9-Channel PMIC for High-Performance Applications, ASIL D and SIL 2
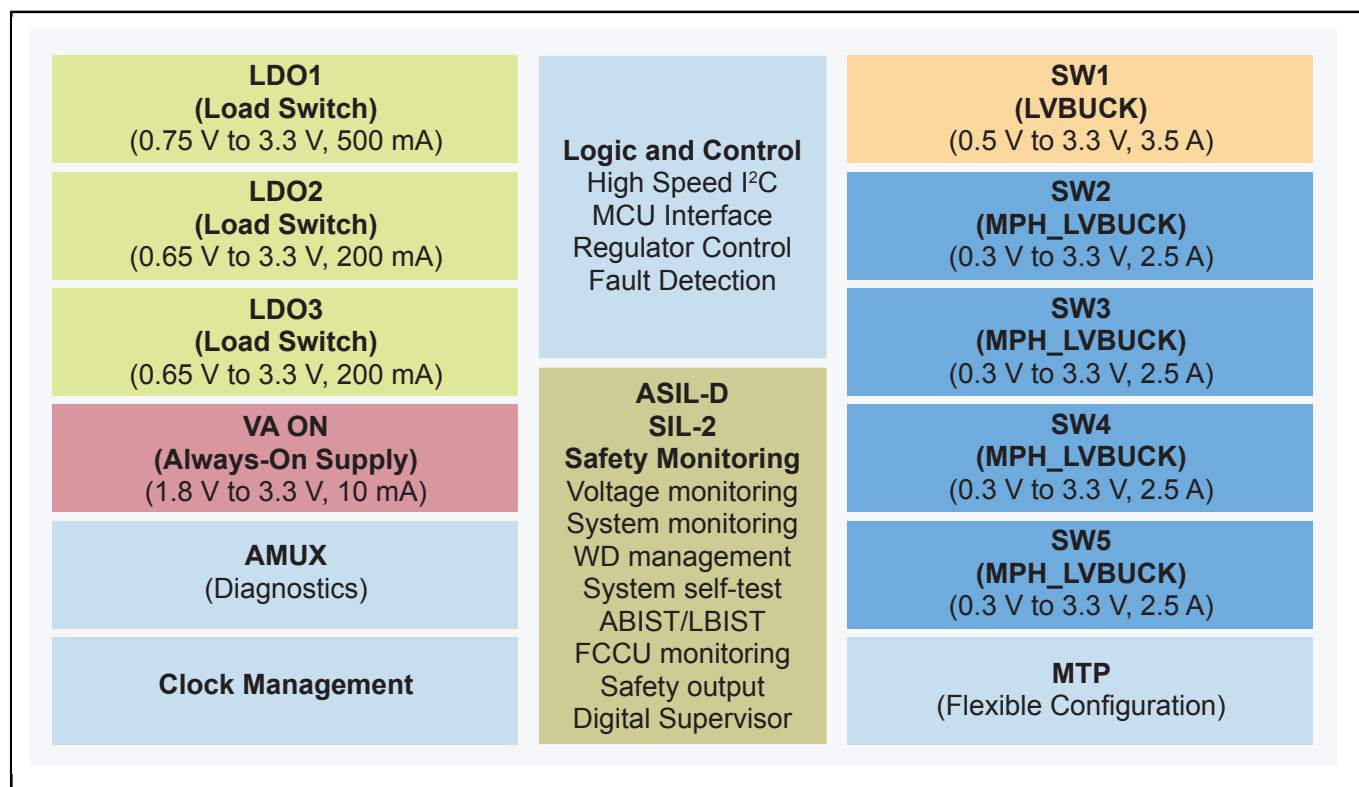
PF09

Active

Last Updated: Dec 23, 2025

The PF09 power management integrated circuit (PMIC) is optimized for high-performance i.MX95 based applications. It features five high-efficiency buck converters and four linear regulators for powering the processor, memory and miscellaneous peripherals. PF09 provides low quiescent current in standby and low-power off modes.

The PF09 is developed in compliance with automotive ISO 26262 and industrial IEC 61508 safety standards, including safety features, with failsafe outputs and integrated self-test mechanisms, becoming part of a safety oriented system partitioning targeting high integrity safety levels up to automotive ASIL D and industrial SIL 2.

PF09 Multi-Channel PMIC for i.MX95 Block Diagram

LDO1 **(Load Switch)** (0.75 V to 3.3 V, 500 mA)	**Logic and Control** High Speed I²C MCU Interface Regulator Control Fault Detection	**SW1** **(LVBUCK)** (0.5 V to 3.3 V, 3.5 A)
LDO2 **(Load Switch)** (0.65 V to 3.3 V, 200 mA)		**SW2** **(MPH_LVBUCK)** (0.3 V to 3.3 V, 2.5 A)
LDO3 **(Load Switch)** (0.65 V to 3.3 V, 200 mA)	**ASIL-D** **SIL-2** **Safety Monitoring** Voltage monitoring System monitoring WD management System self-test ABIST/LBIST FCCU monitoring Safety output Digital Supervisor	**SW3** **(MPH_LVBUCK)** (0.3 V to 3.3 V, 2.5 A)
VA ON **(Always-On Supply)** (1.8 V to 3.3 V, 10 mA)		**SW4** **(MPH_LVBUCK)** (0.3 V to 3.3 V, 2.5 A)
AMUX (Diagnostics)		**SW5** **(MPH_LVBUCK)** (0.3 V to 3.3 V, 2.5 A)
Clock Management		**MTP** (Flexible Configuration)

View additional information for 9-Channel PMIC for High-Performance Applications, ASIL D and SIL 2.

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