

40-V, 16-Bit, I²C Output, Current, Voltage and Power Monitor With Alert in WCSP Package

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1 Features

- Bus voltage range: 0V ~ 40V
- High- or low-side sensing
- Current, voltage, and power reporting
- Gain error: $< \pm 0.2\%$ ($-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$)
 $< 30\text{ppm}$ ($-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$)
- Digital output:
SMBus, I²C interface compatibility
- Supply voltage range: 2.7V ~ 5.5V
- I²C Logic Voltage Range: 1.6V to 5.5V
- Configurable averaging options
- Programmable alert limit
- Package Information:

PART NUMBER	PACKAGE	BODY SIZE (mm ²)
GXI340U	MSOP-10	3.00 × 3.00

2 Applications

- Servers
- Power management
- Test equipment

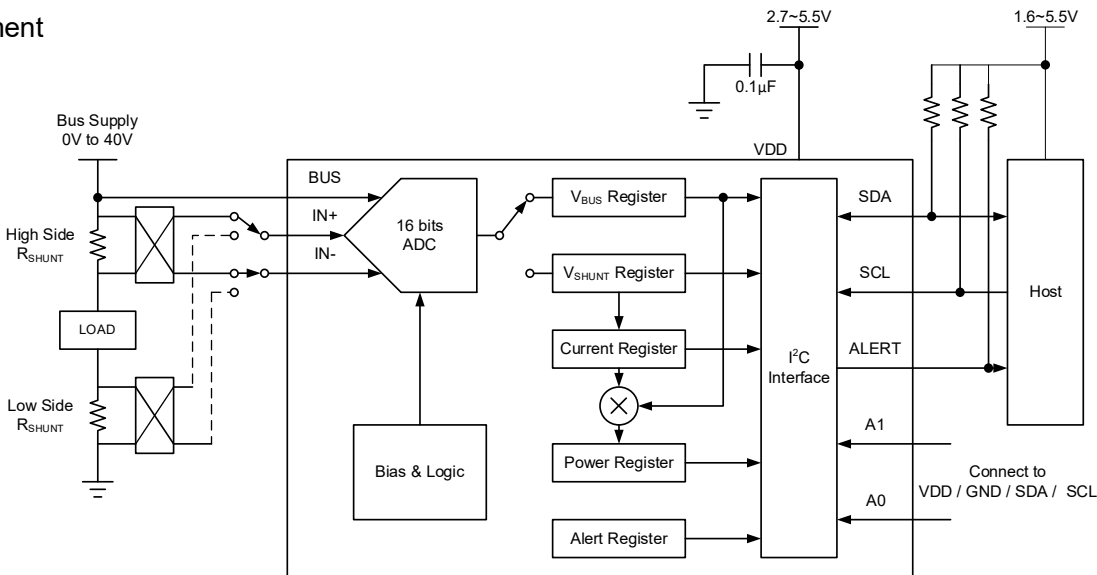
3 Description

The GXI340 is a high- / low-side voltage, current, and power monitoring chip. The integrated 16bits ADC continuously measures the bus voltage V_{BUS} and the V_{SHUNT} on the high / low side resistance R_{SHUNT} . The GXI340 then calculates the current flowing on the bus and the power consumption generated on the bus. The GXI340 can measure bus voltages ranging from 0V ~ 40V. The GXI340 can directly output current measurements in amps (A) and power measurements in watts (W), greatly reducing host processing.

The GXI340 powers from a single 2.7V ~ 5.5V supply, drawing 300 μA (typical) of supply current. The typical operating temperature range of the GXI340 is $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$. The GXI340 is compatible with standard I²C interfaces down to 1.6V and enjoys 16 programmable slave addresses. The GXI340 is available in a 10-Pin MSOP package.

The GXI340 supports the measurement of only V_{BUS} or V_{SHUNT} with a minimum single conversion time of only 140 μs . The GXI340 provides an average output for more accurate measurements. The ALERT pin and programmable alert limits of the GXI340 provide protection for other devices on the bus.

Figure 1 High- / Low-Side Sensing for GXI340



10 Ordering Information

Order Number	Chip Model	Package	SPQ	Note
GXI340U-T&R	GXI340U	MSOP-10	4000	Tape & Reel

Note: U represents the MSOP-10 package;