RN00416

Industrial Communication Explorer (ICE) Tool

Rev. 3.0 — 12 February 2026 **Release notes**

Document information

Information	Content
Keywords	RN00416, Industrial Communication Explorer, ICE, PROFINET, PROFINET RT, PROFINET DCP, EtherNet/IP, EtherCAT
Abstract	This document is the release notes for the Industrial Communication Explorer tool. Supports: MIMXRT1180-EVK.

1 Introduction

The Industrial Communication Explorer (ICE) is a companion tool for developers of the Generic Open Abstraction Layer (GOAL)-based device, assisting in application development. It supports application development on Windows and Linux operating systems.

The tool enables:

- Device configuration
- Snapshot creation of the current state
- Firmware updates
- Log reading
- Initiation of PROFINET, EtherNET/IP, or EtherCAT connections using integrated central emulators
- Production line operations by setting the default device state, such as initial firmware or device configuration

Device management

- Scan devices in the network (device detection)
- Read and write device configuration via ConfigManager
- Read and write device log
- Reset exception log
- Update device firmware (SoM/RJ45 only)
- Create device snapshots

PROFINET main device

- Test I/O data exchange with Device Detection-powered device via PROFINET RT connection
- Identify device via PROFINET DCP protocol
- Set station name via PROFINET DCP protocol
- Set IP configuration via the PROFINET DCP protocol
- Trigger Wink command via the PROFINET DCP protocol
- Read/write I&M from 1 to 4 records via the PROFINET RT protocol
- Read/write user-defined records via the PROFINET RT protocol
- View alarms generated by the device

EtherNet/IP scanner

- Scan EtherNet/IP adapters
- Read device data
- Test I/O data exchange with Device Detection-powered device

EtherCAT main device

- Test I/O data exchange with Device Detection-powered device via EtherCAT
- Identify the device via EtherCAT
- View EtherCAT state machine details
- Retrieve object dictionary from device
- Read object dictionary values
- Adjust RxPDO and TxPDO mapping
- Write EEPROM of the device

2 Features

New and noteworthy

Table 1. Features and components

Component	Summary	Description
EtherNet/IP main device	Allow setting of initial sequence counter for testing purposes	As a user, it is possible to set the initial sequence counter for an EtherNet/IP connection. The counter supports the user to test the turn around of the sequence counter.
Core	Allow autoscrolling of messages in the Messages view	As a user, it is possible to select an option to autoscroll the messages in the Messages view. If enabled, the latest message is automatically shown.
Core	Update Eclipse libraries to 2024-12	Update the base libraries to a current version.

3 Known restrictions

Bug fixes

Table 2. Component and bug fixes

Component	Summary	Description
PROFINET main device	Error “Could not parse timing information” with multiple Send Clocks	If the SendClock attribute inside the GSDML consists of more than one value, the Explorer cannot parse the timing information.
PROFINET main device	Inaccessible UI elements after resizing of the window	After resizing the UI window, UI elements can become inaccessible. Scrollbars must be added to make the elements accessible.
PROFINET main device	The cursor jumps to an undefined position when editing the pattern value	After entering a value in the Pattern Value dialog, the cursor jumps to an undefined position.
PROFINET main device	The record data length is always zero in record requests.	The RecordDataLength is always zero in record requests. Therefore, the PROFINET device denies the record requests.
Core	Scan timeout shows incorrect values	“Remaining time” in the scan dialog shows incorrect/negative values depending on the set timeout value.

4 Changelog and open issues

None

5 Revision history

Table 3 summarizes the revisions to this document.

Table 3. Revision history

Document ID	Release date	Description
RN00416 v.3.0	12 February 2026	Initial public release

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Tables

Contents