ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

**Artisan Technology Group**
(217) 352-9330 | sales@artisantg.com | artisantg.com

**Full-service, independent repair center**
with experienced engineers and technicians on staff.

**We buy your excess, underutilized, and idle equipment**
along with credit for buybacks and trade-ins.

**Custom engineering**
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

**Expert team | Trust guarantee | 100% satisfaction**

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Acromag BusWorks XT1231-000* at our website: ***Click HERE***

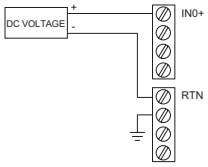
# Ethernet I/O: BusWorks® XT Series

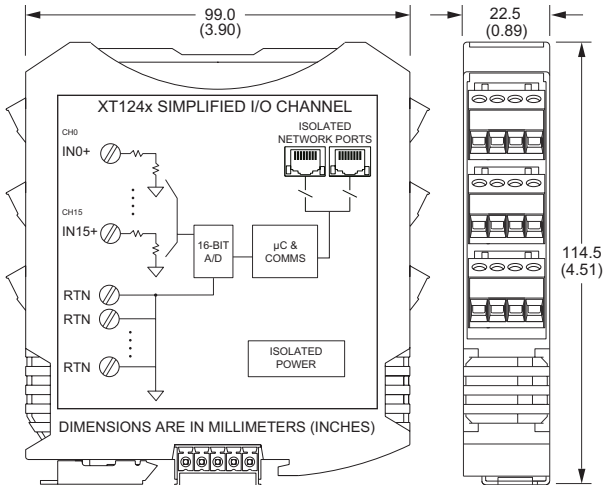
## XT1240 Ethernet Analog Input Modules




EXAMPLE INPUT CONNECTIONS

DC VOLTAGE INPUT




16-channel single-ended analog voltage input ◆ Modbus TCP/IP, Ethernet/IP, Profinet, or i2o communication

## Description

The XT1240 offers an isolated Ethernet network interface for up to to sixteen single-ended voltage input channels. Single-ended inputs enable a higher channel density to save space and a lower cost per channel.

Rugged construction, high density design, and easy USB-to-PC/Windows setup combine for a very effective and reliable module. These units are ideal for remote monitoring, distributed control, or SCADA applications.

### Input Ranges

DC Voltage:
±5V, ±10V, 0 to 5V, 0 to 10V

### Ethernet Communication

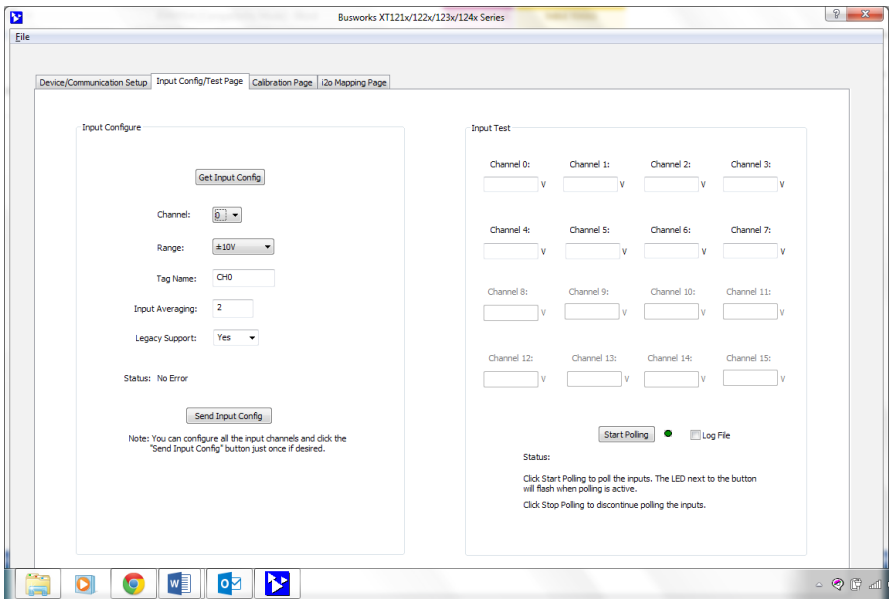
Modbus TCP/IP, Ethernet/IP, Profinet, i2o® peer-to-peer, 10/100Base-T(X) PriorityChannel™ device determinism

### Power Requirement

12 to 32V DC (2.8W)

## Key Features & Benefits

- Easy setup with Windows software via USB
- High input impedance (100K ohms) reduces loading on voltage loops
- User-configurable sample averaging (1-200) on a per-channel basis
- 10ms network updates for all 16 input channels
- i2o peer-to-peer updates based on percent-of-change and/or timed updates
- High-resolution 16-bit Σ-Δ A/D converter ensures precise, high accuracy measurements
- High-Density 22.5mm wide package with pluggable, front-facing terminals
- Dual Ethernet 10/100 ports (auto-negotiation) reduce switch port requirements
- 1500V AC isolation (between I/O, power, and network ports) and surge/transient protection
- Supports bussed/rail and redundant power
- -40°C to +70°C wide temperature operation
- Withstands 25g shock and 4g vibration
- CE compliant. UL/cUL Class 1 Div 2 Zone 2 approvals. ATEX Certified.




*BusWorks XT software (download free from www.acromag.com) allows you to configure I/O modules offline with USB or save the configuration file and download settings into units later at your convenience.*

Acromag® THE LEADER IN INDUSTRIAL I/O

Tel 248-295-0880 ■ sales@acromag.com ■ www.acromag.com ■ 30765 Wixom Rd, Wixom, MI 48393 USA

*Bulletin #8400-798h*

# Ethernet I/O: BusWorks® XT Series

## XT1240 Ethernet Analog Input Modules

### Performance Specifications

IMPORTANT: To prevent damage or errors from grounded PCs and surges, Acromag strongly recommends use of the USB-ISOLATOR when configuring an XT1000 I/O module.

#### USB Interface

**USB Connector**
Type: USB Mini-B type socket, 5-pin
Data rate: 12Mbps. USB v1.1 and 2.0 compatible
Maximum cable length: 5.0 meters

**USB Transient Protection**
Transient voltage suppression on power and data lines

**Driver**
Not required. Uses Windows HID drivers

#### Input

**Accuracy**
±0.05% of span, typical for nominal input ranges

**Analog to Digital Converter (A/D)**
16-bit Σ-Δ converter. 351.6uV/bit resolution.

**Noise Rejection**
Better than -110dB @ 60Hz

**Input Filter Bandwidth**
-3dB at 25KHz, typical

**Input Conversion Rate**
10mS for all 16 input channels

**Input Impedance**
105.2K ohms

#### Ethernet Communication

**Protocols**
Modbus TCP/IP, i2o peer-to-peer, Ethernet/IP, or Profinet depending on model number.

**Ethernet Communication Controller**
Innovasic RapID™ Platform with PriorityChannel™ for determinism at the device regardless of network load.

**Modbus TCP/IP (slave)**
Port 502 reserved. Supports up to 10 sockets.

**i2o Peer-to-Peer (master/slave)**
Can map each of 16 analog input channels separately to output channels. Timed (1-65535 sec) or percent-of-change updates. Supports GPRS/GSM systems.

**Ethernet/IP (adapter)**
Supports 10 connections. EDS file on website.

**Profinet (server)**
Supports 1 connection. GSDML file on website.

**Connectors**
Two shielded 8-pin RJ-45 sockets, 10BaseT/100BaseTX.

**Wiring**
Auto-crossover for MDI or MDI-X

**IP Address**
User-configurable. 192.168.1.100 default IP address

**Data Rate**
Auto-negotiated, 10Mbps or 100Mbps

**Compliance**
IEEE 802.3, 802.3u, 802.3x

#### Environmental

**Operating temperature**
-40 to 70°C (-40 to 158°F)

**Storage temperature**
-40 to 85°C (-40 to 185°F)

**Relative humidity**
5 to 95% non-condensing.

**MTBF:** 458,991 hrs. at 25°C
338,846 hrs. at 40°C

**Power Requirement**
12 to 32V DC, 2.8W maximum
(113mA maximum @ 24V)

**Isolation**
4-way isolation between I/O channels, network (each port), and power.
Peak: 1500V AC, ANSI/ISA-82.01-1988
Continuous: 250V AC, 354V DC

**Shock and Vibration Immunity**
Vibration: 4g, per IEC 60068-2-64
Shock: 25g, per IEC 60068-2-27

**Electromagnetic Compatibility (EMC) Compliance**
Radiated Emissions: BS EN 61000-6-4, CISPR 16
RFI: BS EN 61000-6-2, IEC 61000-4-3
Conducted RFI: BS EN 61000-6-2, IEC 61000-4-6
ESD: BS EN 61000-6-2, IEC 61000-4-2
EFT: BS EN 61000-6-2, IEC 61000-4-4
Surge Immunity: BS EN 61000-6-2, IEC 61000-4-5

**Approvals**
CE compliant. UL/cUL listed. ATEX Certified.
Designed for Class I; Division 2; Groups ABCD; Zone 2.
Ⓔx II 3 G Ex nA IIC T4 Gc -40°C ≤ Ta ≤ +80°C

#### Physical

**General**
General purpose plastic enclosure for mounting on 35mm "T-type" DIN rail.

**Case Material**
Self-extinguishing polyamide, UL94 V-0 rated, color light gray. General purpose NEMA Type 1 enclosure.

**Circuit Board**
Military grade fire-retardant epoxy glass (IPC-4101/98)

**I/O Connectors**
Removable plug-in type terminal blocks rated for 12A/250V; AWG #26-12, stranded/solid copper wire

**Dimensions**
Width = 22.5mm (0.9 inches), Length = 114.5mm (4.51 inches), Depth = 99.0mm (3.90 inches)

**Shipping Weight**
0.5 pounds (0.22 Kg) packed

### Ordering Information

#### Models

XT1241-000
16-channel single-ended voltage input module, Modbus/TCP and i2o protocol

XT1242-000
16-channel single-ended voltage input module, Ethernet/IP protocol

XT1243-000
16-channel single-ended voltage input module, Profinet protocol

#### Software

XT-SIP (recommend one kit per customer)
Software Interface Package. Includes software (XT-CONFIG), isolator (USB-ISOLATOR), two USB cables (4001-112, 4001-113), Ethernet cable (5035-360).

#### Accessories

XT BUS-KIT
DIN rail bus power/excitation connector kit. Includes one DIN rail bus connector (1005-070), one left-side female connector terminal block (1005-220) and one right side male connector terminal block (1005-221).

USB-ISOLATOR
USB-to-USB isolator, includes USB cable (4001-112)

PS5R-VD24
Power supply (24V DC, 2.5A)

DIN RAIL 3.0
DIN RAIL 16.7
DIN rail strip, Type T, 3 inches (75mm) or 16.7 (425mm)

20RM-16-DIN
19" rack-mount kit with DIN rail

ISO9001
AS9100
MADE IN USA

Acromag
THE LEADER IN INDUSTRIAL I/O

Tel 248-295-0880 ■ sales@acromag.com ■ www.acromag.com ■ 30765 Wixom Rd, Wixom, MI 48393 USA

*All trademarks are property of their respective owners. Copyright © Acromag, Inc. 2019. Data subject to change without notice. Printed in USA 10/2019.*

**Artisan Technology Group** is an independent supplier of quality pre-owned equipment

## Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

## We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

## Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP