

1 Features

- I²C Bus and SMBus compatible
- SCL Frequency: 0 ~ 1MHz
- 1-of-4 Bidirectional translating switches
- Active-low reset input $\overline{\text{RESET}}$
- Three address pins, allowing up to eight GXA546 devices on the I²C Bus
- Allows voltage-level translation between 1.8V, 2.5V, 3.3V, 5V buses
- Low on-resistance, low standby current
- Supply voltage: 1.65V ~ 5.5V
- Support hot insertion
- Package information:

PART NUMBER	PACKAGE	BODY SIZE(mm ²)
GXA546	SOP-16	9.90 × 3.90
GXA546U	TSSOP-16	5.00 × 4.40
GXA546Q	QFN-16	4.00 × 4.00

2 Applications

- Servers
- Routers
- Products with I²C slave address conflicts

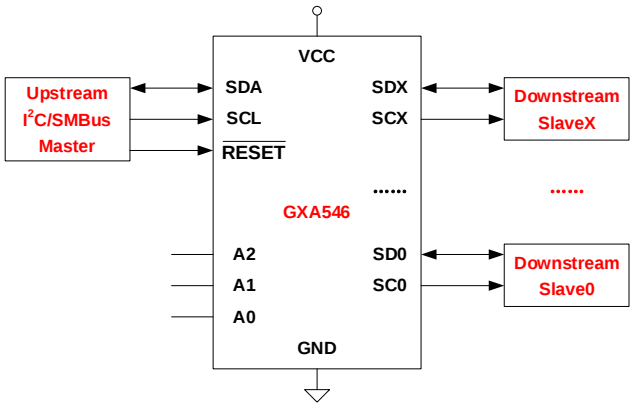
3 Description

The GXA546 is a quad bidirectional translating switch controlled via the I2C bus. The SCL/SDA upstream pair fans out to four downstream pairs, or channels. Any individual SCX / SDX channel or combination of channels can be selected, determined by the contents of the programmable control register.

An active-low reset input $\overline{\text{RESET}}$ allows the GXA546 to recover from a situation in which one of the downstream I2C buses is stuck in a low state. Pulling $\overline{\text{RESET}}$ low resets the I2C state machine and causes all the channels to be deselected, as does the internal power-on reset function.

The pass gates of the switches are constructed such that the VCC pin can be used to limit the maximum high voltage, which will be passed by the GXA546. This allows the use of different bus voltages on each pair, so that 1.8V, 2.5V, or 3.3V parts can communicate with 5-V parts without any additional protection. External pull-up resistors pull the bus up to the desired voltage level for each channel. All I/O pins are 5.5-V tolerant.

Figure 1 Simplified Diagram of GXA546



10 Ordering Information

Order Number	Chip Model	Package Information	Standard Quantity	Note
GXA546-T&R	GXA546	SOP-16	3000	Tape & Reel
GXA546U-T&R	GXA546U	TSSOP-16	5000	Tape & Reel
GXA546Q-T&R	GXA546Q	QFN-16	4000	Tape & Reel