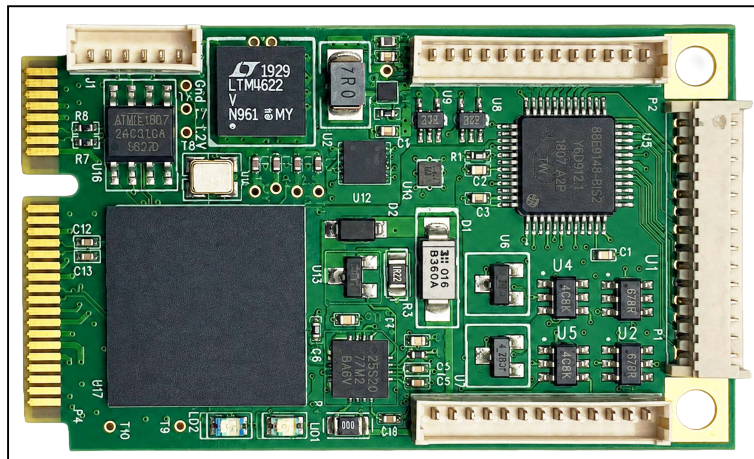


Multi-Sensor, High Accuracy Digital Temperature Measurement System

Features

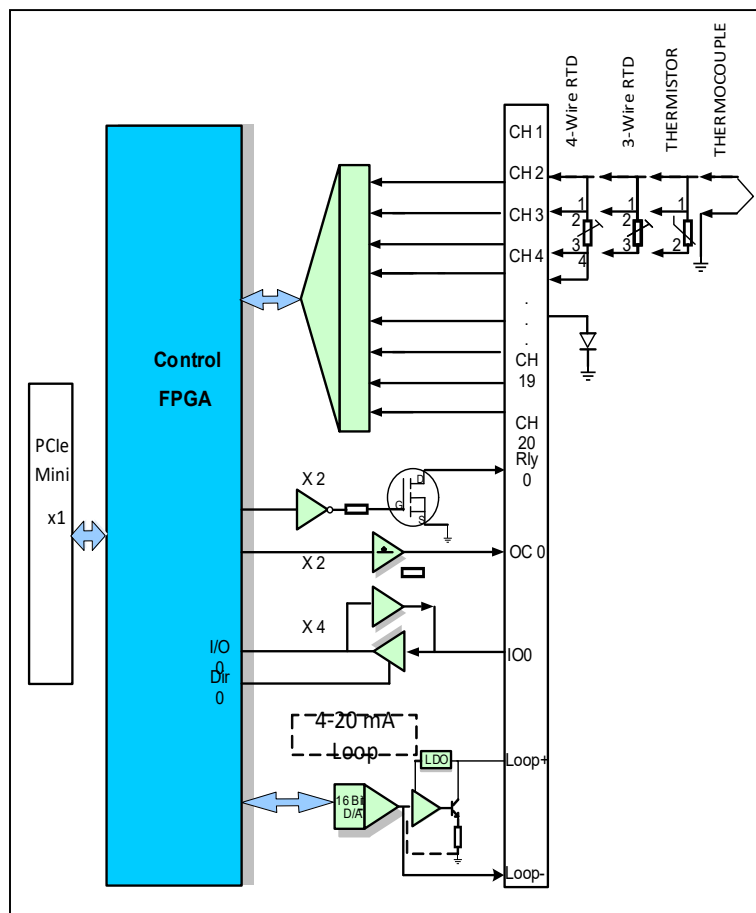
- Digitizes up to 20 channels of interchangeable 2- 3- or 4-wire sensors
 - Thermocouples
 - Resistance Temperature Detectors (RTDs)
 - Thermistors
 - Diodes
- Temperature output accuracy of 0.1°C and 0.001°C resolution
- Four channels of digital I/O, with programmable direction
- Two open collector outputs
- One channel 4-20mA output
- Two Sink relay control outputs
- Integrated EEPROM stores channel configuration data and custom coefficients



Block Diagram and Operational Overview

The PCIe-Mini-DTMS is a Mini PCI Express x1 module that can be used as a complete temperature monitor and control device. Its versatile input choices and multiple output capabilities satisfy an extensive range of application requirements.

The DTMS measures a wide variety of sensors, and it digitally outputs the results with 0.1°C accuracy and 0.001°C resolution. It can measure temperature with standard 2- 3- or 4-wire RTDs, Thermistors and Diodes, and with virtually all standard or custom Thermocouples.



Measurement System capabilities

- Directly digitizes 2- 3- or 4-wire Thermocouples, RTDs, Thermistors and Diodes
- Automatic Thermocouple cold junction compensation
- Built-in standard and User-programmable coefficients for Thermocouples, RTDs and Thermistors
- Measures negative Thermocouple voltages
- Buffered inputs allow external protection
- Simultaneous 50Hz/60Hz rejection
- Includes 15ppm/°C reference
- Integrated EEPROM stores channel configuration data and custom coefficients
- Interfaces directly to ground-referenced sensors without needing level shifters, negative supply voltages or external amplifiers
- All temperature input signals are buffered and simultaneously digitized with three high-accuracy 24-bit $\Delta\Sigma$ ADCs, driven by an internal 10ppm/°C (max) reference.

Digital I/O capabilities

- Four digital I/O channels, with software programmable direction
- Two relays control up to 200mA (Sink)
- Two open collector output channels
- One output channel, 4-20mA

Applications

- Temperature monitor and system control
- Direct Thermocouple, RTD and Thermistor measurements
- Custom sensor applications

Available Software Drivers

- Linux® drivers
- Windows® drivers
- VxWorks® drivers

Mechanical

- Size: Mini PCIe Module (30mm x 50.95mm)
- Power: TBA
- Front panel I/O
- Vibration: 0.5G, 20-2000Hz rand
- Shock: 20G, 11ms, ½ sine
- Weight: 10g (0.4oz)
- MTBF: >250,000 hours

Operating Environment

- Operating temperature
Commercial: 0 to +70°C
Industrial: -40°C to +85°C
- Non-operating: -50°C to +90°C
- Airflow requirement: .5CFM
- Humidity: 5 to 90% (non-cond)
- Altitude: 0 to 10,000 feet

Ordering information

PCle-Mini-DTMS
PCle-Mini-DTMS-I

Digital Temperature Measurement System, Commercial Temp 0°C to +70°C
Digital Temperature Measurement System, Industrial Temp -40°C to +85°C

Append -CC for Conformal Coat

Optional Accessories

CBL-DTMS-12

13 pin pigtail Cable, 12in length (DO WE NEED THIS??)