



Switch Detection Interface, 22 I/Os, Programmable Wetting Current, Temp Sensor, 3.3 V / 5.0 V SPI

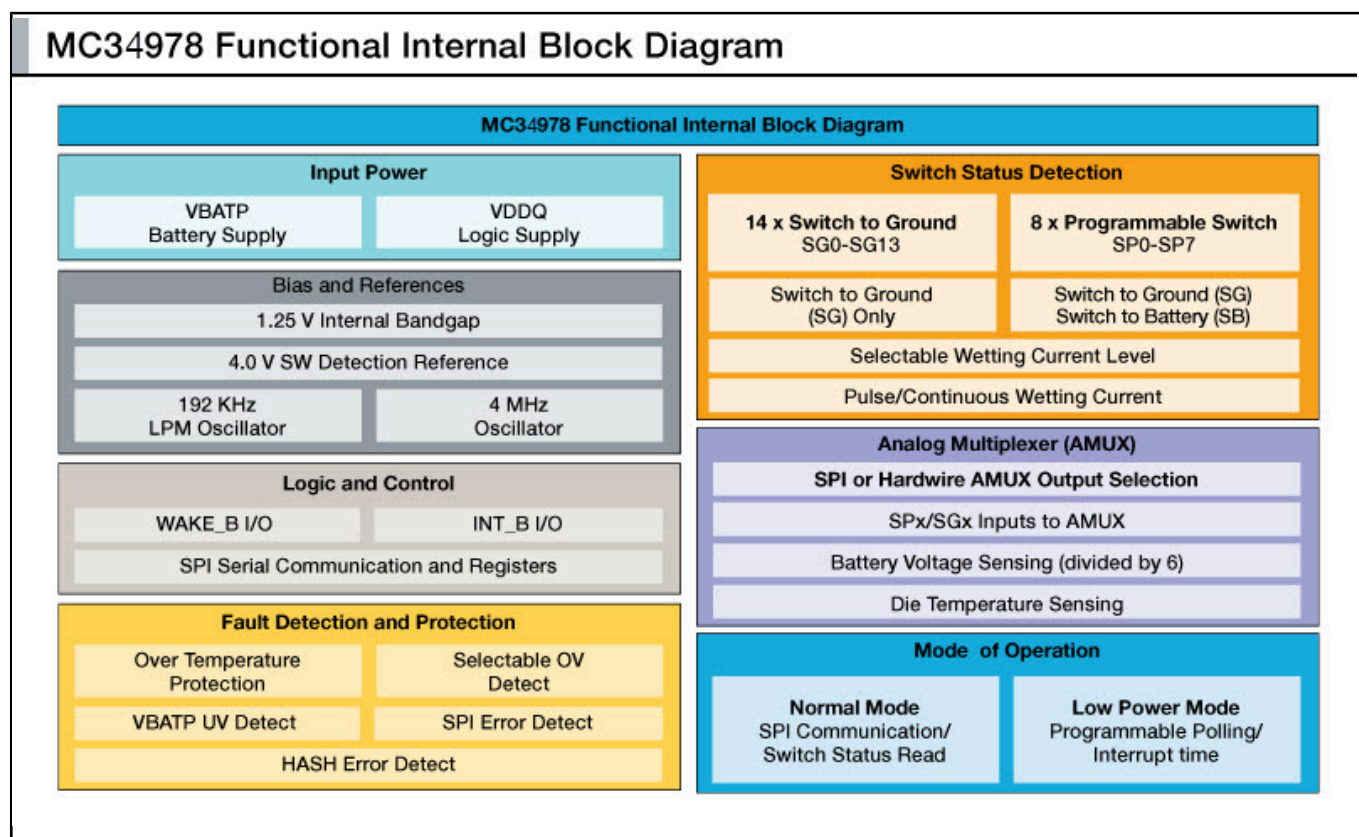
MC34978

Last Updated: Dec 23, 2025

The NXP MC34978 is a multiple switch detection interface (MSDI) designed to detect the closing and opening of up to 22 switch contacts in industrial environments.

- The switch status, either open or closed, is transferred to the microprocessor unit through a serial peripheral interface (SPI)
- This SMARTMOS® device also features a 24-to-1 analog multiplexer for reading analog inputs
- Individually selectable input currents are available in Normal and Low-Power Mode (LPM), as needed in the application
- A battery and temperature monitor are included in the IC and are available via the AMUX pin
- This product interfaces with any microcontroller that supports SPI communications

Switch Detection Interface, 22 I/Os, Programmable Wetting Current, Temp Sensor, 3.3 V / 5.0 V SPI Block Diagram



View additional information for [Switch Detection Interface, 22 I/Os, Programmable Wetting Current, Temp Sensor, 3.3 V / 5.0 V SPI](#).

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. © 2026 NXP B.V.