

EtherNet/IP™ endpoint (single port) for Linux

EtherNet/IP is an industrial Ethernet protocol that implements the common industrial protocol (CIP™) over standard Ethernet using TCP/IP and UDP communication. In an EtherNet/IP network, the scanner acts as the controller that initiates communication, while the adapter responds to requests and exchanges I/O data with the Scanner.

NXP provides an EtherNet/IP adapter protocol stack as part of its robust and certifiable industrial Ethernet portfolio, built on a unified software architecture. The EtherNet/IP endpoint for Linux (single-port configuration) is delivered as a precompiled object library running in user space. Platform-specific drivers are provided in source code for supported NXP devices. For a list of supported devices, visit nxp.com/port or contact ProSupport@nxp.com for licensing options.

Benefits

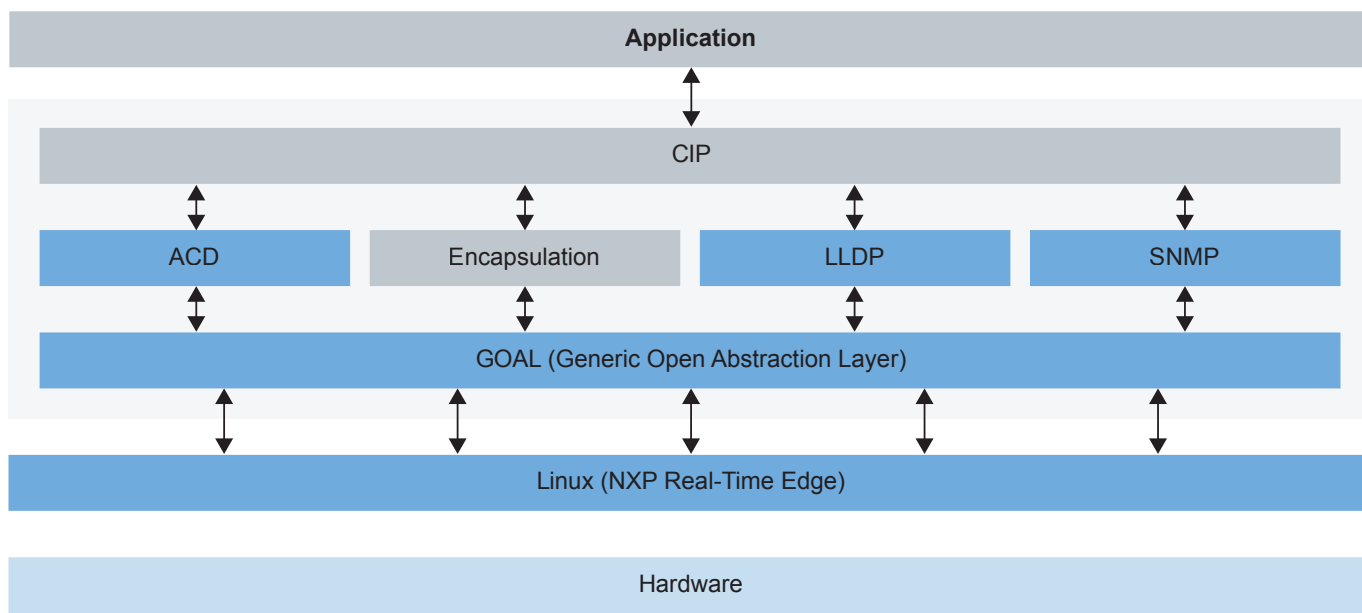
- Complete EtherNet/IP I/O device reference implementation
- Optimized for low memory and power consumption
- Designed to support conformance testing
- Integrates with NXP's [industrial communications creator \(ICC\)](#) tool for simplified configuration of protocol data structures
- Part of NXP's industrial networking suite, leveraging the GOAL framework to simplify application migration across protocols and NXP devices



Features

- Class 3 server (connected explicit messaging)
- Class 1 I/O server (connected implicit messaging)
- UCMM server (unconnected explicit messaging)
- Extensible application and profile object support
- Configurable explicit and implicit connection counts
- Supports exclusive owner, input-only and listen-only connection types
- DHCP or static IP addressing
- 10/100/1000 Mbps ethernet link support
- Large Forward Open support for payloads greater than 511 bytes
- Address conflict detection (ACD)

EtherNet/IP endpoint (single port) for Linux block diagram



NXP enhancements

- Modular hardware-independent and hardware-dependent components communicate through message queues
- The application interfaces only with the hardware-independent layer, helping simplify migration across protocols and NXP devices
- Incoming communication is validated by the stack before being passed to the user application

Getting started with EtherNet/IP™ endpoint (single port) for Linux

Visit nxp.com/EtherNetIP or contact [NXP pro support](#) for licensing options and documentation

Additional resources

1. [NXP port industrial networking suite](#)
2. [NXP support](#) and [technical community](#)

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