Motorola MVME133A-20

Installation & Commissioning | field workflow

Use this guide to prepare, fit, test and document the offered MVME133A-20 within its actual installed system.

Exact offered identity	MVME133A-20
Engineering role	MC68020 VMEbus Monoboard Computer
Installed-system reference	MVME133A 32-bit VME monoboard computer

Before work starts

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.

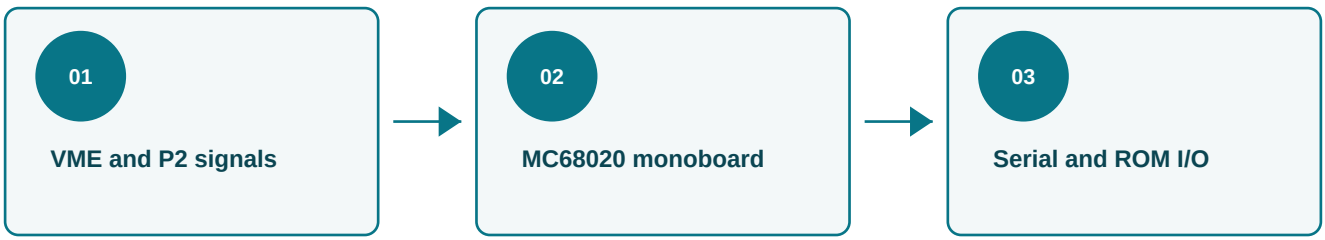
Record first

Send the complete MVME133A-20 marking, installed revision, quantity and system configuration with your enquiry.

Work package

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

Engineering path



02 Pre-installation readiness

STEP	ACTION	ACCEPTANCE
01	Chassis isolation	Remove power and use ESD protection before touching the board or ROM devices.
02	Supply capacity	Verify +5 V and auxiliary rails against the catalog board load and the complete chassis budget.
03	Serial jumper map	Copy DCE/DTE and RS-485 operating mode selections from the working installation.
04	ROM devices	Record installed socket identities and orientation before moving any programmed device.

Companion and host check

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

03 Fit and interface

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.

Serial wiring

Channel A and B use different electrical standards. Verify P2 wiring and DCE/DTE jumpers against the installed cable before energizing communications.

04 Commission and prove

STEP	ACTION	ACCEPTANCE
01	Controller role	Match SYSRESET and arbitration jumper configuration to the system-controller plan.
02	Functional checkout	Prove processor boot, local DRAM, VME traffic and each used serial channel with the host application.

STEP	ACTION	ACCEPTANCE
03	Record the functional result	Boot the intended ROM image, pass local memory tests, exercise both configured serial paths and validate the machine VME transaction sequence.

VME role

System-controller functions are selected by board jumpers; retain the chassis arbitration and SYSRESET arrangement.

05 Handover record

Log the fitted marking, firmware or board revision, wiring changes and measured acceptance results.

Diagnostic decisions

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.
How should a memory fault be isolated on MVME133A-20?	Run local diagnostics and inspect the onboard DRAM and power rails before attributing a failure to VME peripherals.
What VME checks follow installation of MVME133A-20?	Confirm the A32/D32 address map, interrupts, bus arbitration and transfers used by the installed application.
What proves MVME133A-20 is ready for service?	Boot the intended ROM image, pass local memory tests, exercise both configured serial paths and validate the machine VME transaction sequence.



Discuss the complete model and fitted revision with Apter Power.
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Technical basis: Motorola Microcomputer Systems and Components, 1987, MVME133A data and ordering entry; MVME133 User Manual