

Master Control Program/V Series (MCP/VS)

Release 2.0

UNISYS

Style Numbers

V300 MCP, V510 MCP, V530 MCP

Catalog Numbers

3696 2058, 3800 8314, 3800 8702

Capabilities

Master Control Program/V Series (MCP/VS) is a comprehensive operating system specifically designed for (and integrated with) V Series multiprogramming computer systems. MCP/VS provides significant improvements over previous MCP releases in the areas of:

- Memory size and management
- Number of input/output devices
- Number of concurrent tasks
- System reliability
- Time-sharing
- Program debugging aids
- Overall system throughput

MCP/VS functions in complete integration with V Series hardware architecture to simplify system operation and control, provide automatic multiprogramming, and to provide centralized input/output management for:

- Disk Pack Subsystems
- Thin Film Disk Subsystems
- Multi-Disk-4 (MD4) Disk Subsystems
- Multi-Disk-8 (MD8) Disk Subsystems
- 80-Column Card Equipment

- MICR/OCR Reader Sorters
- Line Printers
- Image Printers
- Operator Display Terminals (ODT)
- PE/GCR Magnetic Tape Units
- PE Magnetic Tape Streamer
- Data Communication Devices
- Data Communication Processors (DCP)
- Front End Processors (FEP)
- Inter-Systems Controls (ISC)

MCP/VS also supports the use of high-level programming languages, and accommodates future growth without reprogramming. MCP/VS reduces programming and operating costs while increasing the system's productivity and responsiveness to user's needs.

General Features

MCP/VS continues to provide the fundamental features inherent with previous MCP releases such as:

Ease of Operation

- Controls the allocation of memory dynamically
- Assigns peripheral units as needed for maximum throughput
- Permits random access disk file storage of programs and data
- Manages the program library
- Retrieves jobs for processing

- Improves computer staff efficiency by simplifying system operation and accounting procedures
- Communicates with the operator in abbreviated English phrases

Simplified System Control

- Notifies operator of missing data, errors, start and end-of-job procedures, and special conditions
- Provides status display of all active jobs automatically
- Schedules jobs for processing

More Results Through Automatic Multiprogramming

- Runs segments of multiple, independent jobs concurrently:
 - Automatically allocates memory areas
 - Initiates I/O operations
 - Provides automatic error handling procedures
- Accepts programs in any sequence
- Observes user-assigned job priorities
- Schedules system with programs or program groups
- Keeps all hardware/software components functioning for maximum job throughput
- Provides full audit of processor and peripheral usage per program

Centralized Input/Output Control for Total System Efficiency

- Optimized user read/write performance
- Device status testing
- Tailored I/O paths for specific devices
- Greater throughput by significantly reducing disk I/Os through the storage of user program overlays in main memory
- Provides automatic spooling for low speed input-output data
- Transfers output data to peripherals
- Multiprograms data communications and batch work automatically

- Operates with Data Link Processors (DLP) to optimize concurrent use of I/O channels
- Supports Qwik Disk in main memory

Programming Flexibility with User-Oriented Languages

- Guides compilation of source programs
- Assists in the use of utility functions and conversion aids
- Automates many tedious and costly programming operations
 - Memory allocation
 - Loading routines
 - File opening and closing
 - Physical data management
 - Input/Output procedures
 - Program library calls
 - Error handling
 - Other computer "housekeeping"
- Saves time and money
 - Permits programmers to concentrate on problem solutions
 - Less training time for programmers
 - More time for constructive programming

Growth Without Reprogramming

- Allows the addition of memory, peripheral devices, data communications, and terminal systems as needed
- No reprogramming
- A simple control statement advises MCP/VS of the change
- MCP/VS automatically reorganizes scheduled workloads to take full advantage of increased capabilities
- Permits confident, long-range planning

Release 2.0 New Features

In addition to providing these standard operating system features, MCP/VS provides significant physical and logical enhancements over previous MCP releases, such as:

- **Memory Management** — each user task is placed in a memory area controlled by a base/limit register upon execution. No task has access to all of memory at any instant. This provides absolute memory protection, improves MCP/VS and system reliability and maintainability.
- **Memory Addressability** — addressability of up to 160 million bytes of main memory
- **Re-entrant MCP** — MCP/VS assigns copies of its own routines to user tasks executing in the system to improve throughput and fault tolerance.
- **Increased Capacities:**
 - Maximum tasks — 775
 - Maximum peripherals:
 - Disk pack devices — 10,000
 - Non pack devices — 10,000
 - Timesharing memory area — prior limits removed.
- **Increased Reliability and Fault Tolerance** — the MCP's modularized and re-entrant architecture provides the potential for continued, non-stop operation since it is free from non-critical peripheral subsystem or user task faults.
- **Enhanced Input/Output** — tailored Input/Output paths have been further optimized in Release 2.0. Significant improvements in I/O channel utilization have been made.
- **Expanded Debug Module:**
 - Concurrent debug sessions for multiple tasks
 - Interactive debug via a uniline or ODT terminal
- **Data Base Accessability** —
 - Maximum open data bases - 49
 - Maximum data base users - 98
- **Improved Shared System Flexibility**
 - All, some, or none of the disk and pack devices can be shared among all or some of the processors.

- Remote Maintenance — remote active or passive maintenance through the maintenance processor
- Strong Foundation For Future Enhancements

System Requirements

Central Processor
V300 System
V500 System

Memory:
2MB memory

Peripherals:
Magnetic tape
Disk and disk pack drive
Operator console
Line printer

Reference Material

MCP/VS Architecture Manual (form 5026289)
MCP/VS Support Manual (form 5026297)
Operations Guide Volume 1, Installation (form 5026230)
Operations Guide Volume 2, System Commands (form 5026248)
Operations Guide Volume 3, System Utilities (form 5026255)
Operations Guide Volume 4, Output Messages (form 5026263)
Operations Guide Volume 5, Glossary (form 5026271)
MCPIX to MCP/VS Migration Manual (form 5026545)
Logging Reference Manual (form 1178076)
Security Installation Manual (form 1178092)
Programming Reference Manual (form 5022973)

Product Support

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Product Identification

Program Identification	Description	Code Form
MCPVS	Multiprogramming Operating System	OBJECT
Utilities:		
BFRF	Backup File Inquiry/Maintenance	OBJECT
B974LD	B974 Firmware Loader	OBJECT
CONFIG	Configurator File Generator	OBJECT
COPY	File Transfer	OBJECT
CHGSEC	System Security Utility	OBJECT
DISPKV	Disk Pack Utility	OBJECT
DLPXCO	Clears Hung DLPS	OBJECT
DMPALL	Generalized Media Conversion	OBJECT
DMPANL	MCP Dump Analyzer	OBJECT
DMPMEM	Off-Line Memory Dump	OBJECT
DMPOUT	Program Dump Analyzer	OBJECT
DSKOUT	Disk File Print	OBJECT
FMLODR	Automatic Firmware Loader	OBJECT
GUARD	System Security Utility	OBJECT
LDCNTL	Pseudo Card Reader Control	OBJECT
LDHOST	Host Load Firmware	OBJECT
LGDCOM	Log Consolidator	OBJECT
LOADER	Train Printer Buffer Generator	OBJECT
LOADFW	Offline Firmware Loader	OBJECT
LOGCON	Log Consolidation Merge	OBJECT
MAKTRN	Translation File Generator (SORT)	OBJECT
MDCOPV	Minidisk Copy and Analysis	OBJECT
MERG:	Merg Files	OBJECT
MLGEXT	Log Consolidation MLOG Extract	OBJECT
MLGOUT	Maintenance Log Print	OBJECT
PATCHK	Object Patch Verification	OBJECT
PBDPRN	Print Backup Files	OBJECT
PCHOUT	Pseudo Card Output Control	OBJECT
PCOPY	Object Program Copy	OBJECT
PKCOPY	Pack Copy	OBJECT
PTDMNO	Peripheral Test Maintenance Program	OBJECT
RJE	Remote Job Entry Handler	OBJECT
RLGEXT	Log Consolidator RLOG Extract	OBJECT
RLGOUT	Run Log Print	OBJECT
SLGOUT	Operator (SPO) Log Print	OBJECT
SMSCRN	SMS Data Entry	OBJECT
SMSRPT	SMS Reporting	OBJECT
SORT.	Disk File Sort	OBJECT
SORT:	Disk and Tape File Sort	OBJECT
SQUASH	Pack File Squash	OBJECT
SRTUTL	Sort Utility	OBJECT
SYSTEM	Off-Line System Loader	OBJECT
SYSUP	System Start-up Utility	OBJECT
TABMRG	Log File Merge	OBJECT
UNLODV	Uniline Firmware Loader	OBJECT
USERHO	System Security Utility	OBJECT
USERLS	System Security Utility	OBJECT