

Product Document



Product Brief

PB000131

Ultra-Low Power Digital Temperature Sensor Family

AS6212, AS6214 & AS6218

1 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.

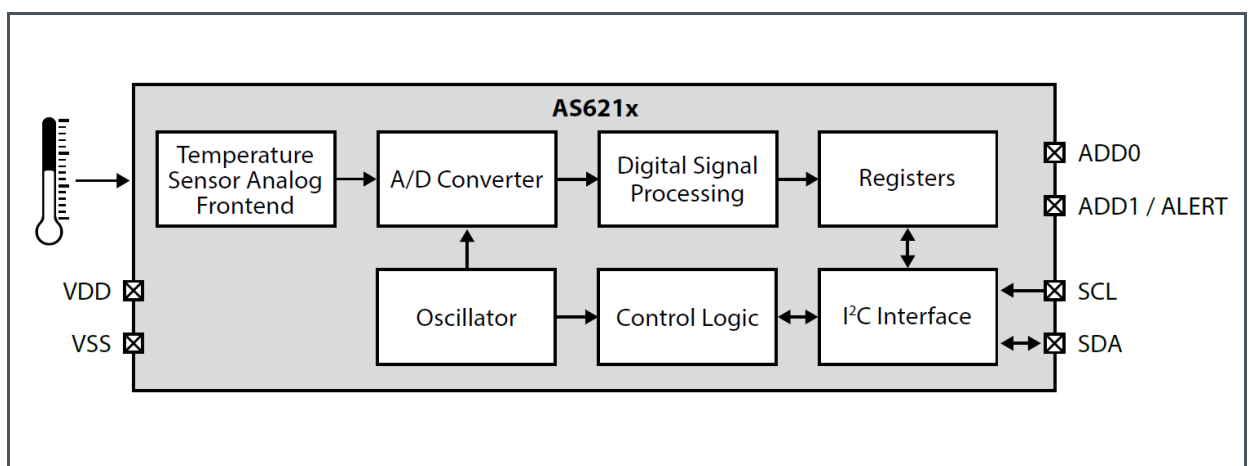
2 Key Features

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



Headquarters

ams AG
 Tobelbader Strasse 30
 8141 Premstaetten
 Austria, Europe
 Tel: +43 (0) 3136 500 0

Please visit our website at www.ams.com

Buy our products or get free samples online at www.ams.com/Products

Technical Support is available at www.ams.com/Technical-Support

Provide feedback about this document at www.ams.com/Document-Feedback

For sales offices, distributors and representatives go to www.ams.com/Contact

For further information and requests, e-mail us at ams_sales@ams.com

Copyright ams AG. Trademarks Registered. All rights reserved. The material herein may not be reproduced, adapted, merged, translated, stored, or used without the prior written consent of the copyright owner.