XARTU/1™ Panel Mounted

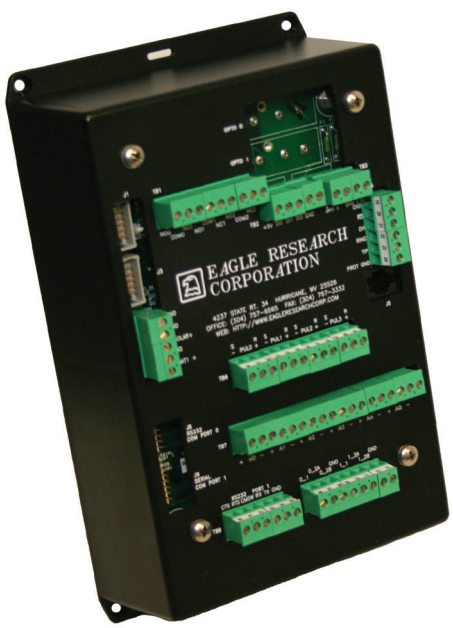
The XARTU/1™ Remote Terminal Unit (RTU) is a low-cost version of the XA Series ™ Flow Computer products. It is an intelligent, compact, rugged, and reliable industrial computer designed for real-time remote data acquisition and control applications. It can execute multiple processes, such as complex math functions, control algorithms, alarming, and more, without host intervention.

Flexibility and reliability are the major criteria in the XARTU/1™ design philosophy. The unit features a balanced system including flexible memory, I/O, power, and communication schemes with support for HexASCII, MODBUS, and various other custom protocols upon request. Tolerance of harsh environments is another one of the XARTU/1™ strengths. Operating temperature range is -40°C to 70°C. The XARTU/1™ comes packaged in an easy to mount enclosure with pluggable field wiring terminals.

The XARTU/1™ is normally powered with a 7-30 VDC supply and employs an energy efficient low-power CMOS design. A 120/240VAC uninterruptible power supply can be provided as an option. Should it lose power, the RTU will sense the failure, automatically switch to battery power, and then continue to operate at full capacity. Other power options for sites without conventional power include solar power and thermoelectric generators.

An optional operator interface with either a two-line, four line, or graphical liquid crystal display, and 25-key keypad with 10 user-definable function keys is available. This allows users to examine and/or change process data and diagnose problems at the remote site without a local host or terminal.

The XARTU/1™ can calculate corrected volume using AGA-3, AGA-5, AGA-7, AGA-8, and NX-19 reports and is fully compatible with Eagle Research's entire family of products. Eagle Research is committed to providing a complete solution for all gas flow and control applications.



Product Features

- Enclosure dimensions sized depending on application requirements
- Fibox polycarbonate enclosure with quick release hasps
- Wall or Pole Mounting
- Ability to store and poll over 30,000 user definable history records
- User configurable awake windows to minimize power requirements
- Pressure scan times of 1/sec or less, depending on user requirements

Expansion Capability: Additional connectors provide redundant termination points to allow for configuration flexibility. Two 10-position connectors allow for expansion over the I^2C communication bus. Optional isolated analog output modules, optional serial ports (RS-232/485), and optional Remote I/O (RIO) Boards available for more expansion capabilities.

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Technical Specifications:

- Input Power: 7-30 VDC. Two battery inputs with MTA connectors. One power supply/rechargeable battery input with screw terminals. One Solar power input with screw terminals. (10 Watt Maximum Panel Size)
- Power Monitoring: Supply voltage monitoring through A/D with low supply voltage alarming
- Backup Battery: 3.6 VDC lithium backup battery for database, history, audit trail, time/date, RAM memory.
- Memory: Store up to 32,000 Time Stamped Records with programmable FLASH program memory and battery-backed RAM data memory
- Communications: Available On-Board Dial-up Modem port with extension off-hook detection. Two RS-232 ports with RX, TX, RTS, CTS, and communication switch signals. Up to 4 Expansion Comm Ports (RS-232/485). Configurable speed up to 115,200 baud. Directly interfaces to Cell Modems (TCP/IP), Radios, Satellite, etc. Communication protocols selectable on a per port basis: Eagle HexASCII, or Modbus

Inputs / Outputs (I/O) Available:

- Internal Inputs: One ambient temperature input; one supply voltage input
- Pulse Inputs: Four pulse inputs, software programmable for Form A or C; high or low speed. Each counter is a six-digit (0-999999) hardware counter with programmable interrupt support. Can be used for simple pulse accumulation, and for more complex applications such as card readers.
- Digital I/Os: Five multi-purpose, memory-mapped digital I/O lines. High-level functionality including pulse inputs, PWM (pulse width modulation) outputs, and complex custom inputs/outputs. Two I/O lines are connected to field terminals through standard OPTO modules. The other 3 I/O lines can be used as either Form C or A relay outputs (solid state 100 mA max AC/DC) or status inputs (50 V max. DC only).
- Analog Inputs: Six general-purpose analog inputs, 12 bit resolution (16 bit available), analog sampling, software calibration. Nominal input ranges 0-5VDC or a 250 ohm resistor in socket allows for 4-20 mA input for each channel. Each input has 3 screw terminals (Supply, Signal, and Ground).
- RTD Inputs: Two 12-bit resolution RTD inputs; 3-wire lead compensated with ground shield connection; four screw terminals per input.

Accuracy Specifications:

- Accuracy from -20 ^{o}F to 140 ^{o}F (including linearity, hysteresis and repeatability)

Pressure Measurement	±0.25% of full scale
Temperature Measurement	±1.0^{o}F
Computation (At reference conditions)	±0.3% of corrected volume reading
Combined (Pressure, Temperature & Computation)	±0.42%

- Long Term Stability

Pressure Measurement	±0.5% of full scale per year
Temperature Measurement	±0.5^{o}F per year
Combined (Pressure, Temperature & Computation)	±0.36% per year

Field to Front Office Solutions™