FIM VERSION 2.1

Field Information Manager
Product Guide
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1 About This User Manual

1.1 General

Any security measures described in this Release Note, for example, for user access, password security, network security, firewalls, virus protection, etc., represent possible steps that a user of an Field Information Manager may want to consider based on a risk assessment for a particular application and installation. This risk assessment, as well as the proper implementation, configuration, installation, operation, administration, and maintenance of all relevant security related equipment, software, and procedures, are the responsibility of the user of the Field Information Manager.

1.2 User Manual Conventions

Microsoft Windows conventions are normally used for the standard presentation of material when entering text, key sequences, prompts, messages, menu items, screen elements, etc.

1.3 Warning, Caution, Information, and Tip Icons

This Release Note includes Warning, Caution, and Information where appropriate to point out safety related or other important information. It also includes Tip to point out useful hints to the reader. The corresponding symbols should be interpreted as follows:

- Electrical warning icon indicates the presence of a hazard that could result in electrical shock.

- Warning icon indicates the presence of a hazard that could result in personal injury.

- Caution icon indicates important information or warning related to the concept discussed in the text. It might indicate the presence of a hazard that could result in corruption of software or damage to equipment/property.

- Information icon alerts the reader to pertinent facts and conditions.
Tip icon indicates advice on, for example, how to design your project or how to use a certain function

Although Warning hazards are related to personal injury, and Caution hazards are associated with equipment or property damage, it should be understood that operation of damaged equipment could, under certain operational conditions, result in degraded process performance leading to personal injury or death. Therefore, fully comply with all Warning and Caution notices.
## 2 Terminology

<table>
<thead>
<tr>
<th>Term/Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DD / EDD</td>
<td>Device Descriptions and Electronic Device Descriptions are files that describe the configuration for process field devices.</td>
</tr>
<tr>
<td>Device Package</td>
<td>FDI Device Packages comprise device descriptions, optionally Programmed User Interface Device Applications and attachments as manuals, certificates, and device specific files as GSD (ML).</td>
</tr>
<tr>
<td>FCI</td>
<td>Field Communication Interface</td>
</tr>
<tr>
<td>FDI</td>
<td>Field Device Integration is an integration technology for process field devices from the FieldComm Group.</td>
</tr>
<tr>
<td>FIM</td>
<td>Field Information Manager</td>
</tr>
<tr>
<td>HART</td>
<td>The HART Communications Protocol (Highway Addressable Remote Transducer) is an early implementation of Fieldbus, a digital industrial automation protocol.</td>
</tr>
<tr>
<td>NAMUR Recommendation</td>
<td>NAMUR Recommendations (NE) prepared by NAMUR (User Association of Automation Technology in Process Industries) explain procedures, provide support material like check lists and define requirements relating to equipment and systems.</td>
</tr>
</tbody>
</table>
## 2 Terminology

<table>
<thead>
<tr>
<th>Term/Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABB Repository</td>
<td>An online cloud that contains ABB Device Package, EDDs and other files distributed by ABB. The Field Information Manager is connected to the ABB Repository and has access to the repository content.</td>
</tr>
<tr>
<td>FCG Repository</td>
<td>An online cloud that is maintained by the FieldComm Group. The cloud contains FDI Device Package and EDDs. The Field Information Manager is connected to the FCG Repository and has access to the repository content.</td>
</tr>
</tbody>
</table>
Field Information Manager, the first FDI-based software for device management, makes the configuration, commissioning, diagnostics and maintenance of fieldbus instruments easier and quicker than ever before.

ABB’s Field Information Manager software employs FDI technology to ensure a high degree of device type compatibility and is equipped with high-performance and innovative graphical user interface that helps technicians & engineers to effectively work with the process instrumentation.

Key features of Field Information Manager:

- Easy & fast configuration, commissioning & diagnostics of HART & PROFIBUS instruments
- Interoperability based on FDI Common Host Components
- Supports mobile Windows devices
- Supports Legacy HART devices by DD / EDD files
- Generic HART Device Package for all HART devices
- Profile package for PROFIBUS
- Tool supports English & German language
- Novel concepts for ease of use and navigation with touch support
- Plug and Play for point-to-point diagnostic and maintenance of HART devices supporting NE 107 classification
- Online parametrization of devices with easy navigation via FDI / NE 131 device core parameters
- Offline configuration with device core parameter support as well as device type templates
- Comprehensive device monitoring views to visualize online data with state of the art indicators, gauges and charts
- Audit Trail functionality gathering information about modifications in parameters, diagnosis information and communication states of field devices
Clear and structured Dashboard presenting gathered Audit Trail, Field Device Diagnosis and Field Device Communication State information

Configuration Management by exporting device configuration for documentation in PDF files

Project management

Compare datasets

ABB Repository support

FCG Repository Support

Connectivity supported for Field Information Manager:

- Connectivity to ABB Ability™
- System 800xA, for supported versions, please refer to our webpage: https://new.abb.com/control-systems/fieldbus-solutions/fim/connectivities/system800xa
- System 800xA Select I/O
- System 800xA S800 I/O
- Direct connectivity to PROFINET IO and Devices
- Direct connectivity to PROFIBUS IO & Devices through Thorsis isNet gateway
- ABB UMC direct USB connectivity
- HART & PROFIBUS modems
4 Functional Description

4.1 Product Overview

Field Information Manager is a Desktop Application that can be installed on devices running Windows Operating System. HART & PROFIBUS field devices connected via various connectivity options can be configured, commissioned and diagnosed.

4.2 Device Type Support

HART device configuration can be done using the preinstalled generic FDI Device Package or with device specific FDI packages or with Electronic Device Descriptions (EDD) that are IEC 61804-3 compliant. As Field Information Manager shares common software components with the FDI Runtime Environment all Device Packages tested with the FDI Runtime Environment are compatible with Field Information Manager by design.

PROFIBUS device configuration can be done using the FDI Device package supplied by the instrument vendor, or by using the generic PA PROFIBUS profile package.

Please note that device specific packages can be obtained via the device manufacturer, where the packages for ABB devices are available via the Field Information Manager connection to the ABB Repository.

4.3 Connectivity Options

4.3.1 ABB Ability™

The Field Information Manager contains an OPC UA Server that can be used with ABB Ability™ Platform. Please get in contact with your local ABB service partner for more information.
4.3.2 **System 800xA**
The Field Information Manager can connect to ABB Ability™ System 800xA and contain a functionality for scanning the topology objects and connected field devices for HART and PROFIBUS.

Please find further information and setup instructions on


4.3.3 **System 800xA Select I/O**
The Field Information Manager supports ABB Ability™ System 800xA Select I/O based on an FCI Station via PROFINET or 800xA Connect.

An FCI Station consists of:

- TU865
- CI845 (Single or Redundant)
- TC810 (Single or Redundant)
- HIS880

For supported I/O modules refer to FIM release notes 2PAA113895

4.3.4 **System 800xA S800 I/O**
The Field Information Manager supports ABB Ability™ System 800xA S800 I/O based on PROFIBUS with CI801 or CI840 or based on PROFINET with FCI Station.

An FCI Station consists of:

- TU860
- CI845 (Single or Redundant)
- TC810 (Single or Redundant)

All HART compatible S800 I/O modules are supported.

4.3.5 **PROFINET Communication Server**
The Field Information Manager supports PROFINET Devices via FIM PROFINET Communication Server.

Please find further information and setup instructions at

4.3.6 **ABB S800 connectivity through Thorsis Ethernet to PROFIBUS DP adapter**

The Field Information Manager supports a connectivity to ABB S800 IO installed base through Thorsis Ethernet to PROFIBUS DP adapter.

Required Thorsis modules:
- isNet Lite - Ethernet Communication Module
- isNet DP - PROFIBUS DP Ethernet Gateway

Further information are available at

4.3.7 **ABB UMC 100 local (USB) connectivity**

The Field Information Manager supports the local (USB) connectivity to ABB UMC 100 device as well as through PROFIBUS.

4.3.8 **HART Communication Server**

The HART Communication Server is used for the communication between FIM and a HART modem. The server settings are available via the CONTEXT MENU - DEVICE SETTINGS item of the corresponding Device Tile. The diagnostic option on CONTEXT MENU - DIAGNOSTICS can be used to run a diagnostic scan on a HART modem. This scan includes all HART channels and communication baud rates, and the scan will report any connected device independent from the current communication server settings.

Field Information Manager (FIM) contains the Thorsis (Ifak) modem driver and is already prepared to support ABB/Thorsis (Ifak) HART modems listed below:
- ABB NDA121-NX USB (Ex ia)
- ABB NHA121-NO USB
- Thorsis (Ifak) system isHRT USB
- Thorsis (Ifak) system isHRT USBeX
- Thorsis (Ifak) system H@RT BluePack

Other modems require a manual modem driver installation. The supported baud rates are: 1200, 9600, 19200, 38400, 115200.
4.3.9 PROFIBUS Communication Server

The PROFIBUS Communication Server is used for the communication between FIM and Thorsis (ifak) PROFIBUS isPro USBx12 modem. The server settings are available via the CONTEXT MENU - DEVICE SETTINGS item of the corresponding Device Tile.

4.4 System Requirements

Operating System Requirements:

- Recommended: Windows 8.1, Windows 10
- Not recommended: Windows 7 64bit (Missing support by Microsoft)
- FIM800xA Connect as well as PROFINET Connect (for direct PROFINET connectivity) get normally installed on Windows Server OS.

Please find more information about the supported Windows Server versions referring to the System Guide Summary document 3BSE078159

- 10 GB storage space, minimum of 1 Gigabyte RAM

4.5 Tags

The tag count includes all field device "online" datasets and all "offline" configuration datasets. A field device, that consists out of a "online" and "offline" configuration is counted as 1. Templates are not counted as tags.

Each FIM license contains a number of tags per default. The tag number can be increased if necessary, which is dependent on the used FIM Edition.

Field Information Manager Editions:

- Device Window "Free" Edition, no license required, 1 tag supported; option to upgrade to Handheld Edition or other editions
- Handheld Edition, license required, 100 tags per default, option to increase tag number
- Device Management Edition, license required, maximum of 2500 tags supported, higher tag count possible through TSA.
### 4.6 Editions

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum number of tags</td>
<td>1</td>
<td>100 (option to increase)</td>
<td>2500</td>
</tr>
<tr>
<td>HART / PROFIBUS modem support</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>ABB Profinet Connect - Enables connecting to PROFINET Devices</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Direct Connectivity to PROFIBUS IO &amp; Devices through Thorsis IsNet gateway</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>English and German tool language</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Other tool languages (based on language pack availability)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Backup / restore of tool configuration</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>ABB repository support (ABB device packages in the cloud)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Field Comm Group (FCG) repository support – access to all 3rd party device drivers</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Offline device configuration</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Import / export device configuration as file</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Device type template support</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Exporting device configuration for documentation in PDF files</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Project management: Switch between projects for working on several systems with the same FIM computer client.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Bulk device configuration</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>ABB Ability™ System 800xA Connect - Enables connecting to HART &amp; PROFIBUS &amp; PROFINET Devices connected to System 800xA Hardware</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>ABB Ability™ Connect - Exposes information of devices connected to FIM through OPC UA interface to the ABB Ability™ platform</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

*Figure 4.1: FIM Edition Matrix*