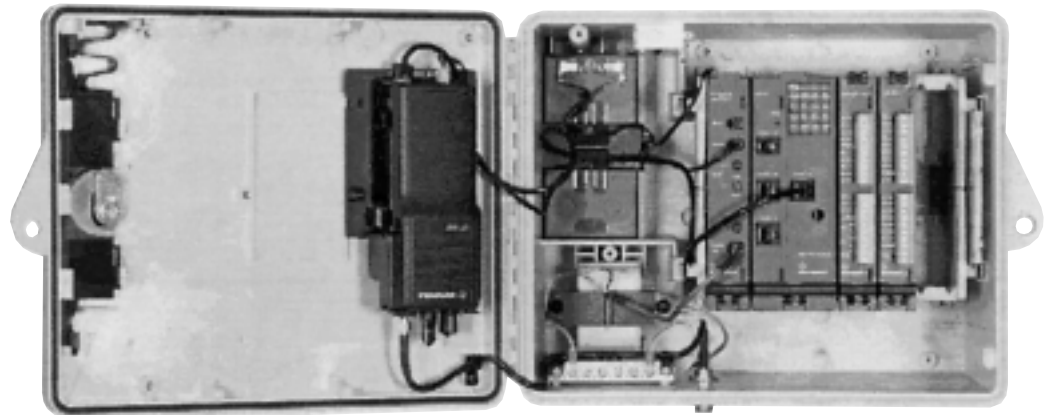


The Most Popular Features of MOSCAD in a Smaller, Leaner Package

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



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.

(continued)

MOSCAD-L Provides Communications (cont'd)

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.

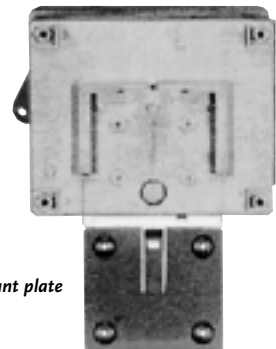
Automation solutions may be tailored to satisfy specific customer requirements. Programming is accomplished by using an advanced version of tried-and-proven ladder logic, complemented by “C” functions. It is supported by the MOSCAD-L Programming ToolBox.

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.

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.



Wall mount plate

MOSCAD-L SCADA Remote Terminal Unit

General 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 at 0.6 amp; 14.3 Vdc at 2.0 amp; 24 Vdc at 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, day, hour, minute, second supported
Serial Data Ports:	Port 1: RS-485 2-wire multidrop or 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 Output:	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 or Intrac)

RS-232

Interface	7 wire DTE/DCE (data in, data out, CTS, RTS, DTR, CD, gnd); 0.6-57.6 kbps
-----------	---



MOTOROLA

Motorola U.S.A.
1301 E. Algonquin Road
Schaumburg, Illinois 60196
Phone: 1-800-567-7347

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

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, Viable Industrial Estate
Basingstoke, Hampshire
RG22 4PD
Phone: +44-1256-484341

©, Motorola, and MOSCAD are trademarks of Motorola Inc.
All company and product names are trademarks or registered trademarks of their
respective companies
Printed in U.S.A. (0104) VPS
Motorola is an Equal Employment Opportunity/Affirmative Action Employer
Visit us on the Web at <http://www.mot.com/MOSCAD>