



## Product Brief

PB000131

# Ultra-Low Power Digital Temperature Sensor Family

**AS6212, AS6214 & AS6218**

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## 1 General Description

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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 I<sup>2</sup>C 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.

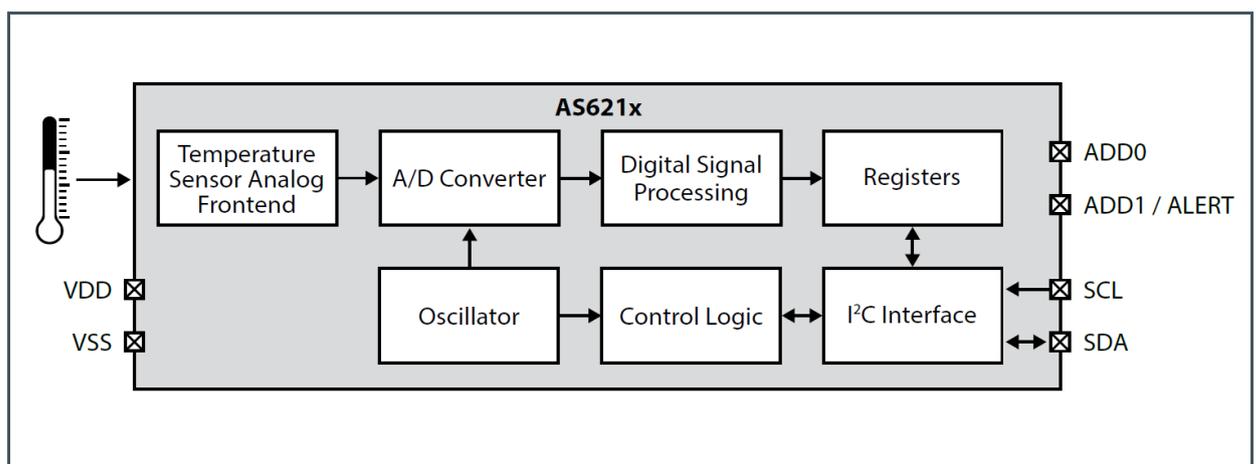
## 2 Key Features

Figure 1: Added Value of Using Ultra-Low Power Digital Temperature Sensor Family

Benefits	Features
Easy to integrate with serial bus connection	Full-digital system with up to eight I2C addresses
Longer battery lifetime	Ultra-low power consumption: 6µA @ 4 samples/sec (typ)
Small integration size	Small WLCSP package (1.5 x 1.0mm)
Full accuracy over supply voltage	High temperature accuracy up to ±0.2°
Alert functionality for exact temperature control	Programmable alert output pin
Easy-to-use solution, i.e., no calibration or linearization needed	Factory calibrated

## 3 Block Diagram

Figure 2: Functional Blocks of Ultra-Low Power Digital Temperature Sensor Family



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