IEC 60870-5-104 Server to IEC 60870-5-103 Master Gateway
5201-104S-103M

The 104S-103M modules are the ideal solution for the many applications where IEC 104 Server connectivity can be used to integrate an IEC 103 slave device into a system. The IEC60870-5-104 Server gateway is a powerful module designed with Server support, enabling easy connection to other IEC 104 client devices. In combination with the IEC 103 Master device support, the module provides a very powerful interface to the many IEC 103 slave devices which are in use in the industrial marketplace today. Applications for the module are found in most industries, especially Electrical Power.

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

IEC 60870-5-104 Server to IEC 60870-5-103 Master Gateway

5201-104S-103M
The ProLinx IEC60870-5-104 Server to IEC60870-5-103 Master Gateway creates a powerful connection between devices on an IEC 104 network and an IEC 103 slave device. This stand-alone DIN-rail mounted protocol gateway provides one Ethernet port and one IEC 103 Master configurable serial port.

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

The IEC 60870-5-103 Master protocol driver works as a master to monitor and control up to 16 slaves. The serial port is user-configurable, providing a very powerful and flexible host or device interface solution.

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

IEC 60870-5-103 Master

The IEC 60870-5-103 Master driver provides extensive support for Master implementations of the protocol. The serial port on the gateway is user-configurable to support the IEC protocol (Master, Error Checking, Baud rate, etc).

The module supports:

- 16 slaves (sessions with distinct Data Link Addresses)
- Each slave (session) supports up to 3 sectors (with distinct Common ASDU Addresses)
- Configurable Time Sync and General Interrogation messages during initialization
- Supports General Interrogation, General Command and Time Synchronization Commands.

General Parameters

Communication parameters	Baud Rate: 110 to 19200 baud
	Stop Bits: 1 or 2
	Data Size: 5 or 8 bits
	Parity: None, Even, Odd
	RTS Timing delays: 0 to 65535 ms

IEC 60870-5-103 Master

Configurable Parameters	Baud Rate
	Parity
	RTS On
	RTS Off
	Minimum Delay
	Receive Timeout
	Data Link Address
	Common ASDU Address

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-103M   IEC 60870-5-104 Server to IEC 60870-5-103 Master 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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