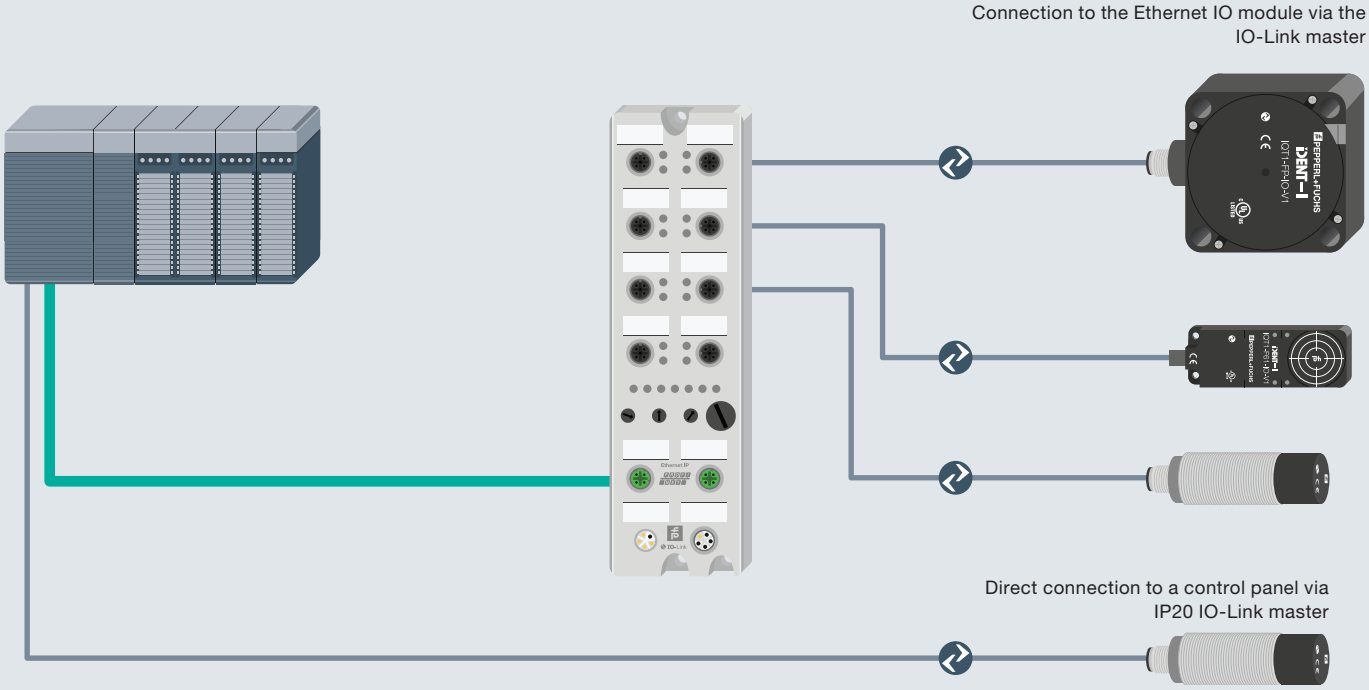
IO-Link Master: Intelligent and Future-Proof

The Ethernet IO modules from Pepperl+Fuchs offer high efficiency, maximum flexibility and the simplest connection. Up to eight IO-Link devices can be connected via one IO-Link master. This saves channel costs and enables a highly cost-effective application solution. End-to-end communication between the control and sensor levels also forms the basis for implementing Industry 4.0 applications—a secure investment in the future.

Sensorik 4.0



In addition to the IDENTControl family, Pepperl+Fuchs also offers an optimized overall solution for applications with IO-Link technology. The Ethernet IO module with integrated IO-Link master allows all read/write heads with IO-Link interface to be connected easily and cost-effectively—for a future-proof identification solution.

IO-Link Master

Standard Technical Data	
Transfer rate	100000 Hz
Type	Ethernet IO-Link module
Voltage type	DC
Operating voltage (max)	30 V
UL	■

For detailed data and description, see the datasheet. Further products can be found online at www.pepperl-fuchs.com.

Model number	Installation conditions	Protocol	Input	Output type	UB (min)	Degree of protection	Length L	Width W	Height H
ICE1-8IOL-G30L-V1D	Field mounting	EtherNet/IP, PROFINET	12 digital inputs, 8 x IO-Link	8 digital outputs, 8 x IO-Link	18	IP65/IP67/IP69K	21	59.6	200
ICE1-8IOL-G60L-V1D	Field mounting	EtherNet/IP, PROFINET	12 digital inputs, 8 x IO-Link	12 digital outputs, 8 x IO-Link	18	IP65/IP67/IP69K	21	59.6	200
ICE2-8IOL-G65L-V1D	Field installation	EtherNet/IP, MODBUS	16 digital inputs	8 digital outputs	20	IP67	30	65	212
ICE2-8IOL-K45P-RJ45	Switch cabinet mounting	EtherNet/IP, MODBUS	16 digital inputs	8 digital outputs	18	IP20	114	45	118
ICE2-8IOL-K45S-RJ45	Switch cabinet mounting	EtherNet/IP, MODBUS	16 digital inputs	8 digital outputs	18	IP20	114	45	108
ICE3-8IOL-G65L-V1D	Field installation	MODBUS, PROFINET	16 digital inputs	8 digital outputs	20	IP67	30	65	212
ICE3-8IOL-K45P-RJ45	Switch cabinet mounting	MODBUS, PROFINET	16 digital inputs	8 digital outputs	18	IP20	114	45	118
ICE3-8IOL-K45S-RJ45	Switch cabinet mounting	MODBUS, PROFINET	16 digital inputs	8 digital outputs	18	IP20	114	45	108

Highlights

- Integrated IO-Link master function for continuous diagnostics and parameterization from the control panel down to the sensor/actuator level
- Extensive diagnostic options either on the device itself or via web server for greater transparency and increased process reliability

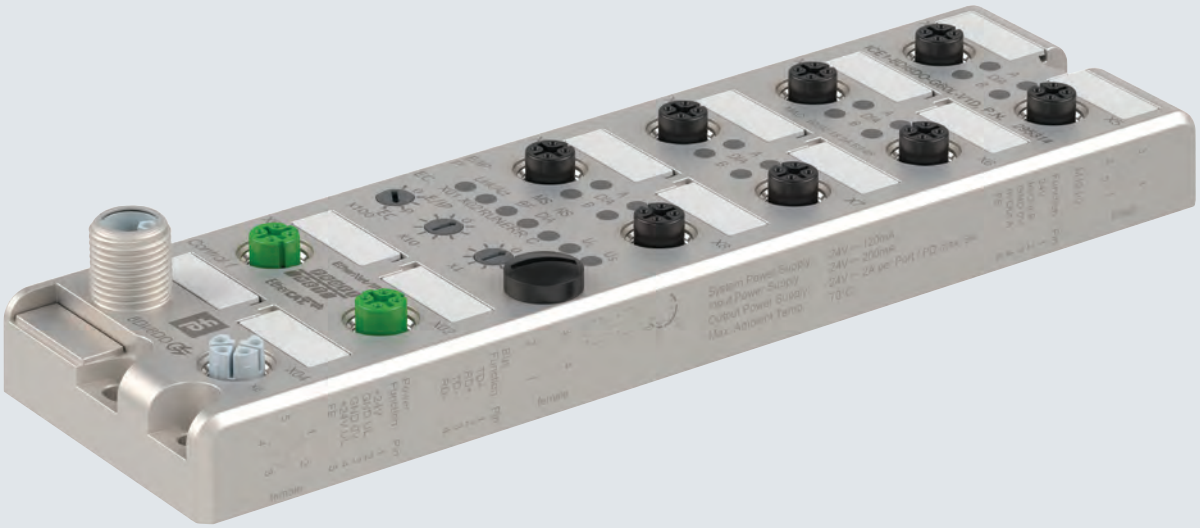
Brief Description

The standard IO-Link can be used with devices from any manufacturer and makes full use of the intelligence of sensors. Pepperl+Fuchs therefore offers Ethernet IO modules with an integrated IO-Link master for the optimal connection of IO-Link devices. The modules support the standard and widely used industrial protocols PROFINET and Ethernet/IP, which means that they can be used easily with many standard controllers. In order to make maximum use of the advantages of this technology, a large number of IO-Link I/O hubs are available alongside the modules for also integrating binary sensor technology into the intelligent IO-Link system.

Accessories	
ICA-10DI6DO-G60A-IO	I/O hub with IO-Link interface for ten digital inputs and six digital outputs
ICA-16DI-G60A-IO	I/O hub with IO-Link interface for 16 digital inputs
ICA-16DIO-G60AL-IO	I/O hub with IO-Link interface for 16 digital inputs/outputs
MH V1-BIT M12	Plug-in attachment for M12
MH V1-SCREWDRIVER	Torque screwdriver (0.6 Nm)
V1-G-2M-PUR	Single-ended female cordset, M12, 4-pin, PUR cable
V1-G-2M-PVC	Single-ended female cordset, M12, 4-pin, PVC cable
V1-G-BK1M-PUR-A-T-V1-G	Y-splitter cordset, M12 to 2xM12, 4-pin, PUR cable

Reliable Communication on All Levels

A module in a robust design for all common Ethernet protocols, IO-Link, and integrated intelligence for decentralized automation and diagnostic tasks—the fieldbus modules from Pepperl+Fuchs not only perfectly fit into the requirement profile of innovative machine and plant builders, but also in Industry 4.0.



Ethernet IO module with integrated logic function

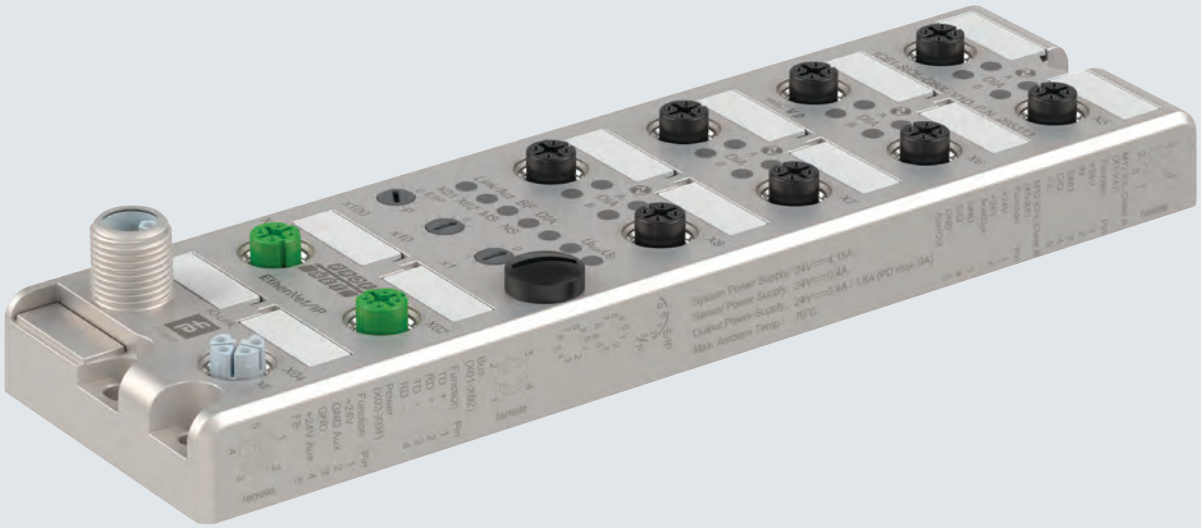
Typical Applications

Fieldbus modules act as interfaces to industrial fieldbus systems. They enable efficient communication between the central control and the field level. Typical applications for these modules are:

- Automotive industry: Networking in final assembly
- Production lines: Switch control for sorting scrap production via decentralized control function
- Wrapping machines: Deterioration response as diagnostics for preventative maintenance

Your Benefits at a Glance

- Machine standardization through multiple protocols: all standard Ethernet communication protocols in a single module
- Innovative M12 power connector for reduced installation costs due to higher current-carrying capacity up to 2x 16 A (galvanically isolated for sensor and actuator supply)
- Integrated IO-Link master function for continuous diagnostics and parameterization from the control panel down to the sensor/actuator level
- Decentralized logic function in the fieldbus module for autonomous functionality, independent from the control panel
- Extensive diagnostic options either on the device itself or via web server for greater transparency and increased process reliability



Ethernet IO module with IO-Link master

Technical Features

- Metal housing with full casting in IP67: Ideal for use directly on the machine due to high shock and vibration resistance
- Connection of sensors and actuators via 16 digital inputs, 8 digital inputs/outputs or 8 IO-Link sensors/actuators
- Future-proof thanks to IO-Link standard V1.1 according to IEC 61131-9
- Rotary switch for setting the communication protocol (PROFINET, Ethernet/IP, EtherCAT) enables especially easy operation
- Highly visible, channel-specific status LEDs as well as indicators for communication, diagnostics and voltage supply for status monitoring