

# H.E.A.T Board

## Harsh Environment Acquisition Terminal

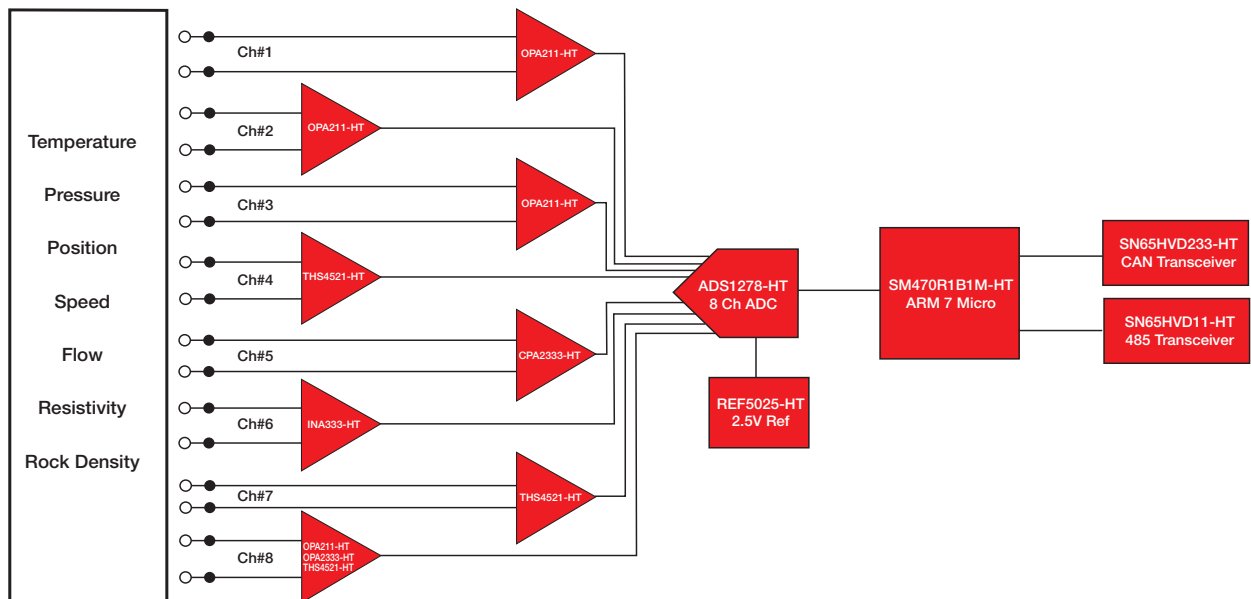
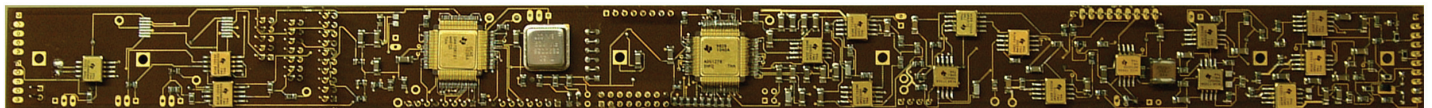
### Texas Instruments 200°C High Temperature Evaluation Module



#### General purpose “Signal Acquisition” High-Temp EVM

- World’s first High Temperature Evaluation Module with components qualified for extreme operating temperatures from -55°C to 210°C
- Easy to use development platform utilizing TI’s comprehensive signal-chain product portfolio offering including:
  - ADS1278-HT – Octal Simultaneous Sampling 24-Bit 128KSPS Analog-to-Digital Converter
  - SM470R1B1M-HT – ARM7 Microcontroller
  - OPA211-HT – Low-Noise Operational Amplifier
  - OPA2333-HT – Low Power Zero-Drift Series Operational Amplifier
  - INA333-HT – Zero Drift, Low Power, Single Supply Instrumentation Amplifier
  - THS4521-HT – Low-Power Fully Differential Amplifier
  - REF5025-HT – 2.5V Precision Voltage Reference
  - SN65HVD233-HT – CAN Transceiver
  - SN65HVD11-HT – RS485 Transceiver
- Signal conditioning, acquisition and processing
- Up to 8 channels of analog data
- Analog signals conditioned, digitized and processed at temperature
- 6 channels dedicated for temperature, pressure, and accelerometers
- 2 general purpose channels
  - One fully differential
  - One single ended
- All semiconductor devices are qualified and characterized to 210°C operation and 1,000 hour operating life
- The HEAT board is built with high temperature materials suited to withstand up to 250°C
  - Polyimide PCB material
  - High temperature rated passive components
  - High temperature solder
- Operational in a 200°C oven for 200 hours
- PCB Dimensions: 15.6” x 1.1”
- Target Applications:
  - Down-hole drilling
  - Commercial aviation (e.g. jet engines)
  - Heavy Industrial

This EVM is a key design tool for the HiRel High-Temp products and enables rapid evaluation and development of a 200°C data acquisition system



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