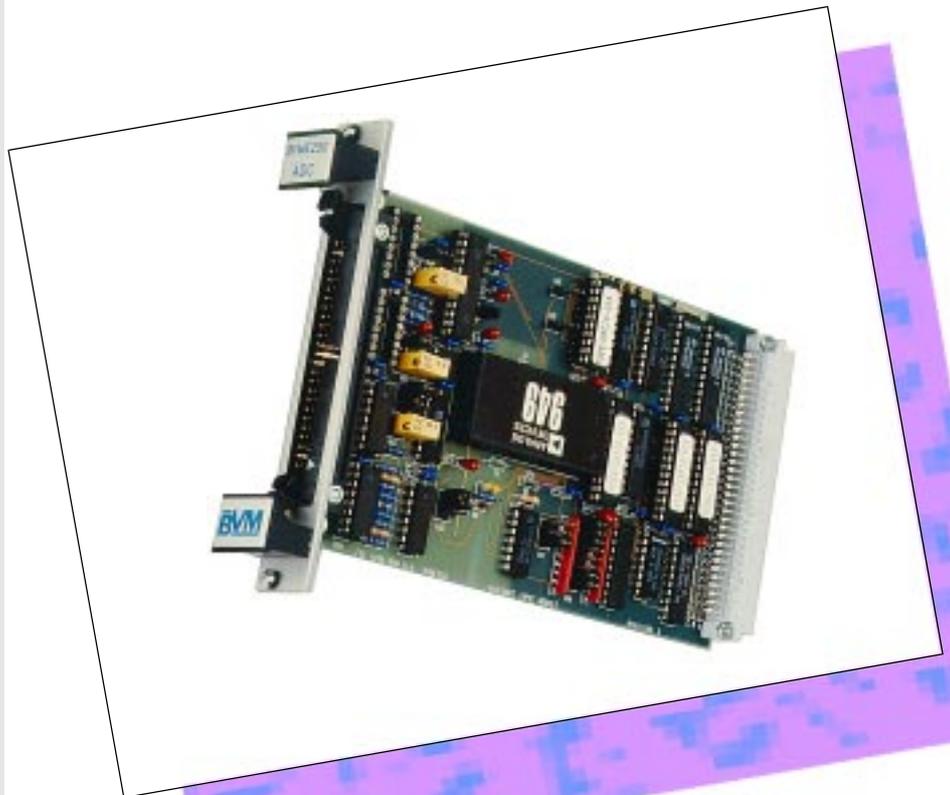


BVME250

Analogue Input Module

- Up to 32 analogue inputs
- Full 12 bit resolution
- 11µsec. worst case conversion time
- Switchable input voltage ranges of
 - 20mv
 - 200mv
 - 2v
 - 20v full scale
- Single ended or differential input operation
- Unipolar or bipolar operation
- Single Eurocard 3U form factor with 6U front panel option
- Fully compatible with VMEbus specification C.1
- Fully supported with OS-9 drivers and 'C' bindings

The BVME250 is a compact 3U VMEbus module providing up to 32 single ended analogue input channels or 16 differential inputs. The inputs are selected via the input multiplexer and scaled by the precision instrumentation amplifier before being converted by the A to D converter.



A resolution of 12 bits is available with a worst case conversion time of 11µsecs. Communication with the VMEbus is via registers in the short I/O address space and on-board interrupt generation and acknowledge are provided.

Analogue Input Operation

The BVME250 has 32 analogue input channels which can be configured individually for single ended input or as pairs to provide 16 independent differential inputs.

The input signal is selected via the analogue mux and fed to a precision instrumentation amplifier. This amplifier has a link selectable gain of 1, 10, 100 or 1000. The gain of the amplifier may also be controlled in software via the channel select register.

The output from the instrumentation amplifier is fed to the Analogue to Digital converter which has a sensitivity of 10 or 20 Volts. This allows the user to select the best gain/sensitivity match for a particular application.

Worst case conversion time is 11 μ S which includes 2 μ S sample and hold time. If the channel selected register has been written to a further 15 μ S is added to the conversion time to allow the input amplifiers and multiplexer to settle.

VMEbus Operation

The BVME250 occupies 256 bytes in the short I/O address space. There are 6 registers each of 16 bits, accessible to the user. The base address can be located on any 256byte boundary by link selection.

Interrupts can be generated on any individual link selectable level I(1-7) These operate on a Release on Register Access mode (RORA).

Interface Modules

A DIN rail mounting Plant Interface Module (PIM) is available to simplify cable termination by providing screw connectors and also provides a mounting for any signal conditioning resistor or capacitors required for

specific applications. The PIM connects to the BVME250 via ribbon cable providing a simple transition between computer and plant wiring.

Specifications

Analogue Inputs

32/16 Single ended/differential
Gain 1, 10, 100 or 1000
ADC range 0 - 10, 0 - 20 Volts

VMEbus Slave

A16:D16, D8(OE)
AM6, RMW

Interrupter

I(1-7) Single level RORA. Link select.
SYSRESET Monitor

Links

Register Base Address
Interrupt level
Amplifier gain
Differential/Single ended operation
Unipolar/Bipolar operation

Dimensions

160mm x 100mm Single slot

Power

+5V, 750mA Typ
+12V 0.0A
-12V 65mA

Environmental

0 to 70°C
95% humidity non-condensing
(extended specification available to order)

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