



MIP-Therm Ipack Thermistor Module

Specifications

- Thermistor Range** – 0 to 5.11k Ω , 0.2W
- Logic Interface** – IndustryPack Logic Interface, 0.7.1 Compatible
- Input Overvoltage** - $\pm 35V$ Continuous, w/wout power to the IP module
- Current Source** – 1 mA constant, 5 ppm/ $^{\circ}C$ typical drift, S/W switch ON/OFF; factory-trimmed accuracy of 0.1%
- Channels** – 16 Temperature Input
- Connection Configuration** – 2-wire or 3-wire
- Resolution** – 16-bit with integral Sample-and-Hold
- Data Format** – 16-bit Binary
- Conversion Rate** – 58.8 ksample/s continuous
- Settling Time** – 3 μs to 0.01%
- Dynamic Linearity** - ± 2 LSB, $\pm 0.05\%$ of FSR
- Factory Trim** – DC offset voltage to ± 2 LSB accuracy; reference voltage to +5.12V
- Pacer Clock** – 16 bits, 1 μs resolution, optional interrupt
- Interrupt** – Vectored, generated with pacer clock or ADC
- Memory** – 2 kbits
- Host Interface** – Register-based mapped w/in IP I/O space
- Onboard Options** – User Installed optional shunt resistors for thermistors over 5.11k Ω
- Interface Connectors** – 50-pin Flat ribbon cable
- DMA** - DMA Basic DMA read in the memory space for pipelined conversion
- On board Options** – Range on DAC outputs



The module is a drop-in-replacement to the obsolete GE-IP(SBS) IP-THERMISTOR

The module provides 16 channels of temperature input for thermistor-based sensors. The circuit functions as a complete solution for integrating thermistor circuits in an IP-std platform. Thermistors are negative temperature coefficient resistors; as temperature sensed increases, resistance value decreases. The module provides a stable current source and measures voltage drop across the sensor into the 16 channels of ADC inputs. The module then performs, buffering, S&H, control and conversion. There is no external function required, such as timing, signal conditioning or ADC.

Power Requirements

- +5 Volts @ 60mA
- +12Volts @ 40mA

Environmental

- Dimensions** – 1.8" x 3.9" x 0.344"
- Operating Temperature** - -40 to 85 $^{\circ}C$
- Storage Temperature** - -40 to 125 $^{\circ}C$

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