

# **Ethernet I/O Modules**

## Ethernet/IP-Compatible Modules BusWorks® Series



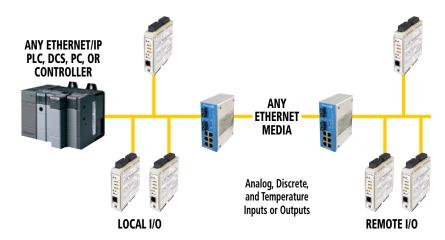












Ethernet analog and discrete I/O modules ◆ Compact design with high channel density ◆ Easily scalable

## **Description**

Acromag offers a variety of I/O modules to interface analog or discrete signals to an EtherNet/IP network. EtherNet/IP (Ethernet Industrial Protocol) is traditional IEEE 802.3 Ethernet combined with an industrial application layer protocol targeted to industrial automation. This application layer protocol is the Common Industrial Protocol (CIP™). Many popular Rockwell Automation (Allen-Bradley) PLC systems support Ethernet/IP communication.

Unlike many I/O systems that require an expensive buscoupler and proprietary power supply before you add any I/O, each BusWorks I/O module has everything you need built into the inch-wide unit –  $\mu$ P, I/O, power and network port. You can deploy just a few I/O channels with very low start-up costs and easily scale up as necessary.

The independent, stand-alone design of each module makes it cost-effective and simple to install in tight spaces or to supplement existing control systems. Browser-based configuration makes setup fast and easy without any special software or programming.



### **BusWorks I/O Modules**

### Analog I/O

#### 961EN, 962EN Models

6-channel differential input, 16-bit A/D, DC current or DC voltage signals

#### 963EN, 964EN Models

12-channel single-ended input, 16-bit A/D, DC current or DC voltage signals

## 965EN Models

4 or 6-channel input, 16-bit A/D thermocouple or DC millivolt signals

#### 966EN Models

4 or 6-channel input, 16-bit A/D RTD or resistance signals

#### 972EN, 973EN Models

4 or 6-channel output, 12-bit D/A DC current or DC voltage signals

#### Discrete I/O

#### 981EN, 982EN, 983EN Models

12-channel input, output, or I/O (any mix); active-low inputs; sinking outputs

#### ■ Combination I/O

#### 951EN, 952EN Models

- 4 analog inputs (DC current or DC voltage),
- 2 analog outputs (DC current),
- 6 discrete I/O channels

## **Key Features & Benefits**

- Compatible with any Ethernet/IP-certified controller
- ODVA 3rd-party conformance tested and certified
- Supports Ethernet/IP implicit and explicit messaging
- Supports PCCC communication for interoperability with legacy Allen-Bradley PLCs
- Supports one socket of Modbus TCP/IP Protocol – For DCS, PLC, HMI/OI, PC, or embedded controller communication
- Compatible with Allen Bradley's PLCs:
   Control Logix, Compact Logix, SLC5/05, PLC5E,
   MicroLogix, others
- Built-in web page configuration
- CE, UL/cUL Class 1 Division 2, and Atex Zone 2 approvals
- eds files available via website, email, or shipped with units
- Application notes, white papers, and CAD drawings available at www.acromag.com



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# **Ethernet I/O Modules**

## **Ethernet/IP-Compatible Modules** BusWorks Series

## **Ordering Information**

See www.acromag.com for more information.
Modbus TCP/IP Ethernet I/O modules also available.

#### Models

#### 951EN-6012

Ethernet/IP combo I/O module with 4 analog current inputs, 2 analog current outputs, 6 discrete I/O channels

#### 952EN-6012

Ethernet/IP combo I/O module with 4 analog voltage inputs, 2 analog current outputs, 6 discrete I/O channels

#### 961EN-6006

Ethernet/IP analog input module with 6 differential DC current input channels

#### 962FN-6006

Ethernet/IP analog input module with 6 differential DC voltage input channels

#### 963EN-6012

Ethernet/IP analog input module with 12 single-ended DC current input channels

#### 964EN-6012

Ethernet/IP analog input module with 12 single-ended DC voltage input channels

#### 965EN-6004

Ethernet/IP temperature input module with 4 thermocouple/mV input channels

#### 965EN-6006

Ethernet/IP temperature input module with 6 thermocouple/mV input channels

#### 966EN-6004

Ethernet/IP temperature input module with 4 RTD/resistance input channels

#### 966FN-6006

Ethernet/IP temperature input module with 6 RTD/resistance input channels

#### 972EN-6004

Ethernet/IP analog output module with 4 DC current output channels

#### 972EN-6006

Ethernet/IP analog output module with 6 DC current output channels

#### 973EN-6004

Ethernet/IP analog output module with 4 DC voltage output channels

#### 973EN-6006

Ethernet/IP analog output module with 6 DC voltage output channels

#### 981EN-6012

Ethernet/IP discrete input module with 12 input channels

#### 982EN-6012

Ethernet/IP discrete output module with 12 output channels

#### 983EN-6012

Ethernet/IP discrete I/O module with 12 bi-directional input/output channels

#### XT1112

Ethernet/IP discrete I/O module with 16 sinking output channels

#### XT1122

Ethernet/IP discrete I/O module with 16 sourcing output channels

#### XT1212

Ethernet/IP analog input module with 8 differential DC current input channels

#### XT1222

Ethernet/IP analog output module with 8 DC voltage input channels

#### XT1232

Ethernet/IP analog input module with 16 single-ended DC current input channels

#### XT1242

Ethernet/IP analog input module with 16 single-ended DC voltage input channels

#### XT1532

Ethernet/IP combo I/O module with 4 analog current outputs, 4 discrete I/O channels

#### XT1542

Ethernet/IP combo I/O module with 8 analog voltage outputs, 8 discrete I/O channels

#### Accessories

See www.acromag.com for more information.





