



# 8-Bit I<sup>2</sup>C-Bus and SMBus I/O Port with Reset

## PCA9557

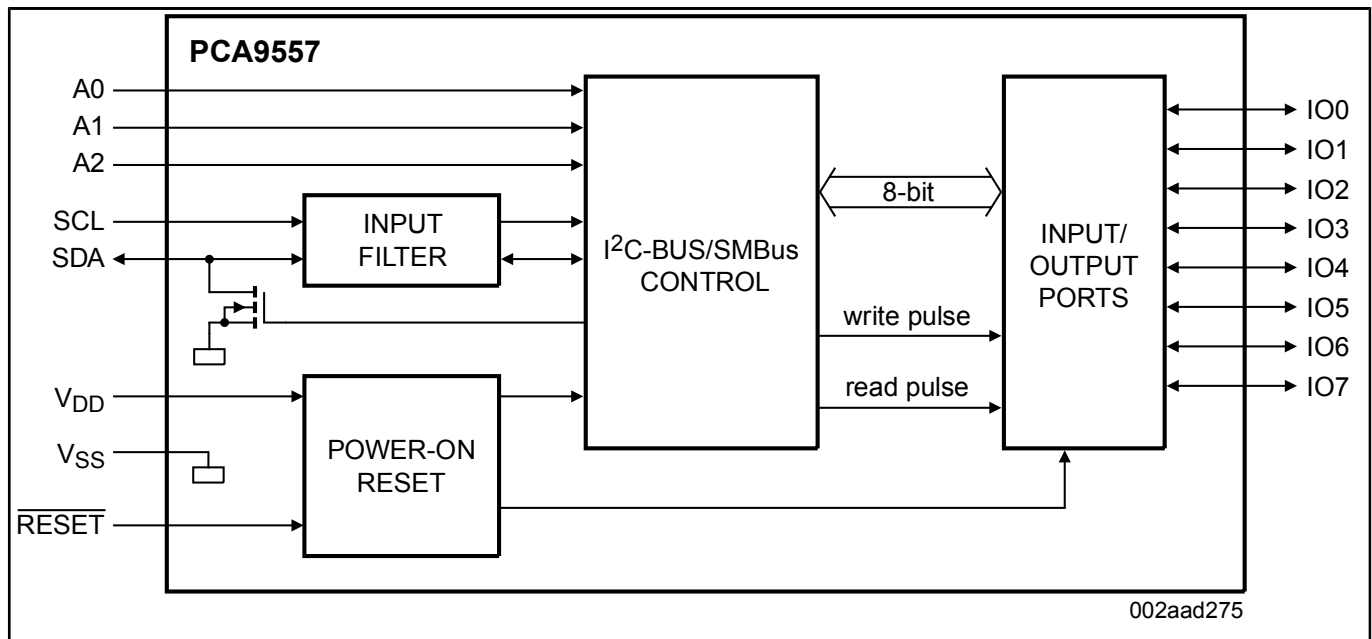
Last Updated: Dec 15, 2024

The PCA9557 is a silicon CMOS circuit which provides parallel input/output expansion for SMBus and I<sup>2</sup>C-bus applications. The PCA9557 consists of an 8-bit input port register, 8-bit output port register, and an I<sup>2</sup>C-bus/SMBus interface. It has low current consumption and a high-impedance open-drain output pin, IO0.

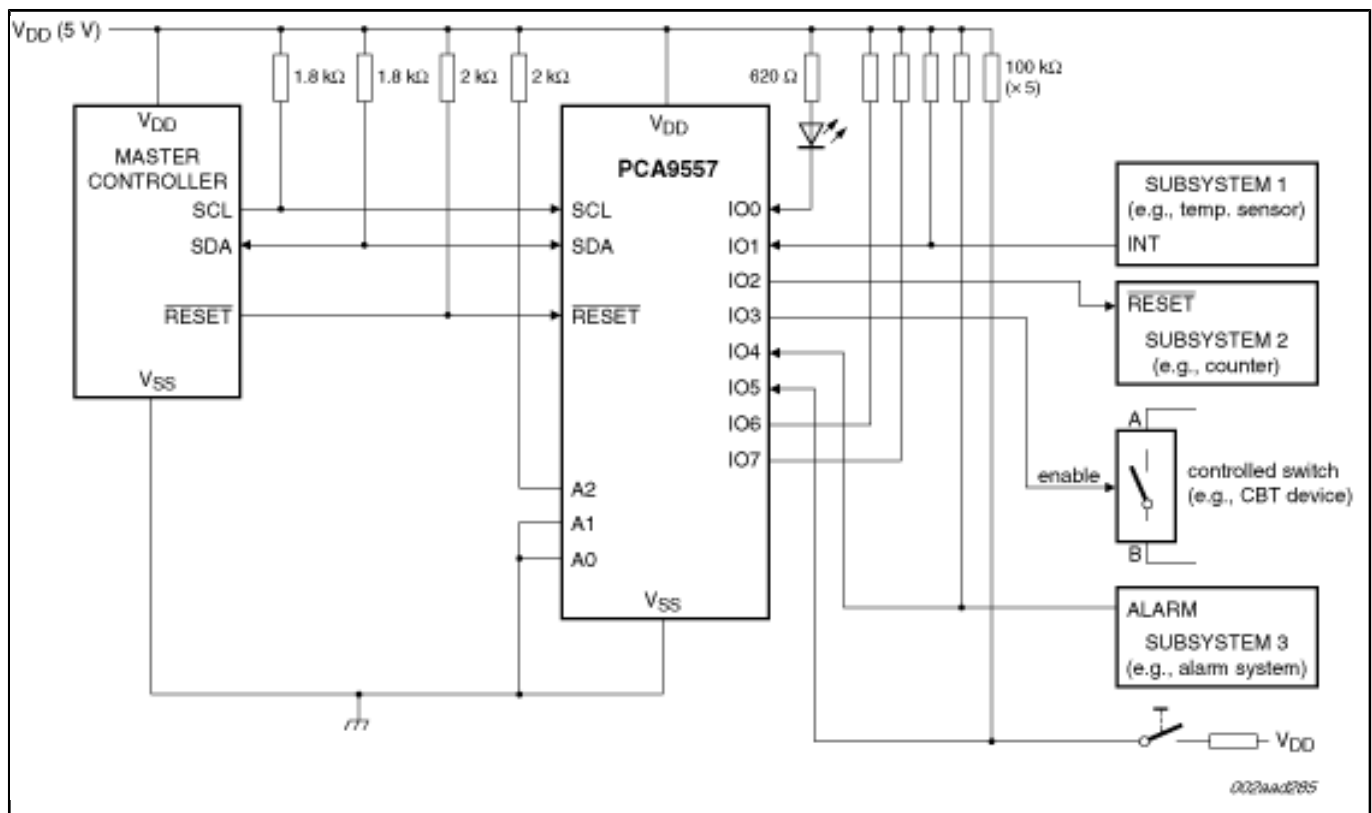
The system controller can enable the PCA9557's I/O as either input or output by writing to the configuration register. The system controller can also invert the PCA9557 inputs by writing to the active HIGH polarity inversion register. Finally, the system controller can reset the PCA9557 in the event of a time-out by asserting a LOW in the reset input.

The power-on reset puts the registers in their default state and initializes the I<sup>2</sup>C-bus/SMBus state machine. The RESET pin causes the same reset/initialization to occur without de-powering the part.

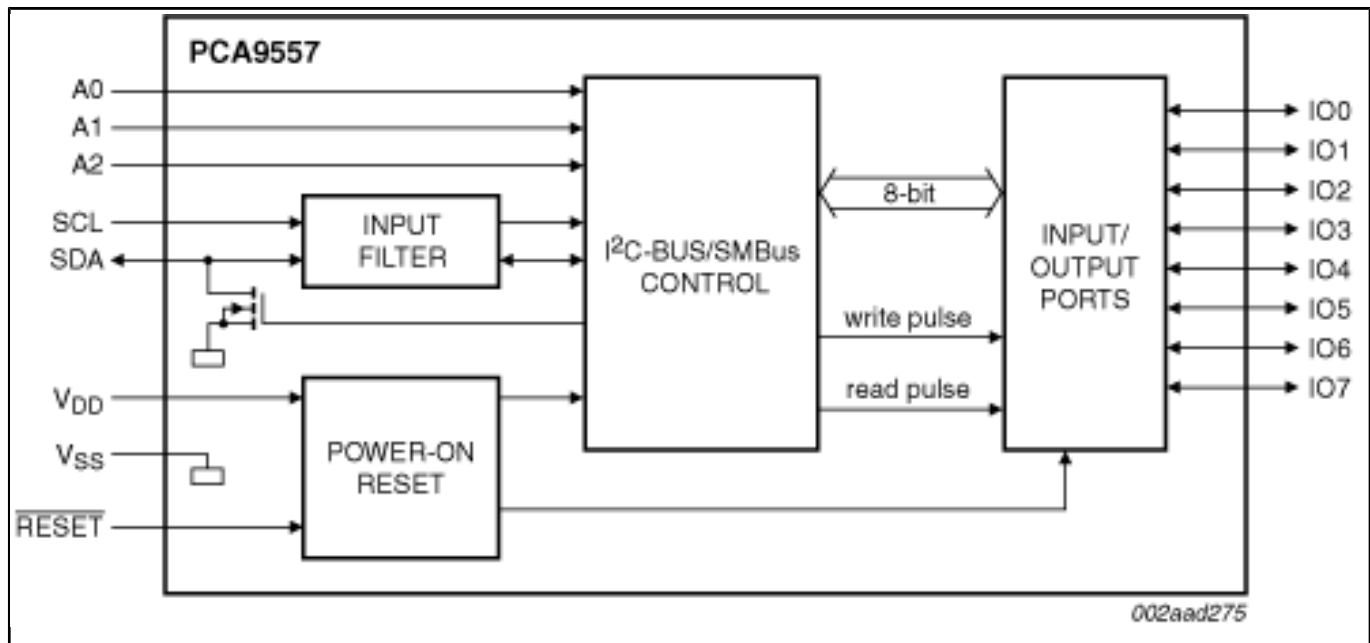
## PCA9557 Block Diagram



## PCA9557BS, PCA9557D, PCA9557PW Block Diagram



## PCA9557BS, PCA9557D, PCA9557PW Block Diagram



View additional information for [8-Bit I<sup>2</sup>C-Bus and SMBus I/O Port with Reset](#).

**Note:** The information on this document is subject to change without notice.

**www.nxp.com**

NXP and the NXP logo are trademarks of NXP B.V. All other product or service names are the property of their respective owners. The related technology may be protected by any or all of patents, copyrights, designs and trade secrets. All rights reserved. © 2025 NXP B.V.