

Product Overview

CAT9532: I/O Port Expander, I2C / SMBus, 16-Bit, with LED Dimming

For complete documentation, see the data sheet.

The CAT9532 is a CMOS device that provides 16-bit parallel input/output port expander optimized for LED dimming control. The CAT9532 outputs can drive directly 16 LEDs in parallel. Each individual LED may be turned ON, OFF, or blinking at one of two programmable rates. The device provides a simple solution for dimming LEDs in 256 brightness steps for backlight and color mixing applications. The CAT9532 is suitable in I2C and SMBus compatible applications where it is necessary to limit the bus traffic or free-up the bus master's timer. The CAT9532 contains an internal oscillator and two PWM signals that drive the LED outputs. The user can program the period and duty cycle for each individual PWM signal. After the initial set-up command to program the Blink Rate 1 and Blink Rate 2 (frequency and duty cycle), only one command from the bus master is required to turn each individual open drain output ON, OFF, or cycle at Blink Rate 1 or Blink Rate 2. Each open drain LED output can provide a maximum output current of 25 mA. The total current sunk by all I/Os must not exceed 200 mA.

Features

- I/Os can be Used as GPIOs
- 16 LED Drivers with Dimming Control
- 256 Brightness Steps
- 16 Open Drain Outputs Drive 25 mA Each
- 2 Selectable Programmable Blink Rates: - Frequency: 0.593 Hz to 152 Hz - Duty Cycle: 0% to 99.6%
- 400 kHz I2C Bus Compatible
- 2.3 V to 5.5 V Operation
- 5.0 V Tolerant I/Os
- Active Low Reset Input

Benefits

- Suitable for control, or data transfer, and LED control

Applications

- Backlighting
- RGB color mixing
- Sensors control
- Power switches, push-buttons

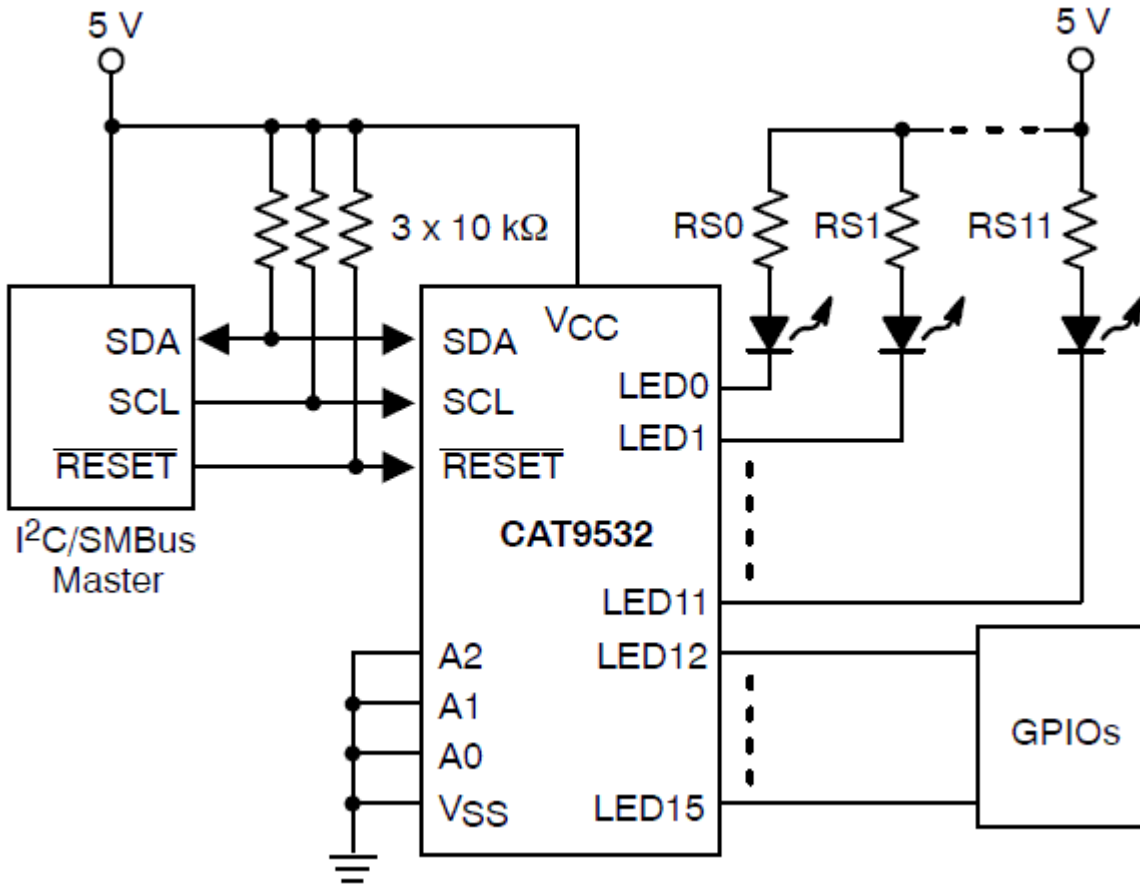
End Products

- Alarm systems

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	I/O	Cascadable	V _{CC} Min (V)	V _{CC} Max (V)	Interrupt Output	I/O Pullups	LED Blink/PWM	I _O Min (mA)	Package Type
CAT9532HV6I-GT2	1.3333	Pb-free Halide free	Active	16	8 Slave ID Addresses	2.3	5.5	No	No	Yes	25	TQFN-24
CAT9532YI-T2	1.2666	Pb-free Halide free	Active	16	8 Slave ID Addresses	2.3	5.5	No	No	Yes	25	TSSOP-24

Application Diagram



For more information please contact your local sales support at www.onsemi.com.

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