DATASHEET

DNP 3.0 Server over Ethernet Communication Module
MVI56-DNPSNET

The DNP 3.0 Ethernet Server Network Interface Module allows ControlLogix processors to interface with the many field devices that support the DNP protocol over Ethernet. DNP (Distributed Network Protocol) is an open communication protocol developed to achieve interoperability among systems specifically in the electric utility, oil & gas and water/wastewater industries. This non-proprietary protocol, available worldwide, was designed to optimize the transmission of data acquisition information and control commands.

The MVI56-DNPSNET is a highly efficient and reliable communications protocol between substation computers, RTUs, IEDs and master stations. DNP is also a layered protocol, featuring time stamping and True Report by Exception (TRBE). These features allow the MVI56-DNPSNET module to send a report to the processor without being polled, providing real time data transmission in critical situations.

General Specifications

- Single Slot - 1756 backplane compatible

- The module is recognized as an Input/Output module and has access to processor memory for data transfer between processor and module.

- Ladder Logic is used for data transfer between module and processor. Sample ladder file included.

- Configuration data obtained from configuration text file downloaded to module. Sample configuration file included

- Local or remote rack

Functional Specifications

The MVI56-DNPSNET accepts DNP commands to control and monitor the data stored in the DNP databases. This data is passed between the module and the ControlLogix processor over the backplane for use in user applications.

- DNP databases to house data for the slave port supporting the following maximum input counts

Binary input	8000 points (500 words)
Binary output	8000 points (500 words)
Counter	250 (500 words)
Analog input	500
Analog output	500
Float Input	150
Float Output	150

- User-definable module memory usage up to maximum point counts
- Data movement between module using input/output image
- Ethernet port supports both TCP and UDP over Ethernet
- Supports DNP 3.0 in a level 2 implementation
- Supports sending of input event data from the ladder to the module
- Supports time synchronization from/to processor
- Configurable via text file
- Status and error information
- All data in the DNP slave is contained in user-defined files

Hardware Specifications

Specification	Description
Backplane Current Load	800 mA @ 5 Vdc 3 mA @ 24 Vdc
Operating Temperature	32°F to 140°F (0° C to 60°C)
Storage Temperature	-40°F to 185°F (-40° C to 85°C)
Shock	30 g operational 50 g non-operational Vibration: 5 g from 10 Hz to 150 Hz
Relative Humidity	5% to 95% (with no condensation)
LED Indicators	Module Status Backplane Transfer Status Application Status Serial Activity
Application port (Ethernet)	
Ethernet Port (Ethernet modules)	10/100 Base-T 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
Shipped with Unit	RJ45 to DB-9M cables for each port 6-foot RS-232 configuration cable
Debug/Configuration port (CFG)	
CFG Port (CFG)	RJ45 (DB-9M with supplied cable) No hardware handshaking

Agency Approvals & Certifications

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