

# Software Product Description

PRODUCT NAME: VAX 8600/8650 Diagnostic Set

SPD 26.82.01

## DESCRIPTION

VAX 8600/8650 Diagnostic Set is a package of programs that allows users to maintain a VAX 8600/8650 central processor unit (CPU) and standard VAX 8600/8650 peripheral devices. The set includes micro- and macrodiagnostic programs which are required to fully support diagnosis of a VAX 8600/8650 system.

The microdiagnostic programs detect and isolate faults at the module level within the CPU, Floating Point, and memory. Microdiagnostic monitor and a number of test overlays achieve module level fault detection and isolation.

Microdiagnostics are executable with the microdiagnostic monitor running in the VAX 8600/8650 LS/11 console. The console disks provide storage for the microdiagnostic test overlays. Microdiagnostic tests are organized into a bootstrapping sequence for testing the console interface, data path hardware, SBI-Cache-Translation Buffer, I-stream Buffer, SBI, and Memory Controller, Arrays and Floating Point Accelerator (FPA). All detected faults result in error typeouts that indicate the smallest set of modules to which the program can isolate a failure.

The macrodiagnostic programs provide fault detection and isolation within the VAX 8600/8650 CPU and standard options.

### Macrodiagnostic Components

VAX Diagnostic Supervisor (VDS) - Supplies diagnostic and operator services (I.E., loading, starting, and control) as a stand-alone controller (non-VAX/VMS) or as a process under VAX/VMS.

Diagnostics - Consist of exercisers, functional-level and logic-level tests that run under control of VDS. Functional-level tests run in stand-alone mode or with VAX/VMS. Repair level programs run only in stand-alone mode.

Supporting programs also included are console micro-code, boots, and device drivers.

## VAX-11 Diagnostic Program Levels

Level	Run-time Environment	Types of Programs
Level 1	Runs under VAX/VMS Operating System	System exercisers
Level 2R	Runs under VDS in user mode only	Function tests of tests of peripheral devices
Level 2	Runs under VDS in user and stand-alone modes	Function tests of peripheral devices
Level 3	Runs under VDS in stand-alone mode only	Functional tests and logic of peripheral devices
Level 4	Runs in stand-alone without VDS	Function and logic tests of CPU cluster
Level 5	Runs in WCS or system console, not in VAX main memory	Micro programs

### MINIMUM HARDWARE REQUIRED

Any valid VAX 8600/8650 system configuration

### OPTIONAL HARDWARE

None

### PREREQUISITE SOFTWARE

VAX/VMS Operating System is recommended.

### OPTIONAL SOFTWARE

None

### SOFTWARE INSTALLATION

CUSTOMER INSTALLED

### WARRANTY

NONE

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VAX 8600/8650 Diagnostic Set is available only on RL02 disk cartridge

ZK200-CH Single-use license, binaries, no documentation, no support services.

ZK200-DZ Single-use license-only, no binaries, no documentation, no support services.

**Update Option - Available only on Magtape**

Licensed users of VAX 8600/8650 Diagnostic Set may order the following software update at the prevailing rate for such update. The update is distributed in binary form on magtape and includes no installation or other services unless specifically stated.

ZK200-HH Annual Diagnostic Update Service, binaries, no documentation, no support services on Magtape.

**Miscellaneous Options**

Maintenance Documentation Service (MDS) - Microfiche documentation library

MD-VAX-00 Maintenance Documentation and Diagnostic Listings for VAX systems (Library Only)

MD-VAX-R Subscription 1-year Update Service for MD-VAX

MD-VAX-D Maintenance Documentation for VAX systems (Library Only)

MD-VAX-DR Subscription Update Service for MD-VAX-D

MD-VAX-L Diagnostic Listings for VAX systems (Library Only)

MD-VAX-LR Subscription Update Service for MD-VAX-L

MD-MFDOL-00 Complete FCO Listings, 1-year updates included

**ADDITIONAL SERVICES**

None