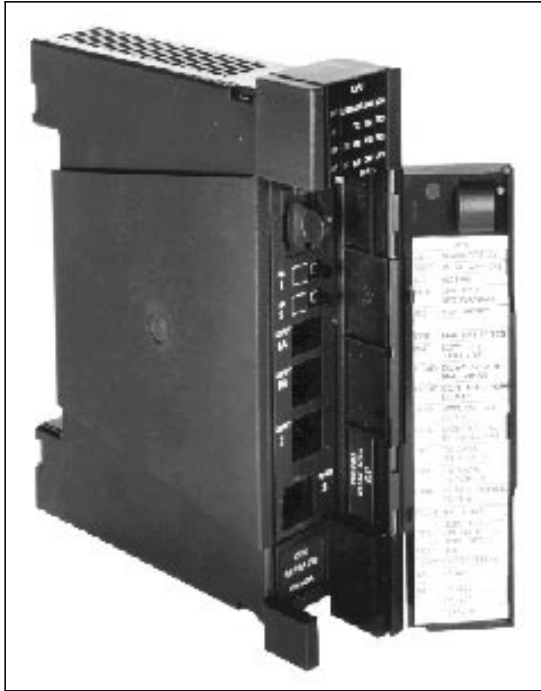


CPU Module

for the MOSCAD RTU

FEATURES/BENEFITS

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



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 its 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.



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Specifications

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



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.



Winner 1988



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