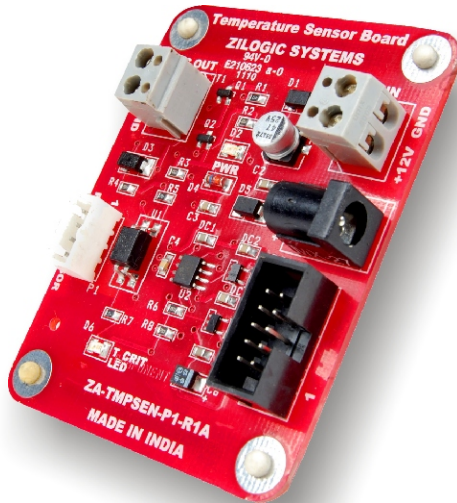# Temperature Sensor Board

ZA-TMPSEN-P1

ZILOGIC SYSTEMS

Overview

The temperature sensor board is based on NXP's SA56004 temperature sensor chip, which can be interfaced through I2C bus. IC SA56004 is an SMBus compatible, 11-bit remote/local digital temperature sensor with over temperature alarms. The remote channel of the board monitors a diode junction, such as a diode connected transistor, with the accuracy of ±1°C.

Under-temperature and overt-emperature alert thresholds can be programmed to cause the ALERT output to indicate when the on-chip or remote temperature is out of range. This output may be used as a system interrupt or SMBus alert. The T_CRIT output is activated when the on-chip or remote temperature measurement rises above the programmed T_CRIT threshold register value. This output may be used to activate a cooling fan, send a warning or trigger a system shutdown. The board provides Isolated 12V/1Amp switching facility for the above applications with the help of T_CRIT

signal. The board includes a LED to show the T_CRIT status.

The Standard 0.1" FRC headers are provided for easy connection to other control systems. The board can be used for prototype development by hobbyists, engineers and students. The board is also suitable for teaching and learning temperature sensor interface through I2C.

Features:

- Accurately senses temperature of diode connected transistors within ±1°C

- On-chip local temperature sensing

- 11-bit, 0.125°C resolution

- Offset registers available for adjusting the remote temperature accuracy

- Programmable under/over temperature alarms

- SMBus 2.0 compatible interface

- I2C standard and fast mode compatible

- Opto isolated 12VDC/1Amp load switch by T_CRIT signal. Heavy duty screw terminal blocks for 12VDC/Amp load.

- 0.1" FRC header for connection to control logic/MCU

- Ready to go with Zilogic's mother boards.

Product Number	Description
ZA-TMPSEN-P1-R1A	Temperature Sensor Board

Zilogic Systems Private Ltd