

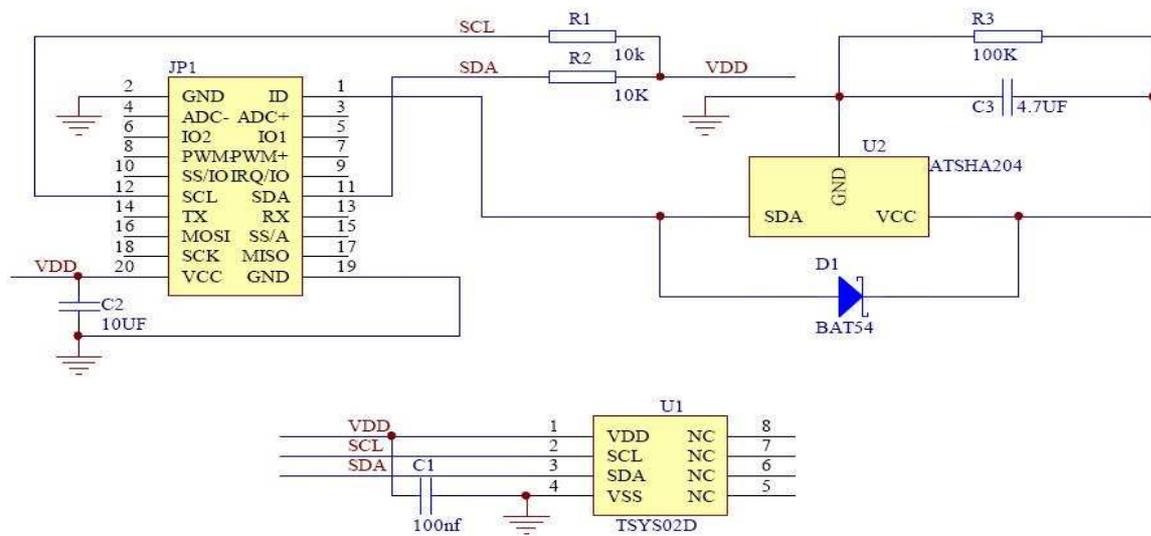
TSYS02D PERIPHERAL MODULE

Digital Temperature Sensor

Performance

- -5°C to 50°C accuracy: 0.2°C
- -20°C to 100°C accuracy: 0.5°C
- -40°C to 125°C accuracy: 1°C
- Very low power consumption
- Operates from 1.5V to 3.6V
- Time constant – 4 second typical
- Conversion time – 43 mS typical

Schematic



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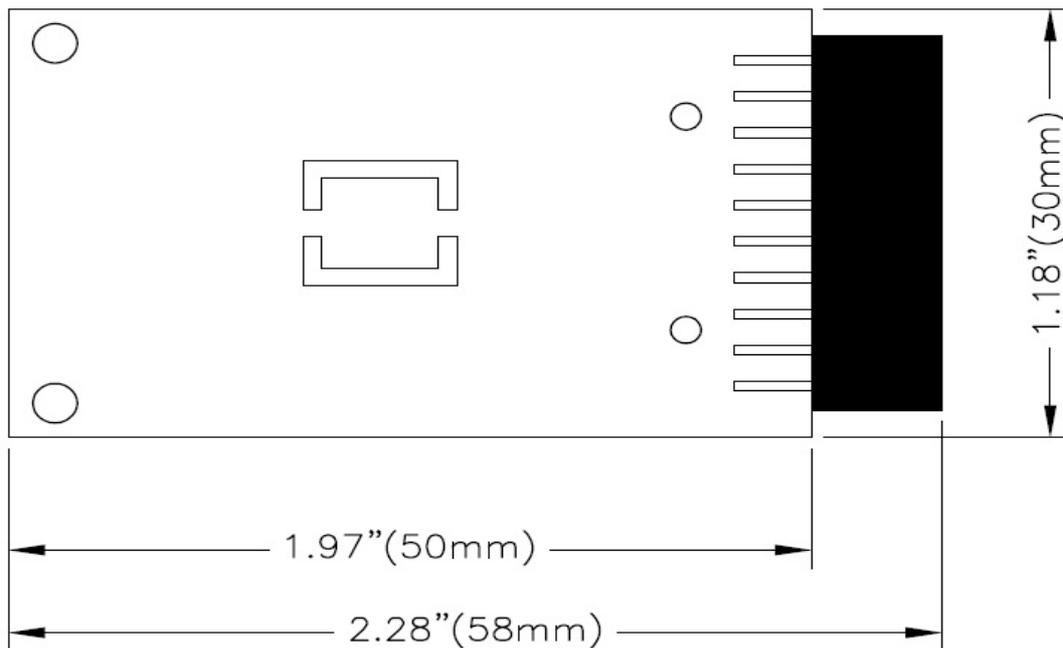
Digital Temperature Sensor

Connector Pin Assignments (I²C 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)



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Detailed Description

I²C Interface

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

External Control Signals

The IC operates as an I²C slave using the standard 2 wire I²C connection scheme. The IC is controlled either by the host (through the Xplained pro connector). In cases where one or more of the SCL and SDA signals are driven from an external source, resistors R1, R2 provide pull-up. However, this also increases the apparent load to the external driving source. If the external source is incapable of driving these loads, they should be removed.

Reference Material

- Detailed information regarding operation of the IC:
[TSYS02D Datasheet](#)
- Detailed information regarding SAMD2x Driver:
TSYS02D SAMD2x Driver
- Complete software sensor evaluation kit for Xplained Pro:
TSYS02D SAMD2x Software

Ordering Information

Description	Part Number
TSYS02D PERIPHERAL MODULE	DPP202A000

te.com/en/products/sensors.html

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PRODUCT SHEET

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