MCP-M

Motorola Communication Processor for MODBUS

The MCP-M is designed to provide an efficient method of communications between Motorola's MOSCAD RTUs and a variety of SCADA host computer applications.

FEATURES

The Front-End

The MCP-M functions as interface between the SCADA host computer and the field RTUs. It contains a runtime database that correlates to selected data tables defined in the field RTUs. Theruntime database is updated by an included scheduler engine that periodically polls the RTUs or is updated by direct data bursts initiated by the field RTUs.

▶ *Current field data is held in the MCP-M, ready for instant accessibility by the host computer. The MCP-M manages the over-radio data activity thereby freeing the SCADA software and the host computer from this task.*

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Available Services

The SCADA software in the host computer has complete control over the operation of the MCP-M, including:
• Immediate update of an RTU,
• Sending setcall (broadcast) messages,
• Sending of time sync messages to all RTUs,
• Enable/disable schedule engine,
• Enable/disable/force any defined schedule,
• more.

▶ *A separate data terminal and specialized operator training is not required to use the MCP-M. The SCADA operator or supervisor may make appropriate functional changes from the SCADA terminal according to need and their SCADA logon permission level.*

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SCADA Communications

The SCADA software in the host computer communicates with the MCP-M via the MODBUS Binary protocol. Data is available from the runtime database and may include RTU communications statistics.

▶ *The MODBUS protocol is widely accepted and commonly used throughout the industry. It is supported by a variety of SCADA equipment vendors which eliminates the requirement to develop additional and unique drivers.*

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MDLC

MDLC is a seven layer protocol that conforms to the ISO recommendation for Open System of Interconnection. The protocol is used by the MOSCAD RTUs and is designed for two-way radio use. It is optimized for data transfer between host computers and RTUs on that, and other, communication media.

▶ *Efficient data transfer, by enabling multiple logical channels on the physical media, permits simultaneous Host-to-RTU, RTU-to-Host, and RTU-to-RTU sessions to minimize the burden on the communication medium.*
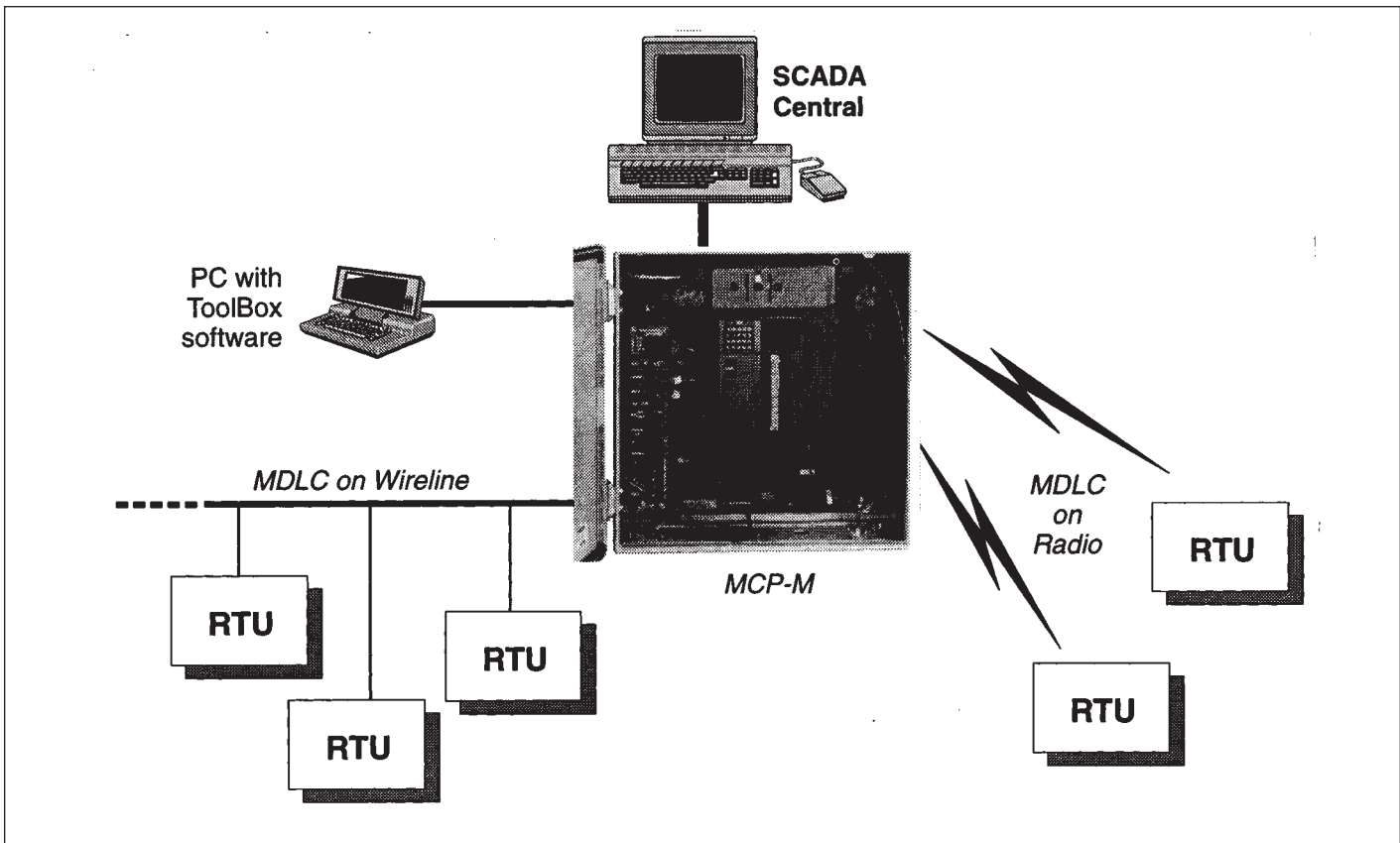
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MCP-M Motorola Communication Processor for MODBUS

GENERAL SPECIFICATIONS

Order:		F42xx-family (xx denotes radio frequency and power level)
System Size:		Up to 246 RTUs, each with up to 32 *Tables* of data
CPU: **Memory:**		68LC302; 25 MHz RAM: 1.5 MB; FLASH: 1.28 MB
Ports:	Port 1: Port 2: Port 3:	RS-232 Async (MODBUS or MDLC) or RS-485 (MDLC) @ up to 19.2 kbps RS-232 Async(MODBUS or MDLC) up to 19.2 kbps (up to 9.6 kbps when used with DARCOM modem) Radio Communications: DFM @ up to 4.8 kbps or FSK @ up to 2.4 kbps *or* DPSK @ 1.2 kbps *or* Wireline Communications: refer to separate Modem description sheet R3-11-93 *or* RS-232: Async @ up to 19.2 kbps
Indicators:		Power, Reset, Fail, Configuration, Application, Monitor, Error, Low lithium Battery, plus Tx, Rx, and CM for each port
Physical:	Enclosure: Power Supply:	Steel: 15 x 15 x 8.25˘ (38 x 38 x 21 cm): rated NEMA4 Dual: 117 Vac or 230 Vac 50-60 Hz, provides power to modules and radio, charges battery; 12.6 Vdc @ 5A-h battery
Environmental:	Temperature: Humidity:	–30° to +60°C 0 to 90% @ +50°C

Specifications subject to change without notice.

SCADA Central

PC with ToolBox software

MDLC on Wireline

MCP-M

MDLC on Radio

RTU

RTU

RTU

RTU

RTU

CUSTOMER **MOTOROLA** *Communications* **SERVICE**

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