

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 is a computer with 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 requirements 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.

- 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. 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 numerous 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.

| GENERAL 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: | Plant installed: V449; field installed: FRN5671 |
| | 1.2 MB RAM and Math Coprocessor: | 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 to 19.2 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 Intrac @ 0.6 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 |

Specifications subject to change without notice.



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.



Atlanta 1996
TM. © 1992 ACOG
Centennial Olympic Games Partner



MOTOROLA

1301 E. Algonquin Road
Schaumburg, Illinois 60196
In the U.S. call: 1-800-247-2346
Outside the U.S. call: (847) 576-3107

(), and Motorola are trademarks of Motorola, Inc. ■ © 1994
Motorola, Inc. ■ Printed in U.S.A. ■ (9612) Merit ■ Produced by
Customer Communications.

Motorola is an Equal Employment Opportunity/
Affirmative Action Employer