Modbus Master/Slave to HART Multi-drop Gateway
5107/5127-MCM-HART(2)

The MCM-HART modules are the ideal solution for the many applications where Modbus connectivity can be used to integrate HART serial devices into a system. The Modbus gateway is a powerful module designed with both Master and Slave support, enabling easy connection to other Modbus devices (Modicon processors and many others). In combination with the HART 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.

How to Contact Us: Sales and Support

All ProSoft Technology® products are backed with unlimited technical support. Contact our worldwide Technical Support team directly by phone or email:

Asia Pacific
+603.7724.2080, asiapc@prosoft-technology.com
Languages spoken include: Chinese, Japanese, English

Europe – Middle East – Africa
+33 (0) 5.34.36.87.20, support.EMEA@prosoft-technology.com
Languages spoken include: French, English

North America
+1.661.716.5100, support@prosoft-technology.com
Languages spoken include: English, Spanish

Latin America (Sales only)
+1.281.298.9109, latinam@prosoft-technology.com
Languages spoken include: Spanish, English

Brasil
+55-11.5084.5178, eduardo@prosoft-technology.com
Languages spoken include: Portuguese, English

Modbus Master/Slave to HART Multi-drop Gateway
5107/5127-MCM-HART(2)

The ProLinx Modbus Master/Slave to HART Multi-Drop Gateway creates a powerful connection between devices on a Modbus network and HART devices. This stand-alone DIN-rail mounted protocol gateway provides one serial port and up to eight configurable HART channels.

The Modbus protocol driver supports Master and Slave implementations of the protocol. All Modbus serial ports are individually configurable, providing a very powerful and flexible host or device interface solution.

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.

Modbus Master/Slave

The Modbus driver provides extensive support for both the Master and the Slave implementations of the protocol. The serial port(s) on the gateway can be individually configured to support the Modbus protocol (Master or Slave, RTU or ASCII, Baud rate, etc.).

General Parameters – Modbus Protocol	
Communication parameters	Baud Rate: 110 to 115K baud Stop Bits: 1 or 2 Data Size: 7 or 8 bits Parity: None, Even, Odd RTS Timing delays: 0 to 65535 ms
Error Checking	RTU mode (binary) with CRC-16 ASCII mode with LRC error checking
Floating Point	Floating point data movement supported, including configurable support for Enron implementation
Function Codes	1: Read Output Status 2: Read Input Status 3: Read Multiple Data Registers 4: Read Input Registers 5: Write Single Bit 6: Write Single Data Register 15: Write Multiple Bits 16: Write Multiple Data Register
Modbus 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	Configurable polling of command list, including continuous and on change of data, and dynamically user or automatic enabled.
Modbus Slave	
Node address	1 to 247 – software selectable

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.

Ordering Information

To order this product, please use the following:

5107-MCM-HART   Modbus Master/Slave to HART Multi-drop
5127-MCM-HART2   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

Distributors:
Place your order by email or fax to:
North American / Latin American / Asia Pacific
orders@prosoft-technology.com,
fax to +1 661.716.5101
Europe
europe@prosoft-technology.com,
fax to +33 (0) 5.61.78.40.52