HPLOGO.TIF;1.35";0.383";TIFF

██████

HP MMS/9000
Technical Data

Product Number
32018A, 32019A, and J2161A
HP MMS/9000 is an HP Advance Net CIM (Computer Integrated
Manufacturing) product addressing the critical need for multivendor
communications manufacturing. MAP 3.0 (Manufacturing Automation
Protocol 3.0) is a full seven–layer communication specification based
on the OSI (Open Systems Interconnection) model.

la3821d1.plt;4.355";2.9";HPGL

HP MMS/9000 is a layer seven service for the HP 9000. MMS
(Manufacturing Message Specification) is the protocol that
OSI–connected cell controllers use to direct the activities of factory
floor devices (i.e. robots, PLCs, NC machines, etc.). HP MMS/9000
complies with both the draft standard ISO/DIS 9506 specified by MAP
3.0 and the international standard ISO/IS 9506.

HP MMS/9000, in combination with HP OTS/9000 and LanLink, allows HP 9000 Series 300, 400, 700, and 800 computers to connect to 802.3 or ethernet networks.

Functional Description

MMS (ISO/DIS & IS 9506) is a substantial specification containing more than 80 service calls spread over 10 categories of capability. The intent of MMS is to allow cell controllers mastery of factory floor device activities. For instance, MMS can control PLCs (Programmable Logic Controllers) by downloading and executing programs, by reading and writing PLC variables, and by setting and reading status conditions. MMS also contains computer–to–computer communications functionality, such as the binary file transfer service along and the ability to transfer messages between programs (via a remote read/write variable mechanism).

Feature	Benefit
┤ Comprehensive, direct con–trol of OSI conformant factory floor devices (FFDs)	┤ Reduced communications costs (writing and programming)
┤ Standard programmatic interface (MMS–I)	┤ Portable applications; reduced programming costs
┤ Investment Protection	┤ Customers can utilize their install communication media
┤ Proven Interoperability with leading MMS vendors	┤ Eliminates the need for customers to perform interoperability testing.

In support of the above general capabilities HP MMS/9000 includes the following MMS categories:

┤   Connection/Context Management ¬ establishment and release of associations between MMS peers.
┤   Virtual Manufacturing Device (VMD) Support Services ¬ device status and resource interrogation.
┤   Variable Access and Management ¬ services to read and write

2

remote variables.

┤ File Transfer and Management ¬ binary file transfer to and from remote node; file delete.

Note: This capability is separate from, and not interoperable with ISO FTAM.

┤ Domain Management Services ¬ upload and download of program execution images or data files.

┤   Program Invocation Management ¬ start stop and resume of remote FFD programs
┤   Operator Communication Services ¬ services to exchange messages with remote consoles.

HP's MMS is accessed exclusively through an application programmatic interface (API). The MMS API is a C language interface adhering to the MMS–I specification.

Despite its rich feature set, MMS alone cannot tap all the capabilities of FFDs. MMS Companion Standards are presently being written to extend MMS to allow full control of certain classes of factory devices (e.g., there are fledgling Companion Standards for robots, NC machines, PLCs, and vision systems). Currently HP's MMS product does not support Companion Standards.

Customer Site Requirements

An 802.3, or ethernet cable plant is required at the customer site.

Ethernet Cable Plant:
Cable system: 50–ohm coaxial cable and nondirectional taps, meeting the IEEE 802.3 Medium Layer Specifications.

Configuration Information

Computer
HP 9000 Series 300, 400, 700, or 800.

Operating System
HP–UX Version 8.02 or 8.07.

Memory and Data Storage
┤   16 MB RAM
┤   30 MB of free disk space

Other required products:
┤   HP OSI Transport Services/9000
┤   HP LanLink/9000

Ordering Information

HP MMS/9000

32018A HP MMS/9000 for the Series 300 and 400

J2161A HP MMS/9000 for the Series 700

32019A HP MMS/9000 for the Series 800

800 Series Options:

Media Options:
AA0 software on cartridge
AA1 software on magnetic tape
AAH software on DAT
0B1 Additional Documentation

Processor:
AH0 License to use on Tier 1
AEL License to use on Tier 2
AE5 License to use on Tier 3
AE6 License to use on Tier 4
AEN License to use on Tier 5
AEP License to use on Tier 6
AH1 License to use on Tier 7

Processor Upgrades:
OGR for return credit for Tier 1
OGE for return credit for Tier 2
OC8 for return credit for Tier 3
OGS for return credit for Tier 4
OGT for return credit for Tier 5
OGU for return credit for Tier 6

Documentation

32019–**60500** HP MMS/9000 Reference Manual
32019–**60510** HP MMS/9000 Programmer's Guide
32019–**60530** Installing and Administering HP MMS/9000

Installation and Support

HP OSI products are customer installable. HP OSI products provide a complete toolset for effective management of HP OSI nodes within an OSI multivendor network. The HP OSI communication subsystem includes a thorough set of utilities for diagnosis and resolution of communication problems.

The full complement of HP network support services: HP Network Planning and Design, NetPrepare, NetStartup, and NetAssure are available for use within the OSI environment. Combined with the HP OSI diagnosis and support tools, HP Support services offer complete assistance in the planning, design, preparation, startup, and maintenance of OSI multivendor networks.

Related Products:

In addition to HP MMS/9000, the following HP OSI products are offered:

- HP X.400/9000
- HP FTAM/9000
- HP OSI Transport Service/9000