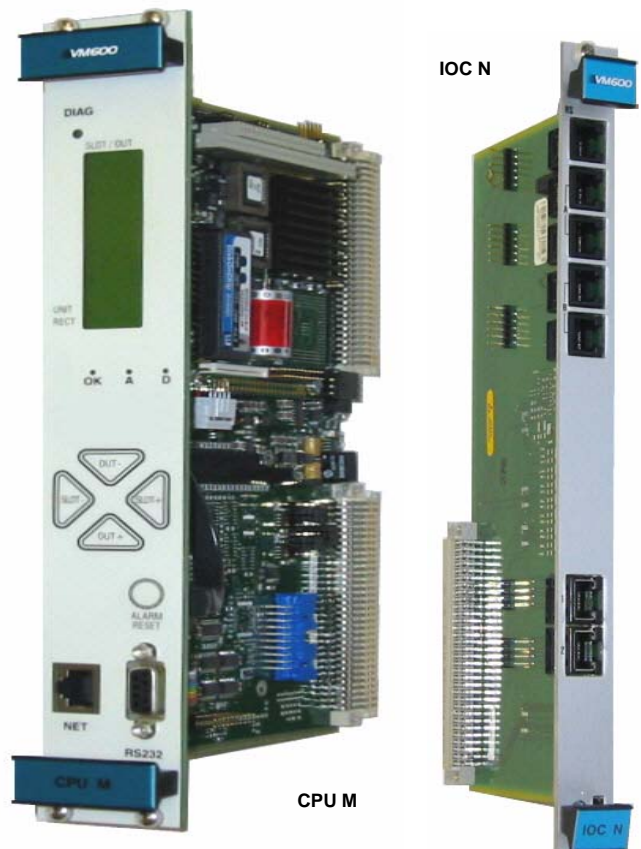


CPU M & IOC N

Modular CPU Card & Input / Output Card Types CPU M & IOC N

FEATURES

- ▶ 'One-Shot' configuration of all VM600 cards using a direct Ethernet or RS-232 serial connection from an external PC (e.g. laptop, notebook, or industrial PC) running Vibro-Meter's MPS (Machinery Protection System) software
- ▶ Local micro-display for visualisation of monitored outputs and alarm limits
- ▶ External communication interfaces with third party devices such as DCS/PCS
- ▶ Up to 3 serial connections (RS232/422/485), as well as up to 2 Ethernet connections, can be accommodated simultaneously. 'Redundant' communications links can be configured where necessary
- ▶ Industry standard protocols including Modbus RTU, and Modbus/TCP provided
- ▶ Extended operating range of -20°C to +60°C



DESCRIPTION

The CPU M is a modular Central Processing Unit (CPU) card intended for use in Vibro-Meter's VM600 series of **Machinery Protection System (MPS)** and **Condition Monitoring System (CMS)** racks. Depending on the system requirements, the CPU M may be used alone in the rack (installed in the front card cage) or in conjunction with the corresponding **IOC N Input / Output Card** (installed in slot 0 of the rear card cage, directly behind the CPU M).

The modular, highly versatile design of the CPU M means that all rack configuration, display and communications interfacing can be performed from a single card.

The CPU M consists of a base carrier card having two PC/104 type slots. One of a range of PC/104 modules can be installed in each slot. In the standard configuration, a single PC/104 type CPU module is fitted. This provides an RS-232 connection via a DB9 connector, and an Ethernet network connection via an RJ45 connector on the front panel, or alternatively, via the relevant ports on the IOC N, if installed.

The IOC N is a network communications card which includes two pairs of RJ11 connectors (labelled A and B) for configuring multi-drop RS-485 networks of

VM600 racks, and another RJ45 connector for a redundant Ethernet connection. These extra connectors may be used if the optional Ethernet and RS-485 (RS-422) PC/104 modules have been installed on the CPU M.

The CPU M front panel features an LCD display that shows the level of a selected monitored output in bar-graph and digital form. The Alert and Danger levels are indicated on the bar-graph. The signal identification (slot and output number) is shown at the top of the display. The **SLOT** and **OUT** (output) keys on the front panel are used to select which signal to display.

Coloured LEDs on the front panel indicate the **OK**, **Alert (A)** and **Danger (D)** status for the currently selected signal (these are coloured green, yellow and red, respectively). When Slot 0 is selected, the LEDs indicate the status of the whole rack. When the CPU M card is functioning correctly, the green **DIAG** (diagnostic) LED is lit.

An **ALARM RESET** button on the front panel resets all latched alarms (and associated relays) for the entire rack.

CPU M SPECIFICATIONS

CARRIER BOARD

Electrical

Supply voltage	: 5 V _{DC} ± 5%
RS 485 isolation	: 500 V _{DC}
Power consumption	: < 10 W

Physical

Height	: 6U (262 mm)
Width	: 40 mm
Depth	: 187 mm
Weight	: 0.4 kg

Environmental

Operating	
• Temperature	: -20°C to +60°C
• Humidity	: 0 to 90% non-condensing
Storage	
• Temperature	: -20°C to +85°C
• Humidity	: 0 to 90% non-condensing

CPU MODULE (always installed)

Type	: MSM586SEN or equivalent
Processor speed	: 133 MHz
Memory	: 128MB DRAM
Dimensions	: 96 x 90 x 20 mm
Operating temperature	: -20°C to +60°C
Power supply	: +5 V _{DC} , <1.5A
Operating system	: QNX
Communication ports	
• RS232/RS422/RS485	: ≤ 115.2 kBaud
• Ethernet	: Network interface: 10 Base-T Data transfer rate: 10 MBits/s

ADDITIONAL ETHERNET CONTROLLER MODULE

Type	: MSME104 or equivalent
Network interface	: 10 Base-T
Data transfer rate	: 10 MBits/s
Dimensions	: 96 x 90 x 20 mm
Operating temperature	: -20°C to +60°C
Power supply	: +5 V _{DC} , 250 mA

ADDITIONAL SERIAL COMMUNICATIONS MODULE (RS)

Type	: AIM104COM4 or equivalent
Network interface	: 2x RS232 (not used) Isolated RS422 and/or RS485 (total of 2)
Baud rate	: ≤ 115.2 kBaud
Isolation	: > 100 V _{DC}
Dimensions	: 96 x 90 x 20 mm
Operating temperature	: -20°C to +60°C
Power supply	: +5 V _{DC} , 220 mA

IOC N SPECIFICATIONS

Electrical

Supply voltage	: 5 V _{DC} ± 5%
Power consumption	: < 2 W

Physical

Height	: 6U (262 mm)
Width	: 20 mm
Depth	: 125 mm
Weight	: 0.25 kg

Communication ports

Ethernet : 2 RJ45 connectors; 10 Base-T.
Serial : 5 RJ11 connectors (RS-232 or RS-485); 'RS', 'A' (x2), 'B' (x2).

Environmental

Operating
• *Temperature* : -20°C to +60°C
• *Humidity* : 0 to 90% non-condensing
Storage
• *Temperature* : -20°C to +85°C
• *Humidity* : 0 to 90% non-condensing

ORDERING INFORMATION

To order please specify :

Type	Designation	Ordering Number
CPU M	Modular CPU Card	
	- Including carrier card and PC/104 CPU module (with integral Ethernet controller)	200-595-SSS-1Hh
	- Including carrier card, PC/104 CPU and additional Ethernet module	200-595-SSS-3Hh
	- Including carrier card, PC/104 CPU and additional Serial Communications module	200-595-SSS-4Hh
	- All other configurations	On request
IOC N	Input / Output Card for CPU M	
	- Standard version	200-566-000-1Hh
	- Separate circuits in accordance with IEC/CEI 60255-5 standard	200-566-000-2Hh

Note : "SSS" represents the firmware (embedded software) version and "Hh" the hardware version. "H" increments for major modifications that can affect product interchangeability. "h" increments for minor modifications that have no effect on interchangeability.



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