

# DATASHEET

## PROFIBUS DP Master Network Interface Module for Quantum PTQ-PDPMV1

The PROFIBUS DPV1 Master module is a powerful communication interface for Quantum processors. Developed under license from Schneider Electric, the module incorporates proprietary backplane technology that enables powerful data exchange with processors.

The module supports complete Master specifications according to IEC 61158. Acyclic parameter data can be transferred with Class 1 or Class 2 DPV1 services, allowing processors to easily communicate with slave devices supporting PROFIBUS DPV0/V1 protocol.

The module acts as an input/output module between the PROFIBUS network and the processor. Data transfer from the processor is asynchronous with the I/O data transfer on the PROFIBUS network.



Features	Benefits
Easy to configure and manage	<ul> <li>Includes ProSoft Configuration Builder software to design, configure and monitor your PROFIBUS network</li> </ul>
	<ul> <li>Includes PROFIBUS DPV1 Master FDT (Field Device Tool) communication DTM (PROFIBUS comDTM) software to interface between any compliant FDT software container, an FDT device DTM, and applicable PROFIBUS slave devices</li> </ul>
	Configure PTQ module and PROFIBUS network over Ethernet
Industry Recognition	<ul> <li>Schneider Electric CAPP (Collaborative Automation Partner Program) approved</li> </ul>
	<ul> <li>PROFIBUS Trade Organization (PTO) approved</li> </ul>
Rugged and reliable	<ul> <li>The module is built on Siemens ASIC ASPC2 Step E with Infineon C165 Microprocessor</li> </ul>
	The firmware is flash-upgradable
	<ul> <li>Adheres to the Unity HEC Hot Standby Functional Specifications.</li> </ul>
	<ul> <li>Supports up to six PTQ-PDPMV1 modules per rack (up to four for Hot Standby implementations)</li> </ul>
	<ul> <li>Supports extended diagnostic data, alarm indications and confirmations handling, Multicast and Broadcast telegrams (DPV1)</li> </ul>
Backed by ProSoft Technology <sup>®</sup>	<ul> <li>Industrial data communications experts who understand your protocols, devices, and applications</li> </ul>
	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<sup>®</sup> module
- Configuration software for Microsoft Windows XP, 2000 and NT is included with the module
- Up to six modules can be placed in a rack
- Local rack The module must be placed in the same rack as processor
- 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)
- Quantum data types supported: 3x, 4x
- High speed data transfer across backplane provides quick data update times
- Sample ladder file available

### **Functional Specifications**

- Easy-to-use drag and drop Busview configuration interface via ProSoft Configuration Builder software (see PSW-PCB Datasheet)
- Monitor/Modify of process data and DPV1 acyclic data with online slave diagnostics
- Supports PROFIBUS PA slaves on the network through DP/PA coupler or link
- Supports up to 125 slave devices with repeaters
- Supports extended diagnostic data (DPV1)
- Supports all standardized baud rates, up to 12 Mbits/s
- Auto baud detection at all valid PROFIBUS DPV1 rates
- Supports PROFIdrive 3.1 compliant parameter read and write operations
- Supports Sync and Freeze commands
- Alarm indications and confirmations handling (DPV1)
- Supports Multicast and Broadcast telegrams (DPV1)
- CRC checksum determination of slave configuration consistency to processor
- FDT/DTM PROFIBUS master transport communication DTM software included (see PSW-CDTM-PDPM)

#### **Hot Standby**

- Hot Standby features supporting the SE 140 671 CPU
- Supports up to six PTQ-PDPMV1 Hot Standby modules per rack
- Diagnostic and status words are provided for Active Primary and Passive Secondary master health status
- PROFIBUS switchover time will be nominal 100 ms not to exceed 300 milliseconds
- Cable break detection with segmented network slave quantity information
- PROFIBUS health messages are generated from secondary master via FDL ping services
- No setup parameters required. Module automatically detects Hot Standby system

#### Physical

- PROFIBUS DPV1 RS-485 interface with a 9-pin D shell female connector and isolated Opto-Couplers
- Master Status LED Indicators for Operations, Network Drop Communication, Master Token-Hold



#### **Example Application**



#### **Hardware Specifications**

Backplane Current Load1100 mA maximum @ 5 Vdc $\pm$ 5%Operating Temperature0 °C to 60 °C (32 °F to 140 °F)Storage Temperature-40 °C to 85 °C (-40 °F to 185 °F)	
Storage Temperature -40 ℃ to 85 ℃ (-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 30 g, 11 msec. in each of the 3 orthogonal ax	es
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 LED	
Serial Activity and Error LED Status	
Master Status Operations	
Network Drop Communication	
Master Token-Hold	
Master database configuration	
Debug/Configuration Ports	
Configuration Serial Port (PRT1) DB-9M PC Compatible	
RS-232 only	
No hardware handshaking	
Configuration Ethernet Port RJ45 Connector	
Link and Activity LED indicators	
Application Port	
PROFIBUS Master Port DB-9F Optically Isolated RS-485	
Ready, Run, Error and Token LED Indicators	

#### **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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#### Additional Products

ProSoft Technology<sup>®</sup> offers a full complement of hardware and platforms.

Compatible products in this product

**PROFIBUS DP Slave Communication** Module

For a complete list of products, visit www.prosoft-technology.com

### Ordering Information

To order this product, please use the following:

#### **PROFIBUS DP Master Network Interface** Module for Quantum

#### PTQ-PDPMV1

To place an order, please contact your local ProSoft Technology distributor. For a list of ProSoft Technology distributors near you, go to:

www.prosoft-technology.com and select Distributors from the

Place your order by email or fax to:

Asia Pacific orders@prosoft-technology.com fax to +1 661.716.5101

Europe / Middle East / Africa europe@prosoft-technology.com fax to +33 (0) 5.61.78.40.52