molex

PROFINET Network Interface Cards ❯

PROFINET Network Interface Cards (NICs) streamline factory automation by reducing hardware and cabling requirements, minimizing network downtime, and optimizing network performance and efficiency. They deliver reliable real-time communication, versatile configuration and diagnostic capabilities, robust security and seamless integration for complex PROFINET networks.

ADVANTAGES AND FEATURES

Delivers reliable and uninterrupted data transfer
Two independent PROFINET ports support the media redundancy protocol (MRP) for fault-tolerant networking and enable 100Mbps full-duplex communication with auto-negotiation and auto-crossing.

Offers seamless multi-controller communication for complex networks
The NIC simultaneously operates as both a PROFINET IO controller and an IO device, enabling it to control other devices while being managed by a higher-level system.

Supports high-performance industrial networks
The NIC accommodates up to 32 cyclic PROFINET connections to deliver fast, deterministic communication.

Network Protocol	PROFINET
Interface	PCIe half-length; half- or full-height bracket
Certifications	RoHS, REACH, cUL, CE, KCC
Functionality	IO controller/IO device (simultaneous)
Cyclic Connections	Up to 32
Modules/Submodules per Device	Up to 64
Operating Temperatures	0 to +60°C

Streamlines configuration, diagnostic and maintenance tasks
A product configuration tool (PCT) with built-in diagnostics enables user-friendly troubleshooting and configuration capabilities.

Provides system design flexibility
The low-profile, half-length PCI Express (PCIe) interface ensures compatibility with a wide range of enclosures, and supports PCIe x1, x4, x8 and x16 slots.
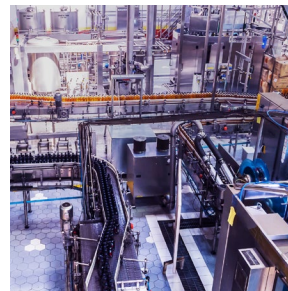
MARKETS AND APPLICATIONS

Industrial Automation
Agricultural systems
Automotive production lines
CNC machine manufacturers
Food and beverage lines
Machine builders
Material handling solution manufacturers
Material handling systems
Mining equipment
Pulp and paper manufacturing equipment
Robot cell control systems
Semiconductors
Substation control devices
Water and wastewater treatment plants

Material Handling Systems

Food and Beverage Lines

Robot Cell Control Systems

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SPECIFICATIONS

Reference Information

Packaging: Box
Designed in: Millimeters
RoHS: Yes
REACH: Yes
PI Conformance: Yes
PCIe Compliance: PCIe Gen 1.0a
Certifications: cUL, CE, KCC

Mechanical

Interface: PCIe half length, half- or full-height bracket
Supported PCIe Slots: x1, x4, x8, x16

Physical

Humidity: 5 to 95% non-condensing
Operating Temperatures: 0 to +60°C
Storage Temperatures: -25 to +85°C

Features

Functionality: PROFINET IO controller and
  IO device (I-device)
Communication Class: Real-Time Conformance
Class-B (RT CC-B)
Cyclic Connections (max.): 32
Modules/Submodules per Device (max.): 64
I/O Data Size (max.): 10kB input + 10kB output,
  with IOxS
MRP Support: Yes
Supported Operating Systems: Windows, Linux
Supplied Software: Hardware drivers, configuration
  and diagnostic tools, development libraries,
  interface source code (CAPIs)

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