



IEC 60870-5-104 Server to DH-485 Gateway

5201-104S-DH485

The ProLinx IEC60870-5-104 Server to DH-485 Gateway creates a powerful connection between devices on an IEC 104 Server network and a DH-485 device. This stand-alone DIN-rail mounted protocol gateway provides one DH-485 configurable serial port and one Ethernet port.

The 104S module accepts commands from an attached master unit on the network and generates unsolicited messages.

The DH-485 protocol driver supports the Master and the Slave modes of the protocol on each port, providing powerful data transfer capability with Rockwell Automation PLCs and HMIs. All DH-485 ports are individually configurable. User configurable data mapping make the interface an easy to use and powerful data transfer tool.

IEC 60870-5-104 Server

Operating in the Server mode, the protocol driver accepts commands from an IEC-60870-5-104 Client to read/write data stored in the module's internal registers.

The 104S module acts as an input/output module between the IEC 60870-5-104 Ethernet network and many of the other serial and network protocols, as well as several proprietary interfaces.

General specifications include:

- User-definable module memory usage
- Protocol implementation conforms to the IEC 60870-5-104 specification with fully configurable parameters
- SNTP (Simple Network Time Protocol) timestamping for detailed logging of data transactions.

The 104S module accepts commands from an attached master unit on the network and generates unsolicited messages. These last sets of messages are either spontaneous or cyclic. Data transferred to the host is derived from the module's internal database. The remote master device can control data in the database and hence the devices connected using the other protocol in the module using standard control messages supported in the protocol. The remote master device uses the fully-configured databases in the module to control outputs and monitor inputs.

IEC 60870-5-104 Server

Configurable Parameters	Override StartDT
	Clear queue on close
	t1 timeout set value
	t2 timeout set value
	t3 timeout set value
	k (maximum queue)
	w (latest ack threshold)
	Time DB Offset

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The 104S-DH485 modules are the ideal solution for the many applications where IEC 104 Server connectivity can be used to integrate a DH-485 device into a system. The IEC60870-5-104 Server gateway is a powerful module designed with Server support, enabling easy connection to an IEC 104 master device. In combination with the DH-485 device support, the module provides a very powerful interface to the many DH-485 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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DH-485

The DH-485 protocol in its native form is a peer to peer token passing network. The ProLinX DH-485 driver accesses the network functioning either as a Master or as a Slave.

General Protocol Information

Error Checking	BCC and CRC
Communication Parameters	Local Station ID: 0 to 31 Port 0 Baud Rate: 110 to 38.4K baud Port 1 Baud Rate: 110 to 19200 baud Stop Bits: 1 or 2 Data Size: 7 or 8 bits Parity: None, Even, Odd RTS Timing delays: 0 to 65535 ms

DH-485 Slave Mode

In Slave mode, the module accepts commands from one or more Masters to read/write data stored in the module's internal data memory. In this mode, the ProLinX unit is answering DH-485 commands and has the appearance of an SLC processor to the network.

DH-485 Master Mode

In Master mode, the ProLinX DH-485 driver will actively gather data from other devices on the network, controlling the read/write data transfer between the gateway and other DH-485 devices, such as SLC processors. Data transfer can be initiated and executed with the other devices without any ladder logic being required in the Rockwell Automation slave hardware.

DH485 Functioning as a Master

Command List	Up to 100 command per master port, each fully configurable for function, slave address, register to/from addressing and word/bit count
Polling of command list	User configurable polling of commands, including disabled, continuous and on change of data (write only)

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.

Ordering Information

To order this product, please use the following:

5201-104S-DH485 IEC 60870-5-104 Server to DH-485 Gateway

To place an order, please contact your local ProSoft Technology distributor. For a list of ProSoft distributors near you, go to <http://www.prosoft-technology.com>

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