Motorola MVME133A-20

Complete Product Information | decision matrix

Motorola MVME133A-20 is a 32-bit VME monoboard computer with a 20 MHz MC68020 processor, onboard DRAM, serial communications and system-controller capability.

02 Configuration and interface matrix

Microprocessor	20.0 MHz MC68020
Board class	32-bit VME monoboard computer
Local DRAM	1 MB onboard MVME133A architecture
Floating point	MC68881 coprocessor in MVME133A architecture
VME interface	A32/D32
Serial channel A	RS-485/RS-422 configurable
Serial channel B	RS-232-C, jumper-selected DCE or DTE
System controller	Jumper-enabled VME controller functions
ROM sockets	Four 28-pin sockets in two banks
Power requirement	+5 V, 5 A typical; 7 A maximum, plus ±12 V rail provision

03 Application roles and compatibility

VME host processing

Run the original MC68020 software and access VME slave modules under the recorded address and interrupt map.

Multidrop serial communication

Use the RS-485/RS-422 channel only with the correct line topology and master/slave setting.

Service terminal

Use the RS-232 channel with the required DCE/DTE strap and cable pinout.

System-controller duty

Enable VME arbitration and reset functions only in the chassis slot assigned to controller service.

Practical compatibility boundary

Motorola catalog ordering information names MVME133A-20 as the 20.0 MHz MC68020 execution. Serial configuration and VME controller functions are board-level features whose use depends on installed jumpers and cabling.

04 Product precautions

Chassis isolation

Remove power and use ESD protection before touching the board or ROM devices.

Supply capacity

Verify +5 V and auxiliary rails against the catalog board load and the complete chassis budget.

Serial jumper map

Copy DCE/DTE and RS-485 operating mode selections from the working installation.

ROM devices

Record installed socket identities and orientation before moving any programmed device.

05 Offered unit and lifecycle

Condition: New, original product. Confirm the complete board marking, ROM/EPROM population, jumper settings and P2 cable arrangement in the quotation; external memory and peripherals are separate.

Lifecycle status

MVME133A-20: A current manufacturing or support phase for this complete marking is unconfirmed. For legacy support, retain the programmed ROM devices, serial jumpers and system-controller settings. Apter Power availability is separate from the manufacturer lifecycle phase.

Engineering decisions

Why is the -20 suffix significant on MVME133A-20?	Motorola uses it for the 20.0 MHz MC68020 version. Preserve the suffix when selecting software timing assumptions or replacement stock.
How should RS-232 cabling be selected for MVME133A-20?	Check whether the board is strapped as DCE or DTE, then compare the installed P2-to-connector cable against the board pinout before connecting a terminal.
What does the RS-485/RS-422 mode change on MVME133A-20?	Master/slave and duplex choices alter how the serial channel participates on a shared line. Restore the recorded mode and termination scheme.
When should MVME133A-20 provide VME system-controller functions?	Only when the original chassis design assigns that board the controller role; verify the enabling jumper and arbitration plan.
Why should ROM sockets be inspected during MVME133A-20 exchange?	The board can carry application or boot code in socketed devices. Record each device and orientation so a replacement does not start with an unrelated image.

Discuss the fitted revision.
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Source: Motorola Microcomputer Systems and Components, 1987, MVME133A data and ordering entry; MVME133 User Manual

Other Motorola references

Motorola MVME172-333

Motorola MVME172PA-652SE

Motorola MVME5100

Catalog navigation only; verify each model separately.