

Two Remote Temperature Sensors and One Fan Controllers with SMBus Serial Interface

Features

- Measures Two Remote Temperatures
- Adjustable Offset for Each Sensor via SMBus
- Accuracy: $\pm 1^{\circ}\text{C}$ (+ 60°C to + 100°C)
 $\pm 3^{\circ}\text{C}$ (- 10°C to + 120°C)
- +4.5V to +5.5V Supply Range
- Programmable Hardware Thermal Shutdown for Sensor 2 and Programmable Software Thermal Shutdown for Sensor 1.
- SMBus 2-Wire Serial Interface With Writting Protection Function.
- Alert Signal for Diode Fault, Fan Fail, and Fan Out of Control
- Supports SMBus Alert Response
- Fan Drivers Using Linear Control Algorithm with Built-in MOSFET
- Closed Loop Speed Control and programmable 8 Bits Open Loop Voltage Control for Fan1
- Wide Speed Control Range for Fan1, Accuracy within 2%, when SET_CNT1 > 50
- Internal Current- limit and Over-temperature Protection for the Fan
- G795-1 is the Same Function but Different Slave Address from G795
- 16-Pin SSOP Package

Applications

- Desktop and Notebook
- Central Office Computers
- Telecom Equipment
- Smart Battery Packs
- Industrial Controls
- LAN Servers

General Description

The G795 contains 2 precise digital thermometers, one fan controllers, hardware and software thermal shutdown, and a system-reset circuit.

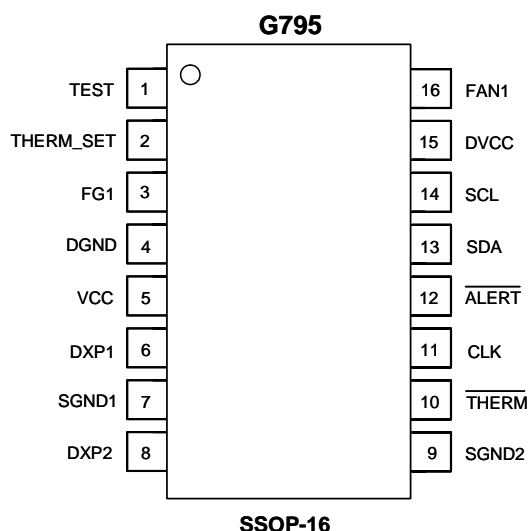
The thermometers report the temperature of 2 remote sensors. The remote sensors are diode-connected transistors typically a low-cost, easily mounted 2N3904 NPN type or the diode built-in in CPU. Remote accuracy is $\pm 1^{\circ}\text{C}$ for multiple transistor manufacturer. The G795 also support offset adjust function via SMBus to fix the error due to different CPU diode or parasitic resistors.

The 2-wire serial interface accepts standard System Management Bus (SMBus™) Write Byte, Read Byte, Send Byte, and Receive Byte commands. G795 SMBus address is 7ah for write and 7bh for read. G795-1 address is 70h for write and 71h for read. And supports writting protection function by command 20h to prevent error behavior of μP .

G795 contains one fan controllers. FAN1 controller performs closed-loop and open-loop control. G795 determines the current fan speed based on the FG inputs and an externally supplied 32.768KHz clock. The driving ability of FAN1 is 500mA. G795 also provide ALERT for fan fail and out of control event.

The G795 provides hardware and software thermal shutdown. The hardware thermal shutdown is for the sensor 2. The trigger point is set external resistors. The trigger points of software thermal shutdown are set via SMBus. If thermal shutdown event occurs, THERM pin outputs low.

Pin Configuration



Ordering Information

ORDER NUMBER	ORDER NUMBER (Pb free)	MARKING	TEMP. RANGE	PACKAGE
G795S1U	G795S1Uf	G795	-55°C to +125°C	SSOP-16
G795-1S1U	G795-1S1Uf	G795-1	-55°C to +125°C	SSOP-16

Note: S1:SSOP-16 U: Tape & Reel

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