

## DNP 3.0 Slave Network Interface Module for Quantum PTQ-DNPS

The PTQ DNP 3.0 Slave Communication Module is a single slot, backplane compatible DNP 3.0 interface solution for the platform. This module provides highly configurable support of both DNP 3.0 Slave implementations.

The PTQ-DNPS module is a powerful communication interface for Quantum platform processors. Developed under license from Schneider Electric, the module incorporates proprietary backplane technology that enables powerful data access to the Quantum processor.

The PTQ-DNPS allows Schneider Electric Quantum processors to easily communicate with other DNP protocol-compatible devices. The module supports DNP Subset Level 2 features and some of the Level 3 features allowing the many SCADA systems supporting the DNP protocol to be integrated into the Quantum platform.



### Features

### Benefits

#### Program Software Compatibility

- Compatible with all common Quantum programming packages, including Concept (version 2.6 or higher), Unity Pro (version 2.2 or higher), ProWORX (version 2.20 or later), and ModSoft

#### Asynchronous Data Transfer

- The module acts as an input/output module between the DNP network and the Modicon backplane. The data transfer from the Quantum processor is asynchronous from the actions on the DNP network. Databases are user defined and stored in the module to hold the data required by the protocol.

#### Licensed Backplane Technology

- The PTQ-DNPS module is a powerful communication interface for Quantum platform processors. Developed under license from Schneider Electric, the module incorporates proprietary backplane technology that enables powerful data access to the Quantum processor.

#### Backed by ProSoft Technology<sup>®</sup>

- Industrial data communications experts who understand your protocols, devices, and applications
- Three year standard warranty

## Configuration

ProSoft Configuration Builder (PCB) provides a PC-based software configuration solution for quick and easy management of module configuration files, as well as viewing communication and network diagnostics.

PCB is not only a powerful solution for new configuration files, but also allows you to import information from previously installed (known working) configurations into new projects.

## 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 processor
- Quantum data types supported: 3x, 4x
- High speed data transfer across backplane provides quick data update times
- Sample ladder file available

## Functional Specifications

The PTQ-DNPS module supports the DNP 3.0 protocol with a minimum of Level 2 functionality. DNP protocol Subset Definitions for the Slave drivers are available in the module's User Manual.

The module has two DNP protocol ports that can be user configured to operate in a Slave/Slave redundant port configuration.

The module has 4000 words of user defined internal register space that are accessible to the protocol driver and to the Quantum processor memory.

## Redundant Slave Port Operation

When configured in the Slave/Slave port configuration, the module's slave ports operate in a primary and secondary fashion. In this mode, a single host polls the module via redundant physical layer connections. Several methods are supported to automatically switch between the primary and secondary slave ports.

## DNP 3.0 Slave Protocol Specifications

The DNP Slave port(s) accepts DNP commands to control and monitor data stored in the module's DNP Slave databases.

- Report-by-Exception data is logged to the module's database
- Supports unsolicited messaging
- Each DNP point type is user configurable by point
- Total point counts must be configured so that Class 0 responses do not exceed 2048 bytes in size
- Class assignments are completely user-definable on a Type and point basis (BI, AI, FI, DI point types)
- The analog inputs are class and deadband configurable on a point basis for all formats (integer, float, double float)
- Supports clock synchronization from a master or from the Quantum
- Support for four octet-strings are supported (object type 110) in the slave driver to return version and other module information
- Up to 400 events are stored for Floats, Binary In, Analog In and Double Inputs
- In addition to the module generated events, AI and BI events can be generated in the Quantum and transferred to the module (useful with external timestamping hardware)
- Configurable event buffer transmission threshold based on count and/or time since last event transmission
- Collision avoidance algorithm per DNP organization for redundant port switching (redundant slave mode)
- Special modem AT command string and timing support for dialing out on redundant port (redundant slave mode)

## Additional Products

ProSoft Technology offers a full complement of hardware and software solutions for a wide variety of industrial communication platforms. Compatible products in the ProTalk product line also include:

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

Visit our web site at [www.prosoft-technology.com](http://www.prosoft-technology.com) for a complete list of products.



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## Ordering Information

To order this product, please use the following:

## DNP 3.0 Slave Network Interface Module for Quantum

PTQ-DNPS

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Specifications subject to change without notice.

## Hardware Specifications

Specification	Value
Backplane Current Load	1100 mA maximum @ 5 Vdc $\pm$ 5%
Operating Temperature	0°C to 60°C (32°F to 140°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Relative Humidity	5% to 95% (without condensation)
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
LED Indicators	Module Status Backplane Transfer Status Serial Port Activity Serial Activity and Error Status
<b>Debug/Configuration Port (Debug)</b>	
CFG Port (DEBUG)	DB-9M PC Compatible RS-232 only No hardware handshaking
<b>Application Ports</b>	
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

## Agency Approvals & Certifications

CSA/cUL	C22.2 No. 213-1987
CSA CB Certified	IEC61010
ATEX	EN60079-0 Category 3, Zone 2 EN60079-15



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