Analog—Robust, reliable performance

Power Management Integrated Circuits

Highly integrated, high-performance power management solutions for automotive, consumer and industrial markets.

OVERVIEW

Designed to offer optimum integration for a wide range of devices. They combine:

- Power management
- System control
- Battery management
- Interfaces
- Scalable functional safety
- System-specific functions

Using high-performance process technologies, our PMICs offer high-efficiency solutions designed to extend battery life, reduce power dissipation and minimize EMC.

Our PMICs provide robust and proven platform solutions for i.MX applications processors, networking and standard processors.

PMICs FOR i.MX APPLICATIONS PROCESSORS

Designed for use with the various families of i.MX applications processors, these PMICs aim to support processor scalability requirements optimize power efficiency and software/hardware integration.

The PMICs include:

- Switching and linear regulators
- Battery management functions
- Optimized power modes management
- And one-time programmable (OTP) memory for flexible configurability

They allow system level functional safety and provide one-stop customer service and support as part of the complete i.MX reference design platform.

PMICs FOR NETWORKING PROCESSORS

Designed for use with specific networking processors, these PMICs help optimize power efficiency and software/hardware integration as well as board space.

NXP provides customer service and support as part of the complete Layerscape reference design platform.

CONFIGURABLE PMICS FOR STANDARD PROCESSORS OR FPGAs

NXP's PMICs bring an advanced level of configurability and programmability at system level. A single device can be easily configured to power a wide range of processors or FPGAs. OTP memory stores configuration without the need for external memory.

TYPICAL PMIC BLOCK DIAGRAM
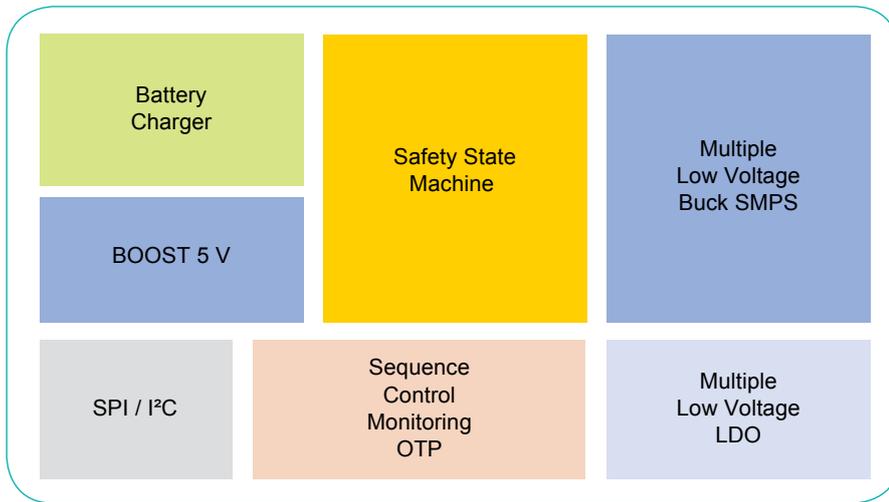
LOW VOLTAGE POWER MANAGEMENT ICs FOR i.MX

PMIC	Associated NXP Processor	Operating Voltage (V)	SMPS	LDO	Ambient Temp Range (°C)	Qualification Grade & Applications: C: Consumer I: Industrial A: Automotive	Key Features
PF0100	i.MX 6S/D/Q/QP/SL/SX	2.8–4.5	6	6	-40 to +85 -40 to +105	C: portable electronics A/I: car infotainment, industrial control	Demonstrated robust platform with BSP, scalability, power efficiency
PF0200	i.MX 6SL/SX	2.8–4.5	5	6	-40 to +85 -40 to +105	C: e-reader, portable electronics I: industrial control	Demonstrated robust platform with BSP, scalability, power efficiency
PF1510	i.MX 7ULP, 6UL, 6ULL	4.1–6.0 or 2.5–4.5	3	3	-40 to +85 -40 to +105	C: wearable, IoT device I: portable medical	Demonstrated robust platform with BSP, cost and size optimized
PF1550	i.MX 7ULP, 6UL, 6ULL	4.1–6.0	3	3	-40 to +85 -40 to +105	C: wearable, IoT device I: portable medical, battery supplied device	Demonstrated robust platform with BSP, includes one cell battery charger, very high efficiency and extremely low power mode
PF3000	i.MX 7S/D i.MX 6UL	2.8–5.5	4	6	-40 to +85 -40 to +105	C: audio, access panel control, HMI A/I: car infotainment, portable medical, POS	Demonstrated robust platform with BSP, scalability, power efficiency
PF3001	i.MX 6UL	2.8–5.5	3	6	-40 to +85 -40 to +105	C: audio, home automation, HMI A/I: telematics, HMI, access control	Demonstrated robust platform with BSP, scalability, optimized for powered applications
PF4210	i.MX 8MQ, 8MD	2.8–4.5	6	6	-40 to +85 -40 to +105	C: audio video receiver, soundbar I: streaming media client	Pre-programmed to meet i.MX 8M applications needs, demonstrated robust platform with BSP
PF8100	i.MX 8, i.MX 8X series	2.7–5.5	7	4	-40 to +85	I: industrial control, consumer, digital signage A: car infotainment, clusters, telematics, vision	Reference design with i.MX 8, i.MX 8X Scalable through programmable configurations
PF8101	i.MX 8, i.MX 8X series	2.7–5.5	5	3	-40 to +105	I: industrial control, consumer, digital signage A: car infotainment, clusters, telematics, vision	Reference design with i.MX 8, i.MX 8X Scalable through programmable configurations
PF8200	i.MX 8, i.MX 8X series	2.7–5.5	7	4	-40 to +105	A: car infotainment, clusters, telematics, ADAS	Reference design with i.MX 8, i.MX 8X Scalable through programmable configurations Functional safety support
PF8201	i.MX 8, i.MX 8X series	2.7–5.5	5	3	-40 to +105	A: car infotainment, clusters, telematics, ADAS	Reference design with i.MX 8, i.MX 8X Scalable through programmable configurations Functional safety support
PF8121	i.MX 8M Mini	2.7–5.5	7	4	-40 to +85	C: IoT Devices, Consumer, Light Industrial	Reference design with i.MX 8M Mini Scalable through programmable configurations

LOW VOLTAGE POWER MANAGEMENT ICs FOR NETWORKING

PMIC	Associated NXP Processor	Operating Voltage (V)	SMPS	LDO	Ambient Temp Range (°C)	Qualification Grade & Applications: C: Consumer I: Industrial A: Automotive	Key Features
VR500	LS1020/21/23/24/43, T1013/23, LS1028	2.8–4.5	4	6	-40 to +105	I: IoT gateway, NAS, MFP printers, ATMS, wireless router, wireless audio	Demonstrated robust platform with BSP, scalability, power efficiency
VR5100	LS1012, LS1024A	2.8–4.5	3	6	-40 to +105	I: NAS, IoT gateway, industrial control, home / building automation	Demonstrated robust platform with BSP, scalability, power efficiency

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