

GW8110/1

Low Power Digital Temperature Sensor with Two-Wire Serial Interface

Description

The GW8110/1 is a low-power digital temperature sensor with a very precise accuracy class. Its software compatibility with industry-standard LM75 and TMP75 digital temperature sensors makes it a reliable replacement for existing platforms and its additional features make it ideal for developing a variety of applications.

The GW8110/1 provides 16-bit temperature results with a resolution of 0.0078°C and an accuracy of $\pm 0.5^{\circ}\text{C}$ over a wide temperature range. It contains OTP memory for temperature compensation and is shipped calibrated at the time of production.

The GW8110/1 features I2C and SMBus™ compatible interfaces, programmable alerting, and can support up to 32 devices on a single bus. Support for no hold master mode during temperature measurement reduces the I2C bus occupancy to improve utilization in multi-slave I2C system.

Features

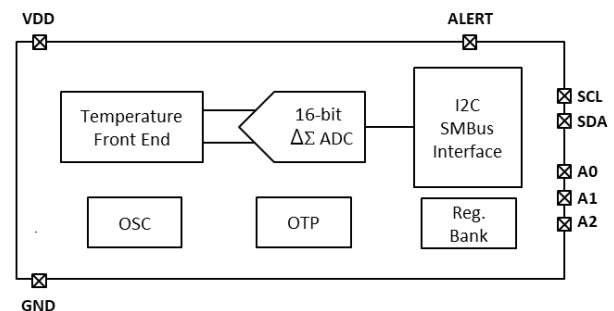
- High accuracy temperature measuring:
 - $\pm 0.1^{\circ}\text{C}$ (typical) from -40°C to 125°C
 - $\pm 0.5^{\circ}\text{C}$ (maximum) from -40°C to 125°C
- Operating temperature range: -40°C to 125°C
- Low power consumption:
 - $4.9\text{-}\mu\text{A}$ Average current
 - $0.8\text{-}\mu\text{A}$ Shut-down current
- Supply range options from: 1.62 V to 5.5 V
- Temperature independent of supply
- Digital interface: SMBus, I2C
- CRC checksum
- Support I2C no hold mode
- Can coexist in I3C mixed fast mode bus
- Resolution: 16 Bits
- Supports up to 32 I2C addresses
- Programmable temperature alert limits

Typical Applications

- PC and notebooks
- Smartphone and tablet thermal management

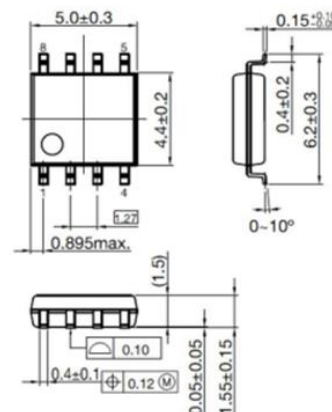
- Consumer Electronics
- Battery management
- Thermostat control
- Under and overtemperature protection
- Environmental monitoring and HVAC

Functional Block Diagrams

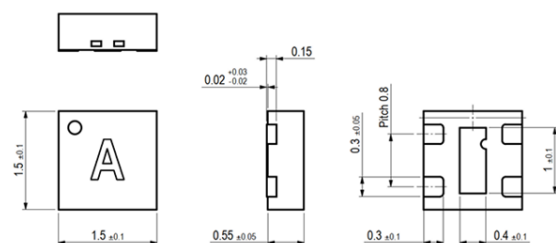


Package Information

- SOP-8D



- DFN-4



Ordering Information

| Device name | Package | Remark |
|---------------|---------------|--------|
| GW8110/1ADDAR | 5.0mm x 4.4mm | SOP-8D |
| GW8110/1ANGAR | 1.5mm x 1.5mm | DFN-4 |

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Corporate Headquarters

Gwanak Analog Co., Ltd.,
5F, Seoul National University Research Park,
1 Gwanak-ro, Gwanak-gu, Seoul, 08826, Korea

Contact Information

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