

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 Pmod compatible expansion ports configurable for I²C 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°C to 125°C
- I²C communication
- Fully calibrated
- Fast response time
- Very low power consumption

Features

- 12-pin Pmod compatible connector
- I²C interface
- Secondary 12-pin connector allows daisy chain
- FPGA fabric available for download
- μ C C code available for download
- 24 bit resolution for pressure
- 24 bit resolution for temperature
- Parameters stored on chip

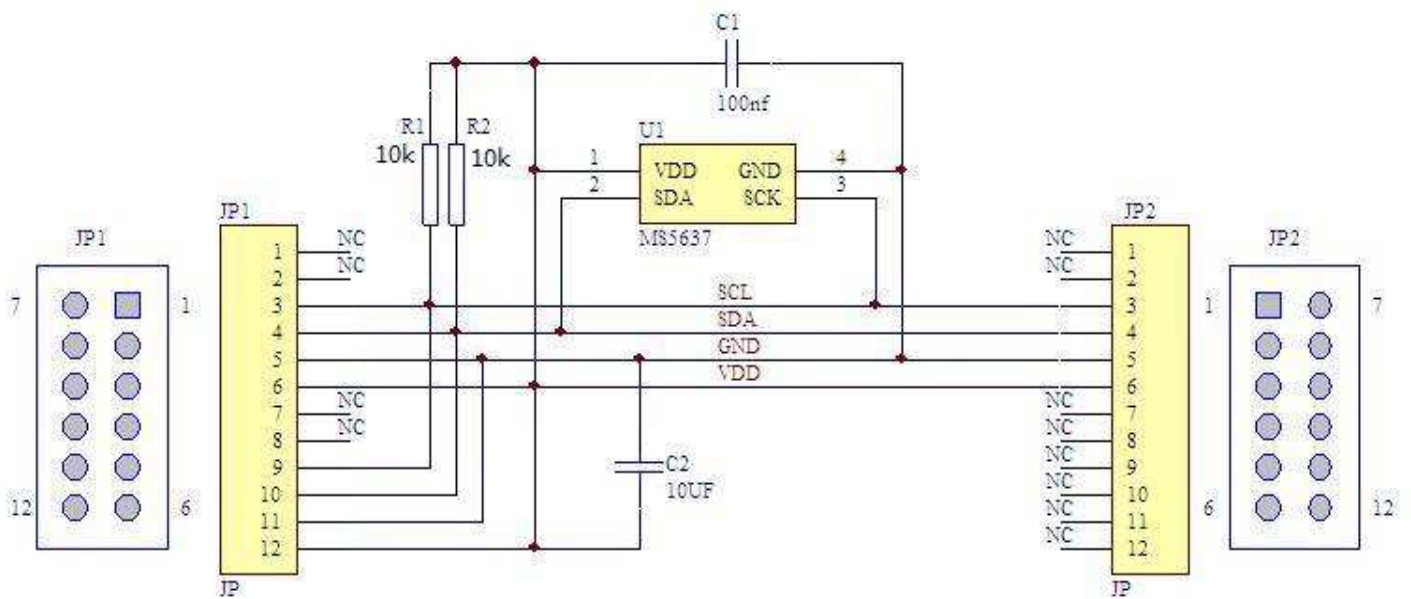
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Performance

- 300 to 1200mbar pressure range
- -40°C to 85°C 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



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Connector Pin Assignments (I²C Communications)

System Plug (Table 1)

Connector J1		
Pin No.	Signal	Description
1	N/C	Not Connected
2	N/C	Not Connected
3	SCL	I ² C Serial Clock
4	SDA	I ² C Serial Data
5	GND	Ground
6	Vdd	Power Supply
7	N/C	Not Connected
8	N/C	Not Connected
9	SCL	I ² C Serial Clock
10	SDA	I ² C Serial Data
11	GND	Ground
12	Vdd	Power Supply

Expansion Socket (Table 2)

Connector J2		
Pin No.	Signal	Description
1	N/C	Not Connected
2	N/C	Not Connected
3	SCL	I ² C Serial Clock
4	SDA	I ² C Serial Data
5	GND	Ground
6	Vdd	Power Supply
7	N/C	Not Connected
8	N/C	Not Connected
9	N/C	Not Connected
10	N/C	Not Connected
11	N/C	Not Connected
12	N/C	Not Connected

Dimensions(mm)

