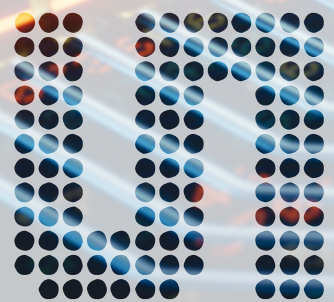# Product
Document

Digital Temperature Sensor

www.ams.com/AS6204

AS6204 – Digital Temperature Sensor for powerful consumer electronics

- Four I²C addresses
- Small-sized WL-CSP package
- Ultra-low power consumption

Sensing is life.

General Description

The AS6204 is a complete digital sensor system, designed for the needs of high-performance consumer electronics. It is based on the well-proven AS6200 design, but with additional I²C addresses to serve complex design needs. This is especially useful in the prototyping phase of a product where several heat sensitive areas might need monitoring but without needing to reserve additional systems application processor resources. The AS6204 is a fully calibrated and linearized sensor system that is easy to integrate in any digital system. It provides a resolution of 12 bit over the wide temperature range from -40°C to +125°C. The integrated alarm functionality enables micro-controller wake-up calls on defined temperature thresholds. An internal voltage regulator allows stable accuracy independent of the supply voltage between 1.8 to 3.6V. For power-sensitive applications, the device can enter a low-power wait mode with 0.1μA current consumption.
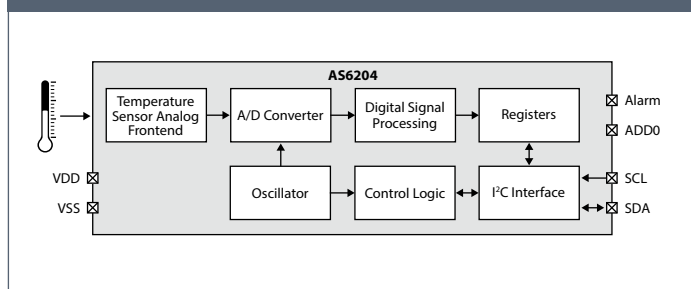
Applications

- High-performance consumer electronics
- Mobile devices/tablets/notebooks
- Cameras

Benefits

- Complete digital temperature sensor system
- Serial bus connection
- Easy-to-use solution, i.e., no calibration or linearization needed
- Alert functionality for exact temperature control

Block Diagram

Features

- Easy to integrate; full-digital system with four I²C addresses
- Ultra-low power consumption: 6μA @ 4 samples/sec (typ)
- Small integration size: WL-CSP package (1.5 x 1.0mm)
- High temperature accuracy of ±0.4°C (0°C to 65°C)
- Supply voltage: 1.8 – 3.6V
- Wide-range operating temperature: -40°C to 125°C