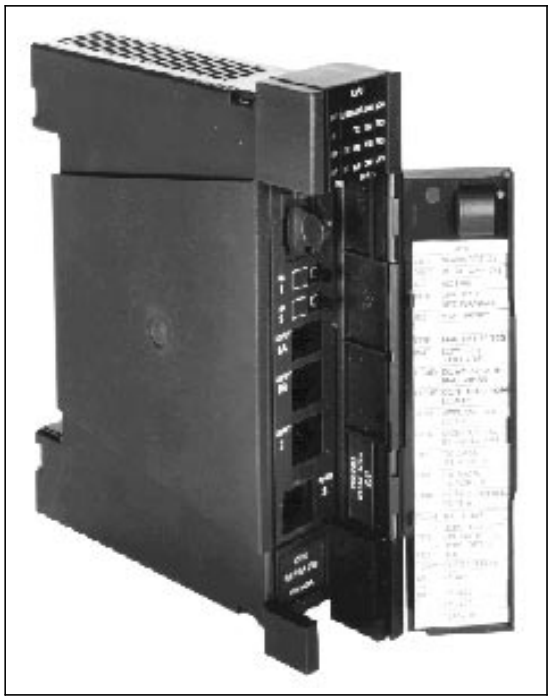
CPU Module

for the MOSCAD RTU

The CPU module is the core of the MOSCAD RTU. The module contains the operating system code, provides RAM for runtime variables and historical data, and provides FLASH memory for the Application Program.

FEATURES/BENEFITS



CPU is a Computer

The CPU module as a computer: it has RAM and ROM memory, a fully-functional and fast processor, a real-time clock, and serial data I/O ports.

◆ *It can be programmed to:*
◆ *Accomplish the familiar Programmable Logic Controller (PLC) tasks.*
◆ *Be an interface among existing data devices thereby constructing a single data system.*
◆ *Use a wide spectrum of communications media when constructing a single data system.*
◆ *Perform many other functions.*

Ladder Logic

The MOSCAD CPU is programmed by using an advanced version of the familiar Ladder Logic language. The programming ToolBox offers a collection of software programs that facilitate this task.

◆ *The logic variables are defined according to the needs and wants of the system and programmer.*
◆ *The individual logic statements are coded by using the powerful coding icons.*
◆ *The I/O variables are linked to physical I/O points.*
◆ *The entire code structure is compiled into the exact same PROM code that would be created by a Pascal or C programming language compiler.*

C-language Programming

The C programming language may be used to code functions and routines which may be compiled and downloaded into the Series 300 or 400 CPU module..

◆ *Existing C-language functions may be reused in the MOSCAD CPU or new functions created.*
◆*Programming techniques supported by the C-language may be used in the MOSCAD CPU.*

Data I/O

The Application Program may take advantage of the two on-module RS-232 ports and the communications port. Smart sensors with RS-232 I/O may be directly connected. Data to/from other sites may be communicated via two-way radio or by traditional wireline modem technologies.

◆ *These are additional ways to move data to/from the CPU and the resident Application.*

Communications Protocol

The communications protocol was specifically developed for two-way radio communications. It conforms to the ISO *Open System of Interconnection* recommendation (all seven layers) and permits remote-to-central and direct peer-to-peer communications.

◆ *The packet-type protocol permits:*
◆ *Operating data to be moved from any RTU to any other unit in the system.*
◆*The programming ToolBox at any RTU to download the appropriate Application Program to any other RTU in the system.*
◆ *The programming ToolBox at any RTU to upload the diagnostic files from any other RTU in the system; and more.*
All this happens quickly and efficiently, by wirelines or by two-way radio.

Third-Party Protocols

The CPU module may use some third-party protocol for it's communication needs. These protocols include MODBUS, X.25, and others.

◆ *Systems may be created by using products from a multiplicity of manufacturers.*

Packaging

The CPU module is packaged in a plastic housing that plugs and locks into the motherboard. RJ-45 connectors, and matching cables, permit easy connection to DTE/DCE/printer devices.

◆ *Modularity allows the MOSCAD RTU to easily expand as system requirements change.*

MOTOROLA

Specifications

Order	Series 200:	Plant installed: V424; Spare: F6932
	Series 300:	Plant installed: Standard; Spare: F6933
	Series 400:	Plant installed: V426; Spare: F6936
	Math Coprocessor:	Plant installed: V445; field installed: FRN5670
	1.2 Mb RAM expansion:	Plant installed: V449; field installed: FRN5671
	Math Coprocessor + 1.2 Mb RAM:	Plant installed: V446; field installed: FRN5672
Clock/Memory	Series 200:	EPROM: 512k; RAM: 64k; FLASH: 256k; Clock: 16.6 MHz @ 100 ppm
	Series 300:	EPROM: 1024k; RAM: 256k; FLASH: 256k; Clock: 16.6 MHz @ 30 ppm
	Series 400:	RAM: 256k; FLASH: 1280k; Clock: 16.6 MHz @ 30 ppm
Ports	Port 1:	RS-232 @ up to 19.2 kbps, or RS-485 @ up to 19.2 kbps
	Port 2:	RS-232 @ up to19.2 kbps with full DTE/DCE support
	Port 3:	Radio: Direct-FM @ up to 4.8 kbps; or AFSK @ up to 2.4 kbps; or DPSK @ 1.2 kbps; or Wireline: Sync or Async; or RS-232 @ 0.6-19.2 kbps
Power	5 Vdc:	Provides up to 2.0 amp to associated I/O modules
	12 Vdc:	Series 200: consumes 120 ma Series 300 and Series 400: consumes 130 ma
Environment	Humidity:	0 to 90% @ +50°C
	Temperature:	-30 to +60°C

CUSTOMER MOTOROLA Communications SERVICE

Support Services
Wherever Motorola sells, our product is backed by service. Our products are serviced throughout the world by a wide network of company or authorized independent distributor service organizations.
Specifications subject to change without notice.

PROUD SPONSOR USA

Winner 1988 Malcolm Baldrige National Quality Award

MOTOROLA

1301 E. Algonquin Road
Schaumburg, Illinois 60196
In the U.S. call: 1-800-247-2346
Outside the U.S.call: (708) 576-3107
Ⓜ, and Motorola are trademarks of Motorola, Inc. ■ © 1994 Motorola, Inc. ■ Printed in U.S.A. ■ Produced by Customer Communications. 36 USC 380
Motorola is an Equal Employment Opportunity/ Affirmative Action Employer

Quality Means the World To Us™