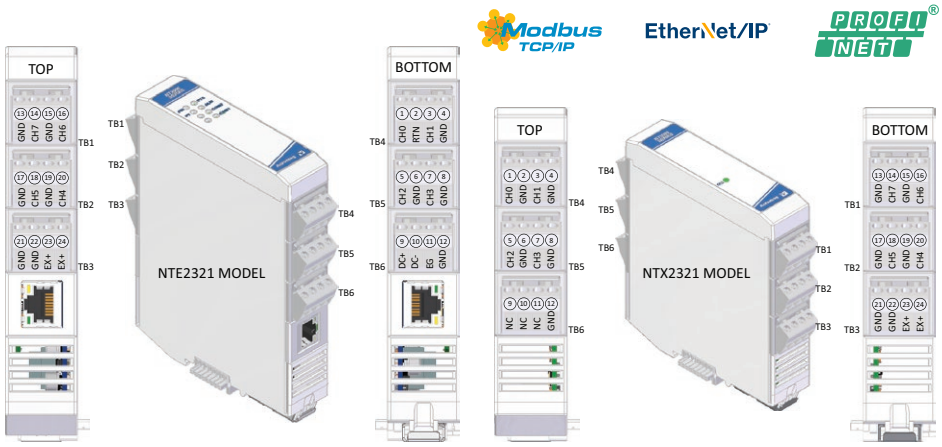
Ethernet I/O: BusWorks® NT Series

NT2320 Ethernet Analog Output Modules

CE · 24 HOUR STOCK ITEM · 2 YEAR WARRANTY · RoHS Compliant



Modbus TCP/IP · EtherNet/IP · PROFINET®

8 process voltage outputs ◆ Ethernet I/O plus Expansion I/O ◆ Multi-protocol support

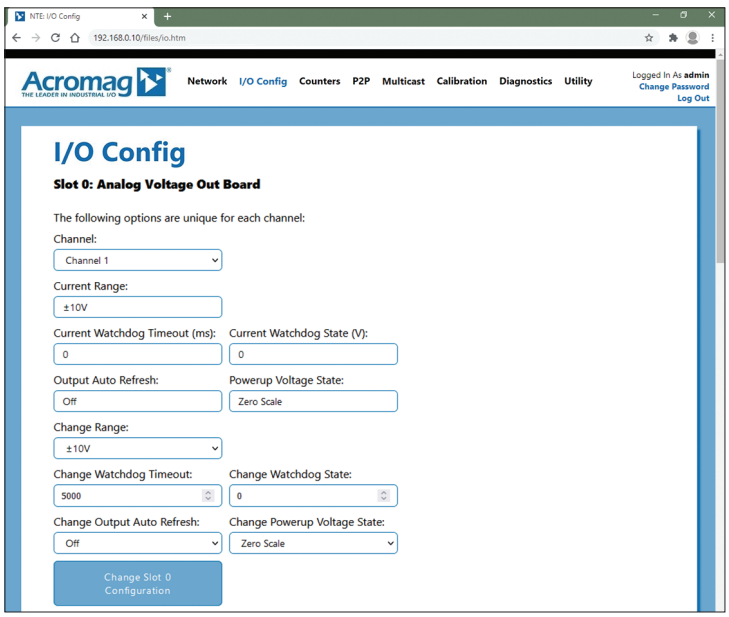
The BusWorks® NT2000 series offers a cost-effective, modular solution for Ethernet remote I/O systems. Two module types are available. NTE Ethernet models provide the protocol interface plus I/O signal processing channels. NTX expansion modules add extra I/O channels when mated to any NTE Ethernet communication module.

NT2320 modules offer 8 voltage outputs. Each output is driven by a 16-bit DAC. NTE Ethernet models provide a compact network interface to control voltage signal levels. Appending NTX expansion models can interface up to 32 voltage outputs at a single IP address.

Applications include controlling analog actuator levels and driving recorders, displays, or other process instruments. Voltage outputs can control generator power, drive speed, or valve positioning.

An isolated RS-485 bus links up to three expansion modules to the Ethernet module with connectors that join along the DIN rail. This internal NT bus distributes power and communication between the modules. Users can mix analog, temperature, and discrete I/O modules across the NT bus.

Acromag's i2o® messaging technology allows direct peer-to-peer or multicast communication between remote modules without a master controller.



Easily configure I/O modules using any web browser.

Key Features & Benefits

- Configured over Ethernet with web browser
- Expandable I/O capacity, up to 56 I/O channels of mixed signal types at one IP address
- Field-selectable Modbus TCP/IP, EtherNet/IP, or *Profinet communication
- i2o peer-to-peer or multicast communication
- Dual RJ45 ports enable daisy chain topology
- Eight voltage outputs with 16-bit D/A resolution
- Selectable ±5V, ±10V, 0-5V, 0-10V output range
- LED status indicators for visual troubleshooting
- *OPC-UA, *MQTT and *RESTful API IIoT support
- Conditional logic for rule-based I/O operation
- Advanced *alarm and *data logging functions
- 1500V isolation between I/O, network, and power
- Thin 25mm housing with pluggable terminals
- Wide temperature operation (-40 to 70°C)
- CE compliant. Hazardous approvals pending.

* Coming soon. Consult factory for availability.

Acromag® THE LEADER IN INDUSTRIAL I/O

Tel 877-214-6267 ■ sales@acromag.com ■ www.acromag.com ■ 30765 Wixom Rd, Wixom, MI 48393 USA

Ethernet I/O: BusWorks® NT Series

NT2320 Ethernet Analog Output Modules

Performance Specifications

Ethernet Interface (NTE models only)

Communication
Configurable for Modbus TCP/IP, EtherNet/IP, and Profinet.

10/100Mbps data rate, auto-sensing.

IP Address
Default 192.168.0.10. Configurable static IP or DHCP.

Analog Outputs

D/A Converter
Eight DC voltage outputs driven by individual D/A converters. Outputs share a return.

Output Voltage Ranges
Select ±10V, ±5V, 0-10V, or 0-5V.

Output Accuracy
Factory calibrated to better than ±0.1% of span. Manual calibration of voltage outputs can improve accuracy to better than ±0.05%.

Output Temperature Drift
Better than ±50ppm/°C (±0.0050%/°C).

Output Excitation
Required for output operation 0.8W max.

Output Update Rate
Outputs update when written and are continuously refreshed every 5 seconds.

General I/O

Input Update/Conversion Rate
Fresh data available to the network every 10ms. Dependent on number of samples with averaging.

Response Time from an Ethernet command
Less than 5ms, typical.

Environmental and Physical

Temperature and Humidity
Operating: -40 to +70°C (-40 to +158°F).
Storage: -40 to +85°C (-40 to +185°F).
Relative Humidity: 5 to 95%, non-condensing.

Isolation
1500V AC for 60 seconds and 250V AC or 354V DC continuous between I/O channels (group), each network port and power circuits.

Power Supply
10-32V DC SELV power wired to NTE model only.
Power to NTX models is via NT bus connection.
Excitation Voltage: +12V DC to +24V DC

Power Consumption
NTE2321: 1.23 W typical, 1.35 maximum.
NTX2321: 1.44 W typical, 1.54 W maximum.

Dimensions (width x height x depth)
NTE: 25 x 116.9 x 139.2 mm (0.98 x 4.6 x 5.48 inches).
NTX: 25 x 116.9 x 116.65 mm (0.98 x 4.6 x 4.59 inches).

Weight
NTE: 0.5 lbs (0.23 kg).
NTX: 0.3 lbs (0.14 kg).

Standards and Certifications

Electromagnetic Compatibility (EMC)
CE marked, per EMC Directive 2004/108/EC.

Safety Approvals
Hazardous approvals pending.

Ordering Information

Models

Go to on-line ordering page >

NTE2321-1111
Ethernet I/O module with dual RJ45 ports, 8 voltage outputs.

NTX2321-0011
Expansion I/O module with 8 voltage outputs.

Accessories

5035-369
5035-370
Ethernet patch cable, low EMI, double-shielded. 3 feet (5035-369) or 15 feet (5035-370).

PS5R-VB24
Power supply, 24V DC, 15W output.

See www.acromag.com for other sizes.

ISO9001
AS9100
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