Safe SBC with Buck and Boost DC/DC Up to 1.5 A on Vcore
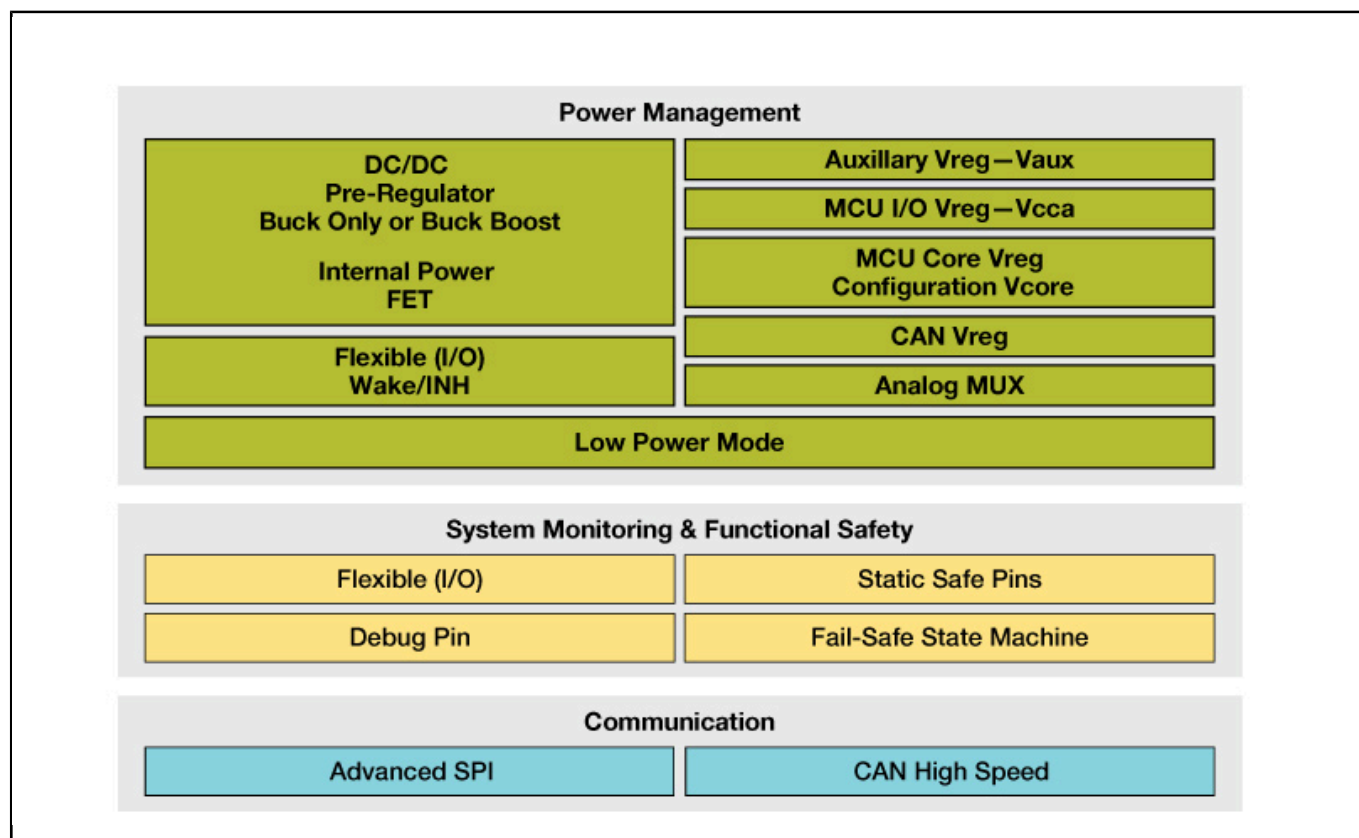
MC34FS6408

Last Updated: Dec 23, 2025

The MC34FS6408system basis chip (SBC), an NXP® Energy-Efficient solution, provides power to MCUs and offer system loads and optimize energy consumption through DC/DC switching regulators, linear regulators and ultra-low-power saving modes.

- Advanced functional safety measures.
- IEC 61508 functional safety metrics available upon demand.
- Serial peripheral interface (SPI) to allow control and diagnostics with the MCU.
- Integrates CAN physical interface compliant with the ISO11898-2 and -5 standards along with the latest automotive OEM standards for EMC and ESD.

MC34FS6407/8 Product Block Diagram Block Diagram

Power Management

DC/DC Pre-Regulator Buck Only or Buck Boost / **Internal Power FET**	**Auxiliary Vreg—Vaux**
	MCU I/O Vreg—Vcca
	MCU Core Vreg Configuration Vcore
Flexible (I/O) Wake/INH	**CAN Vreg**
	Analog MUX
Low Power Mode	

System Monitoring & Functional Safety

Flexible (I/O)	Static Safe Pins
Debug Pin	Fail-Safe State Machine

Communication

Advanced SPI	CAN High Speed

View additional information for Safe SBC with Buck and Boost DC/DC Up to 1.5 A on Vcore.

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