



Product brief

XMC™ – wireless power controller

Enabling wireless charging transmitter applications

Infineon's XMC™ wireless power controller, based on the ARM® Cortex®-M0 core, provides a powerful and cost-effective platform for high performance, smart and safe wireless charging applications.

The XMC™ wireless power controller helps the next-generation wireless charging systems meet strict safety, environmental and regulatory requirements, while still enabling industry-leading charging performance and efficiency. This controller works seamlessly with Infineon's power devices in a scalable architecture to provide a complete charging solution for everything from a fast charge smartphone, to a 20 W robot, to a 60 W drone and beyond.

Key benefits

- › Supports 15 W charging and existing standards, including fast charge smartphones
- › Full power 15 W without exotic thermal management
- › Achieves charging rates equivalent to wired charging
- › Supports custom charging profiles and industry standards on the same hardware
- › Foreign Object Detection (FOD) with improved accuracy quality-factor monitoring
- › Foreign object detection capability can be extended beyond existing standards to improve detection
- › Supports custom coils, and greater than three coils

Main features

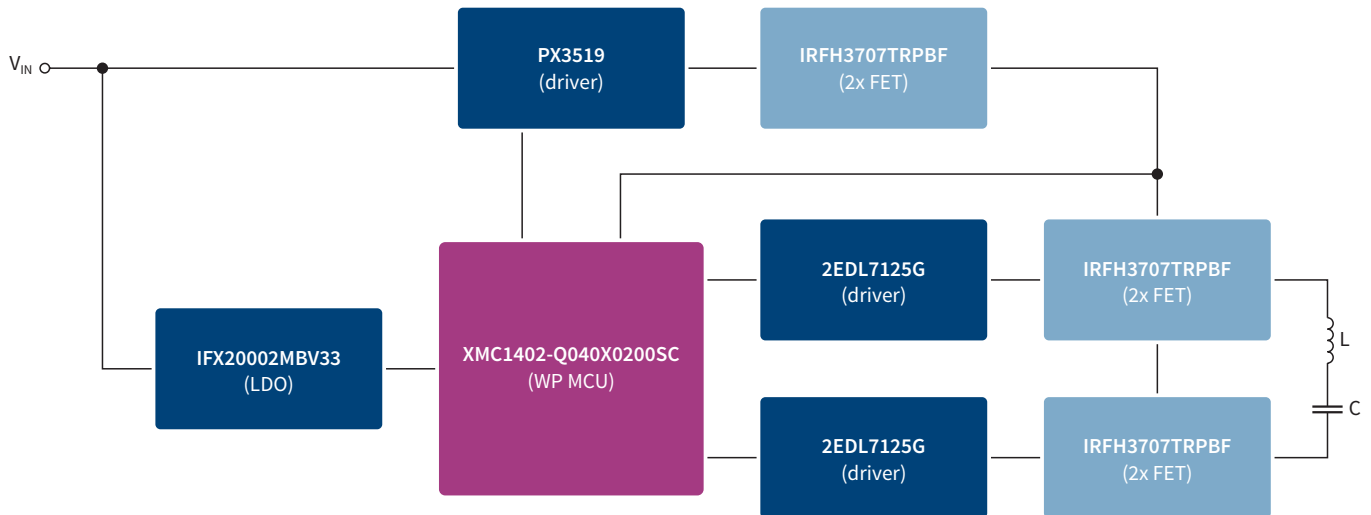
Features XMC1402-Q040X0200SC

- › Supports Inductive and resonant charging methods
- › Power levels up to 60 W
- › Multiple industry standard and custom charging profiles using the same hardware architecture
- › Single and multi-coil transmitters
- › Half and full-bridge support
- › Variable and fixed frequency transmitter types
- › Buck and boost topologies
- › Integrated flash for parameter storage
- › Voltage supply 1.8–5.5 V
- › Space saving VQFN-40 package

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Application diagram



Single-coil 15 W charger. Also supports multi-coil designs.

Product summary

Type	Flash [KB]	Frequency [MHz]	SRAM [KB]	Package	Temp. range [°C]	Remarks
XMC1402-Q040X0200 SC	200	48	16	VQFN-40	-40 ... +105	Including wireless charging IP
XMC1402-Q040X0128 SC ¹⁾	128	48	16	VQFN-40	-40 ... +105	Including wireless charging IP
XMC1402-Q040X0064 SC ¹⁾	64	48	16	VQFN-40	-40 ... +105	Including wireless charging IP
XMC1402-Q048X0200 SC ¹⁾	200	48	16	VQFN-48	-40 ... +105	Including wireless charging IP
XMC1402-Q064X0200 SC ¹⁾	200	48	16	VQFN-64	-40 ... +105	Including wireless charging IP
XMC1402-F064X0200 SC ¹⁾	200	48	16	LQFP-64	-40 ... +105	Including wireless charging IP
XMC1403-Q040X0200 SC ¹⁾	200	48	16	VQFN-40	-40 ... +105	Including wireless charging IP
XMC1404-Q048X0200 SC ¹⁾	200	48	16	VQFN-48	-40 ... +105	Including wireless charging IP

1) On request

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