



Rockwell Automation Remote I/O to HART Multi-drop Gateway

5607-RIO-HART

The RIO-HART modules are the ideal solution for the many applications where Remote I/O connectivity can be used to integrate HART Multi-drop devices into a system. The Remote I/O gateway is a powerful module designed with Slave support, enabling easy connection to Rockwell Automation PLCs (CLX, SLC, PLC, CPLX, and similar devices). In combination with the HART Multi-drop device support, the module provides a very powerful interface to the over two million HART devices which are in use in the industrial marketplace today. Applications for the module are found in most industries, especially Manufacturing, Oil and Gas, Electrical Power and Food Processing.

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Rockwell Automation Remote I/O to HART Multi-drop Gateway

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The ProLinx Rockwell Automation Remote I/O Adapter to HART Multi-drop Gateway creates a powerful connection between devices on a Remote I/O network and HART devices. This stand-alone DIN-rail mounted protocol gateway provides one Remote I/O port and four configurable HART Multi-drop channels.

The RIO interface is an adapter (slave) which can be connected to a scanner (master) that controls the data transfer. The module also supports limited high speed data transfer via the Input and Output images.

The HART protocol driver works as a Master on four (HART) or eight channels (HART2 – not available on certain configurations) per interface card, depending on implementation. Each channel is individually configurable.

Rockwell Automation Remote I/O

The RIO interface is an adapter (slave) and is connected to a scanner (master) that controls the data transfer. For example, the master/slave relationship can be accomplished using the RIO module (adapter/slave unit) with a Rockwell Automation PLC5 (scanner/master unit). Ladder logic must be programmed into a PLC to perform BTR/BTW commands to receive and transmit data between the module and the PLC. The module also supports limited high speed data transfer via the input and output images.

Software Configurable Parameters

Rack Number Addressing	0 to 63
Rack Size	¼-rack, ½-rack, ¾-rack and full rack
Starting Group	0,2,4,6
Last Rack	Yes or No
Baud Rate	57.6K, 115K, 230K

Functional Specifications

Supports block-transfers of data with scanner
Supports I/O data movement. Amount determined by rack size configuration
BTW Command – up to 64 words
BTR Command – up to 63 words

Physical Connection

Remote I/O connector	Standard 3-screw termination connector
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HART

The HART Master Protocol exists in 4 channel implementations with HART2 allowing 8 channels. This driver can be configured on an individual channel basis to operate as a HART Master Station and supports all the available HART commands including Universal, Common Practice and Device Specific Commands. Each HART channel is independently configured to interface with the internal database in the module.

The auto-poll mode allows the module to automatically collect data from each HART instrument on the channel and store the data in the module's database without the use of user commands. The module automatically generates HART commands 0, 3, 13, 14 and 15.

General Parameters

Communication parameters	Number of HART Preambles: 2 to 50 Enable Handheld: Y or N Primary Master: Y or N
Configurable Parameters per Channel	Auto-Poll Enable, Short / Long Address Retries, Retries After Error Poll Time After Error, Number of Commands, Slave List Error Pointer

HART Driver

Command List	Up to 100 fully configurable commands per channel
Polling of command list	User configurable polling of commands, including disabled, continuous, on change of data (write only) and dynamically user or automatic enabled.

HART® is a registered trademark of the HART Communication Foundation

General Specifications

The ProLinx Communication Modules provide connectivity for two or more dissimilar network types. The modules, encased in sturdy extruded aluminum, are stand-alone DIN-rail mounted protocol gateways, providing communication between many of the most widely used protocols in industrial automation today.

Hardware Specifications

Specification	Description
Power Supply	24 VDC nominal 18 to 36 VDC allowed Positive, Negative, GND Terminals 2.5 mm screwdriver blade
Current Load	500 mA max@ 24 VDC
Operating Temperature	-20 to 50°C (-4 to 122°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)
Relative Humidity	5 to 95% (non-condensing)
Dimensions	Standard: 5.20H x 2.07W x 4.52D in. (13.2cmH x 5.25cmW x 11.48cmD) Extended: 5.20H x 2.73W x 4.52D in. (13.2cmH x 6.934cmW x 11.48cmD)

Specification	Description
LED Indicators	Power and Module Status Application Status Serial Port Activity LED Serial Activity and Error LED Status
Configuration Serial Port	DB-9M RS-232 only No hardware handshaking
Ethernet Port (Ethernet modules only)	RJ45 Connector Link and Activity LED indicators
Application Serial Ports	RS-232/422/485 RS-232 handshaking configurable RS-422/485 screw termination included
Serial Port Isolation	2500V RMS port signal isolation per UL 1577 3000V DC min. port to ground and port to logic power isolation
Shipped with Each Unit	Mini-DIN to DB-9M serial cables 4 ft RS-232 configuration cable 2.5mm screwdriver CD (docs and Configuration utility) RS-422/485 DB-9 to Screw Terminal Adaptor (1 or 4, depending on ports)

ProSoft Configuration Builder

ProSoft Configuration Builder (PCB) provides a quick and easy way to manage module configuration files customized to meet your application needs. PCB is not only a powerful solution for new configuration files, but also allows you to import information from previously installed (known working) configurations to new projects.

Additional Products

ProSoft Technology offers a full complement of hardware and software solutions for a wide variety of industrial communication platforms.

Visit our web site at <http://www.prosoft-technology.com> for a complete list of products.