



パワー・マネジメント IC (PMIC)



SECURE CONNECTIONS
FOR A SMARTER WORLD

NXPのPMICは、車載用、民生用、産業用の各市場向けに高度に統合化された高性能のパワー・マネジメント・ソリューション

NXPのPMICは、高性能アプリケーション・プロセッサ、ネットワーキング、その他のプロセッサ向けに、スケーラブルで堅牢な実績のあるプラットフォーム・ソリューションを提供します。

革新的なプロセス技術を採用したNXPのPMICは、バッテリー寿命の延長、消費電力の削減、EMCの最小化につながる高効率のソリューションを実現します。

これらのPMICは、システム・レベルで高度な設定とプログラミングが可能です。

1つのデバイスでさまざまなプロセッサやFPGAに電力を供給するように簡単に設定できます。設定はワンタイム・プログラマブル (OTP) メモリに保存され、外部のメモリを必要としません。



**SYSTEM
SOLUTION**



EFFICIENCY



SAFETY

YOUR FUNCTIONAL SAFETY AND POWER MANAGEMENT PARTNER

**ENABLING SMART SYSTEM POWER PLATFORM
STRATEGIES FOR FLEXIBLE AND SCALABLE SOLUTIONS FOR DIFFERENT MARKETS**



AUTOMOTIVE



INDUSTRIAL



SMART HOME

主な特長

- スイッチング・レギュレータおよびリニア・レギュレータ
- バッテリー・マネジメント機能
- 最適化された電力モード管理
- OTPメモリによる柔軟な設定
- システム・インターフェースと制御による高度なスケーラビリティ
- リファレンス・デザイン・プラットフォームの一部として提供されるワンストップのカスタマー・サービスとサポート
- 自動同期シグナリングにより、すべてのデバイスが同期して1つのPMICとして動作することが可能
- 先進の機能安全アーキテクチャ

BYLinkシステム電源プラットフォーム

すべての電子制御ユニット (ECU) に安全に電力を供給するためのミッシング・リンク。

NXPの安全でスケーラブル、拡張可能なBYLinkシステム電源プラットフォームは、安全で設定可能なパワー・マネジメント設計のための手軽で不可欠な構成要素として、さまざまなNXP SBC/PMICデバイスを1つのパワー・システムとして相互に結び付けます。

重要な課題への対処

- 消費電力の管理
- 機能安全の統合
- 複雑な電源投入/切断シーケンスの管理

主なメリット

- 市場投入までの期間の短縮
- 安全解析の簡素化
- プラットフォーム・アプローチの実現

www.nxp.jp/BYLink

PMICコミュニティ

PMICコミュニティは、専門家に質問して答えてもらうことができる専用コミュニティです。

<https://community.nxp.com/community/Power-Management>

パワー・マネジメントIC

	Features	PCA9420	PCA9450	PCA9451	PCA9460	PF0100	PF0200	PF1510
Power Management Features	Orderable part numbers	PCA9420UKZ PCA9420BSZ	PCA9450AAHNY PCA9450BHNY PCA9450CHNY	PCA9451AHNY	PCA9460AUK PCA9460BUK PCA9460CUK	MMPF0100xxAEP	MMPF0200xxAEP	MC34PF1510xxEP
	Buck	1*(0.5 V~1.5 V or fixed 1.8 V / 250 mA) 1*(1.5 V~2.1 V, 2.7 V~3.3 V / 500 mA)	3*(0.6 V~2.1875 V / 3 A) 1*(0.6 V~3.4 V / 3 A) 2*(0.6 V~3.4 V / 2 A)	3*(0.6 V~2.1875 V / 2 A) 1*(0.6 V~3.4 V / 3 A) 1*(0.6 V~3.4 V / 2 A) 1*(0.6 V~3.4 V / 1.5 A)	2*(0.6 V~3.4 V / 1 A) 2*(0.6 V~2.1875 V / 1 A)	1*(0.3 V~1.875 V / 2.5 A) 1*(0.3 V~1.875 V / 2 A) 1*(0.4 V~3.3 V / 2 A, 1.2 V~3.3 V / 2.5 A) 2*(0.4 V~3.3 V / 1.25 A) 1*(0.4 V~3.3 V / 1 A)	1*(0.3 V~1.875 V / 2.5 A) 1*(0.4 V~3.3 V / 1.5 A) 2*(0.4 V~3.3 V / 1.25 A)	2*(0.6 V~1.3875 V or 1.1 V~3.3 V / 1 A) 1*(1.8 V~3.3 V / 1 A)
	Boost	-	-	-	-	1*(5 V~5.15 V/600 mA)	1*(5 V~5.15 V / 600 mA)	-
	LDO	1*(1.70 V~1.90 V / 1 mA) 1*(1.5 V~2.1 V, 2.7 V~3.3 V / 250 mA)	1*(1.6 V~1.9 V, 3.0 V~3.3 V / 10 mA) 1*(0.8 V~1.15 V / 10 mA) 1*(0.8 V~3.3 V / 300 mA) 1*(0.8 V~3.3 V / 200 mA) 1*(0.8 V~3.3 V / 150 mA)	1*(1.6 V~1.9 V, 3.0 V~3.3 V / 10 mA) 1*(0.8 V~3.3 V / 200 mA) 1*(1.8 V~3.3 V / 150 mA)	3*(0.8 V~3.3 V / 250 mA) 1*(0.8 V~3.3 V / 10 mA) 1*(0.6 V~1.95 V / 250 mA)	1*(0.8 V~1.55 V / 100 mA) 1*(0.8 V~1.55 V / 250 mA) 2*(1.8 V~3.3 V / 100 mA) 1*(1.8 V~3.3 V / 350 mA) 1*(1.8 V~3.3 V / 200 mA)	1*(0.8 V~1.55 V / 100 mA) 1*(0.8 V~1.55 V / 250 mA) 2*(1.8 V~3.3 V / 100 mA) 1*(1.8 V~3.3 V / 350 mA) 1*(1.8 V~3.3 V / 200 mA)	2*(0.75 V~1.5 V / 1.8 V~3.3 V / 300 mA) 1*(1.8 V~3.3 V / 400 mA)
	Others	Charger	Load Switch, I ² C Level Translator	Load Switch, I ² C Level Translator	4* Load Switch	Coin-cell charger	Coin-cell charger	USB_PHY LDO (3.3 V or 4.9 V/60 mA); VREFDDR LDO (0.45 V~0.9 V / 10 mA)
Safety Features (listed for higher level of ASIL)	Fit for ASIL	QM	QM	QM	QM	QM	QM	QM
	Watchdog	Yes	-	-	-	-	-	Yes
	BIST	-	-	-	-	-	-	-
	ABIST On Demand	-	-	-	-	-	-	-
	Safety Output	-	-	-	-	-	-	-
	Documentation/Analysis	-	-	-	-	-	-	-
System Features	Operating Voltage (V)	2.5 – 5.5	2.7 – 5.5	2.7 – 5.5	3.0 – 5.5	2.85 – 4.5	2.8 – 4.5	2.65 – 6.0
	Ambient Temp Range (°C)	-40 °C to 85 °C	-40 °C to 105 °C	-40 °C to 105 °C	-40 °C to 85 °C	-40 °C to 85 °C / 105 °C	-40 °C to 85 °C / 105 °C	-40 °C to 85 °C / 105 °C
	Low-power Off Mode (25 °C) All Reg Off	Low power with ship mode	-	-	-	-	-	-
	GPIO	1.8 V	1.8 V / 3.3 V	1.8 V / 3.3 V	1.8 V / 3.3 V	-	-	1.8 V / 3.3 V
	AMUX (battery, I/O, temp, VREF)	-	-	No	-	-	-	-
	Communication	I ² C	I ² C	I ² C	I ² C	I ² C	I ² C	I ² C
	Special Features	Linear battery charger integrated	Load Switch, I ² C Level Translator	Load Switch, I ² C Level Translator	Load Switch	Coin-cell charger RTC Supply	Coin-cell charger RTC Supply	Coin-cell charger RTC Supply
	Package (mm)	HVQFN24 (3 mm x 3 mm x 0.85 mm) or WLCSP25 (2.09 mm x 2.09 mm x 0.525 mm)	HVQFN56 (7 mm x 7 mm x 0.85 mm)	HVQFN56 (7 mm x 7 mm x 0.85 mm)"	WLCSP42 (2.86 mm x 2.46 mm x 0.525 mm)	QFN56 (8 mm x 8 mm x 0.85 mm)	QFN56 (8 mm x 8 mm x 0.85 mm)	HVQFN406 (5 mm x 5 mm x 0.85 mm)
MCU alignment	i.MX RT600 i.MX RT500 (BSP available)	i.MX 8M Mini i.MX 8M Nano i.MX 8M Plus (BSP available)	i.MX 93 Family C&I versions (BSP available)	i.MX 8ULP	i.MX 6S / D / Q / QP / SL / SX (BSP available)	i.MX 6SL / SX (BSP available)	i.MX 7ULP, 6UL, 6LULL, 6ULZ (BSP available)	
BYLink System Power Platform	-	-	-	-	-	-	-	

パワー・マネジメントIC (続き)

	Features	PF1550	PF3000	PF3001	PF4210	VR500	VR5100
Power Management Features	Orderable part numbers	MC32PF1550xxEP	MC32PF3000xxEP	MC32PF3001xxEP	MC32PF4210xxES	MC34VR500VxES	MC34VR5100xxEP
	Buck	2*(0.6 V~1.3875 V / 1.1 V~3.3 V / 1 A) 1*(1.8 V~3.3 V / 1 A)	1*(0.7 V~1.425 V, 1.8V, 3.3 V/1 A) 1*(0.7 V~1.475 V/1.75 A) 1*(1.5 V~1.85 V, 2.5 V~3.3 V/1.25 A) 1*(0.9 V~1.65 V/1.5 A)	1*(0.7 V~1.425 V, 1.8 V, 3.3 V/2.75 A) 1*(1.5 V~1.85 V, 2.5 V~3.3 V/1.25 A) 1*(0.9 V~1.65 V/1.5 A)	1*(0.3 V~1.875 V / 2.5 A) 1*(0.3 V~1.875 V / 2 A) 1*(0.4 V~3.3 V / 3 A) 2*(0.4 V~3.3 V / 1.5 A) 1*(0.4 V~3.3 V / 1 A)	1*(0.625 V~1.875 V / 4.5 A) 1*(0.625 V~3.3 V / 2 A) 1*(0.625 V~3.3 V / 2.5 A)	1*(0.7 V~1.425 V, 1.8 V, 3.3 V / 3.8 A) 1*(1.5 V~1.85 V, 2.5 V~3.3 V / 1.25 A) 1*(0.9 V~1.65 V / 1.5 A)
	Boost	–	1*(5 V~5.15 V/600 mA)	–	1*(5 V~5.15 V/600 mA)	–	1*(5 V~5.15 V / 600 mA)
	LDO	2*(0.75 V~1.5 V / 1.8 V~3.3 V / 300 mA) 1*(1.8 V~3.3 V / 400 mA)	1*(1.8 V~1.85 V, 2.85 V~3.3 V / 100 mA) 1*(2.85 V~3.3 V / 350 mA) 1*(0.8 V~1.55 V / 250 mA) 2*(1.8 V~3.3 V / 100 mA) 1*(1.8 V~3.3 V / 350 mA)	1*(1.8 V~1.85 V, 2.85 V~3.3 V / 100 mA) 1*(2.85 V~3.3 V / 350 mA) 1*(0.8 V~1.55 V / 250 mA) 2*(1.8 V~3.3 V / 100 mA) 1*(1.8 V~3.3 V / 350 mA)	1*(0.8 V~1.55 V / 100 mA) 1*(0.8 V~1.55 V / 250 mA) 2*(1.8 V~3.3 V / 100 mA) 1*(1.8 V~3.3 V / 350 mA) 1*(1.8 V~3.3 V / 200 mA)	1*(0.8 V~1.55 V / 250 mA) 2*(1.8 V~3.3 V / 100 mA) 1*(1.8 V~3.3 V / 350 mA) 1*(1.8 V~3.3 V / 200 mA)	1*(2.85 V~3.3 V / 350 mA) 1*(0.8 V~1.55 V / 250 mA) 1*(1.8 V~3.3 V / 350 mA) 1*(1.8 V~3.3 V / 200 mA)
	Others	USB_PHY LDO (3.3 V or 4.9 V / 60 mA); VREFDDR LDO (0.45 V~0.9 V / 10 mA)	Coin-cell charger	Coin-cell charger	Coin-cell charger	–	Coin-cell charger
Safety Features (listed for higher level of ASIL)	Fit for ASIL	QM	QM	QM	QM	QM	QM
	Watchdog	Yes	–	–	–	–	–
	BIST	–	–	–	–	–	–
	ABIST On Demand	–	–	–	–	–	–
	Safety Output	–	–	–	–	–	–
	Documentation/Analysis	–	–	–	–	–	–
System Features	Operating Voltage (V)	2.65 – 6.0	2.8 – 5.5	2.8 – 5.5	2.8 – 4.5	2.8 – 4.5	2.8 – 4.5
	Ambient Temp Range (°C)	-40 °C to 85 °C / 105 °C	-40 °C to 85 °C / 105 °C	-40 °C to 85 °C / 105 °C	-40 °C to 85 °C / 105 °C	-40 °C to 105 °C	-40 °C to 105 °C
	Low-power Off Mode (25 °C) All Reg Off	Low power with ship mode	–	–	–	–	–
	GPIO	1.8 V / 3.3 V	–	–	–	–	–
	AMUX (battery, I/O, temp, VREF)	–	–	–	–	–	–
	Communication	I ² C	I ² C	I ² C	I ² C	I ² C	I ² C
	Special Features	Linear battery charger integrated Coin-cell charger RTC Supply	Coin-cell charger & always-on RTC supply	Coin-cell charger & always-on RTC supply	Coin-cell charger RTC Supply	–	Coin-cell charger RTC Supply
	Package (mm)	HVQFN40 (5 mm x 5 mm x 0.85 mm)	QFN48 (7 mm x 7 mm x 0.85 mm)	QFN48 (7 mm x 7 mm x 0.85 mm)	QFN56 (8 mm x 8 mm x 0.85 mm)	QFN56 (8 mm x 8 mm x 0.85 mm)	QFN48 (7 mm x 7 mm x 0.85 mm)
MCU alignment	i.MX 7ULP, 6UL, 6ULL (BSP available)	i.MX 7, i.MX 6SL / SX / UL	i.MX 7, i.MX 6SL / SX / UL	i.MX 8MQ, 8MD (BSP available)	LS1020 / 21 / 23 / 24 / 26 / 28 / 43 / 46, T1013 / 23 (BSP available)	LS1012, LX2160 (BSP available)	
BYLink System Power Platform	–	–	–	–	–	–	

BYLinkシステム電源プラットフォームに含まれるパワー・マネジメントIC

	Features	PF0300 (Pre-Production)	PF0900 (Pre-Production)	PF5020	PF5023	PF5024	PF5030
Power Management Features	Orderable part numbers	PPF0300xxxxxES	PPF09000xxxxxES	MPF5020xxxxxES	MPF5023xxxxxES	MPF5024xxxxxES	PPF5030AMDA0ES
	Buck	3*(0.5 V-3.3 V / 3.5 A)	1*(0.5 V-3.3 V / 3.5 A), 4*(0.3 V-3.3 V / 2.5 A)	2x (0.4 V to 1.8 V / 2.5 A) 1 x (1 V to 4.1 V / 2.5 A)	3x (0.4 V to 1.8 V / 2.5 A)	4x (0.4 V to 1.8 V / 2.5 A)	2*(0.7 V~1.5 V / 3.5 A with SVS and dual phase capability, up to 7 A) 1*(1 V~4.1 V, 2.5 A)
	Boost	–	–	0	0	0	–
	LDO	1*(0.75 V-3.3V / 500 mA)	1*(0.75 V-3.3 V / 500 mA), 2*(0.65 V-3.3 V / 200 mA)	1x (1.5 V to 5 V / 400 mA)	0	0	2*(1.5 V~ 5.0 V / 400 mA) with load switch capability
	Others	–	VAON: (1.8 V-3.3 V / 10 mA)	Load switch	–	–	–
Safety Features (listed for higher level of ASIL)	Fit for ASIL	QM	QM / ASIL B/D	QM / ASIL B	QM / ASIL B	QM / ASIL B	QM / ASIL B/D
	Watchdog	Simple	Simple/Challenger	Simple	Simple	Simple	Simple/Challenger
	BIST	–	ABIST/LBIST	ABIST	ABIST	ABIST	ABIST/LBIST
	ABIST On Demand	No	Yes	Yes	Yes	Yes	Yes
	Safety Output	PGOOD	PGOOD	5x PGOOD	4x PGOOD	5x PGOOD	F50B, RSTB, PGOOD
	Documentation/Analysis	Yes	Yes	Yes	Yes	Yes	Yes
System Features	Operating Voltage (V)	2.7 – 5.5	2.7 – 5.5	2.5 – 5.5	2.5 – 5.5	2.5 – 5.5	3.15 – 5.25
	Ambient Temp Range (°C)	-40 °C to +125 °C	-40 °C to +125 °C	-40 °C to 105 °C / 125 °C	-40 °C to 105 °C / 125 °C	-40 °C to 105 °C / 125 °C	-40 °C to 125 °C
	Low-power Off Mode (25 °C) All Reg Off	–	3µA	–	–	–	–
	GPIO	1.8 V / 3.3 V	1.8 V / 3.3 V / 5 V	1.8 V / 3.3 V	1.8 V / 3.3 V	1.8 V / 3.3 V	–
	AMUX (battery, I/O, temp, VREF)	No	–	Yes	Yes	Yes	Yes
	Communication	I ² C	I ² C	I ² C	I ² C	I ² C	I ² C
	Special Features	Spread-spectrum Clock synchronization	Spread-spectrum, Clock synchronization	Coin-cell charger RTC Supply Spread-spectrum Clock synchronization	Spread-spectrum Clock synchronization	Spread-spectrum Clock synchronization	Spread-spectrum
	Package (mm)	HWQFN28 (4.5 mm x 4.5 mm x 0.68 mm)	HPQFN56 (8 mm x 8 mm x 0.9 mm)	HVQFN40 (6 mm x 6 mm x 0.85 mm)	HVQFN40 (6 mm x 6 mm x 0.85 mm)	HVQFN40 (6 mm x 6 mm x 0.85 mm)	HVQFN40 (6 mm x 6 mm x 0.85 mm)
	MCU alignment	–	i.MX 95	i.MX RT117x	i.MX 8	i.MX 8	S32xx
BYLink System Power Platform	Yes	Yes	Yes	Yes	Yes	Yes	

BYLinkシステム電源プラットフォームに含まれるパワー・マネジメントIC (続き)

	Features	PF5103 (Pre-production)	PF5113 (Pre-Production)	PF5123 (Pre-Production)	PF52	PF5300 PF5301 PF5302	PF71
Power Management Features	Orderable part numbers	PPF5103xxxxES	PPF5113xxxxES	PPF5123xxxxES	MPF5200AMBxxES	MPF5300xxxxES MPF5301xxxxES MPF5302xxxxES	MPF7100xxxxES
	Buck	3*(0.5 V-3.3 V / 3.5 V)	1*(0.8 V, 0.825 V, 0.9 V or 1.2 V / 2.6 A), 1*(1.3 V, 1.5 V, 1.8 V, 2.3 V, 2.5 V, or 3.3 V / 3.5 A), 1*(1.1 V, 1.3 V, 1.5 V, 2.5 V, or 3.3 V / 2.6 A)	3*(0.5 V-3.3 V / 3.5 A)	2x (0.6 V to 1.2 V / 8 A)	PF5300: 1*(0.5 V – 1.2 V)/12 A PF5301: 1*(0.5 V – 1.2 V) / 8 A PF5302: 1*(0.5 V – 1.2 V) / 15 A	4x (0.4 V to 1.8 V / 2.5 A) multiphase 1x (1 V to 4.1 V / 2.5 A)
	Boost	–	–	–	–	–	–
	LDO	1*(0.75 V-3.3 V / 200 mA), 1*(0.75 V-3.3 V / 500 mA)	1*(1.8 V-3.3 V / 200 mA), 1*(1.8 V-3.3 V / 250 mA)	–	–	–	2x (0.8 V to 5 V / 400 mA)
	Others	–	–	–	–	–	VSNVS1: (1.8 V / 3.0 V / 3.3 V, 10 mA) VSNVS2: (0.8 V / 0.9 V / 1.8 V, 10 mA)
Safety Features (listed for higher level of ASIL)	Fit for ASIL	QM / ASIL B/D	QM / ASIL B/D	QM / ASIL B/D	QM / ASIL B	QM / ASIL B/D	QM / ASIL B
	Watchdog	Simple/Challenger	Simple/Challenger	Simple/Challenger	Window Watchdog	Simple/Challenger	Window Watchdog
	BIST	ABIST/LBIST	ABIST/LBIST	ABIST/LBIST	ABIST	ABIST	ABIST
	ABIST On Demand	Yes	Yes	Yes	Yes	Yes	Yes
	Safety Output	PGOOD	PGOOD	PGOOD	PGOOD	PGOOD	FSOB, PGOOD
	Documentation/Analysis	Yes	Yes	Yes	Yes	Yes	Yes
System Features	Operating Voltage (V)	2.7 – 5.5	2.7 – 5.5	2.7 – 5.5	2.7 – 5.5	2.7 – 5.5	2.7 – 5.5
	Ambient Temp Range (°C)	-40 °C to 125 °C	-40 °C to +125 °C	-40 °C to +125 °C	-40 °C to 125 °C	-40 °C to 125 °C	-40 °C to 105 °C / 125 °C
	Low-power Off Mode (25 °C) All Reg Off	–	–	–	–	1.5uA	–
	GPIO	1.8 V / 3.3 V	1.8 V / 3.3 V	1.8 V / 3.3 V	1.8 V / 3.3 V / 5.0 V	1.8 V / 3.3 V	1.8 V / 3.3 V
	AMUX (battery, I/O, temp, VREF)	No	No	No	Yes	No	Yes
	Communication	I ² C	I ² C	I ² C	I ² C	I ² C	I ² C
	Special Features	Spread-spectrum Clock synchronization	Spread-spectrum Clock synchronization	Spread-spectrum Clock synchronization	Spread-spectrum Clock synchronization	Adaptive voltage positioning	2* RTC Supply Spread-spectrum Clock synchronization
	Package (mm)	HWQFN28 (4.5 mm x 4.5 mm x 0.68 mm)	HWQFN28 (4.5 mm x 4.5 mm x 0.68 mm)	HWQFN28 (4.5 mm x 4.5 mm x 0.68 mm)	PQFN32 (5 mm x 5 mm x 0.68 mm)	3.5 mm x 4.5 mm	HWQFN48 (7 mm x 7 mm x 0.85 mm)
MCU alignment	–	–	–	S32R45, LX2160	S32G3	i.MX 8X / XL (BSP available)	
BYLink System Power Platform	Yes	Yes	Yes	Yes	Yes	Yes	

BYLinkシステム電源プラットフォームに含まれるパワー・マネジメントIC (続き)

	Features	PF81	PF8101	PF8121	PF82	PF8201
Power Management Features	Orderable part numbers	MC33PF8100xxES	MC33PF8101A0ES MC34PF8101A0EP	MC32PF8121xxEP	MC33PF8200xxES	MC33PF8201A0ES
	Buck	6x (0.4 V to 1.8 V / 2.5 A) multiphase 1x (1 V to 4.1 V / 22.5 A)	4x (0.4 V to 1.8 V / 2.5 A) multiphase 2+2 1x (1 V to 4.1 V / 2.5 A)	6x (0.4 V to 1.8 V / 2.5 A) multiphase 2+2 1x (1 V to 4.1 V / 2.5 A)	6x (0.4 V to 1.8 V / 2.5 A) multiphase 4+2 1x (1 V to 4.1 V / 2.5 A)	4x (0.4 V to 1.8 V / 2.5 A) multiphase 2+2 1x (1 V to 4.1 V / 2.5 A)
	Boost	–	–	0	–	0
	LDO	4x (1.5 V to 5 V / 400 mA)	3x (1.5 V to 5 V / 400 mA)	4x (1.5 V to 5 V / 400 mA)	4x (1.5 V to 5 V / 400 mA)	3x (1.5 V to 5 V / 400 mA)
	Others	VSNVS: (1.8 V / 3.0 V / 3.3 V, 10 mA)	VSNVS: (1.8 V / 3.0 V / 3.3 V, 10 mA)	VSNVS: (1.8 V / 3.0 V / 3.3 V, 10 mA)	VSNVS: (1.8 V / 3.0 V / 3.3 V, 10 mA)	VSNVS: (1.8 V / 3.0 V / 3.3 V, 10 mA)
Safety Features (listed for higher level of ASIL)	Fit for ASIL	QM	ASIL B	QM	ASIL B	ASIL B
	Watchdog	Window Watchdog	Window Watchdog	Simple	Window Watchdog	Simple
	BIST	ABIST	ABIST	–	ABIST	ABIST
	ABIST On Demand	No	No	No	Yes	Yes
	Safety Output	PGOOD	PGOOD	PGOOD	FSOB, PGOOD	FSOB, PGOOD
	Documentation/Analysis	No	No	No	Yes	Yes
System Features	Operating Voltage (V)	2.7 – 5.5	2.7 – 5.5	2.7 – 5.5	2.7 – 5.5	2.7 – 5.5
	Ambient Temp Range (°C)	-40 °C to 85 °C / 105 °C	-40 °C to 105 °C	-40 °C to 85 °C	-40 °C to 105 °C	-40 °C to 105 °C
	Low-power Off Mode (25 °C) All Reg Off	–	–	–	–	–
	GPIO	1.8 V / 3.3 V	1.8 V / 3.3 V	1.8 V / 3.3 V	1.8 V / 3.3 V	1.8 V / 3.3 V
	AMUX (battery, I/O, temp, VREF)	Yes	Yes	Yes	Yes	Yes
	Communication	I ² C	I ² C	I ² C	I ² C	I ² C
	Special Features	RTC Supply Coin-cell charger Spread-spectrum Clock synchronization	RTC Supply Coin-cell charger Spread-spectrum Clock synchronization	RTC Supply Coin-cell charger Spread-spectrum Clock synchronization	RTC Supply Coin-cell charger Spread-spectrum Clock synchronization	RTC Supply Coin-cell charger Spread-spectrum Clock synchronization
	Package (mm)	HVQFN56 (8 mm x 8 mm x 0.85 mm)	HVQFN56 (8 mm x 8 mm x 0.85 mm)	HVQFN56 (8 mm x 8 mm x 0.85 mm)	HVQFN56 (8 mm x 8 mm x 0.85 mm)	HVQFN56 (8 mm x 8 mm x 0.85 mm)
MCU alignment	i.MX 8, i.MX 8X, S32V, LS1043 / LS1046 / LA1575 / LA9358 / LX2160 (BSP available)	i.MX 8, i.MX 8X (BSP available)	i.MX 8, i.MX 8X (BSP available)	i.MX 8, i.MX 8X, S32V, LS1043 / LS1046 / LA1575 / LA9358 / LX2160 (BSP available)	i.MX 8, i.MX 8X, S32V, LS1043 / LS1046 / LA1575 / LA9358 / LX2160 (BSP available)	
BYLink System Power Platform	Yes	Yes	Yes	Yes	Yes	

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