

Product Document

Digital Temperature Sensor Solutions

ams.com/AS621x



AS621x – Ultra-Low Power Digital Temperature Sensor Family (AS6212, AS6214 & AS6218)

- Miniature chip-scale package
- High accuracy over full supply range
- Eight I²C addresses

**Sensing
is life.**

General Description

The AS621x is the second generation of the digital temperature sensor family, designed for high accuracy applications with ultra-low power consumption. The new digital sensor design offers eight I²C addresses and a supply voltage from 1.71V to 3.6V.

The AS621x family is a fully calibrated and linearized sensor system that is easy to integrate into any digital system. It provides a 16-bit resolution over the full temperature range from -40°C to +125°C. The integrated alarm functionality enables micro-controller wake-up calls at defined temperature thresholds. An internal voltage regulator enables stable accuracy independent of the supply voltage. For power sensitive applications, the device can enter a low-power wait mode with 0.1µA current consumption.

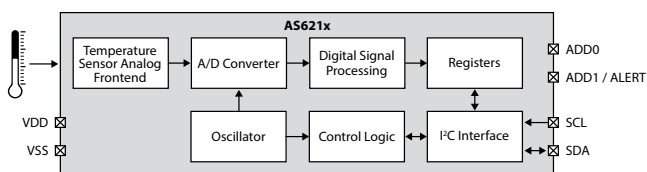
Features

- Full-digital system with up to eight I²C addresses
- Ultra-low power consumption: 6µA @ 4 samples/sec (typ)
- Small WLCSP package (1.5 x 1.0mm)
- High temperature accuracy of ±0.2°C (-10°C to 65°C)
- Supply voltage: 1.71V to 3.6V
- Operating temperature: -40°C to 125°C
- Programmable alert output pin
- Factory calibrated

Benefits

- Easy to integrate with serial bus connection
- Longer battery lifetime
- Small integration size
- Full accuracy over supply voltage
- Wide-range operating temperature
- Alert functionality for exact temperature control
- Easy-to-use solution, i.e., no calibration or linearization needed

Block Diagram



Applications

- High accuracy consumer electronics
- Mobile devices/tablets/notebooks
- Wearables/mobile health
- Cameras
- HVAC and Thermostat control
- Cold chain monitoring
- Industrial automation
- Lab equipment
- Solid State Drive (SSD)