

Infineon’s system solution for embedded systems

www.infineon.com/embeddedsystem

Infineon’s solutions for embedded systems

Modern objects in our daily lives, such as coffee machines, dishwashers and automatic opening systems, need embedded intelligence and power. Designing such devices requires an efficient and easy to implement power supply and a cost effective, versatile and scalable microcontroller platform. With Infineon’s solutions you can realize the functions which distinguish your product.

In particular, for designs that need very high efficiency Infineon also delivers complete solutions that include secondary side synchronous rectification. This improves efficiency compared to traditional diode-based rectification.

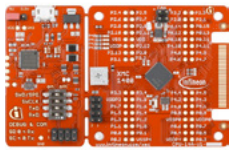
Based on your power and efficiency needs, you can find an optimal ready-to-use solution at Infineon ranging from lowest cost to highest efficiency to highest integration in the given power class.

Full system solution

Infineon is the right partner to make sure you can implement the functions which distinguish your embedded system/product without worrying about designing a complex power supply and/or microcontroller subsystem.

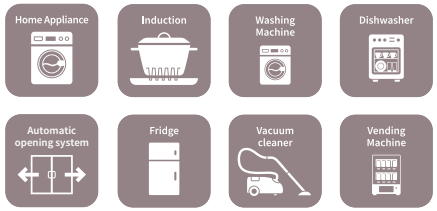
- Easy-to-use **reference solutions and/or building blocks such as power supply, power switches and microcontroller** that dramatically cut your time-to-market
- DAVE™ 4 – free of charge Eclipse-based integrated development environment (IDE) providing extensive, configurable, and reusable code repository for XMC™ MCUs, supporting the whole development process from evaluation to production

Selection of available evaluation boards for embedded systems

12 W SMPS 800 V fixed frequency CoolSET™ ICE3AR4780VJZ	20 W 5 V SMPS off-line flyback converter CoolSET™ ICE3AR2280VJZ	40 W SMPS 800 V quasi-resonant CoolSET™ ICE32QR0680Z	60 W SMPS fixed frequency flyback controller ICE3BS03LJG	65 W fixed frequency flyback controller ICE3AS03LJG
				
EVAL-3AR4780VJZ	EVAL-3AR2280VJZ	EVALQRC-ICE2QR0680Z	EVALSF3-ICE3BS03LJG	EVALSF3-ICE3AS03LJG
XMC1300 Boot Kit	**XMC1400 Boot Kit**	**XMC1000 Motor Control Application kit**	**750 W Motor Control Application kit**	**XMC4400 Motor Control Application kit**
				
KIT_XMC13_BOOT_001	KIT_XMC14_BOOT_001	KIT_XMC1X_AK_MOTOR_001	KIT_XMC750WATT_MC_AK_V1	KIT_XMC44_AE3_001

Benefits

- Very easy to implement
- Fast time-to-market
- Very flexible solutions from low-cost to highest efficiency
- Solutions designed to fit well into most systems



Reliable and durable solutions for embedded systems

Flight control

Quasi-resonant PWM controller
- ICE2QS03G

Fixed frequency PWM controller
- ICE3AS03LJG
- ICE3BS03LJG

Primary side high voltage MOSFETs

700 V CoolMOS™ CE
- IPS70R600CE
- IPS70R950CE
- IPS70R1K4CE
- IPS70R2K0CE

800 V CoolMOS™ CE
- IPU80R2K8CE
- IPD80R2K8CE
- IPD80R1K4CE
- IPD80R1K0CE

Integrated control and MOSFETs

800 V quasi-resonant CoolSET™
- ICE2QR4780Z
- ICE2QR2280Z
- ICE2QR0680Z

800 V fixed frequency CoolSET™
- ICE3AR4780VJZ
- ICE3AR2280VJZ
- ICE3AR1580VJZ
- ICE3AR1080VJZ
- ICE3AR0680VJZ

Secondary side synchronuous rectification ICs

- Once cycle control PFC IC: IR1153STRPBF
- Adj. frequency once cycle control PFC: IR1155STRPBF
- Boost PFC and SMPS control IC: IRS2505LTRPBF
- 200 V secondary side SR controller: IR1161LTRPBF, IR11662STRPBF
- 200 V dual SR controller IC: IR11688STRPBF
- Advanced smart rectifier control IC: IR11672ASTRPBF

Secondary side synchronuous rectification MOSFETs

- 60 V and 100 V OptiMOS™ 3 Logic Level
- 100 V OptiMOS™ 3
- 40 V to 100 V OptiMOS™ 5
- 40 V to 100 V StrongIRFET™

Microcontroller

XMC1000 microcontroller
- XMC1100T016X0064AB
- XMC1201T038F0200AB
- XMC1302Q040X0200AB
- XMC1402F064X0200AA

CoolSET™ reference boards

- EVALQRC-ICE2QR0680Z
- EVALQRC-ICE2QR4780Z
- EVALQRC-ICE2QR2280Z
- EVAL-ICE3AR1080VJZ
- EVAL-ICE3AR1580VJZ
- EVAL-3AR4780VJZ
- EVAL-3AR0680VJZ
- EVAL-3AR2280VJZ

PWM IC reference boards

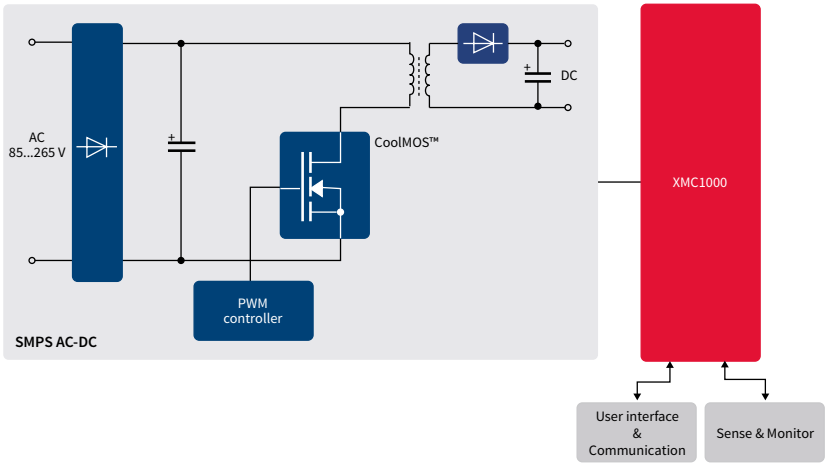
- EVALQRS-ICE2QS03G
- EVALSF3-ICE3BS03LJG
- EVALSF3-ICE3AS03LJG

XMC™ microcontroller reference boards

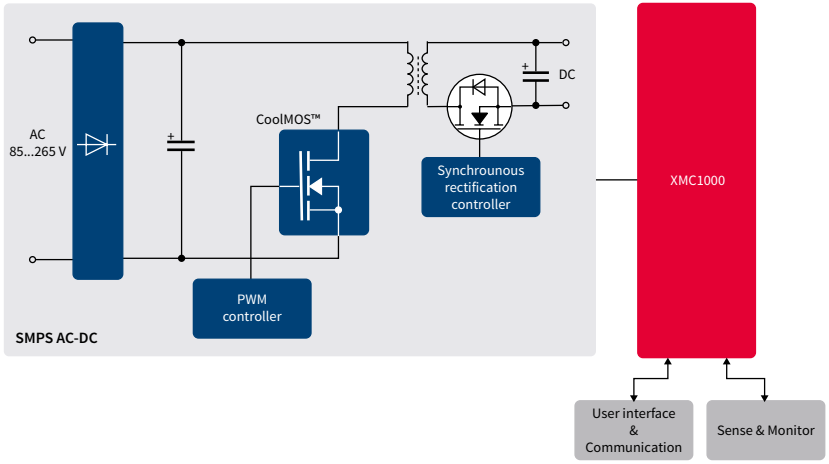
- KIT_XMC13_BOOT_001
- KIT_XMC14_BOOT_001
- KIT_XMC1X_AK_MOTOR_001
- KIT_XMC750WATT_MC_AK_V1
- KIT_XMC44_AE3_001

Possible implementations for embedded systems

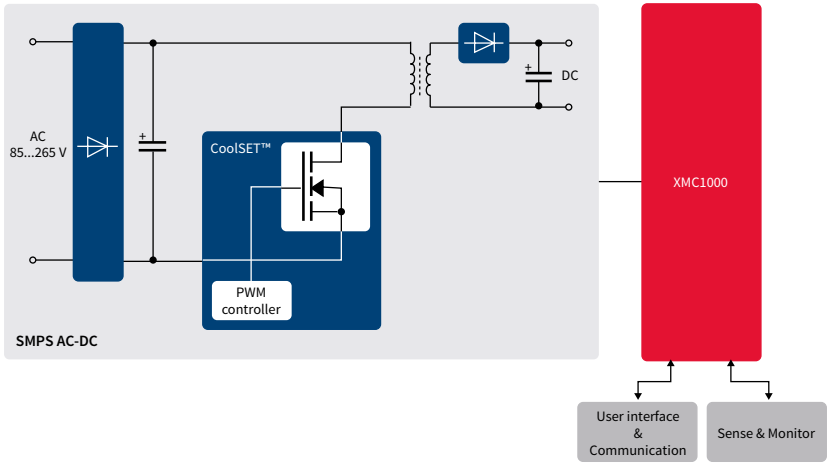
High flexibility and cost competitive



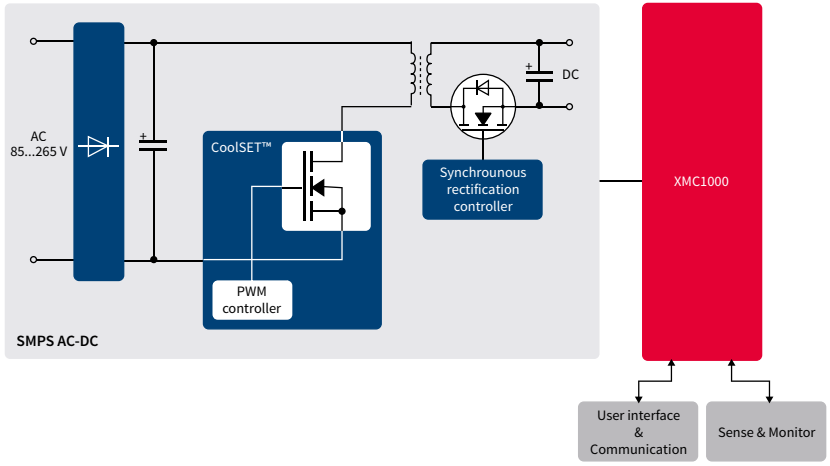
High efficiency and flexibility



High integration, easy to design and cost competitive



High efficiency and high integration



Discover our product recommendation at: www.infineon.com/embeddedsystem

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