

DATASHEET

DF1 Half/Full Duplex Master/Slave Network Interface Module for Quantum PTQ-DFCM

The PTQ DF1 Master/Slave Communication Module is an backplane compatible module that allows compatible processors to interface easily with DF1 protocol compatible devices and hosts. Devices commonly supporting the protocol include PLCs and power monitoring equipment, as well as several other third party devices in the marketplace.

The PTQ-DFCM Master/Slave Communications module allows compatible processors to interface easily with other DF1 protocol compatible devices. Compatible devices include not only PLCs (which all support the DF1 protocol) but also a wide assortment of end devices.



Features	Benefits
Licensed Backplane Technology	<ul style="list-style-type: none"> ◆ Manufactured under license from Schneider Electric® ◆ High-speed data transfer between PTQ module and Quantum® processor ◆ Installs as a Generic NOM module, ladder logic programming not required for most applications
DF1 Master/Slave protocol interface	<ul style="list-style-type: none"> ◆ The module has two serial ports supporting the DF1 protocol, with each port user configurable to act as a Master or as a Slave. Data transfer between the module and the Quantum processor is asynchronous to the DF1 network, with the module's internal database being used to exchange data between the Quantum processor and the DF1 network. ◆ The PTQ-DFCM 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.
Easy to Configure and Monitor	<ul style="list-style-type: none"> ◆ Simple text file to configure module, protocol, port parameters ◆ LED diagnostics for at-a-glance health check ◆ Easy to use menu-driven hardware and protocol diagnostics ◆ View module database contents through serial connection to desktop PC

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
- Rockwell Automation's RSNetWorx for DeviceNet Configuration Software is supported (Available from ProSoft Technology as Part Number PSW-RSNetWorx-DNET)
- 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 common Quantum programming tools.
- Quantum data types supported: 0x, 1x, 3x, 4x
- High speed data transfer across backplane provides quick data update times.
- Sample function blocks available.

Functional Specifications

DF1 ports

- Full and half duplex modes supported
- CRC and BCC error checking
- Full hardware handshaking control provides radio, modem and multi-drop support
- User-definable module memory usage, supporting the storage and transfer of up to 5000 registers to/from the control processor
- Up to 125 word read and write command lengths supported
- Floating point data movement supported

DF1 Master Protocol Specifications

The ports on the DF1 module can be individually configured as Master ports. When configured in master mode, the DFCM module is capable of reading and writing data to remote DF1 devices, enabling the processor to act as a SCADA sub-master.

- Command List: Up to 100 commands per Master port, each fully-configurable for function, slave address, register to/from addressing and word/byte count
- Status Data: Error codes available on an individual command basis. In addition, a slave status list is maintained per active master port
- Polling of Command List: User-configurable polling of commands, including disabled, continuous, and on change of data (write only)

DF1 Slave Protocol Specifications

The module accepts DF1 commands from an attached DF1 master unit. When in slave mode, the module can accept DF1 commands from a master to read/write data stored in the module's internal registers. This data can be derived from other DF1 slave devices on the network through a master port or from the processor and is easily transferred to the processor's data registers.

Tested Hardware Connections

Several hardware connections have been tested by ProSoft Technology or have been customer field tested. The following physical connections have been tested successfully:

- RA Panel view (Full Duplex point-point, DFCM as slave)
- RA Processors (Full/Half duplex, DFCM as either master or slave)
- RA Power Monitors (485 Half-Duplex DFCM as Master)



Additional Products

ProSoft Technology® offers a full complement of hardware and software solutions for a wide variety of industrial communication platforms. For a complete list of products, visit our web site at: www.prosoft-technology.com

Ordering Information

To order this product, please use the following:

DF1 Half/Full Duplex Master/Slave Network Interface Module for Quantum

PTQ-DFCM

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
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Place your order by email or fax to:

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europe@prosoft-technology.com
fax to +33 (0) 5.61.78.40.52

Hardware Specifications

Specification	Value
Backplane Current Load	1100 mA maximum @ 5 Vdc ± 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

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
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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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