediately.

Please note the following when using the battery:
- Replace the battery if the operating time becomes shorter
- Do not place any objects or materials on the battery
- Keep the battery away from conductive or flammable materials

- Keep the battery out of the reach of children
- Only use original batteries
- Only charge the battery with original devices or original charging stations
- Keep the battery away from water
- Do not burn the battery
- Do not expose the battery to temperatures below 0 ℃ (32 ℉) or above 46 ℃ (115 ℉)

> **i** If the battery is exposed to extreme temperatures, 100 % battery capacity cannot be achieved. The capacity may be restored if the battery returns to a temperature range of approximately 20 ℃ (68 ℉).

- Keep the ventilation free
- Charge the battery at a location with temperatures of approximately 20 ℃ (68 ℉)

- Do not place the battery in a microwave
- Do not take the battery apart or touch it with a pointed object
- Do not remove the battery from the device with a sharp object

> **i** Batteries are Ex-certified in combination with the device. The use of batteries not listed on the certificate will invalidate the Ex-certification.

> **i** Battery energy conservation
> - Windows 10 Creators Update
>   - Improve battery life
>   - Check battery drain
> - Switch off wireless modules that you are not using
> - Check and optimize settings of the wireless devices
> - Reduce the brightness of the display
> - Switch off all modules not being used in the service program, e.g. GPS, scanner, camera
> - Turn on the screensaver
> - Create a power plan according to Microsoft guidelines
> - Configure power options according to Microsoft guidelines
> - Configure sleep settings according to Microsoft guidelines

9.1.1   Replacing the battery

⚠ DANGER

Incorrect replacement of the battery
can cause an explosion.
▶ Always replace the battery with an identical battery or an equivalent type of battery recommended by the manufacturer.
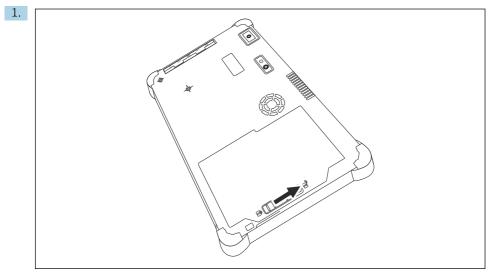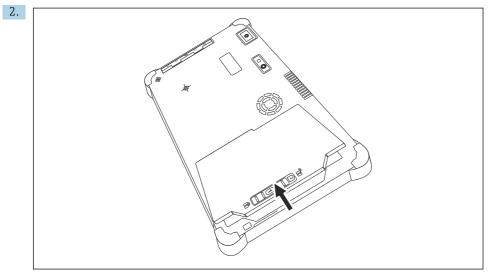
> **i** The battery capacity gradually diminishes over time, depending on how the battery is used. The battery can be replaced after 18 to 24 months.

> Dispose of used batteries in accordance with the manufacturer's instructions.

Removing the battery

1.

Slide the battery lock into the "Unlocked" position.

2.

Open the battery compartment and remove the battery.

For information on inserting the battery → 🖴 21

9.2   Cleaning

ℹ️ When cleaning the device:

Switch off the device correctly and disconnect the AC adapter.

Wipe the device with a clean, dry cloth.

Never use abrasive cleaning agents to clean the device.

10   Repair

10.1   General notes

NOTICE

Never disassemble or repair the device yourself,
as this will render the warranty invalid.
▶ If the device is in need of repair, always contact your Endress+Hauser Sales Center:
   www.addresses.endress.com

10.2   Spare parts

Accessories currently available for the product can be selected via the Product Configurator at
www.endress.com:

1.   Select the product using the filters and search field.

2.   Open the product page.

3.   Select **Spare parts & Accessories**.

10.3   Return

The requirements for safe device return can vary depending on the device type and national
legislation.

1.   Refer to the web page for information:
     http://www.endress.com/support/return-material

     ↳ Select the region.

2.   Return the device if repairs or a factory calibration are required, or if the wrong device
     was ordered or delivered.

10.4   Disposal

If required by the Directive 2012/19/EU on waste electrical and electronic equipment (WEEE), the product is marked with the depicted symbol in order to minimize the disposal of WEEE as unsorted municipal waste. Do not dispose of products bearing this marking as unsorted municipal waste. Instead, return them to the manufacturer for disposal under the applicable conditions.

10.4.1   Battery disposal

This product contains a lithium-ion battery or a nickel-metal hydride battery. These batteries must be disposed of in the correct manner. Please contact your local environmental protection authority for information on recycling and disposal schemes in your country.

11   Accessories

Accessories currently available for the product can be selected via the Product Configurator at www.endress.com:

1. Select the product using the filters and search field.
2. Open the product page.
3. Select **Spare parts & Accessories**.

12   Technical data

For detailed information on the "technical data": see the Technical Information → 🖺 7

13   Appendix

13.1   Protecting mobile devices

These days mobile technology is an important part of modern business enterprises, since more and more of our data is stored on mobile devices. Furthermore, these devices are now just as powerful as conventional computers. As these mobile devices frequently leave the business

premises, they need even more protection than desktop devices. Below you can find four quick tips to help you protect mobile devices and the information they contain.

> **i** **Switch on password protection**
>
> Use a sufficiently complex password or a PIN.

> **i** **Run security updates**
>
> All manufacturers release regular security updates to protect the device. This process is quick, easy and free. Under your settings, make sure that the updates are installed automatically. If the manufacturer does not plan to release any more updates for the device, the device must be replaced with an up-to-date version.

> **i** **Run app and operating system updates**
>
> Update all installed applications and the operating system regularly with patches released by the software developers. These updates not only add new functions but all fix any security vulnerabilities that may have been detected. The Endress+Hauser software update function provides automatic notification of new updates. This requires Internet access. For staff it is important to know when the updates are available, how they are installed, and that this must be done as quickly as possible.

> **i** **Do not connect to unknown WLAN hotspots**
>
> The easiest precaution to take is to never connect to the Internet through unknown hotspots and to use the 3G or 4G mobile communications network instead. Via virtual private networks (VPNs), your data is encrypted before being transmitted over the Internet.

13.2   Federal Communication Commission (FCC)

This device has been tested and complies with the limit values for Class B digital devices in accordance with Part 15 of the FCC regulations. These limit values ensure adequate protection against electromagnetic interference when operating in residential areas. This device generates, uses and can emit radio frequency energy and can interfere with wireless communication if it is not installed and used as specified in the Operating Instructions. However, it is not possible to guarantee that interference will not occur in certain installations. If the device causes interference with radio and television reception - which can be determined by switching the device off and on again - it is the responsibility of the user to rectify the problem .

13.3   Canada, Industry Canada (IC) Notices / Canada, avis d'Industry Canada (IC)

This Class B digital apparatus complies with Canadian ICES-003 and RSS-210. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil numérique de classe B est conforme aux normes canadiennes ICES- 003 et RSS-210. Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne

doit pas causer d'interférence et (2) cet appareil doit accepter toute interférence, notamment les interférences qui peuvent affecter son fonctionnement.

13.3.1   Radio Frequency (RF) Exposure Information

The radiated output power of the Wireless Device is below the Industry Canada (IC) radio frequency exposure limits. The Wireless Device should be used in such a manner such that the potential for human contact during normal operation is minimized. This device has been evaluated for and shown compliant with the IC Specific Absorption Rate ("SAR") limits when installed in specific host products operated in portable exposure conditions.

Informations concernant l'exposition aux fréquences radio (RF) La puissance de sortie émise par l'appareil de sans fil est inférieure à la limite d'exposition aux fréquences radio d'Industry Canada (IC). Utilisez l'appareil de sans fil de façon à minimiser les contacts humains lors du fonctionnement normal. Ce périphérique a été évalué et démontré conforme aux limites SAR (Specific Absorption Rate – Taux d'absorption spécifique) d'IC lorsqu'il est installé dans des produits hôtes particuliers qui fonctionnent dans des conditions d'exposition à des appareils portables.

13.4   Warning Explosion Hazard

Class I, Division 2, Groups A, B, C, D, T Code T5

Model R11XXXXXX, Rugged Tablet PC, Battery Powered (Battery P/N R11AH or R11AH2XXXXXX rechargeable lithium-ion battery pack),Ambient Temperature Range: 0℃ to +40℃. Note: The "X" in the model designations may be any alphanumeric character or blank denoting minor mechanical options, system configuration options and/or safety extra low voltage secondary circuit options.

Conditions of Safe Use:

Connection to or from this device, which enters or leaves the system enclosure, must be completely restricted in Class I, Division 2 Hazardous Locations.

Rugged Tablet PC is to be charged by the supplied charging adaptor, type FSP065-RAB, manufactured by FSP Group, in Non-Hazardous Location only.

Suitable for use in Class I, Division 2 Groups A, B, C and D hazardous locations or non-hazardous locations only;

"WARNING - EXPLOSION HAZARD - SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2."

AVERTISSEMENT - RISQUE D'EXPLOSION – LA SUBSTITUTIOND E COMPOSANTSP EUTR ENDRE CE MATERIEL INACCEPTABLE POUR LES EMPLACEMENTS DE CLASSE I, DIVISION 2.

"WARNING: TO PREVENT IGNITION OF A HAZARDOUS ATMOSPHERE, BATTERIES MUST ONLY BE CHARGED IN AN AREA KNOWN TO BE NON- HAZARDOUS."

"AVERTISSEMENT- RISQUED 'EXPLOSION- AFIN D'EVITER TOUT RISQUE D'EXPLOSION, S'ASSURER QUE L'EMPLACEMENT EST DESIGNE NON DANGEREUX AVANT DE CHANGER LA BATTERIE."

"WARNING - EXPLOSION HAZARD - DO NOT CONNECT OR DISCONNECT WHILE CIRCUIT IS LIVE UNLESS AREA IS KNOWN TO BE NON- HAZARDOUS."

"AVERTISSEMENT - RISQUE D'EXPLOSION. NE PAS BRANCHER OU DÉBRANCHER TANT QUE LE CIRCUIT EST SOUS TENSION, À MOINS QU'IL NE S'AGISSE D'UN EMPLACEMENT NON DANGEREUX."

13.5   Class 1 laser product

Class 1 laser product in accordance with EN 60825

This device contains a laser system and is categorized as a "Class 1 laser product". To use this device correctly, you must read this manual carefully and keep it in a safe place so that it is also available for future reference. If you encounter any problems with this model, please contact your nearest "Authorized service point". To avoid direct laser radiation, do not attempt to open this housing.

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www.addresses.endress.com

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People for Process Automation