

BRIEF OPERATING INSTRUCTIONS

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FieldEdge IXA71



1. Intended use

The intended use of the FieldEdge IXA71 is the communication of connected devices with the Monitoring Box. FieldEdge IXA71 is a gateway unit for Endress+Hauser devices and is used to collect and transfer data. Operate the FieldEdge IXA71 and accessories only as intended. In the case of any other usage or in the event of any modifications to the device or to the Endress+Hauser software, any warranty claims against Endress+Hauser shall be null and void.

2. About this document

This document describes the FieldEdge IXA71 for use with Endress+Hauser devices. It refers to the accompanying Operating Instructions of FieldEdge IXA71. Further information is available at <https://www.endress.com/icomio>.

Definition of terms and components

FieldEdge IXA71: Gateway (Industrial Computer with Monitoring Connect installed)

Monitoring Connect: Core software packages to facilitate, maintain and optimize connection between device, gateway and cloud solution Monitoring Box

Monitoring Box: Digital services to monitor, analyze and predict the service data and process data of connected devices.

Device Manager: Web interface to change and configure basic software settings of the device.

3. For Your Safety

It is essential that FieldEdge IXA71 is transported, stored, installed, and used in accordance with its intended use to ensure error-free, safe operation. FieldEdge IXA71 may only be installed, operated, used and maintained by appropriately trained, authorized specialist personnel. Specialist personnel are individuals who possess the technical training, knowledge, and experience necessary to understand the tasks entrusted to them, evaluate these and identify possible hazards.

Precautions:

- Do not expose the device to extreme temperature or humidity
- Do not use or store the device in dusty or dirty areas
- Do not expose the device to water, rain, splashing water or spilled drinks. It is not waterproof
- Do not spray anything on and inside the device
- Dropping, knocking, violently shaking and any rough handling may damage the device
- Do not transport or store flammable gas, liquids, or explosives in the vehicle compartment where the device is installed

Notice:

- For relevant safety information refer to the operating instructions available at www.endress.com/icomio.

4. Installation

Warning: Dangerous voltage

Risk of accidents through electric shock.

- Ensure the power supply can be switched off at an easily accessible and power isolating switch and/or circuit breaker.
- When working at electrical installations, it is essential to comply with habitual safety requirements.
- Only have the work carried out by skilled electricians familiar with potential risks.
- Disconnect the power connections or power supply line before working on the device.
- Only allow personnel carrying out the work to activate power supply under consideration of valid safety regulations.
- When device damage is visible: switch the power supply off at the external point.
- Before any action step ensure that the unit is turned off.

4.1 General installation concept

The FieldEdge IXA71 is installed as the central gateway between the connected field devices and the Monitoring Box infrastructure. During installation, ensure that the gateway is mounted in a suitable location, that all device-side communication lines are routed cleanly to the gateway, and that the selected communication interfaces match the connected instruments.

Notice:

- Many Endress+Hauser devices can generally be connected out of the box, provided that suitable Monitoring Apps are available. The integration of third-party data sources is also possible, but each third-party data connection requires an engineering check before implementation.
An overview of supported devices can be found at: <https://www.endress.com/icomio>

4.2 Connecting devices to the gateway

Connect each device to the corresponding interface of the FieldEdge IXA71 using the appropriate communication port and matching cable type. Based on the Phoenix Contact VL3 UPC hardware platform, the supported connection option is Ethernet-based communication.

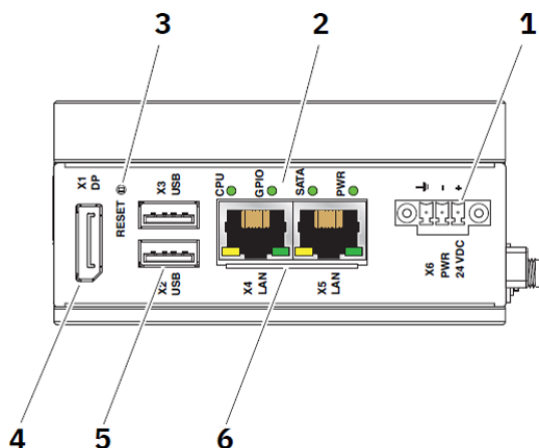
When connecting multiple devices, the installation should be planned so that each signal path is clearly assigned, easy to trace, and protected against accidental disconnection. If extension cables are required, they should be selected in accordance with the interface specification of the respective device and the environmental conditions at the installation site.

- Notice:**
- For larger installations or more complex topologies, a dedicated engineering review is recommended. Please contact: monitoring-box@endress-ehs.com.

4.3 Cabling

The cabling between devices and gateway should be installed in a structured and service-friendly way. Separate communication wiring from power wiring where required, avoid unnecessary cable lengths, observe the minimum bending radius of the cables, and label both cable ends clearly. Shielding, grounding, and connector selection should be implemented according to the requirements of the connected devices and the applicable installation standard.

4.4 Connectors and ports



1	Power Connector	4	DP port
2	Status LED	5	USB ports
3	Reset button	6	LAN ports

5. Commissioning

- Request a commissioning procedure at monitoring-box@endress-ehs.com, if you haven't received information about the process already. Add the desired customer name for the asset tree to your request. You will receive a link to a commissioning form to enter device and network information. A configuration for the installation will be created according to the information you provide (this can happen in parallel to the rest of the steps).
- Connect the communication interfaces of the devices to the corresponding interfaces on the FieldEdge IXA71. For this purpose, use the cables supplied with the devices or additional extension cables if required (see section 4.4).
- To establish the power supply for the FieldEdge IXA71, use the supplied cable to connect the electrical supply to the PWR connector of the device, see section 4.4.
- To configure device connectivity, connect your computer to the X4 LAN port of the FieldEdge IXA71 via an Ethernet cable. Use a browser (recommendation: Google Chrome) to access the Device Manager at <http://192.168.0.100:9090> (subnet mask 255.255.255.0).
- In order to provide internet connectivity via LAN, the following connections need to be allowed through the firewall for the Monitoring Box service to work.

Target	Port	Protocol	Direction	Service
monitoringbox.endress.com (80.72.143.67)	443	TCP	outbound	Monitoring Box Backend
manage.gateway.monitoringbox.endress.com (80.72.143.68)	[target_port]	TCP	outbound	Remote Maintenance
pool.ntp.org [configurable]	123	TCP/UDP	outbound	NTP (time synchronization)
[configurable]	53	TCP/UDP	outbound	DNS (name resolution)
[configurable]		*	inbound, outbound	Sensor connection

- Open the Commissioning Manager[BK2.1] at <http://192.168.0.100:5000>
 - Read the target_port from the UI to configure the firewall, if used
 - Verify that there are no connectivity issues (indicated by red crosses) to the required internet services.
 - You can use the ping tool to test if connected devices can be reached and that the connection is working.
- To use the services, you need an Endress+Hauser ID. To create one, visit www.endress.com.
 - Enter your login data if you already have an Endress+Hauser ID.
 - For first-time creation of an Endress+Hauser ID, click on "Register".
 - Follow the instructions on the website and accept the terms of use. Please ensure that your username and password are stored securely and kept confidential.
- When the gateway connectivity is established and the commissioning form completed (see step 1) contact monitoring-box@endress-ehs.com or your contact person for further instructions.

6. Network configuration

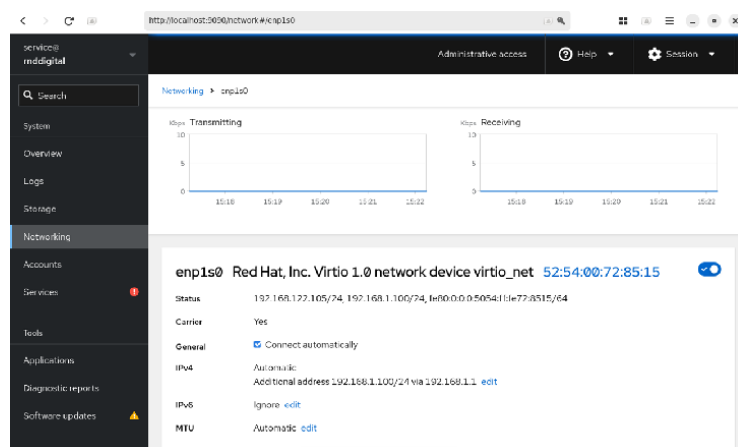
6.1 Necessary equipment and tools

Depending on the type of connection used, different equipment or tools may be required to help with the setup.

- Notebook
- Ethernet cable
- Switch (optional)

6.2 Device Manager

Device Manager example screen - Networking:



6.3 Steps for configuration with two LAN interfaces

- Connect a LAN cable to X4 LAN (192.168.0.100) of the FieldEdge IXA71 and your notebook.
- Connect a LAN cable to X5 LAN (DHCP) of the FieldEdge IXA71 for the internet gateway.
- X4 LAN has a fixed IP address (192.168.0.100) by default and X5 LAN is set to DHCP.

- 4. Make the necessary network settings on your notebook to connect to the FieldEdge IXA71. For X4 LAN: assign your notebook's LAN interface an IP in the network 192.168.0.0 for example 192.168.0.200
- 5. Set the subnet mask to 255.255.255.0
- 6. Go to the Device Manager (default: <http://192.168.0.100:9090>) and log in with the credentials provided on FieldEdge IXA71 label and setup a new individual password
- 7. Unlock "Limited access" at the top of the page
- 8. Set up a way to connect with the device when both LAN ports are in use. This depends on the specific setup, e.g. if you connect X5 LAN to a corporate network.
- 9. Under "Networking" make the required settings for enp2s0 (X4 LAN) and enp3s0 (X5 LAN).[LH3.1][BK3.2]
- 10. Under "IPv4" settings (edit) configure a DNS server if the gateway in the network doesn't provide DNS.
- 11. (optional) Under "Overview - Configuration - System Time" configure an NTP server.[BK4.1]
- 12. Remove the LAN cable between the FieldEdge IXA71 and your notebook.
- 13. Connect a LAN cable to X4 LAN of the FieldEdge IXA71 for device network.
- 14. Use the connection method you set up in step 6 to connect to Monitoring Box Commissioning UI (default: <http://192.168.0.100:5000>).
- 15. Check if all required services can be reached properly.
- 16. Ensure that the device information has been submitted via the web form.
- 17. Contact your local Endress+Hauser representative for further instructions or click "Install Monitoring Box" if instructed.

7. Maintenance

FieldEdge IXA71 housing does not contain any spare or wear parts.

- Clean the housing with a soft, dry, or slightly moistened cloth.
- Do not use any solvents or high-pressure cleaners.

8. Technical Data

General specifications	
Product Type	Phoenix Contact VL3 UPC
Processor	Intel® Atom® x6211E, Number of cores: 2 x 1.3 GHz
Cooling	passive
Memory	8 GB LPDDR4
Storage	60 GB, 3D TLC (onboard)
LAN	2x Ethernet (10/100/1000 Mbps), RJ45
USB	2x USB 3.1 Gen. 1, Typ A
Display Interfaces	1x DP++ 1.4
Security	dTPM 2.0
Supply Voltage	24 V DC 20 %
Operating Temperature	-20 °C ... 60 °C
Mounting Options	DIN rail mounting
Target Environment	Industrial / IoT Edge Computing Applications 1

9. Annex

9.1 Available product variants

Name	Functionality	Part no.
FieldEdge IXA71-LC	LAN connection	1156482

9.2 Regulatory compliance information



- 2011/65/EU
- 2014/30/EU
- EN 61010-1:2010
- EN IEC 61000-6-2:2019
- EN IEC 61000-6-4:2019
- EN IEC 63000:2018
- IEC 61010-2-201:2017

China RoHS

- SJ/T 11364-2014

UL

- UL 61010-1
- UL 61010-2-201

RCM

- S/NZS CISPR 32