DF1 Half/Full Duplex Master/Slave Communication Module

MVI46-DFCM

The MVI46-DFCM module is the ideal solution for many applications where DF1 protocol connectivity must be added to an SLC platform. Applications using the MVI46-DFCM module can be found in many industrial sectors and in the following applications:

- *Foreign device data concentrator*
- *SCADA system pipelines and offshore*
- *Platforms food processing*
- *Mining*
- *Pulp and paper*

How to Contact Us: Sales and Support

All ProSoft Technology products are backed with unlimited technical support. Contact our worldwide Technical Support team directly by phone or email:

Asia Pacific
+603.7724.2080, asiapc@prosoft-technology.com
Languages spoken include: Chinese, Japanese, English

Europe – Middle East – Africa
+33 (0) 5.34.36.87.20, support.EMEA@prosoft-technology.com
Languages spoken include: French, English

North America
+1.661.716.5100, support@prosoft-technology.com
Languages spoken include: English, Spanish

Latin America (Sales only)
+1.281.298.9109, latinam@prosoft-technology.com
Languages spoken include: Spanish, English

Brasil
+55-11.5084.5178, eduardo@prosoft-technology.com
Languages spoken include: Portuguese, English

DF1 Half/Full Duplex Master/Slave Communication Module

MVI46-DFCM

The MVI46 DF1 Master/Slave Communication Module is an SLC backplane compatible module that allows Rockwell Automation SLC I/O compatible processors to interface easily with DF1 protocol compatible devices and hosts. Devices commonly supporting the protocol include Rockwell Automation PLCs and power monitoring equipment, as well as several other third party devices in the marketplace.

Features and Benefits

The MVI46-DFCM Master/Slave Communications module allows Rockwell Automation SLC I/O compatible processors to interface easily with other DF1 protocol compatible devices. Compatible devices include not only Rockwell Automation PLCs (which all support the DF1 protocol) but also a wide assortment of end devices.

The MVI46-DFCM module has two Application 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 SLC processor is asynchronous to the DF1 network, with the module's internal database being used to exchange data between the processor and the DF1 network.

General Specifications

- Single Slot – 1746 backplane compatible (Local or extended I/O rack only. Remote rack not supported)
- The module is recognized as an Input/Output module and has access to processor memory for data transfer between processor and module using M0/M1 files
- Ladder Logic is used for data transfer between module and processor
- Configuration data obtained through user-defined ladder. Sample ladder file included

Hardware Specifications

Specification	Description
Backplane Current Load	800 ma @ 5V (from backplane)
Operating Temperature	0 to 60°C (32 to 140°F)
Storage Temperature	–40 to 85°C (–40 to 185°F)
Shock	30g operational, 50g non-operational
Relative Humidity	5 to 95% (non-condensing)

Specification	Description
Vibration	5 g from 10150 Hz
LED indicators	Module status, Backplane transfer status, Application status, Serial activity and error LED status
Debug/Configuration port (CFG)	
CFG Port (CFG)	RJ45 (DB-9M with supplied cable) RS-232 only
Configuration Connector	RJ45 RS-232 Connector (RJ45 to DB-9 cable shipped with unit)
Application Ports	
Application Serial port (PRT1, PRT2) (Serial Modules)	(2) RJ45 RS-232/422/485 Application ports

Functional Specifications

DF1 ports

- Full and half duplex modes supported
- CRC and BCC error checking
- Full hardware handshaking control
- Memory usage is completely user configurable, 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 SLC platform 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. To our knowledge, the following physical connections have been successful:

- 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.

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

Ordering Information

To order this product, please use the following:

MVI46-DFCM DF1 Half/Full Duplex Master/Slave Communication Module

To place an order, please contact your local ProSoft Technology distributor. For a list of ProSoft distributors near you, go to http://www.prosoft-technology.com

Distributors:
Place your order by email or fax to:

North American / Latin American / Asia Pacific
orders@prosoft-technology.com,
fax to +1 661.716.5101

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

March 23, 2007