

1 Features

- AEC-Q100 Qualified with the Following Results:
 - Temperature Grade 1: -40°C to +125°C
 - HBM ESD Classification Level 3B
 - CDM ESD Classification Level C3
- Operating Temperature : - 55°C ~ +125°C
- Accuracy : ±0.25°C typical. (0°C ~ +70°C)
- Resolution : 12-bits (0.0625°C)
- Supply Voltage : 1.5V ~ 5.5V
- Conversion Time : 26ms
- Operating Current : 15µA @12Hz
- Shutdown Current : 0.3µA
- Digital Output : I²C, SMBus
- Alternative to x75
- Package Information :

PART NUM.	PACKAGE	BODY SIZE (mm ²)
GX75CUA	VSSOP8 / MSOP8	3.00 × 3.00

2 Applications

- Automobile air conditioning
- Automobile refrigerator
- Automotive intelligent cockpit
- In-vehicle infotainment system
- Server and Computer Thermal Management
- Telecommunication Equipment
- Power Supply and Battery Thermal Protection
- Environmental Monitoring and HVAC
- Electrical Motor Driver Thermal Protection
- Industrial Control

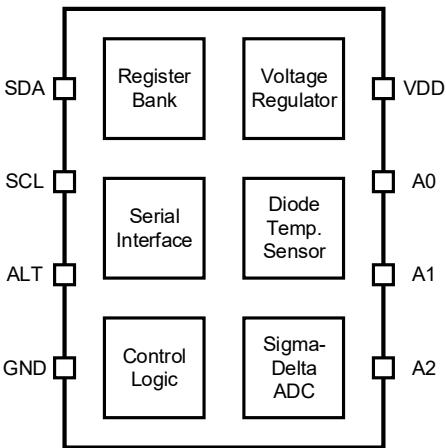
3 Description

The GX75CUA is a fully integrated digital temperature sensor with a 12-bit ADC that can operate at a 1.8-V supply, and is pin and register compatible with the mainstream x75.

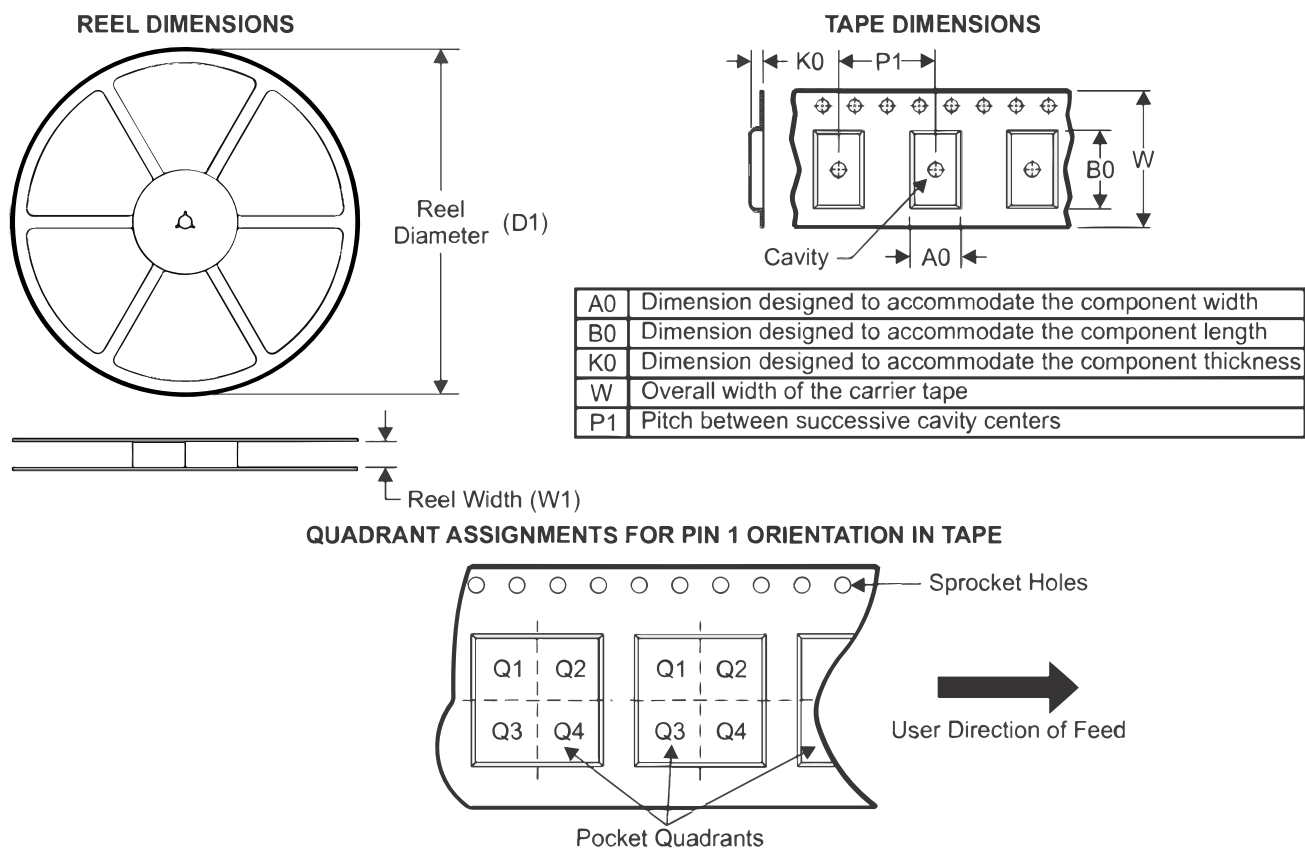
The GX75CUA requires no external components to sense the temperature. The on-chip 12-bit ADC offers resolution down to 0.0625°C. Each chip is specially calibrated for ±1°C (max.) accuracy over -40°C to +125°C range in factory before shipment to customers, eliminating the need for users to make any additional adjustments for temperature output.

The GX75CUA features SMBus and I²C interface with speed up to 1MHz (2.3MHz at high-speed mode), and allows up to eight devices on the same bus. The programmable temperature limits and the ALT pin allow the sensor to operate as a stand-alone thermostat.

Block Diagram of GX75CUA



9.2 Tape and Reel Information



Package	D1 (mm)	W1 (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P1 (mm)	W (mm)	Pin1
VSSOP-8 MSOP-8	330	12.4	5.40	3.40	1.40	8.00	12.00	Q1

Note : all of the above dimensions are in millimeters.

10 Ordering Information

Order PN	Device	Package	SPQ	Remark
GX75CUA-T&R	GX75CUA	VSSOP-8 / MSOP-8	4000	Tape and Reel