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MS5637
PERIPHERAL MODULE
Digital Pressure Sensor

General Description

The MS5637 peripheral module provides the necessary hardware to interface the MS5637 digital barometric pressure and temperature sensor to any system that utilizes Xplained pro compatible expansion ports configurable for I^2C communication. The MS5637 sensor is a self-contained pressure and temperature sensor that is fully calibrated during manufacture. The sensor can operate from 1.5V to 3.6V. The sensor module includes a high-linearity pressure sensor and an ultra-low power 24 bit _Σ ADC with internal factory-calibrated coefficients.

Specifications

- Measures pressure from 300mbar to 1200mbar
- Measures temperature from -40℃ to 125℃
- I2C communication
- Fully calibrated
- Fast response time
- Very low power consumption

Features

- 20-pin Xplained pro compatible connector
- I^2C interface
- Xplained Pro hardware identification chip
- Atmel Studio 6 Project available for download
- µC C code available for download
- 24 bit resolution for pressure
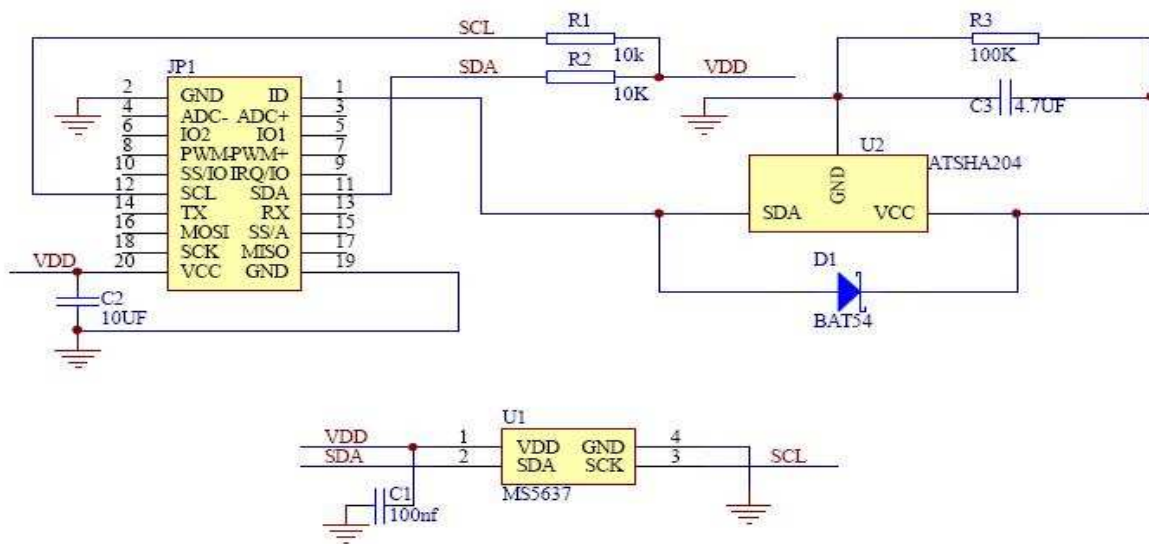- 24 bit resolution for temperature
- Parameters stored on chip

TE connectivity

Performance

- 300 to 1200mbar pressure range
- -40℃ to 85℃ temperature range
- Very low power consumption
- Operates from 1.5V to 3.6V
- Altitude resolution at sea level is 20 cm of air
- Fast conversion time – 0.5 mS typical

Schematic

Connector Pin Assignments (1^{2}C Communications)

System Plug (Table 1)

Connector JP1					
Pin No.	Signal	Description	Pin No.	Signal	Description
1	ID	Address	11	SDA	I2C Serial Data
2	GND	Ground	12	SCL	I2C Serial Clock
3	N/C	Not Connected	13	N/C	Not Connected
4	N/C	Not Connected	14	N/C	Not Connected
5	N/C	Not Connected	15	N/C	Not Connected
6	N/C	Not Connected	16	N/C	Not Connected
7	N/C	Not Connected	17	N/C	Not Connected
8	N/C	Not Connected	18	N/C	Not Connected
9	N/C	Not Connected	19	GND	Ground
10	N/C	Not Connected	20	Vdd	Power Supply

Dimensions(mm)
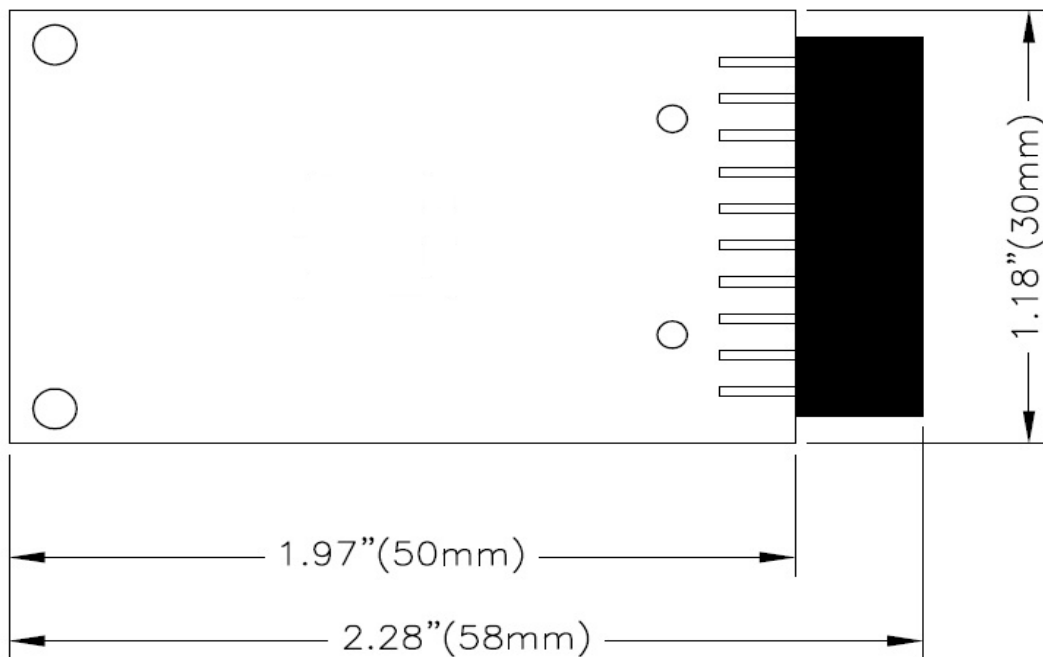
Detailed Description

I^{2}C Interface

The peripheral module can interface to the host being plugged directly into an Xplained Pro extension port (configured for I2C) through connector JP1

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Reference Material

- Detailed information regarding operation of the IC:
  MS5637 Datasheet

- Detailed information regarding SAMD2x Driver:
  MS5637 SAMD2x Driver

- Complete software sensor evaluation kit for Xplained Pro:
  MS5637 SAMD2x Software

Ordering Information

Description	Part Number
MS5637 PERIPHERAL MODULE	DPP101A000

te.com/en/products/sensors.html

PRODUCT SHEET