FIELD I/O · ETHERNET/IP · 24 V PNP · IP20

FieldIO 1616-EIP

32 channels. 120 mm. EtherNet/IP.

A compact, high-density digital I/O block for 24 V PNP machines: 16 inputs plus 16 channels you configure as inputs or outputs. The Logivyx Runtime scans it as EtherNet/IP remote I/O — industrial-grade immunity, three-wire terminals and diagnostics in a module the width of your hand.



16 DI + 16 DI/DO
Up to 32 in or 16 out, PNP

EtherNet/IP
10/100 Mbit/s, ports X1 · X2

120 × 70 mm
IP20, 35 mm DIN rail

VISUAL LOGIC.
ZERO CODE.

PRODUCT OVERVIEW

A whole I/O rack in one compact block.

FieldIO 1616-EIP packs 32 digital channels into a 120 mm module on the industrial EtherNet/IP network. Each channel has its own signal, 24 V and 0 V terminals, so three-wire sensors and valves wire straight in — no separate potential terminals, no PLC rack.

THE CONVENTIONAL CABINET

PLC + I/O cards + potential terminals



Three products to buy, wire and mark up

- ✕ CPU, separate input and output cards
- ✕ Extra terminals to feed 24 V to sensors
- ✕ Wide cabinet for a modest point count

THE LOGIVYX WAY

Panel + FieldIO 1616-EIP on EtherNet/IP



Remote I/O blocks on the machine network

- ✓ 32 channels in 120 mm of DIN rail
- ✓ Per-channel 24 V / 0 V for 3-wire devices
- ✓ Industrial EtherNet/IP, added from the EDS file

32
Channels: 16 DI + 16 configurable DI / DO

0.5 A
Per output, 4 A per module

1 kHz
Max. output switching, resistive loads

90 yrs
MTTF at 25 °C

WHAT YOU GET

High-density I/O block

16 inputs and 16 configurable channels with per-channel status LEDs, IP20, DIN rail.

EtherNet/IP

Industrial Ethernet protocol, 10/100 Mbit/s, configured from the module's EDS file.

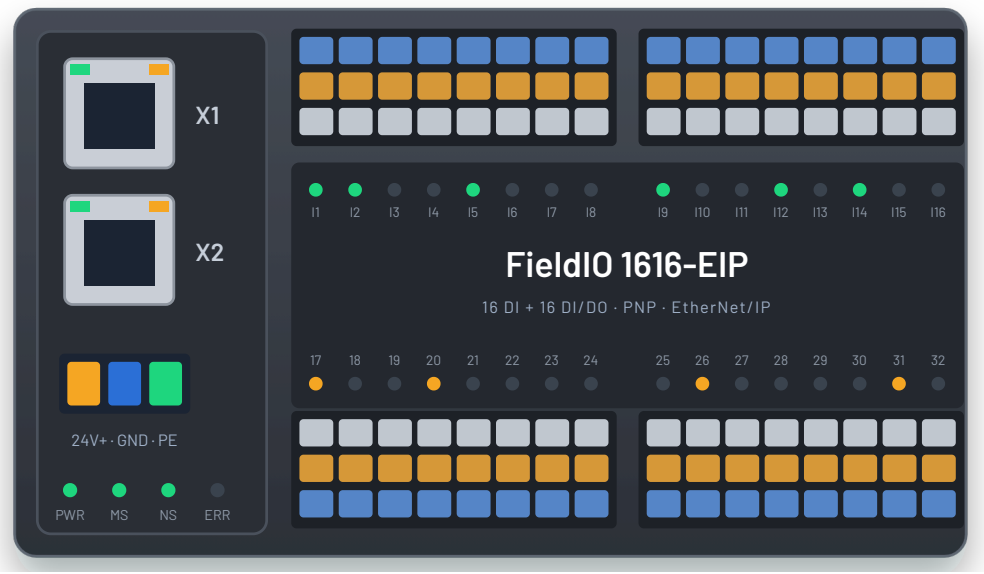
Built for Logivyx

Scanned as EtherNet/IP remote I/O by the Logivyx Runtime and used directly in ST, Ladder and Sequence.

HARDWARE

Built to industrial immunity standards.

A PPE housing tested to IEC 61000-4 EFT, ESD and surge level A, 4 g vibration and 15 g shock, with a 90-year MTTF — and plug-in terminal blocks so a module can be swapped without rewiring.



Front view. Network ports X1 / X2 and power on the left; three rows of terminals per channel group.

Upper terminal field	CH 1–16
Row 1 · 0V	0 V for each channel
Row 2 · 24V	24 V sensor supply for each channel
Row 3 · I/O	Inputs I1 – I16

Network & power	LEFT SIDE
X1 · X2	RJ45 EtherNet/IP ports, 10/100 Mbit/s
24V+ · GND · PE	Module supply (L), 0 V (M), protective earth
Consumption	65 mA

Lower terminal field	CH 17–32
Row 1 · I/O	Channels 17–32: input I17–I32 or output Q1–Q16
Row 2 · 24V	24 V for each channel
Row 3 · 0V	0 V for each channel

Connection data	TERMINALS
Type	Plug-in terminal blocks
Wire size	0.08 – 2.5 mm² (AWG 28 – 14)
Strip length	8 – 10 mm

EFT · ESD · surge
Level A per IEC 61000-4-4, -4-2 and -4-5.

Vibration & shock
4 g per IEC 60068-2-6; 15 g per IEC 60068-2-27.

Input filter
Multiple filter strengths, set in configuration.

Diagnostics
LED indication plus fault messages over the network.

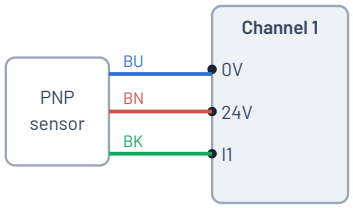
WIRING

Three wires per device, one terminal column each.

Every channel has a column of three terminals — 0 V, 24 V and the signal — so a three-wire PNP sensor or a valve connects in one column without extra terminals or bridges.

INPUT · 3-WIRE

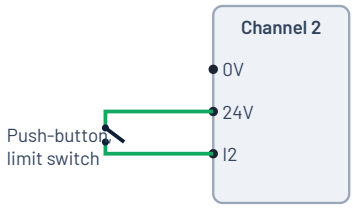
PNP sensor



Brown to 24V, blue to 0V, black (signal) to the input. "1" = 18–30 V, "0" = 0–5 V.

INPUT · 2-WIRE

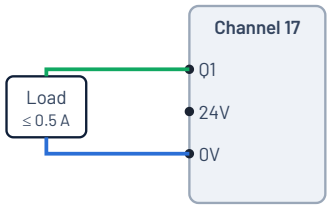
Switch or contact



Contact between the channel's 24V and its input terminal. Closed contact = "1".

OUTPUT · CH 17–32

Valve, lamp or relay



PNP output sources 24 V to the load; return to the channel's 0V. Fit a suppressor on inductive loads.

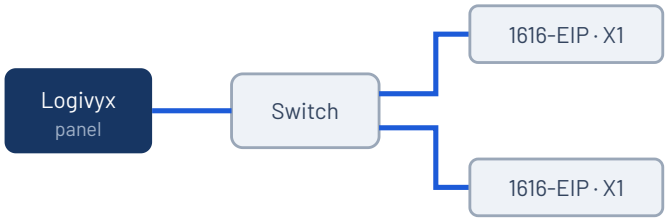
POWER

24 V DC supply

24V+ (L)	24 V DC module and I/O supply
GND (M)	0 V
PE	Protective earth to the DIN rail / cabinet earth
Output total	Size the supply for up to 4 A of outputs plus sensors

NETWORK

EtherNet/IP on the machine LAN



Shielded Cat 5 twisted pair (S-UTP, 100 Ω), up to 100 m per segment. Assign each module its own IP address.

Safety: installation must be done by qualified personnel with the 24 V supply switched off. Pollution degree 2 per IEC 61131-2; install in a control cabinet.

LOGIVYX INTEGRATION

EtherNet/IP remote I/O, added from the EDS file.

The Logivyx Runtime acts as the EtherNet/IP scanner. Import the module's EDS file in Logivyx Studio, give it an IP address, and its inputs and outputs appear as tags — exchanged cyclically and used in logic like local I/O.

01
Import the EDS
Add the FieldIO 1616-EIP EDS file to the Logivyx Studio EtherNet/IP device library.

02
Add & configure
Set the module's IP address, choose which of channels 17–32 are outputs, and set the input filter.

03
Use the tags
Inputs and outputs are exchanged every cycle — use them in ST, Ladder and Sequence, and in IO Diagnosis.

PROCESS DATA

Direction	Size	Content
Input (T → O)	4 bytes	32 input bits — channels I1–I32 (channels 17–32 when configured as inputs)
Output (O → T)	2 bytes	16 output bits — Q1–Q16 on channels 17–32 when configured as outputs
Diagnostics	—	Fault status via LEDs and communication messages

Exact bit assignment and configuration parameters are defined in the module's EDS file.

```
(* Press station on FieldIO 1616-EIP *)
IF EIP1_I1_PartPresent AND EIP1_I2_GuardClosed
   AND NOT EIP1_I16_EStop THEN
    EIP1_Q1_PressDown := Start_PB;
ELSE
    EIP1_Q1_PressDown := FALSE;
END_IF;
EIP1_Q2_PressUp := NOT EIP1_Q1_PressDown;
EIP1_Q16_Lamp   := Cycle_Done;
```

Connects to	PANELS
FieldCore 7	Gigabit or 100 Mbps LAN port
PanelCore 10	Gigabit LAN port
StationCore 15 · 17	LAN1 or LAN2 — keep I/O on its own port
Other scanners	Any EtherNet/IP scanner or PLC

Tag names shown are examples.

I/O CHARACTERISTICS

Flexible channels, fast outputs.

Channels 17–32 can be inputs or outputs, so one module covers anything from a sensor-heavy station (32 inputs) to a balanced machine (16 in / 16 out).

ALL INPUTS
32 DI
Every channel reads a PNP signal — ideal for sensor-dense fixtures and inspection stations.

MIXED
16 DI + 16 DO
Channels 1–16 read sensors, channels 17–32 drive valves and lamps — a complete small machine.

CUSTOM
Any split
Set each of channels 17–32 to input or output in the module configuration.

Output load	Max. switching frequency	Notes
Resistive	1 kHz	Indicators, PLC inputs, counters
Lamps	10 Hz	Signal lamps, beacons
Inductive	1 Hz	Solenoid valves, relays, contactors — fit suppression

IDEAL APPLICATIONS

Assembly stations
Part-present sensors, clamps and valves.

Pneumatic manifolds
Up to 16 valve coils per module.

Conveyors
Photo-eyes, stops and diverters.

Inspection fixtures
32 sensors in one compact block.

Leak & test benches
Valves, clamps and part detection.

Packaging
Fast outputs for markers and ejectors.

Machine extensions
Add a station on the existing network.

Retrofits
Replace rack I/O with a compact block.

TECHNICAL SPECIFICATIONS

Specifications

Digital inputs — DI

Number	16 fixed + 16 configurable — max. 32
Type	PNP
Signal "0" / "1"	0 … 5 V DC / 18 … 30 V DC
Input current	Typ. 4 mA at "1"
Filter	Multiple filter strengths, configurable

Digital outputs — DO

Number	Max. 16 (channels 17–32)
Type / voltage	PNP, 24 V DC
Current	Max. 0.5 A per channel, 4 A per module
Load types	Resistive, inductive, lamps
Switching frequency	1 kHz resistive · 10 Hz lamps · 1 Hz inductive

Communication — ETHERNET/IP

Protocol	EtherNet/IP
Medium / rate	Twisted pair S-UTP, 100 Ω, Cat 5 · 10/100 Mbit/s
Segment length	Max. 100 m
Node address	Set with configuration software
Process data	Input 4 bytes, output 2 bytes
Diagnostics	LEDs, communication messages

Power & connection — HARDWARE

Supply	24 V DC; current consumption 65 mA
Terminals	Plug-in, 0.08–2.5 mm² (AWG 28–14), strip 8–10 mm

Environment — IEC

Protection class	IP20
Ambient / storage	−5 … +60 °C / −25 … +70 °C
Humidity / altitude	95 % non-condensing · 0–2000 m
Pollution degree	2, per IEC 61131-2
EMC	EFT, ESD, surge — level A (IEC 61000-4-4, -4-2, -4-5)
Vibration / shock	4 g (IEC 60068-2-6) / 15 g (IEC 60068-2-27)
Compliance	CE · EU RoHS · REACH

Mechanical — HOUSING

Dimensions	120 × 70 × 37.9 mm (W × H × D)
Weight	240 g
Housing	PPE, dark grey · 35 mm DIN rail
MTTF	90 years at 25 °C

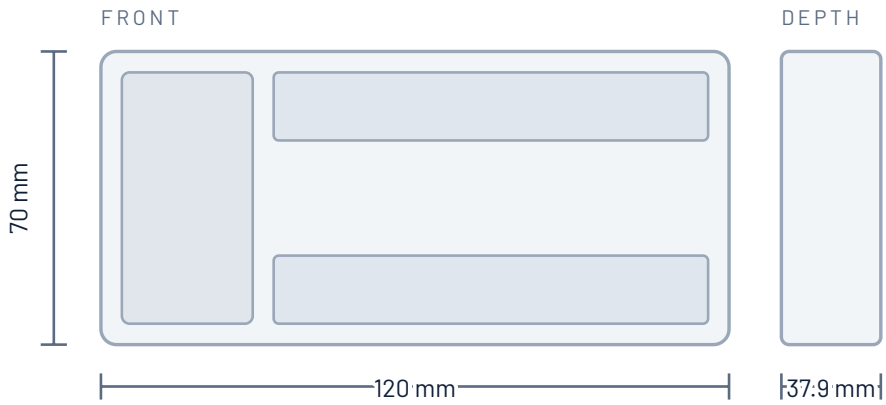
Logivyx compatibility — SOFTWARE

Driver	Logivyx Runtime EtherNet/IP (EDS-based remote I/O)
Panels	FieldCore 7, PanelCore 10, StationCore 15 · 17

Specifications subject to change without notice.

DIMENSIONS

32 channels in 120 mm



Installation

1. Snap onto a 35 mm DIN rail.
2. Wire 24 V, PE and the I/O.
3. Connect X1 to the network.
4. Import the EDS, set the IP.
5. Map tags in Logivyx Studio.

ORDERING INFORMATION

Order code	Description	Best for
LGX-FIO-1616-EIP	**FieldIO 1616-EIP** — 16 DI + 16 DI/DO, PNP, 24 V DC, EtherNet/IP, IP20, DIN rail	Compact high-density machine I/O

In the box

FieldIO 1616-EIP module with plug-in terminal blocks · EDS file available for download

Recommended accessories

24 V DC DIN-rail power supply · shielded Cat 5 patch cables · industrial Ethernet switch · suppressors for inductive loads

TYPICAL SYSTEMS

SINGLE STATION
PanelCore 10 + 1616-EIP
16 sensors and 16 valves — a complete small machine.

TEST BENCH
FieldCore 7 + 1616-EIP + 8AI
32 digital points on Ethernet, 8 analog on RS485.

ASSEMBLY LINE
StationCore 17 + 5 × 1616-EIP
One block per station — 160 points on a dedicated I/O LAN.

Logivyx

Request a live demo
and see FieldIO 1616-EIP on your machine.

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FieldIO 1616-EIP hardware platform: Elco FBEI-1616UP-TS. EtherNet/IP is a trademark of ODVA, Inc.