



PRELIMINARY

MVME4514 16 Channel Scanning Analog I/O Module

Specifications

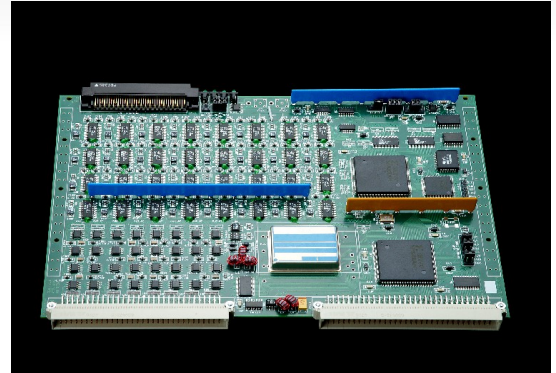
- **Analog Inputs** - 32; 16 Differential, 16 Single-ended
- **A/D Conversion Time** - 15 μ s
- **Analog Input Acquisition Time** - 10 μ s
- **A/D Throughput** - 40kHz (maximum)
- **Monotonicity** - Monotonic over full temperature range
- **Common-Mode Range** - \pm 11V (maximum)
- **Common-Mode Rejection** - 82db
- **Channel Conversion Rate** - 40kHz \div number of scanned channels
- **Accuracy** - 0.04 percent of range \pm 2mV may be calibrated to 0.02 percent \pm 0.5mV
- **Input Bias Current** - 2nA (maximum)
- **Optional Single Pole Analog Input Filter** - -3db at 36Hz
- **Full-Scale Input Ranges** - \pm 2.5V, \pm 5V, \pm 10V, 0 to +5V, or 0 to +10V
- **Analog Input Code/Resolution** - 16-bit ADC, right justification for 12-bit word usage)
- **Input Overvoltage Protection** - \pm 40V, maximum
- **Data Transfer Type:** D16
 - **Analog Output**
- **Full-Scale Analog Output** -
 - Unipolar:** 0 to +10V, 0 to 5V; **Bipolar:** \pm 2.5V, \pm 5.0V, \pm 10.0V
- **Analog Output Code** - The 16-bit DAC accepts digital codes in straight binary and offset binary.
- **Output Load Current** - 10mA, maximum at full accuracy
- **Resolution** - 16-bit DAC, S&H per channel
- **Output Impedance** - 0.2 Ω
- **Total Error** - 0.05 percent of full-scale range
- **Maximum Settling Time to 1 LSB** - 1.7ms
- **Refresh Update Rate** - 550Hz (default); 1,600Hz (FAST REFRESH).

VME Specifications

Conforms with VME Specifications Revision C.1 IEEE Std. 1014-1987

Board size - 6U

Power Requirements - +5V @ 4A



The MVME4514 Analog Scanning I/O Module is a drop-in-replacement for the GE-IP VMIC VMIVME-4514A

Environmental

- **Operating Temperature** - -20 to 85 $^{\circ}$ C
- **Storage Temperature** - -40 to 125 $^{\circ}$ C
- **Shock** - 25g, 11ms on all axis
- **Humidity** - 95% Rel. Humidity, non-condensing
- Conformal coating is standard on all units.
- Conduction-cooled version available

Features

The MVME4514 Analog Scanning I/O module provides 16 analog input and 16 analog output channels. The analog input channels are controlled by a scanner. It continually digitizes all input channels and stores the results in a dedicated channel dual-port register. It provides three A/D operating modes with P2 I/O connection and supports built-in test on board.

As with all Merlin Embedded DIR products, the MVME4514 has the same, or better, functional performance than the product it is replacing. All Merlin Embedded products are backed by a 2-year warranty and 15 years of life-cycle support. The user will not have to take on any obsolescence issues when utilizing Merlin Embedded products.

Merlin Embedded

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