Crossbow

ITS400

IMOTE2 BASIC SENSOR BOARD

- Compatible With the Imote2 Processor/Radio Board

- Onboard 3-Axis Accelerometer, Temperature, Humidity, and Light Sensors

- 4 Channels of 12-bit Analog Input

Applications

- Wireless Sensor Networking

- Environmental Monitoring

- Asset Management (shock, temperature, humidity)

- Regulatory Compliance

ITS400

Developed by Intel Research lab and licensed to Crossbow, the ITS400 sensor board is designed to interface with the Imote2 platform. It contains a three-axis accelerometer, an advanced temperature/humidity sensor, a light sensor and a 4 channel A/D converter. The ITS400 allows stacking with other extension boards.

This versatile sensor board provides multiple sensing capabilities for the Imote2 in a wide variety of applications ranging from environmental monitoring to capturing vibration.

Specifications

Three-axis Accelerometer

- ST Micro LISL02DQ

- Acceleration Range, Resolution:
  - +/- 2g (12-bit)

- Communication Interfaces:
  - SPI, I2C

Temperature and Humidity Sensor
- Sensirion SHT15, 2 Channels:

- First Channel, humidity (12-bit):
  - 10-90%RH @ +/-2%RH
  - 0-100%RH @ +/-4%RH

- Second Channel, temperature (14-bit):
  - 0-40 °C @ +/-0.5 °C
  - -40-120 °C @ +/-2 °C

Digital Temperature Sensor
- TI TMP175 with I²C interface

- Temperature range, resolution: -25 °C – 85 °C @ +/-1.5 °C

Taos Light Sensor
TAOS TSL2651with I²C interface, 2 Channels:

- First Channel Sensitivity (16-bit):
  - Visible Light and IR

- Second Channel Sensitivity (16-bit):
  - IR only

General Purpose ADC
- Maxim MAX1363 with I²C interface

- 4 channel analog (12-bit)

- Input signals range:
  - Analog 0-3V

Imote2 Basic Sensor Board

Model	Description
ITS400CA	Imote2 Basic Sensor Board

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