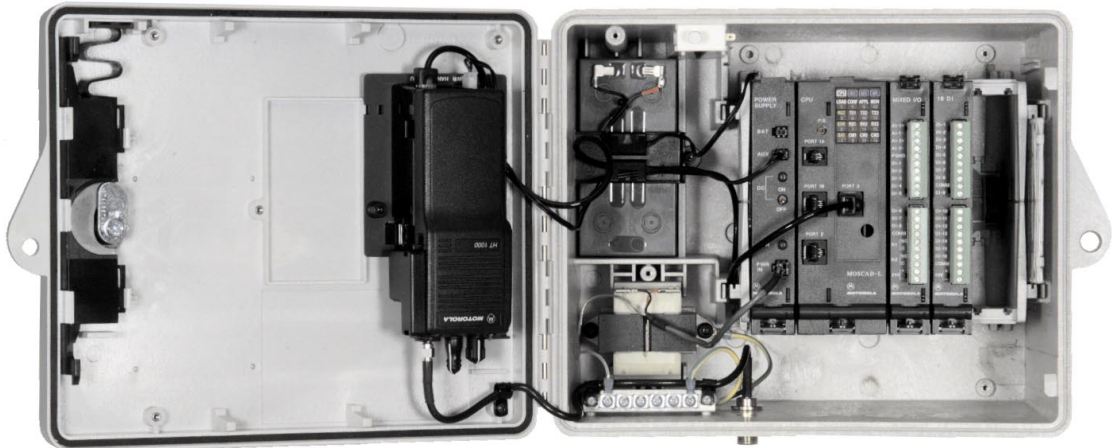


# MOSCAD-L

## SCADA Remote Terminal Unit

MOSCAD-L provides the most asked for features of MOSCAD in a smaller and leaner package for use in locations where space is limited.



### FEATURES / BENEFITS

#### MOSCAD-L is Smaller

The size of MOSCAD-L is noticeably smaller than the equivalent full MOSCAD. The available enclosure meets the requirements of NEMA-4X for use indoors or outdoors in mild corrosive environments.

◆ *MOSCAD-L may be easily installed in many space restricted locations. Mounting options are available for wall or pole mount situations, and MOSCAD-L is small enough to fit with other equipment in many enclosures provided by others.*

#### MOSCAD-L provides Communications

Both MOSCAD-L and MOSCAD use the MDLC communication protocol which is based on the International Standards Organization's 7-layer protocol recommendation. Messaging, both RTU-initiated and poll-response, may occur to a central system management site or peer-to-peer between any RTUs (Remote Terminal Units) in the system. Communications may occur on popular two-way radio frequencies or by wireline or fiber optic modems.

◆ *MOSCAD-L provides the communication task, so important in distributed-intelligence automation systems. There is no add-on communication package to locate and integrate.*

◆ *RTU-initiated messaging virtually eliminates any need for continuous polling to transfer information RTU-to-central – the RTU sends data only when something noteworthy occurs on-site. MOSCAD-L may operate on radio channels that are shared by other users, including voice users.*

◆ *MOSCAD-L and MOSCAD may exchange data among each other. MOSCAD-L may be added to, and be a full member of, existing MOSCAD systems.*

#### MOSCAD-L is Leaner

The commonly used I/O capabilities of MOSCAD, including RS-232 and RS-485, are available with MOSCAD-L. Advanced technology is used to provide these capabilities at lower operating power requirements.

◆ *When the situation requires advanced performance at low power burdens, MOSCAD-L may be the solution. Solar or LP-powered sites may particularly benefit from this capability.*

#### MOSCAD-L is Programmable

The specific automation solution to the system requirement may be programmed into MOSCAD-L. The same application already developed for MOSCAD may be used in MOSCAD-L if the I/O requirement can also be satisfied.

◆ *Automation solutions may be tailored to satisfy specific customer requirements. Programming is accomplished by using an advanced version of tried-&-proven ladder logic, complemented by "C" functions. It is supported by the MOSCAD-L Programming ToolBox.*

#### Spread Spectrum Radio

Unlicensed direct sequence spread spectrum (DSSS) radios are available within MOSCAD-L. Models that operate in either the 900 MHz and 2.4 GHz bands are available. DSSS permits direct peer-to-peer and RTU-to-central messaging to occur.

◆ *Systems that need short range, line-of-sight communications may effectively utilize spread spectrum radio when a licensed frequency is difficult to obtain.*

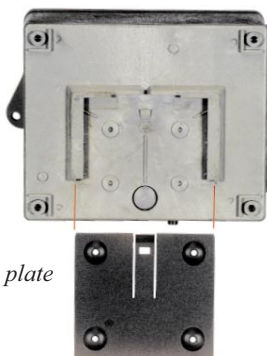
# MOSCAD-L

## SCADA Remote Terminal Unit

# Specifications

SPECIFICATIONS		
<b>Power Supply Module</b>	<b>Input Voltage:</b>	From included 117 Vac (nominal) line transformer; 230 Vac line transformer optional Interface to external 20-28 Vac/21-50 Vdc power source and to solar panel/regulator optional
	<b>Output Voltage/Current:</b>	5 Vdc at 0.6 amp; 14.3 Vdc at 2.0 amp; 24 Vdc at 0.25 amp
	<b>Backup Battery:</b>	1.2 Ah @ 12 Vdc (nominal); 3.0 Ah optional
<b>CPU Module</b>	<b>Processor:</b>	Motorola 68LC302 (16/32 bit) CMOS; 16.6 MHz clock
	<b>Memory:</b>	1024 kB Flash for operating system and application, 256 kB RAM
	<b>Application Size:</b>	Approximately 256 kB
	<b>Clock:</b>	Software clock; year, month, date, day, hour, minute, second supported
	<b>Serial Data Ports:</b>	Port 1: RS-485 2-wire multidrop <i>or</i> RS-232 (no handshake); up to 57.6 kbps Port 2: RS-232 with full DTE/DCE support; up to 57.6 kbps
	<b>Communication Port:</b>	1200 bps DPSK to internal or external radio, <i>or</i> 2400 bps FSK to internal or external radio, <i>or</i> 4800 bps DFM to external radio, <i>or</i> 9600 bps Synchronous to DARCOM 9000 radio, <i>or</i> 600 bps IntraC to internal or external radio, <i>or</i> 1200 bps or 2400 bps wireline modem, <i>or</i> RS-232 Sync <i>or</i> Async; up to 57.6 kbps
<b>I/O Modules</b>	<b>16 Digital Input:</b>	see catalog sheet R3-11-1013
	<b>16 Digital Input 110V:</b>	see catalog sheet R3-11-1040
	<b>8 Digital Output:</b>	see catalog sheet R3-11-1029
	<b>6 Analog Input:</b>	see catalog sheet R3-11-1030
	<b>Mixed I/O:</b>	see catalog sheet R3-11-1014
COMMUNICATION MEDIA		
<b>Wireline Modems</b>	<b>PSTN:</b>	600-2400 bps dial-up/answer, full-duplex
	<b>Leased Line:</b>	300-2400 bps 2-wire or 4-wire full-duplex
	<b>Multidrop:</b>	1200 bps 2-wire half-duplex
<b>Two-Way Radio</b>	<b>Spread Spectrum:</b>	900 MHz: 450 mw at up to 215 kbps; 2.4 GHz: 100 mw at up to 1000 kbps
	<b>Conventional:</b>	136-174 MHz @ 5 watt (variable to 1.2 watt) power output 403-470, 470-512 MHz @ 4 watt (variable to 1.2 watt) power output 928-960 MHz @ 5 watt multiple access system
	<b>Trunked:</b>	806-869 MHz @ 3 watt (variable to 1.2 watt) power output <i>Refer to the MOSCAD-L System Planner for FCC Type Acceptance information.</i>
<b>External Radio</b>	<b>Interface:</b>	5 wire (data in, data out, PTT, channel monitor, ground)
	<b>Emission:</b>	F1 (DFM) or F3 (FSK, DPSK <i>or</i> IntraC)
<b>RS-232</b>	<b>Interface:</b>	7 wire DTE/DCE (data in, data out, CTS, RTS, DTR, CD, gnd); 0.6-57.6 kbps

Specifications subject to change without notice.



Wall mount plate

Rear view of enclosure showing optional wall/pole mount plate; it is attached to the mounting surface before the enclosure slides and locks onto the plate.



Motorola U.S.A.  
1301 E. Algonquin Road  
Schaumburg, Illinois 60196  
Phone: 1-800-247-2346

Motorola Latin America Division  
8000 W. Sunrise Blvd.  
Plantation, FL 33322  
Phone: 1-954-723-8563

Motorola Asia Pacific Ltd.  
39/FL Natwest Tower  
Times Square, Causeway Bay  
Hong Kong, PRC-SAR  
Phone: 852-2966-4366

Motorola UK Ltd.  
Jays Close, Viabes Industrial Estate  
Basingstoke, Hampshire  
RG22 4PD  
Phone: +44-1256-484341

Motorola Canada Ltd.  
3900 Victoria Park Avenue  
North York, Ontario M2H 3H7  
Phone: 1-800-268-5758

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