

## EtherNet/IP Network Interface Module for Quantum PTQ-DFNT

The PTQ EtherNet/IP (DF1 for Ethernet) Client/Server Communication Module is a backplane compatible module that allows processors to interface easily with EtherNet/IP protocol (Explicit Messaging) compatible devices and hosts. Devices commonly supporting the protocol include PLCs, and host HMI systems.

The PTQ-DFNT module is a single slot solution that provides a powerful connection between 's processor and EtherNet/IP (DF1 for Ethernet) network applications.

The module can send read or write commands to remote devices on the EtherNet/IP network. The PTQ-DFNT also has 20 servers that allow the module to receive commands from remote devices. The PTQ-DFNT Pass-Through server allows the user to edit and transfer the ladder logic using an Ethernet connection. Up to 100 commands can be configured by the user.



Features	Benefits
DF1 Master/Slave protocol interface	<ul style="list-style-type: none"> <li>◆ 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.</li> <li>◆ 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.</li> </ul>
Easy to Configure and Monitor	<ul style="list-style-type: none"> <li>◆ Simple text file to configure module, protocol, port parameters</li> <li>◆ LED diagnostics for at-a-glance health check</li> <li>◆ Easy to use menu-driven hardware and protocol diagnostics</li> <li>◆ View module database contents through serial connection to desktop PC</li> </ul>

### 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: 0x, 1x, 3x, 4x
- High speed data transfer across backplane provides quick data update times.
- Sample function blocks available.

## Functional Specifications

Type	Specifications
Internal Database	4000 registers (words) available for transfer to and from Quantum processor
Modes	Client and Server supported
Messaging	PCCC on CIP - See command list that follows CIP Services (Server Only) - See command list below
Service Port	AF12Hex (44818)
Compatibility	Compatible devices include a wide assortment of other client/server devices such as: <ul style="list-style-type: none"><li>◆ PLC: PLC5/E Rev. C/N, D/E, E/D or later, 1785-ENET Series A, Rev. D</li><li>◆ SLC: SLC5/05 Series A, OS501 fm5 or later</li><li>◆ CLX: 1756-ENET, 1756-ENBT</li><li>◆ CPLX: 1769-L5335E Rev. 12.26 Interchange (limited - Contact Tech Support)</li><li>◆ RSLinx: Gateway V1.7 or later</li></ul>
Miscellaneous	125 word read and write data lengths Floating point data supported

## EtherNet/IP Server Specifications

When in the Server mode, the module accepts commands from a Client(s) to read/write data stored in the module's internal registers. This data is easily transferred to the Quantum processor's data registers.

### EtherNet/IP Server

Connections	Twenty independent TCP server sockets permit remote clients to interact with all data contained in the module. Data can be derived from other clients on the network, through the client on the module, or from the Quantum processor
Data File	Data Table File Start - Fixed at N10 Data Table File Size - 100 or 1000 words Data Table location in PTQ - Start Register 0

## EtherNet/IP Client Specifications

When configured in the client mode the DFNT module is capable of reading and writing data to remote EtherNet/IP devices, enabling the Quantum platform to act as a SCADA sub-master.

### EtherNet/IP Client Specifications

Messaging	PCCC on CIP Explicit Messaging supported
General	One client configurable for timing and commands
Command List	Up to 100 command, each fully configurable for function, slave address, register to/from addressing and word/bit count
Polling of command list	User configurable polling of commands, including disabled, continuous and on change of data (write only)



## Additional Products

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## Ordering Information

To order this product, please use the following:

## EtherNet/IP Network Interface Module for Quantum

### PTQ-DFNT

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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 LED Serial Activity and Error LED 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 Ethernet port	RJ45 Connector Link and Activity LED indicators Electrical Isolation 1500 V rms at 50 Hz to 60 Hz for 60 s, applied as specified in section 5.3.2 of IEC 60950: 1991 Ethernet Broadcast Storm Resiliency = less than or equal to 5000 [ARP] frames-per-second and less than or equal to 5 minutes duration
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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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