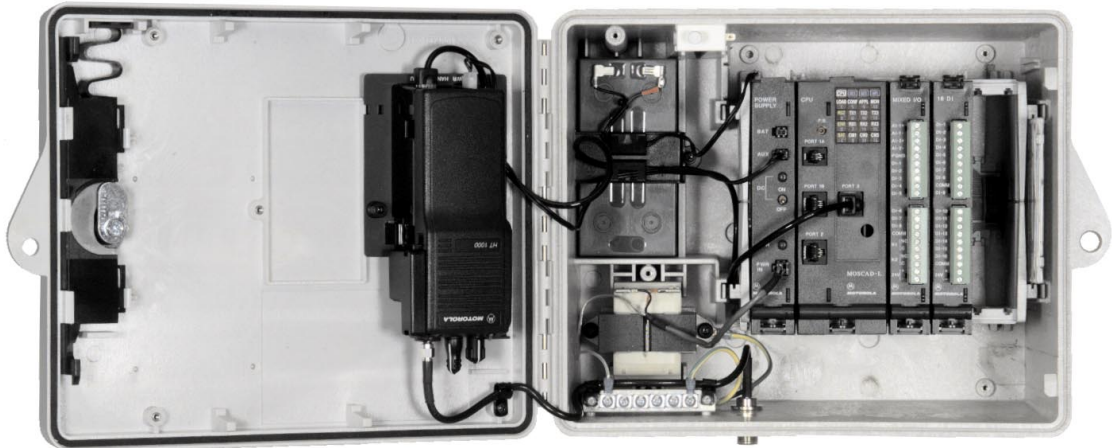


MOSCAD-L

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.*

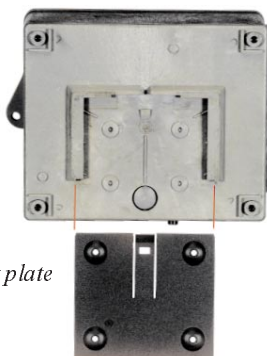
MOSCAD-L

SCADA Remote Terminal Unit

Specifications

SPECIFICATIONS		
Power Supply Module	Input Voltage:	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
	Output Voltage/Current:	5 Vdc @ 0.6 amp; 14.3 Vdc @ 2.0 amp; 24 Vdc @ 0.25 amp
	Backup Battery:	1.2 Ah @ 12 Vdc (nominal); 3.0 Ah optional
CPU Module	Processor:	Motorola 68LC302 (16/32 bit) CMOS; 16.6 MHz clock
	Memory:	1024 kB Flash for operating system and application, 256 kB RAM
	Application Size:	Approximately 256 kB
	Clock:	Software clock; year, month, date, day, hour, minute, second supported
	Serial Data Ports:	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
	Communication Port:	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
I/O Modules	16 Digital Input:	see catalog sheet R3-11-1013
	16 Digital Input 110V:	see catalog sheet R3-11-1040
	8 Digital Output:	see catalog sheet R3-11-1029
	6 Analog Input:	see catalog sheet R3-11-1030
	Mixed I/O:	see catalog sheet R3-11-1014
COMMUNICATION MEDIA		
Wireline Modems	PSTN:	600-2400 bps dial-up/answer, full-duplex
	Leased Line:	300-2400 bps 2-wire or 4-wire full-duplex
	Multidrop:	1200 bps 2-wire half-duplex
Two-Way Radio	Spread Spectrum:	900 MHz: 450 mw at up to 215 kbps; 2.4 GHz: 100 mw at up to 1000 kbps
	Conventional:	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
	Trunked:	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>
External Radio	Interface:	5 wire (data in, data out, PTT, channel monitor, ground)
	Emission:	F1 (DFM) or F3 (FSK, DPSK <i>or</i> IntraC)
RS-232	Interface:	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

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

Motorola Latin America Division
899 W. Cypress Creek Rd. #200
Fort Lauderdale, FL 33309
Phone: 1-954-928-2000

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

© Motorola and MOSCAD are trademarks of Motorola Inc. ■ All company and product names are trademarks or registered trademarks of their respective companies. ■ ©1999 by Motorola Inc. ■ Printed in U.S.A. ■ Produced by Customer Communications
Motorola is an Equal Employment Opportunity/Affirmative Action Employer
Visit us on the Web at <http://www.mot.com/MOSCAD>