

## CML01

### Control, Measurement and Data Logging for Customized Slow Control

The Control, Measurement and Data Logging system (CML) is designed to add remote control and monitoring functionality to electronic systems. Analog measurement is done with a fast & high precision 12 bit AD converter. The 24 analog input channels are configured to measure 8 voltages, 8 current-proportional voltage signals and 8 temperature probes. If current shunt signals are not used, these inputs may be used as general purpose analog inputs.

The integrated supervision system compares all measured voltages with a minimum and maximum value and the currents, temperatures and with a maximum value. Exceeding the supervision threshold can switch off the system.

Fan speed measurement and speed control of up to 9 fans is provided. The fan supply voltage is generated on board, so no special fans with PWM input are required. Up to 3 fan groups can be regulated individually.

If the fans are supplied by a separate power supply, a follow-up time can be set and the system can be cooled down after power off. If the CML is supplied by an external power source, it is possible to switch the main system power supply on or off with the on/off switch or via network.

All necessary functions are implemented on a small (100mm x 120mm) board. The system connections are provided on a 2mm high density connector.

For standard backplanes (e.g. VME) specific adapters are available.

The CML/adaptor combination can be inserted into a VME slot like a standard VME module. All necessary bus connections are satisfied, and additional I/O signals are available at the unused pins of P2 row A and C.

An optional alphanumeric display module can be connected to the CML. With this display all measured values can be visualized, and system settings can be changed.

### Features

- Voltage: 8 differential inputs, 12 bit ADC
- Temperature: 8 inputs (semiconductor sensors)
- Universal V / I : 8 differential inputs, 12 bit ADC
- Digital inputs: 14 TTL
- Digital outputs: 16 TTL/LED driver, 4 open collector
- Fan Control: 9 fans monitored, fan speed settable (no PWM signal necessary)
- Fully controlled, programmable trip thresholds (min./max. voltage, max. current, power, temperature)
- Generation/Detection of VME / cPCI RESET, ACFAIL
- Ethernet connection IEEE 802.3 10BASE-T and IEEE 802.3u 100BASE-TX
- WWW-Server integrated, full control via SNMP protocol
- ON/OFF switch, VME/CPCI RESET button and up to 5 LED's at the front panel
- PC-Control (connected to galvanic isolated USB) with free available software
- IP address static or dynamic via DHCP
- Firmware update possible via USB or Ethernet
- Different security access level
- OPC server available, EPICS
- Automatic data logging on Windows/Linux PC possible
- Optional alphanumeric display

### Ordering Information

Standard configurations (others possible by request).

Items	Size
CML01 VME	3U
CML01 VME	6U





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