DF1 Half/Full Duplex Master/Slave Communication Module

MVI94-DFCM

The MVI94-DFCM module is the ideal solution for many applications where DF1 protocol connectivity must be added to a FLEX platform. The MVI94-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

MVI94-DFCM

The MVI94 DF1 Master/Slave Communication Module is a Flex backplane compatible module that allows Rockwell Automation Flex 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 ProSoft Technology MVI94-DFCM module is the fastest and easiest way to add DF1 Half/Full Duplex Master and Slave capability to the FLEX platform. The MVI94-DFCM module is a single I/O slot, backplane compatible solution for the Allen-Bradley FLEX platform. This module has one powerful and fully configurable DF1 Half/Full Duplex Master/Slave ports allowing the many SCADA and field devices supporting the DF1 protocol to be integrated into the FLEX platform.

The module has one serial port supporting the DF1 protocol, user-configurable to act as a master or as a slave. Data transfer between the module and the FLEX 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

Some of the general specifications include:

- Operation via simple ladder logic
- Complete setup and monitoring of module through Debug port and user configuration file
- Flex backplane interface via I/O access

Hardware Specifications

Specification	Description
Form Factor	Single Slot 1794 Backplane compatible Locate in any slot of Backplane
Backplane current load	20 mA @ 5 V
External power supply	12V to 24VDC 340 mA to 170 mA
Operating temperature	0 to 55°C (32 to 140°F)
Storage temperature	–40 to 85°C (–40 to 185°F)

Specification	Description
Shock	30g operational 50g non-operational 5g from 10150 Hz
Relative humidity	5 to 95% (non-condensing)
LED indicators	Module status Backplane transfer status Application status Serial activity and error LED status
Configuration Serial port (PRT1)	Mini-DIN RS-232 Hardware handshaking
Application serial Port (PRT2)	Mini-DIN RS-232/422/485 jumper selectable 500V optical isolation from backplane
Dimensions (with Module installed in Base)	3.7H x 3.7W x 2.7D inches 94H x 94W x 69D mm

Functional Specifications

DF1 ports

- Full and half duplex modes supported
- CRC and BCC error checking
- Memory usage is completely user configurable, supporting the storage and transfer of up to 4000 registers to/from the control processor
- 125 word read and write command lengths supported
- Floating point data movement supported

DF1 Master Protocol Specifications

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

- Command List: Up to 100 commands, 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 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.

Compatible products include:

DF1 Half/Full Duplex Master/Slave Communication Module **for SLC (MVI46-DFCM)**

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:

MVI94-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

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