A data collection and processing unit to monitor and control many non-SNMP devices at distant sites

View of 48DI NFM RTU

The MOSCAD™ Network Fault Management Remote Terminal Unit (NFM RTU) is a component in the MOSCAD NFM solution. It provides a data collection and processing unit to monitor and control many non-SNMP devices at distant sites. It communicates with the Network Management Center over a Wide Area Network using either MDLC or standard SNMP protocol.

Element Manager for Communication Sites

The MOSCAD NFM RTU is a microprocessor-based RTU that was specifically created for use in network fault management systems. It may connect to a large number of communication system devices and to other devices to monitor their activity and report detected problems to a supervisory center.

Local intelligence permits control decisions without the need for real-time messages from other supervisory centers.

MDLC and SNMP Protocols

The MOSCAD NFM RTU uses its native MDLC protocol for all data signaling to the Network Management Center. An IP Gateway at the NM center converts the message to SNMP protocol.

The best protocol for the communication task is used while providing commonly accepted information interchange to other devices.

RS232/RS485

Data ports to the CPU portion of the NFM RTU permit the connection of a terminal for application programming or connection to base stations and other on-site devices to supervise their operation. An RS232 Multiplex accessory expands the connectivity of any single RS232 CPU port.

Multiple connectors, multiple communication protocols, and variable data speeds allow practically all external data devices to be connected to the NFM RTU.

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Multiple Configurations

The MOSCAD NFM RTU is available in two configurations. The MultiPort model provides six RS232 ports which may be used to connect to base stations and similar on-site devices. The 48DI model provides many discrete digital and analog inputs plus digital outputs, and provides two RS232 ports to base stations, etc. Units may be chained together to increase the I/O capability when required.

The connectivity capabilities provided by the NFM RTU models have been carefully selected to satisfy virtually all network fault management requirements.

Rackmount

The MOSCAD NFM RTUs are packaged for direct mounting onto standard 19″ equipment racks. Their compact size requires only a single rack-unit. Additional one rack-unit panels are available when accessory equipment items are added.

A compact hardware configuration for rack mounted installations is provided.

Diagnostics

The NFM RTU incorporates self-diagnostic software routines to help maintenance personnel identify and correct operational problems.

Self diagnostics and error reporting capabilities, plus local LEDs, permit maintenance personnel to repair RTU malfunctions in the shortest possible time.

Front panel view of MultiPort NFM RTU

MOSCAD NFM RTU for Network Fault Management

Specifications

Order

48DI NFM RTU	F4520 – for 20-28 Vac or 12 Vdc or 21-50 Vdc negative ground operation F4530 – for 24 Vdc positive or negative ground operation F4540 – for 48 Vdc positive or negative ground operation
MultiPort NFM RTU	F4525 – for 20-28 Vac or 12 Vdc or 21-50 Vdc negative ground operation F4535 – for 24 Vdc positive or negative ground operation F4545 – for 48 Vdc positive or negative ground operation
Additional RS232 ports	V426 (MultiPort models only)
Ethernet connectivity	V333 (requires 1 additional rack unit)

Inputs/Outputs

48DI RTU	48 digital inputs (wet/dry contacts); 16 relay outputs (SPST, rated 125 V-A); 8 analog inputs (±5 Vdc, 12 bits including sign)
MultiPort RTU	None

RS232/485

48DI RTU	2 RS232 ports plus 1 RS232 or RS485 (2-wire) selectable port
MultiPort RTU	2 RS232 ports plus 1 RS485 (2-wire) port; 4 additional RS232 ports may be added (in groups of two)

Operating Power

Voltage	
Primary	Separate models for each voltage range: 20-28V ac/dc or 21-50 Vdc, ±24 Vdc, ±48 Vdc
Secondary	From external battery : 12Vdc
Current	
at 24 Vdc	48DI: 180 ma minimum, 680 ma with all I/O active MultiPort: 320 ma
at 48 Vdc	48DI: 100 ma minimum, 280 ma with all I/O active MultiPort: 210 ma

Physical

Size	1 rack-unit (19″w x 1.75″h x 12″d)
Temperature	Operating: −30 to +60°C Storage: −40 to +85°C
Humidity	0-90% RH @ +50°C

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Motorola U.S. & Canada:	Europe:	Latin America:	Asia & Pacific:
1301 E. Algonquin Road	Tel: +972-3-565-8127	Tel: +972-3565-8998	Tel: +852-2966-4368
Schaumburg, Illinois 60196	Fax: +972-3-652-5774	Fax: +954-3-562-5774	Fax: +852-2966-4388
Phone: 1-888-567-7347	bcms94@email.mot.com	B1002@email.mot.com	bcms87x@email.mot.com
moscadsales_na@motorola.com			

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