



DeviceMaster® PNIO-2304

Part Number: 99613-2



DEVICE SERVER

KEY FEATURES AND BENEFITS

- Support for PROFINET IO
- DIN rail mounting
- Low profile, compact housing facilitates easy installation and mounting
- Wide DC input voltage range (5-30 volts)
- Redundant power input for fail-safe power
- Wide operating temperature range (-40° to 75°C)
- RS-232/422/485 software selectable interfaces
- Software selectable termination resistors for RS-232/422/485
- DB9 Male serial connectors
- Dual 10/100 Ethernet Ports
- Screw terminal power connector
- 25KV surge protection for serial ports
- Web-based configuration makes setup and management changes quick and easy
- PortVision® DX for quick setup and remote management
- Security via SSL & SSH connections, SSL serial data stream encryption
- NEMA TS2 Certified

PRODUCT DESCRIPTION

The DeviceMaster PNIO-2304 is the newest model in Control's popular line of DeviceMaster serial device servers. This product can be used to network-enable two serial devices on any Ethernet network and are ideal for PROFINET IO applications in:

- Traffic and Transportation
- Power Utility
- Industrial Automation
- Material Handling
- Any project that requires PROFINET IO serial-to-Ethernet communication with DIN rail-based equipment installations

power connections for convenient installation. It offers both wide DC input voltage range (5-30 volts) and wide operating temperature range (-40° to 75°C), so it operates reliably in a variety of challenging physical environments. It provides redundant DC power input for fail-safe power.

The DeviceMaster PNIO is National Electrical Manufacturers Association (NEMA) TS2 compliant. With two Ethernet ports, you can daisy-chain or cascade devices together for a cleaner layout, a faster installation and a more cost-effective solution (no need for multiple Ethernet switches or star topology layouts).

The DeviceMaster PNIO supports software selectable RS-232, RS-422 and RS-485 serial communications at standard baud rates from 300bps to 230Kbps. Software selectable termination resistors also provided to enable easy and reliable installations.

The DeviceMaster PNIO includes DIN-rail mounting and screw terminal



DEVICEMASTER SPECIFICATIONS

HARDWARE

Bus Interface Specification

10/100 BASE-T Ethernet

Memory

32MB SDRAM, 8MB Flash

Enclosure

UL94-V0 Plastic

Installation Method

DIN rail (35mm)

LED Indicators

Status, Ethernet Port Link/Activity

Dimensions

4.52" x 3.9" x 1.8"
116.8 mm x 99.1 mm x 45.7 mm

Product Weight

0.45lbs
204.12g

ELECTRICAL SPECIFICATIONS

Input Voltage Requirements

5-30VDC

Power Consumption (Max.)

3.0 Watts

Power Input Redundancy

Dual Redundant Power Input

ESD Surge Protection

Provides minimum of 25KV protection on all serial lines. All Ethernet components are rated to 1.5KV magnetic surge protection.

ENVIRONMENTAL SPECIFICATIONS

Air Temperature

System On -40° to 75°C
System Off -40° to 85°C

Operating Humidity

0% to 95%

Altitude

0 to 10,000 Ft
0 to 3,048 m

Mean time between failures

42.3 Years

SERIAL COMMUNICATIONS

Connector Type

DB9M

Number of Ports

4

Software Interfaces

RS-232
RS-422
RS-485
RS-485 2-Wire
RS-485 4-Wire Master
RS-485 4-Wire Slave

Termination Resistor for RS422/485

Software controllable 120Ω termination resistors available for each transmit and receive differential pair on every port. The 120Ω termination resistors can be enabled between TX+ and TX- OR RX+ and RX- or both on every port

Baud Rates

300 to 230 Kbps
Receive Buffer 4.5KB
Transmit Buffer 4.5KB

Serial Data Control

Data Bits 5, 6, 7 or 8
Parity Odd, Even, Mark, Space or None
Stop Bits * 1, 1.5 (with 5 data bits), or 2

Flow Control

None, RTS/CTS, Xon/Xoff, Half-Duplex

* Stop bit 1.5: Supported only when used with 5 data bits

ETHERNET SPECIFICATIONS

Number of Ports

2

Speed

10/100Mbps

Connector Type

RJ45F Auto MDI/MDI-X

LED

Ethernet Link (Green)
Ethernet Activity (Amber)

Ethernet specific features

Ethernet packet switching, Auto Negotiation, Link/Activity Status LED

Network Protocols

ARP, BOOTP, DHCP/RARP, HTTP, HTTPS, SSH, SSL/TLS, ICMP, RFC 1006 (ISO over TCP), SNMP (MIB-II), TCP/IP & UDP socket services, Telnet, and TFTP, and supports IP multicast data transmission

PROFINET IO FEATURES

Supported PLCs

Included but not limited to:
Siemens SIMATIC S7-300, S7-400, S7-1200, S7-1500, and ET 200 CPUs that support the extended PROFINET diagnostics (listed here)

Key Features

- Connectivity – connect serial and Ethernet TCP/IP devices to PROFINET IO controllers and TCP/IP applications
- 8ms to 512ms IO cycle update time – supports high-speed devices and also ensures PLC can process each received data packet
- Intelligent packet identification – start and end of transmission character detection/removing/appending
- Received packet size control – truncate, drop, or save oversized packets as record data
- Large received packet support – up to 1518 bytes serial and 2048 bytes Ethernet TCP/IP
- Shared Device function – different ports can be shared between two PLCs

Diagnostics

Yes

GSDML file

Yes

FEATURES

SNMP Support

Monitoring Only

Other

PortVision DX remote management

Manufacturer's Warranty

5 Years

EXPORT INFORMATION

Packaged Shipping Weight

0.85lbs
386g

Package Shipping Dimensions

5-11/16" x 5-11/16" x 3-3/8"
144.46 x 144.46 x 85.73mm

UPC Code

7-56727-99613-2

Country of Origin

USA

ECCN

5A992

Schedule B Number

8471.80.1000

REGULATORY STANDARDS

Emissions

FCC Part 15 Subpart B
Class A limit
Canadian EMC Requirements
ICES-003

European Standard EN61000-6-4

European Standard EN55022

AS/NZS CISPR 22

Immunity

European Standard EN61000-6-2

European Standard EN55024:

IEC1000-4-2/EN61000-4-2: ESD
IEC1000-4-3/EN61000-4-3: RF
IEC1000-4-4/EN61000-4-4: Fast Transient/ Burst
IEC1000-4-5/EN61000-4-5: Surge
IEC1000-4-6/EN61000-4-6: Conducted Disturbance
IEC1000-4-8/EN61000-4-8: Magnetic Field
IEC1000-4-11/EN61000-4-11: Voltage Dips and Voltage Variations

Safety

UL 61010-1, UL 61010-2-201
CSA C22.2 No. 61010-1-12
CSA C22.2 No. 61010-2-201:14

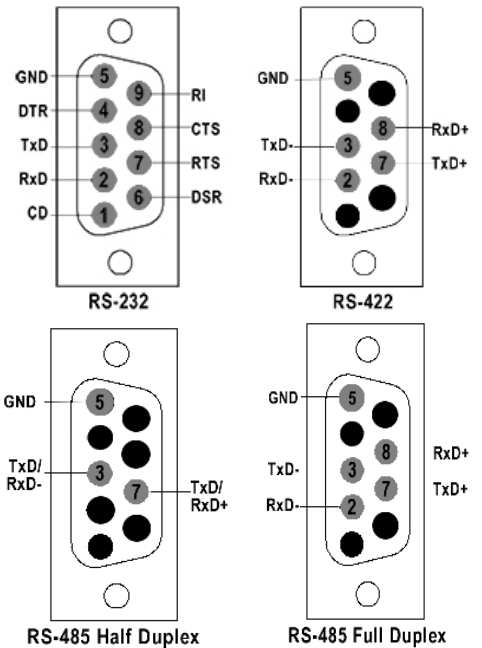
Other

NEMA TS2 Compliant
RoHS2 compliant under CE

REGULATORY APPROVALS



PINOUT DIAGRAMS



Warranty Information

Control offers a 30-day satisfaction guarantee and 5-year limited warranty.

Sales Support

+1.763.957.6000
sales@comtrol.com

Technical Support

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Email, FTP, and Web Support

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