

# DATASHEET

## IEC 60870-5-101 Master Communication Module PTQ-101M



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### PTQ-101M

The ProTalk<sup>®</sup> IEC 60870-5-101 Master Communication Module allows Quantum compatible processors to interface easily with IEC 60870-5-101 slave (controlled unit) devices.

Typical applications for this protocol include power distribution, water treatment, lighting systems for highways, etc. Originally developed for the Power Utility industry, the IEC 60870-5 protocols are very similar in function to DNP 3.0. Both protocols offer "Report by Exception" functionality and dating of events (time stamping).

### Features & Benefits

Feature	Benefit
Standards based	Supports IEC 60870-5-101 Master specification: balanced/unbalanced mode, 32 sessions/5 sectors per session, timestamping
Two configurable IEC-60870-5-101 Master ports	Ports individually configurable for com settings, balanced/unbalanced modes, sessions/sectors, commands
Easy to Configure and Monitor	ProSoft Configuration Builder software (included) allows you to customize module configuration files and view module diagnostics
Three Year Warranty	Low risk investment with great cost savings, backed up by a better than average equipment failure protection plan, from the industrial communications experts who know protocols, devices, and automation

### Configuration

The configuration file is a fully commented, easy-to-understand text file, which can be opened with NotePad or any text editor. A sample configuration file is included on the module, on the product CD, or from <http://www.prosoft-technology.com>. Download configuration file directly to module through the Config/Debug port using HyperTerm or any similar terminal emulation software.

### General Specifications

- Single Slot - Quantum backplane compatible
- The module is recognized as an Options module and has access to PLC memory for data transfer
- Configuration data is stored in non-volatile memory in the ProTalk module
- Up to six modules can be placed in a rack
- Local rack - The module must be placed in the same rack as the processor

- Compatible with common Quantum programming tools: UnityPro XL, Concept, ProWORX
- Quantum data types supported: 3x, 4x
- High speed data transfer across backplane provides quick data update times
- Sample ladder file available

## Functional Specifications

Specification	Description
Modes	Balanced, Unbalanced
Sessions	Up to 32, with up to 5 sectors (separate databases) for each session
Commands	up to 1000
Pass-through	Processor can issue control commands directly to the module or a controlled device (10 at each scan)  Pass-through of event messages from controlled device to processor for logging of time-tagged events  Supports clock synchronization from/to the processor  Receives events from the slave and sends them to the processor
Monitored data	<ul style="list-style-type: none"> <li>▪ Single-point</li> <li>▪ Double-point</li> <li>▪ Step-point</li> <li>▪ Measured-point</li> <li>▪ Bitstring 32-bit</li> <li>▪ Integrated total point</li> </ul>
Delay	Class 1 and Class 2 delay parameter in the configuration file

## Hardware Specifications

Specification	Value
Backplane Current Load	800 mA @ 5 V
Operating Temperature	0 to 60°C (32 to 140°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)
Relative Humidity	5% to 95% (non-condensing)
Vibration	Sine vibration 4-100 Hz in each of the 3 orthogonal axes
Shock	30G, 11 mSec. in each of the 3 orthogonal axes
Dimensions (HxWxD), Approx.	250 x 103.85 x 40.34 mm 9.84 x 4.09 x 1.59 in

Specification	Value
LED Indicators	Module Status Backplane Transfer Status Serial Port Activity Serial Activity and Error Status

### Debug/Configuration Port (Debug)

CFG Port (DEBUG)	DB-9M PC Compatible RS-232 only No hardware handshaking
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### Application Ports

Application Serial Ports (PRT1, PRT2)	DB-9M PC Compatible RS-232/422/485 jumper selectable RS-422/485 screw termination included RS-232 handshaking configurable 500V Optical isolation from backplane
Certifications	cULus, ATEX, CE

## Additional Products

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

Compatible products in this product line also include:

### DNP 3.0 Master/Slave Communication Module for Quantum (PTQ-DNP)

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:**

PTQ-101M	IEC 60870-5-101 Master Communication Module
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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,  
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