



# Parallel Bus to I<sup>2</sup>C-Bus Controller

## PCA9564

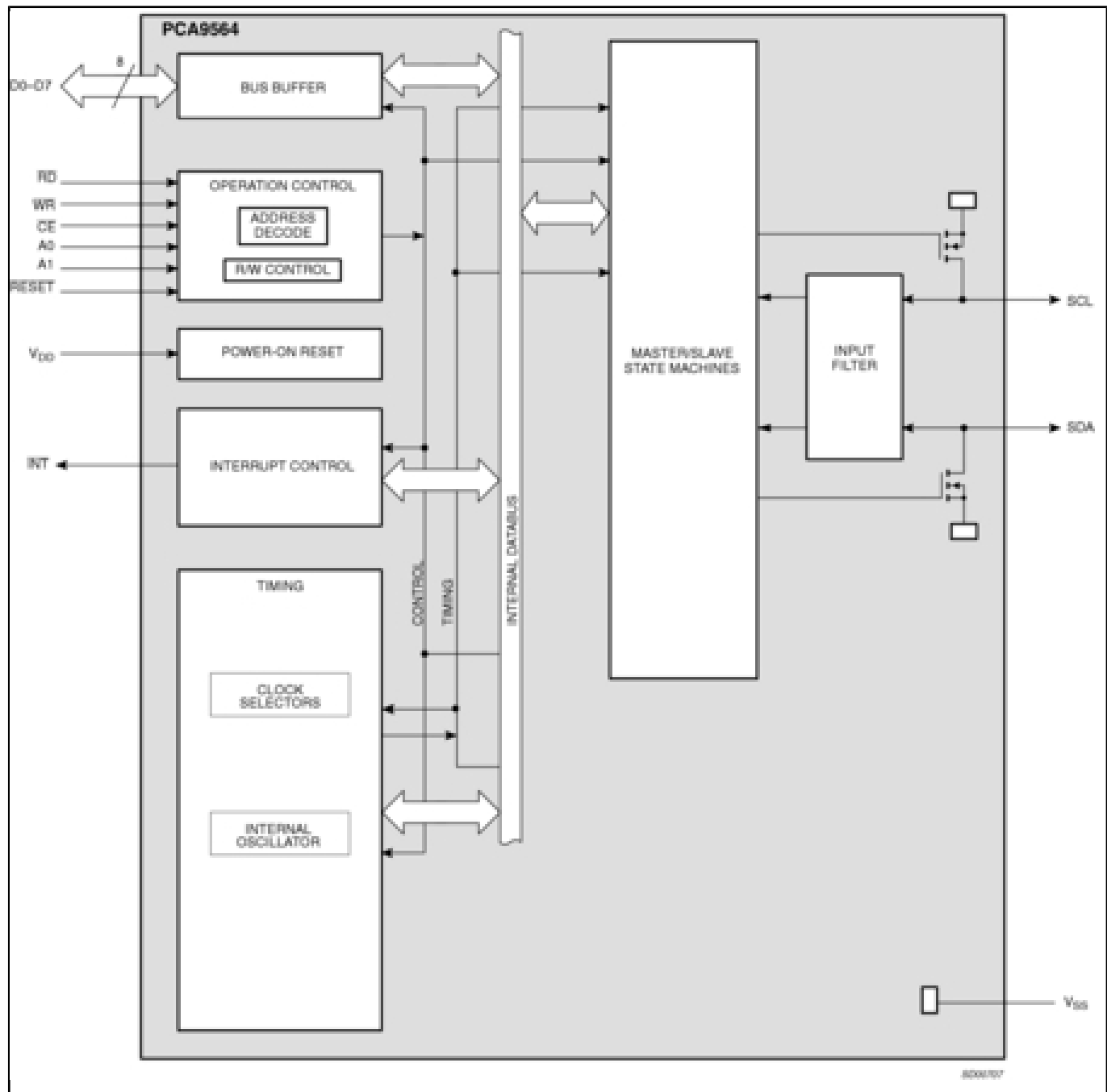
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The PCA9564 is an integrated circuit designed in CMOS technology that serves as an interface between most standard parallel-bus microcontrollers/microprocessors and the serial I<sup>2</sup>C-bus and allows the parallel bus system to communicate bi-directionally with the I<sup>2</sup>C-bus. The PCA9564 can operate as a leader or a follower and can be a transmitter or receiver. Communication with the I<sup>2</sup>C-bus is carried out on a byte-wise basis using interrupt or polled handshake. The PCA9564 controls all the I<sup>2</sup>C-bus specific sequences, protocol, arbitration and timing with no external timing element required.

The PCA9564 is similar to the PCF8584 but operates at lower voltages and higher I<sup>2</sup>C frequencies. Other enhancements requested by design engineers have also been incorporated.

While the PCF8584 supported most parallel-bus microcontrollers/ microprocessors including the Intel 8049/8051, Motorola 6800/68000 and the Zilog Z80, the PCA9564 has been designed to be very similar to the Philips standard 80C51 microcontroller I<sup>2</sup>C hardware so the devices are not code compatible. Additionally, the PCA9564 does not support the bus monitor &quot;Snoop&quot; mode nor the long distance mode and is not footprint compatible with the PCF8584.

## Block diagram: PCA9564BS, PCA9564D, PCA9564N, PCA9564PW Block Diagram



View additional information for [Parallel Bus to I<sup>2</sup>C-Bus Controller](#).

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