

GX112 High-Accuracy, Low-Power, Digital Temperature Sensor With SMBus- and I²C-Compatible Interface

1 Features

- Product number: **GX112S**、**GX112D**
- Temperature range: **-55°C ~ +150°C**
- Temperature accuracy: **±0.5°C (-40°C ~ +125°C)**
- Package: **6-Pin SOT563 (GX112S)**

6-Pin DFN6 (GX112D)

- Package size: **1.60 mm × 1.60 mm**
- Supply voltage range: **1.4V ~ 5.5V**
- Low quiescent current:

Normal operation: **≤10μA (4Hz)**

Shutdown mode: **≤1μA**

- Resolution: **12bits, 0.0625°C**
- Digital output: **SMBus and I²C interface**

compatibility

2 Applications

- Portable and battery-powered applications
- Power-supply temperature monitoring
- Computer peripheral thermal protection
- Notebook computers
- Battery management
- Office machines
- Thermostat controls
- Electromechanical device temperatures
- General temperature measurements:
 - Industrial controls
 - Test equipment
 - Medical instrumentation

3 Description

The GX112 is a digital temperature sensor with high-accuracy, low-power, and NTC/PTC thermistor replacements. It can be used for extended temperature measurement in communication, computer, consumer electronics, environmental, industrial and instrumentation applications. The GX112 provides ≤±0.5°C temperature accuracy with good temperature linearity over the normal operating range of -40°C to +125°C. The GX112 can provide extended temperature measurement mode, extending the temperature measurement range from -55°C to +150°C.

The rated working voltage range of the GX112 is 1.4V~5.5V, and the maximum quiescent current in the entire working range is 10μA (temperature measurement frequency 4Hz). The on-chip 12-bit ADC offers resolutions down to 0.0625°C.

The GX112 adopts SOT563 / DFN6 package of 1.6mm × 1.6mm, is compatible with SMBus and I²C interface, and allows up to four devices on one bus. The device also features an SMBus alert function.

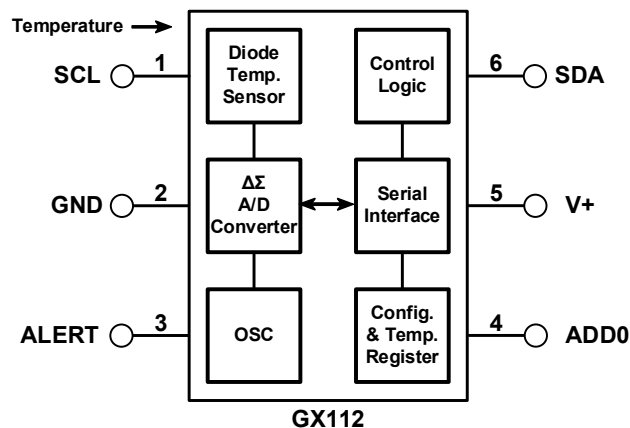


Figure 1. GX112 Internal Schematic Diagram

9 Ordering Information

Order PN	Chip Model	Packaging Information	Standard Package Quantity	Note
GX112D-T&R	GX112D	DFN6	4000	Tape & Reel
GX112S-T&R	GX112S	SOT563	3000	Tape & Reel