XMC™ – 32-bit industrial microcontrollers

One microcontroller platform. Countless solutions.

www.infineon.com/xmc

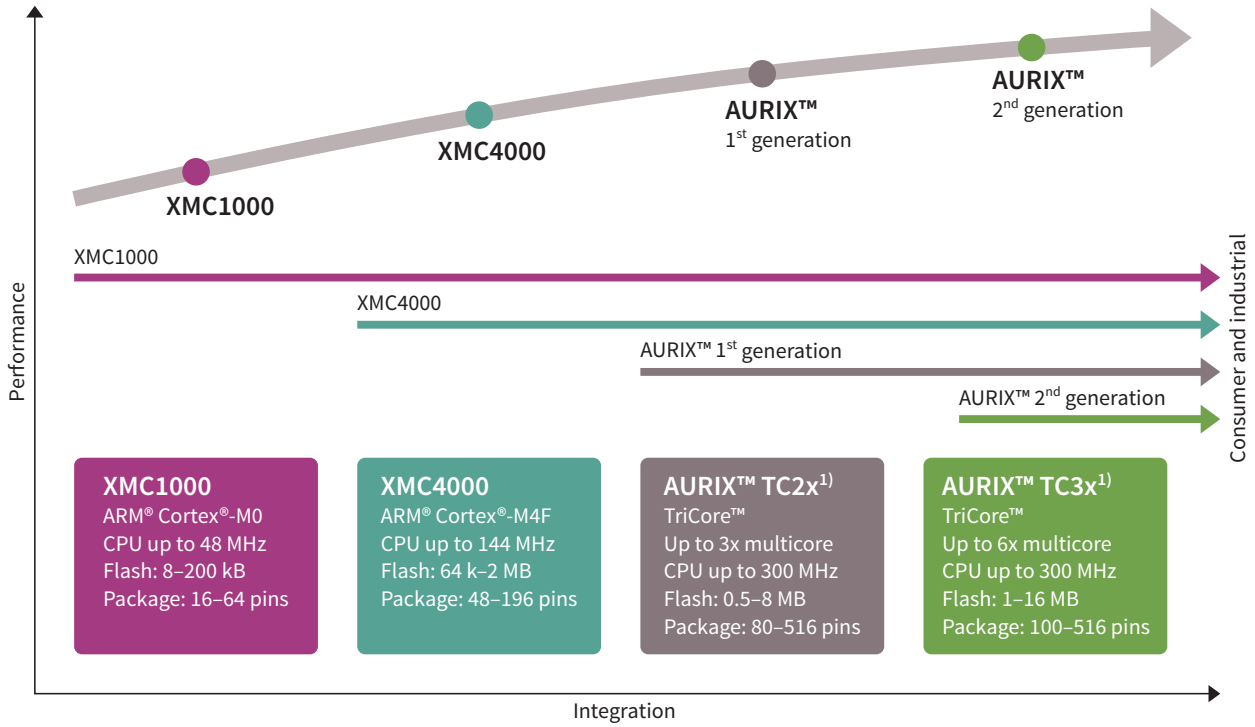
Contents

Infineon industrial microcontrollers portfolio

Infineon has combined its wealth of experience in microcontroller design to offer a wide portfolio that can cover broad range of industrial applications. It is based on:

› The XMC™ family for real-time critical applications where a industry-standard core is needed

› The AURIX™ family when more performance, connectivity, safety and security are needed



1) AURIX™ devices add safety and CAN FD

XMC™ – one microcontroller platform. Countless solutions.

The XMC™ microcontroller family based on ARM® Cortex®-M cores, is dedicated to applications in the segments of power conversion, factory and building automation, transportation and home appliances.

XMC1000

Cortex®-M0

› 32–48 MHz

› Up to 200 kB flash

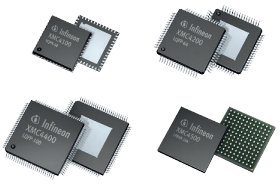
› Package

– LQFP-64

– TSSOP-16/28/38

– VQFN-24/40/48/64

XMC4000



Cortex®-M4F

› 80–144 MHz

› Up to 2 MB flash

› Package

– LFBGA-144/196

– LQFP-100/144

– TQFP-64

– VQFN-48

XMC1000 – optimized peripherals for real-time success

XMC1000 microcontrollers bring together the ARM® Cortex®-M0 core and market-proven and differentiating peripherals in a leading-edge 65 nm manufacturing process. XMC1000 is the number one choice for bringing traditional 8-bit designs to the next level, addressing a broad application spectrum from typical 8-bit applications up to digital power conversion and even field-oriented motor control.

ARM® Cortex®-M0	Co-processor	Clocks		Memory	Analog			Timer/PWM				Connectivity		Package
		Frequency [MHz]	Peripherals [MHz]		ADC 12 bit / S&H	Number of channels	Analog comparators	CCU4	CCU8	POSIF	BCCU	USIC	CAN2.0B	
	–	32	64	Flash 8–64 kB RAM 16 kB	1/1	up to 12	–	1x	–	–	–	2x	–	VQFN-24/40 TSSOP-16/38
XMC12x	–	32	64	Flash 16–200 kB RAM 16 kB	1/2	up to 12	up to 3	1x	–	–	●	2x	–	VQFN-24/40 TSSOP-16/28/38
XMC13x	●	32	64	Flash 8–200 kB RAM 16 kB	1/2	up to 12	up to 3	1x	1x	●	●	2x	–	VQFN-24/40 TSSOP-16/38
XMC14x	●	48	96	Flash 32–200 kB RAM 16 kB	1/2	up to 12	up to 4	2x	2x	●	●	4x	●	VQFN-40/48/64 LQFP-64
Supply voltage range 1.8–5.5 V														
Temperature range -40°C … 85°C/105°C														

Key features

The MATH co-processor adds additional functionality, such as trigonometric operations or divisions, to the standard Cortex®-M0 instruction set, enabling field-oriented motor control. It runs up to 64 MHz. Offering 7 times faster division, 38 times faster cosine calculations and enabling high-resolution PARK transformation with 24-bit.

The BCCU (Brightness and Color Control Unit) automatically runs light control algorithms for optimized dimming and color mixing. This significantly reduces the software development outlay for LED lighting applications.

AC-DC power factor correction can be efficiently realized with high-performance and configurable analog comparators. With a propagation delay of only 30 ns and peripheral interconnection to the PWM timer, zero-current crossing in the coil is detected and a fast and deterministic control loop executed with a very low CPU load.

The secure boot loader mode allows embedded code to be programmed to flash memory in a protected way using AES 128-bit cryptography. This helps to protect IP if manufacturing is outsourced, for example.

XMC4000 – advanced industrial control and connectivity

All XMC4000 devices are powered by ARM® Cortex®-M4 with a built-in DSP instruction set. The single-precision floating-point unit, Direct Memory Access (DMA) feature and Memory Protection Unit (MPU) are state-of-the-art for all devices – even the smallest XMC4000 runs with up to 80 MHz in core and peripherals. They come with a comprehensive set of common, fast and precise analog/mixed signal, timer/PWM and communication peripherals.

ARM® Cortex®-M4F	Frequency [MHz]	Memory	Analog			Timer/PWM					Connectivity							Package
			ADC 12 bit / S&H	Number of channels	DAC 12 bit	CCU4 (4 ch)	CCU8 (4 ch)	HRPWM (150 ps)	POSIF	ΔΣ demodulator	USIC	CAN2.0B	USB	Ethernet	EtherCAT®	SDIO/SD/MMC	External Bus Unit (EBU)	
XMC41x	80	Flash 64–128 kB RAM 20 kB	2/2	up to 9	2 ch	2x	1x	●	●	–	4x	up to 2	●[1)]	–	–	–	–	VQFN-48 TQFP-64
XMC42x	80	Flash 256 kB RAM 40 kB	2/2	up to 9	2 ch	2x	1x	●	●	–	4x	2x	●	–	–	–	–	VQFN-48 TQFP-64
XMC43x	144	Flash 256 kB RAM 128 kB	2/2	14	2 ch	2x	1x	–	–	–	4x	2x	●	●	●	●	–	LQFP-100
XMC44x	120	Flash 256–512 kB RAM 80 kB	4/4	up to 18	2 ch	4x	2x	●	2x	4 ch	4x	2x	●	●	–	–	–	TQFP-64 LQFP-100
XMC45x	120	Flash 512 kB-1 M RAM 128–160 kB	4/4	up to 26	2 ch	4x	2x	–	2x	4 ch	4x	up to 3	●	●	–	●	●	LQFP-100/144 LFBGA-144
XMC47x	144	Flash 1.5–2 MB RAM 276–352 kB	4/4	up to 26	2 ch	4x	2x	–	2x	4 ch	6x	6x	●	●	–	●	●	LQFP-100/144 LFBGA-196
XMC48x	144	Flash 1–2 MB RAM 276–352 kB	4/4	up to 26	2 ch	4x	2x	–	2x	4 ch	6x	6x	●	●	●	●	●	LQFP-100/144 LFBGA-196
Supply voltage range 3.13 to 3.63 V																		
Temperature range -40°C … 85°C/125°C																		

Key features

125 °C	125°C ambient temperature for the ultimate robustness in harsh environments.
Timer ADC	A comprehensive set of highly flexible timers/PWMs, fast and accurate ADCs and position interfaces in combination with a programmable hardware interconnect matrix enable deterministic behavior and full application control.
	150 ps high-resolution PWM and smart analog comparator for achieving the highest energy-efficiency class for digital power conversion.
ΔΣ	Delta-sigma demodulator with integrated filters for cost- and size-efficient galvanic-isolated current measurement.
EtherCAT®	The XMC4300 and XMC4800 are the industry's first-ever microcontrollers with an integrated EtherCAT® node on an ARM® Cortex®-M controller with on-chip flash and analog/mixed signal capabilities. This enables the most compact designs, eliminating the need for a dedicated EtherCAT® ASIC, external memory and crystal.

1) Only for XMC4100-Q48F128, XMC4100-Q48K128, XMC4100-F64F128, XMC4100-F64K128

Industrial automation

EtherCAT®

Global digitization is making inroads into manufacturing and taking its toll in the form of vast amounts of data – measurement and control data from sensors and actuators, data for local and remote diagnosis, and data transferred from one machine to another. But it is not only about the huge amount of data, it is also about time-deterministic behavior for maintaining the high level of productivity in manufacturing. EtherCAT® is the real-time Ethernet standard for combining great bandwidth with unrivaled isochronous time determinism in ranges of three-digit down to low two-digit nanoseconds.

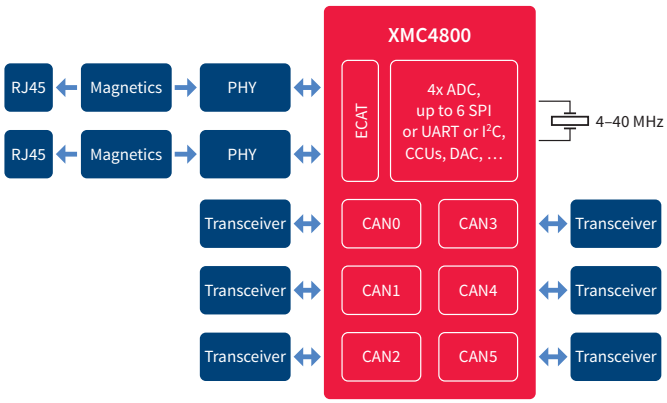
The XMC4300 and XMC4800 series are the industry's first-ever microcontrollers with EtherCAT® integrated on a standard ARM® Cortex®-M controller with integrated flash memory and analog/mixed signal IP. This provides the most compact and cost-efficient EtherCAT® design without a dedicated ASIC, external memory and crystal.

Industrial drives

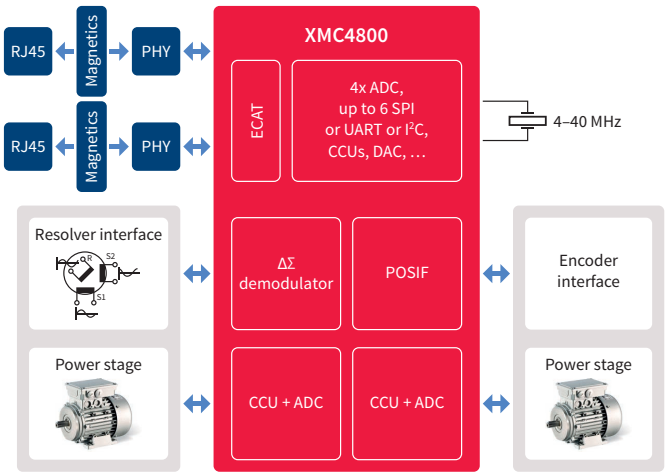
In today's competitive and highly dynamic environment, manufacturers are under constant pressure to find new ways of increasing energy efficiency, mobility and security – in all industrial drive applications.

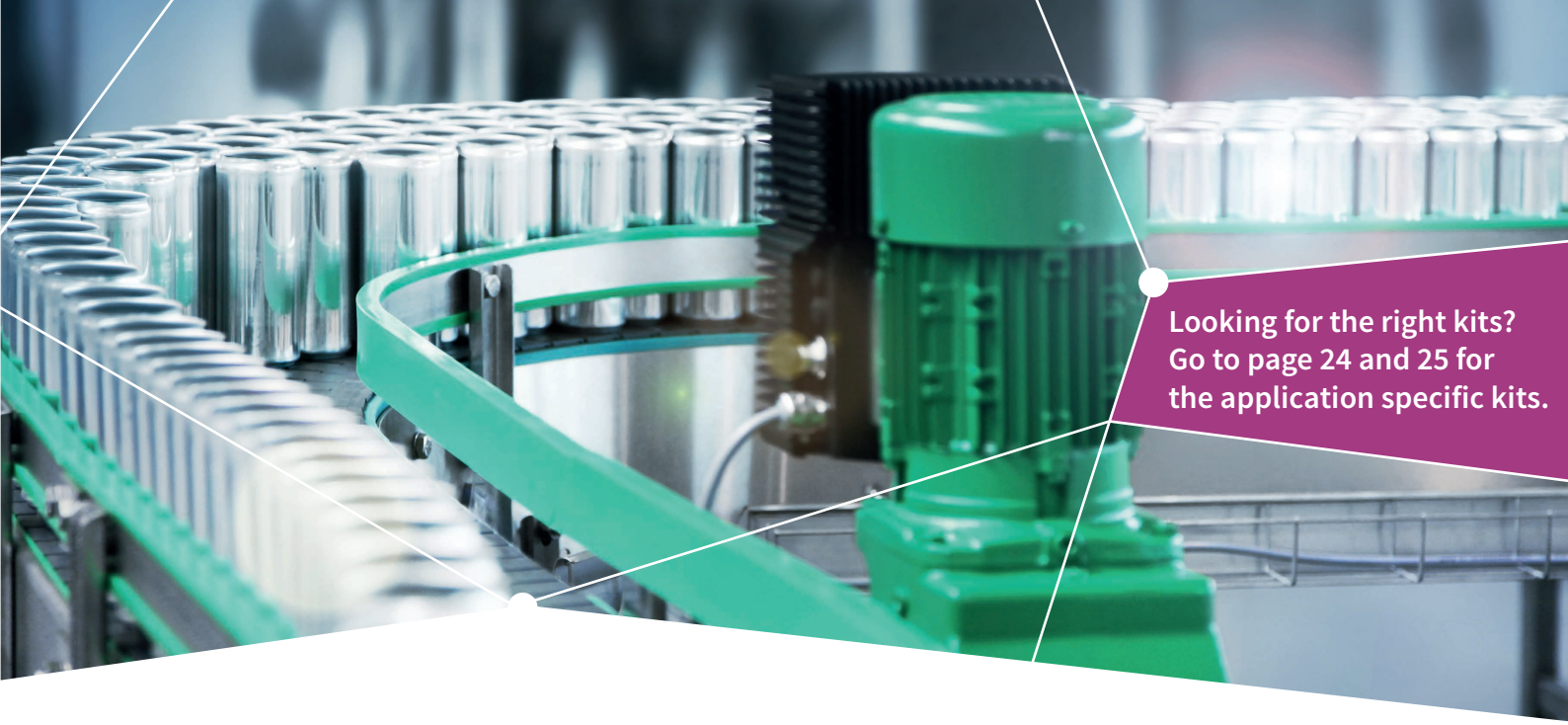
The XMC4000 microcontroller family is the perfect fit to meet these challenges. The ARM® Cortex®-M4 with FPU offers the computing performance needed to run cascade control for the industrial AC and servo drives as well as communication stacks in the field level. The sophisticated software IP is protected by password-secured flash memory. With the position interface (POSIF) and the ΔΣ demodulator, it couldn't be easier to connect to an encoder and a resolver interface.

EtherCAT® plus up to 6 CAN networks in parallel, including gateway functionality



EtherCAT® plus up to 2 motors with resolver/ encoder in parallel





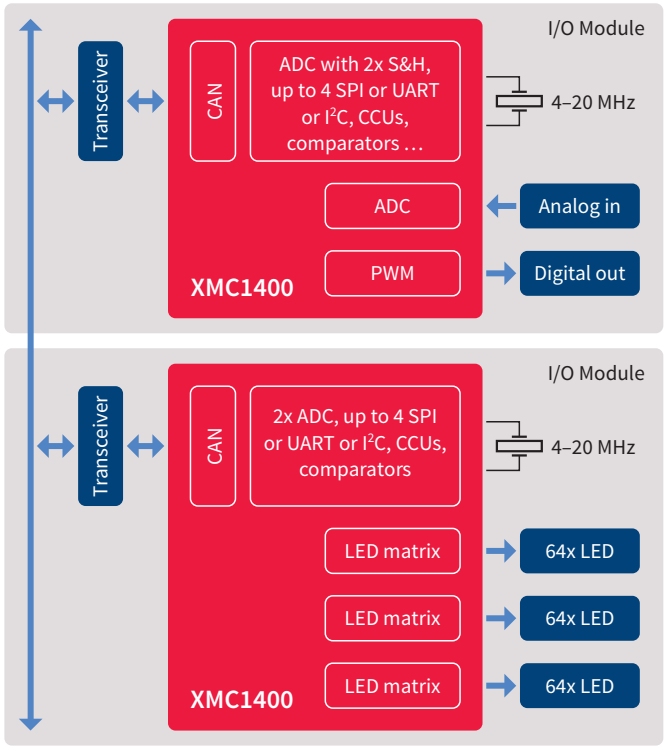
Looking for the right kits? Go to page 24 and 25 for the application specific kits.

I/O modules

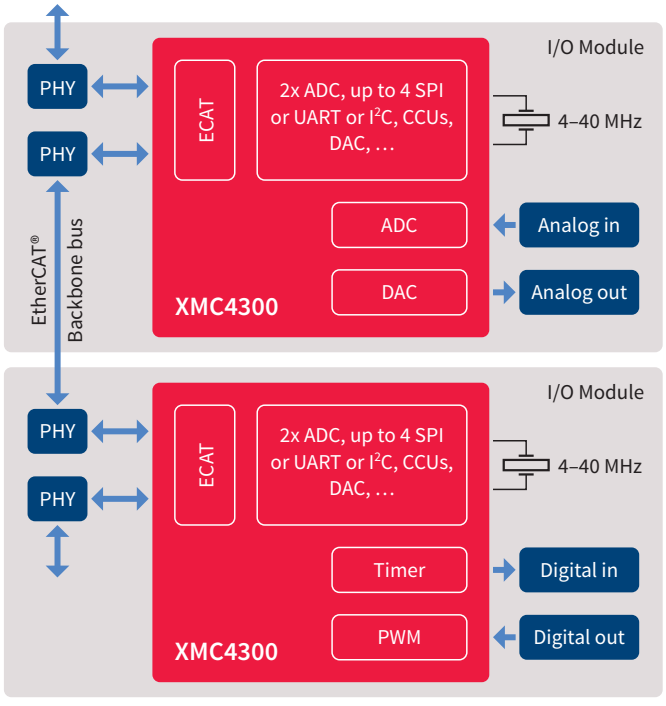
Sense, control, drive, communicate – these tasks are versatile and complex on the field level. But there is a perfect I/O module for every dedicated task. Either in a cabinet on a DIN rail, in decentralized systems or as splash-proof installations – I/O modules are the backbone of every factory production line. Typically, I/O modules form compact in size, thereby providing limited PCB space, but are demanding in relation to the microcontroller features needed to fulfill their tasks. The XMC1400 series with up to 200 kB of flash, 2 CAN nodes, 4 serial channels, 3 x 64 LED matrix control and 9-channel LED brightness and color control is unrivaled when it comes to communication and human-machine interface tasks. At the same time, the XMC1400 is in no way lacking in terms of actuator and sensor control IP as it comes with a 12-bit ADC including 2 sample and holds, 4 comparators and 16 PWM channels. All combined in small-footprint VQFN packages with 40 to 64 pins and 5 x 5 to 8 x 8 mm² in size.

In the event that the backbone bus requires more bandwidth than CAN or serial communication can provide, the XMC4300 is the right choice. It is equipped with integrated EtherCAT® and an outstanding 256 kB flash to 128 kB RAM ratio.

I/O modules with CAN backbone bus



I/O modules with EtherCAT® backbone bus with PHY to PHY connection



Motor control

Energy efficiency, mobility and security are some of the main challenges facing modern society. Infineon's motor control solutions address all of these needs, providing outstanding reliability, excellent quality and leading-edge innovations. From toys and power tools, to industrial pumps and industrial automation systems, Infineon's XMC™ microcontrollers and other semiconductor products enable our customers to design the most innovative, efficient, reliable and energy-friendly motor control and drive systems.

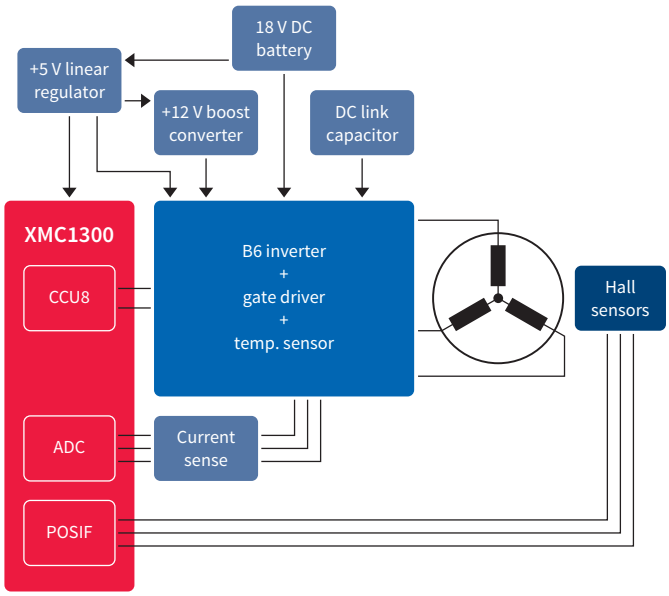
Infineon's XMC™ microcontroller family is perfectly suited as a controller for various types of motors, such as Permanent Magnet Synchronous Motors (PMSM), Brushless DC Motors (BLDC), AC Induction Motors (ACIM), servo motors and brushed DC motors. Our free and easy-to-use DAVE™ Integrated Development Environment (IDE) comes with a large number of pre-defined, configurable and tested software blocks (DAVE™ APPs) targeting specific applications, enabling rapid prototyping and application development. There are ready-made motor control example projects available in the form of DAVE™ APPs for all major motor control schemes.

The XMC1000 family is engineered to offer the best-in-class cost/performance ratio for standard motor control. XMC1000 microcontrollers control the motors in industrial and building automation applications, such as pumps and fans. They are also ideally suited for some consumer applications, such as power tools or white goods. Furthermore, XMC1000 microcontrollers can be found controlling, flying or moving around on board many different types of drones and eBikes around the world.

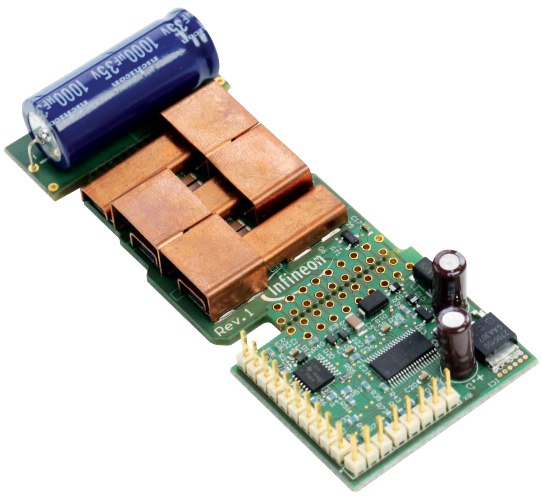
Together with the dedicated MATH co-processor, the ARM® Cortex®-M0 core sets a new benchmark for CPU performance in this price/performance class of microcontrollers. Even highly sophisticated motor control schemes, including sensored and sensorless Field-Oriented Control (FOC), can easily be realized, while also leaving enough headroom for communication or to control a Human-Machine Interface (HMI).

Below is a block diagram and the PCB image of the 1 kW power tool reference design featuring the XMC1302 microcontroller, OptiMOS™ BSC010N04N, 40 V MOSFETs and EiceDRIVER™ 2EDL05M06 gate drivers.

Block diagram of power tool reference design



Form-factor-optimized PCB for 1 kW power tool reference design



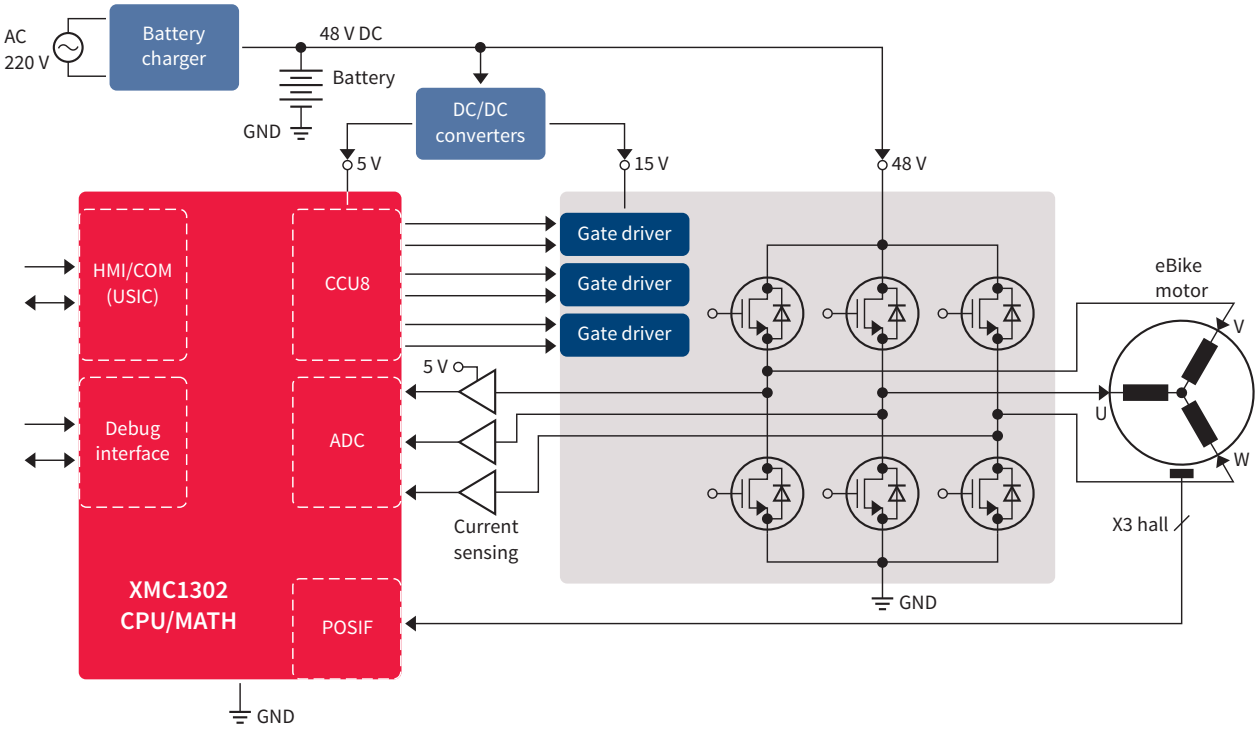
Looking for the right kit? Go to page 26 for the application specific kit.

The following functionalities are what make the XMC1000 microcontroller family perfectly suited for standard motor control application

- Easy 3-phase inverter implementation with a single CCU8 PWM unit, offering shadow register transfer, external input for fault control, binary and floating pre-scaler, 16-bit to 64-bit width
- Motor control-specific **MATH co-processor** providing a 32-bit signed or unsigned divider, as well as a 24-bit CORDIC for trigonometric calculations, working in parallel with the main CPU
- POSIF interface to directly connect hall sensors and incremental encoder
- 12-bit ADC with on-chip adjustable gain of x1, x3, x6 or x12
- 1.8 to 5.5 V supply voltage
- Flexibility for serial communication, thanks to programmable Universal Serial Interface Channels (USIC)

Below is a block diagram of a typical eBike system powered by an XMC1302 microcontroller. In this particular use case, the XMC™ microcontroller is running sensored Field-Oriented Control (FOC) for startup and low-speed operation, and then switiching to sensorless FOC for normal operation.

Block diagram of an eBike system controlled by the XMC1302 MCU



Switched-mode power supplies

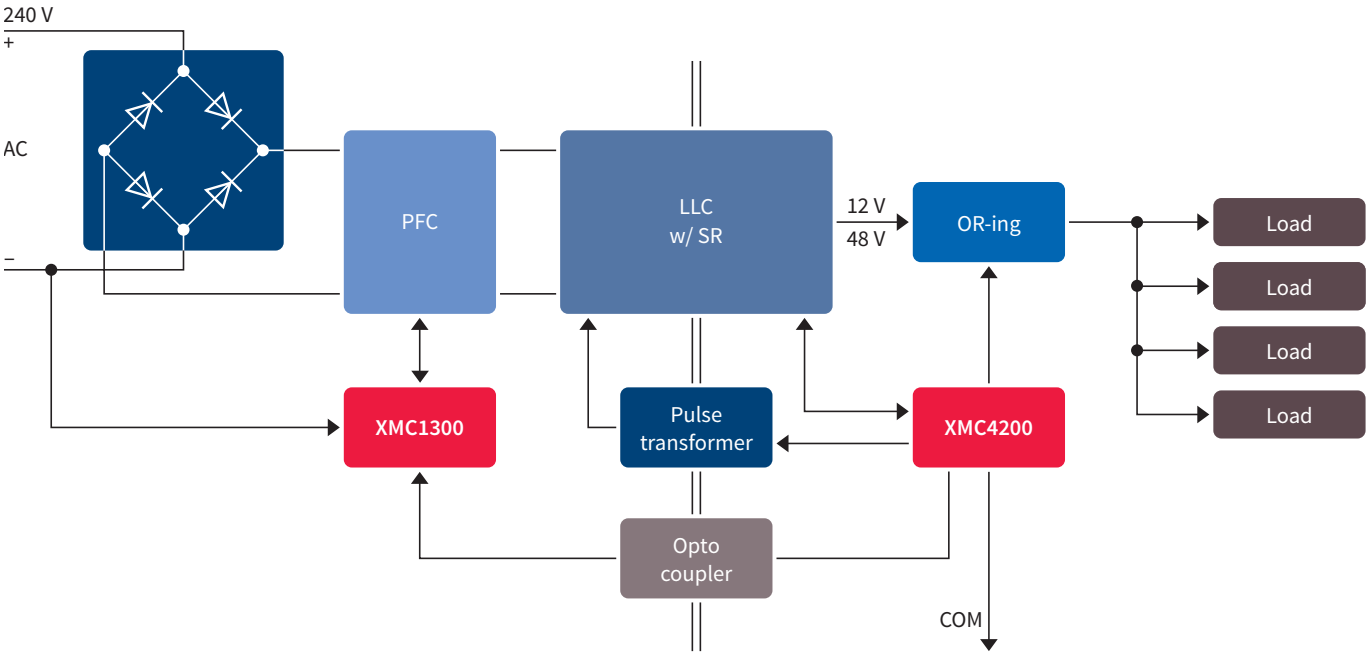
Power supply designs are subject to ever-increasing requirements. Some of them are fueled by customer demands or industry association guidelines (such as higher power density, communication, modularity or the 80 Plus Titanium efficiency standard). Whereas others are driven by the regulators (such as the EN 61000-3-2 PFC standard). These new or more stringent requirements are paving the way for the increased use of digitally controlled switched-mode power supply systems, simply because it is often not even possible to design a traditional control system with analog circuitry and meet all the requirements. This growth is also sometimes driven by the flexibility and modularity that MCU-based designs inherently provide. On the other hand, semiconductor technology advances have allowed MCU manufacturers to develop a new class of MCUs, optimized for digital power conversion applications in terms of features and price point. This new market development his what motivates ever more power supply designers to use digital control for SMPS.

Digital designs have a similar system cost compared to the traditional analog-based system, while also offering the many benefits of digital power conversion, such as:

- Advanced and adaptive control algorithms (multiple loops, non-linear), more compact designs enabling high efficiency across a broad range of loads (titanium standard) and operating conditions (input voltage, temperature, aging)
- Greater flexibility, enabling more cost-efficient platform solutions (e.g. one design for multiple power supplies, commissioning and field updates, regional specifics, etc.)
- System monitoring and network connectivity/maintenance (e.g. hot swap or load balancing, PMBus communication, failure prediction)

The application example below shows a digitally controlled power supply used for server or telecom racks with typical power ratings of between 300 W and 3 KW. XMC™ microcontrollers are used for PFC and LLC control with variable output, load balancing and system status monitoring and reporting.

Server/telecom SMPS with XMC™ for digital control



Looking for the right kit? Go to page 27 for the application specific kit.

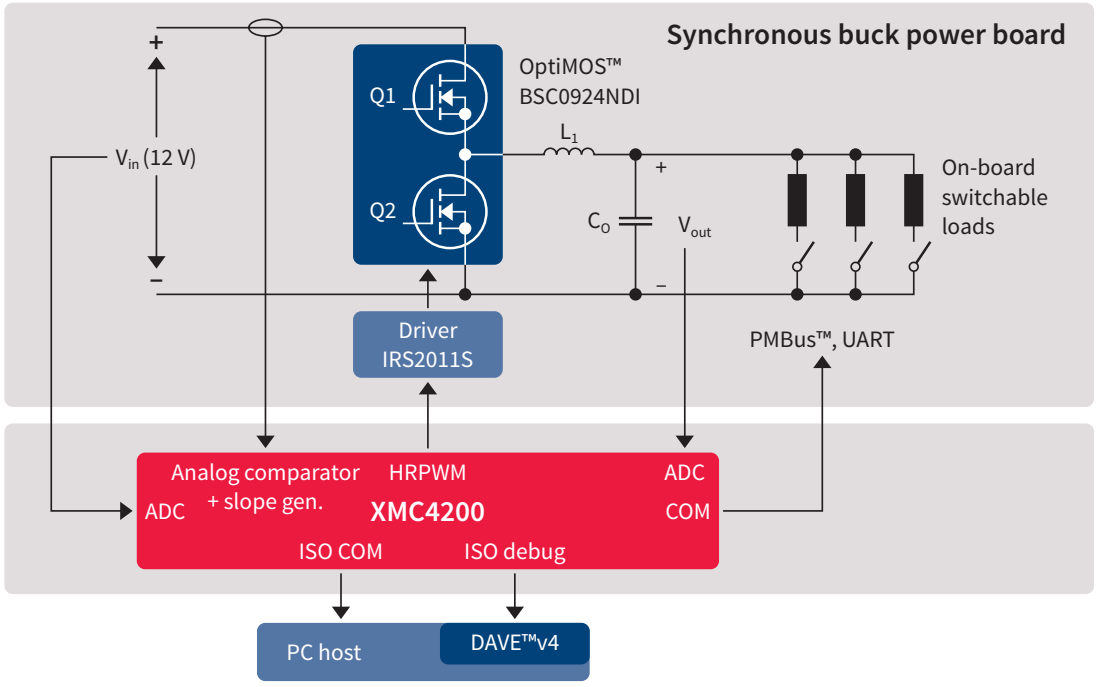
Thanks to the application-tailored features outlined below, XMC™ microcontrollers are particularly well positioned for use in SMPS applications

- 4-channel 150 ps HRPWM timer (XMC4200/4400 series)
- Rich connectivity: 2x CAN nodes, 4-channel serial COM unit (configurable to SPI, I²C, I²S, UART), USB FS
- Up to 4x 12-bit ADC with a sample time of 70 ns ensure fast reaction times and tighter control loops
- Extended temperature range up to an ambient temperature of 125°C (XMC4000 family)
- Analog comparators with only 3 mV input offset voltage and a propagation delay of 30 ns (XMC1000 family)

Below is an example of a synchronous buck converter realized with an XMC4200 microcontroller.

This implementation with the XMC4200, as well as similar implementation with the XMC1300, is part of the new **XMC™ digital power explorer kit**. This kit consists of a power board with the synchronous buck converter and 2 control cards (XMC4200 series and XMC1300 series), helping engineers to take their first steps into digital power control, and experiment with different control modes in a safe, low-voltage environment. This kit makes it extremely easy to test and compare different buck converter control mechanisms (voltage control vs. current control, with slope compensation), and explore the benefits of dedicated power conversion peripherals, such as a high-resolution PWM or slope compensation module.

XMC™ digital power explorer in peak-current-mode control



Applications

Wireless charging

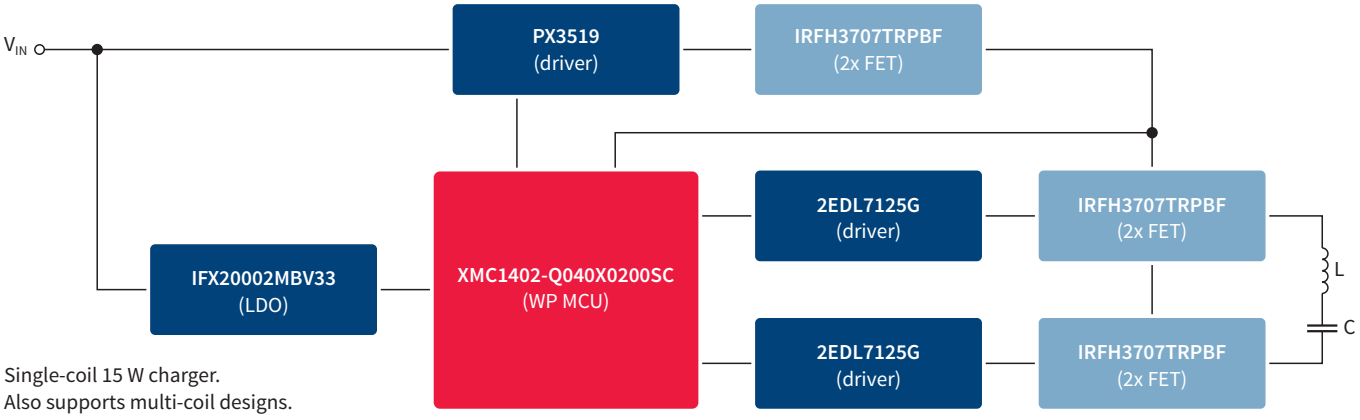
Infineon's XMC™ wireless power controller, based on the ARM® Cortex®-M0 core, provides a powerful and cost-effective platform for high performance, smart and safe wireless charging applications.

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

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

On the Wireless Charging IP Software

Rather than rely on an application specific IC for protocol and power delivery, the strength of the Infineon wireless charging solution lies in its modular software-based architecture. Wireless charging is continually evolving, as standards mature and new products and applications are introduced to the market. The high software content of the solution allows a common hardware architecture to be used across several reference designs, with each reference design flexible enough to support several types of applications. For example, the 15W inductive charger supports single or multi-coil configurations, and can be powered from a broad range of power supplies. In addition, future changes to the wireless charging standards can be supported by a software upgrade, which creates a future-proof product design that can span multiple generations.

The software is responsible for directing all major wireless charging functions in the system. A fully digital demodulation scheme provides greater sensitivity for decoding communication in times of weak coil coupling due to misalignment, and also ensures the highest level of interoperability with legacy receivers. Next-generation parameter measurement techniques ensure the highest accuracy for optimal power delivery and foreign object detection (FOD). Precise control of frequency, duty cycle and voltage provides the correct level of rectified power at the receiver, and two-way communication on some systems enables smart charging with two-way authentication. Underneath the higher-level functions, a real-time engine keeps track of every aspect of transmitter operation from input supply, to efficiency, to thermal performance and makes adjustments as required. Finally, a self-calibration step during initial transmitter power-up provides a predictable baseline performance ensuring each product meets the requirements of the application.

EV charging

Off-board charging, where users can charge plug-in hybrids and pure electrical vehicles on personal garages and open parking lots, demands a optimized solution with high MCU switching frequency to stay efficient and cost competitive. Our XMC4xxx portfolio is a great fit for the application as it integrates all the features needed for off-board-charging.

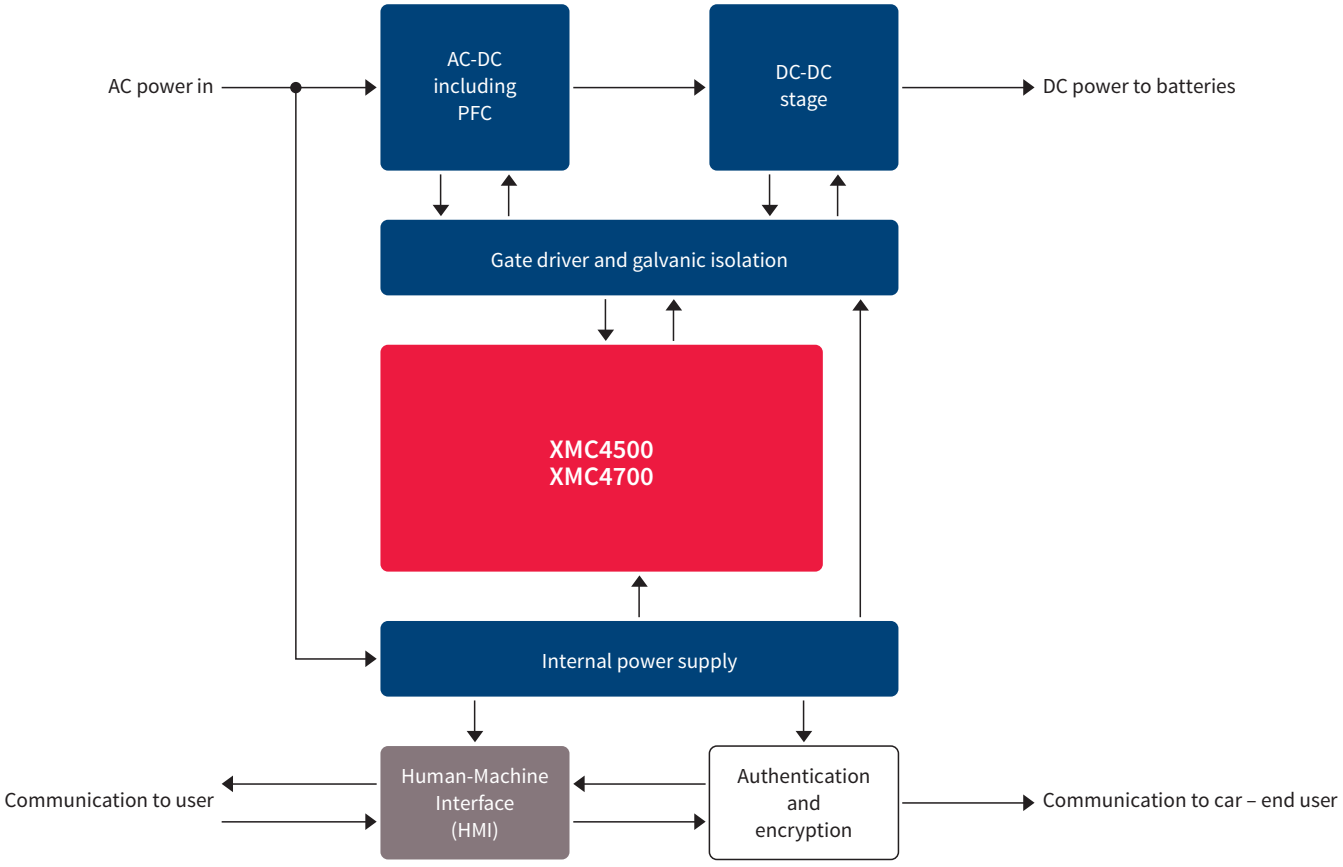
Suggested products

› XMC4500/XMC4700

Key benefits

› Platform concept to allow extensive customization
› Performance, efficiency and cost competitiveness
› Great scalability and SW reuse in the all family
› RAM: 8 kB up to 352 kB
› Flash: 16 kB up to 2 MB
› Accurate analog-mixed signal peripherals
› Fast timer/PMW peripherals
› Rich communication interfaces
› 16 pin to 196 pin count packages
› Long term availability

Application diagram



Applications

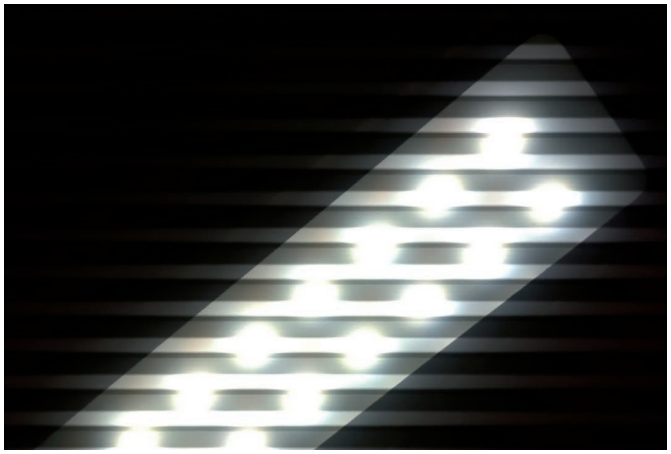
Smart lighting

The term “smart lighting”refers to the expansion of traditional LED illumination technology to include new functionalities, such as wired or wireless connectivity, programmability, sensors, enhanced light quality and sophisticated color mixing. Thanks to special features dedicated to LED lighting, XMC™ microcontrollers help bring this new dimension into traditional LED lighting systems. With their Brightness and Color Control Unit (BCCU), XMC1200/1300/1400 series products offer an industry-unique module for automatically controlling the dimming level and color of multi-channel LED lamps. Users can quickly configure their ideal solution without the need for expert knowledge in lighting. In addition to LED control functions, XMC1200/1300/1400 series microcontrollers can also add DALI or DMX communication capability, facilitating advanced single-chip smart lighting solutions.

Besides LED driving, communication and housekeeping, XMC™ MCUs can also cover the SMPS functionality of an LED driver. All major single and dual-stage SMPS topologies commonly used in LED drivers can be implemented using XMC™ MCUs.

Key features of the XMC1000 family for smart lighting applications

- Automatic brightness control (using high-frequency pulse density modulation) based on the ∑Δ principle enables completely flicker-free dimming through 9 output channels
- Automatic exponential dimming and linear intensity changes make brightness or color changes appear smooth and natural to the human eye
- Integrated high-speed analog comparators for peak-current control and zero-crossing detection
- Tightly interconnected peripherals supporting various digital power conversion techniques



2 kHz flicker with a commercial ballast detected by an HD camera. Despite being invisible, it affects the human brain (below 3 kHz threshold).

Infineon solution with XMC1200/XMC1300 series. Flickering (40–50 kHz) is neither visible nor perceptible and undetectable by most HD cameras.

Smart lighting

DALI 2.0 software stack

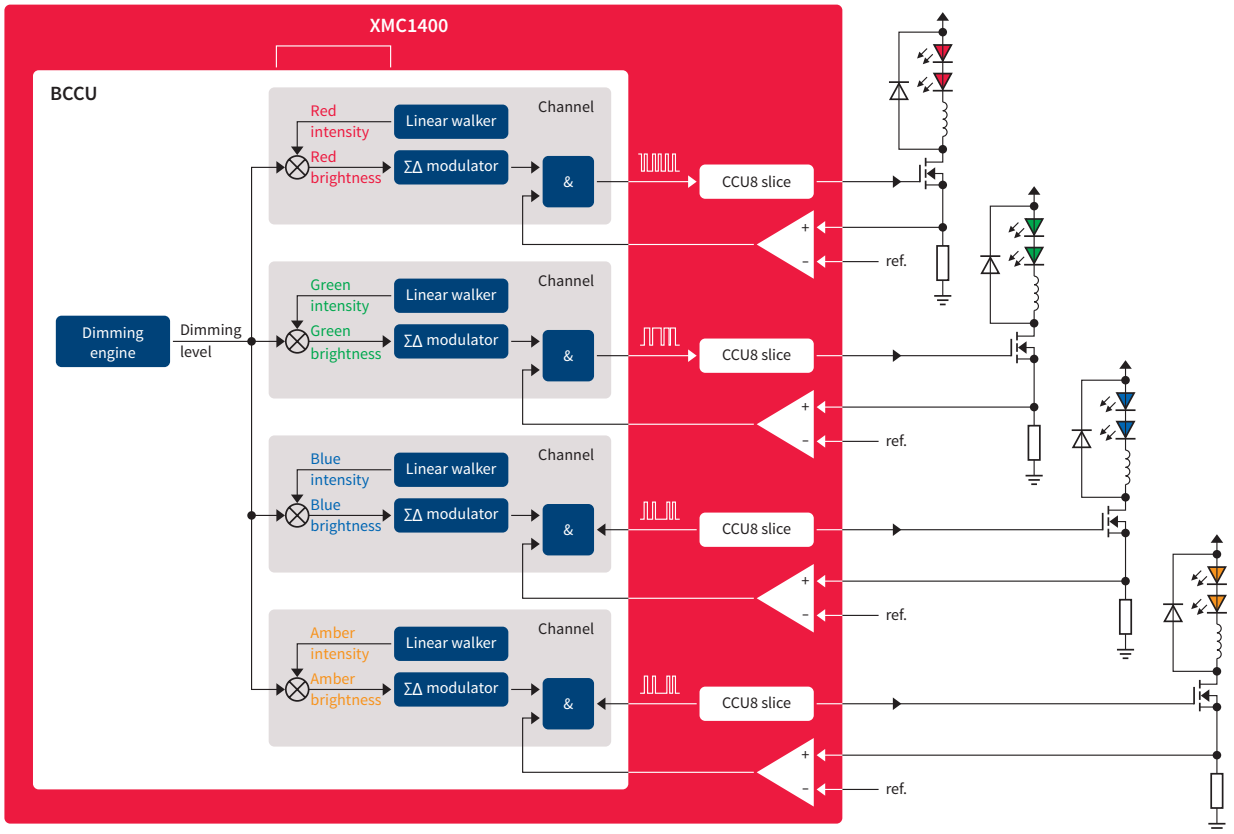
DALI (Digital Addressable Lighting Interface) is a broadly used interface standard for lighting controls with the aim of promoting interoperability, and can be extended for home automation. The revised DALI 2 Standard IEC 62386-102 (edition 2.0 2014-11) improves the predictability in the control gear's behavior.

Infineon, together with partners, developed a stack that supports the DALI 2.0 protocols. It performs functions such as:

- Processing and responding to all DALI commands received from the DALI bus
- Monitoring for and reacting to DALI bus fault (system failure) conditions
- Computing the appropriate light output level for control gear lighting devices, including timing and sequencing fade operations
- Applying configuration changes as requested by DALI control devices through the bus interface
- DALI short address assignment, including participating in random address allocation procedures coordinated by a DALI control device
- Managing delays and other timings related to DALI operations
- Commissioning (factory-reset) of DALI non-volatile variables

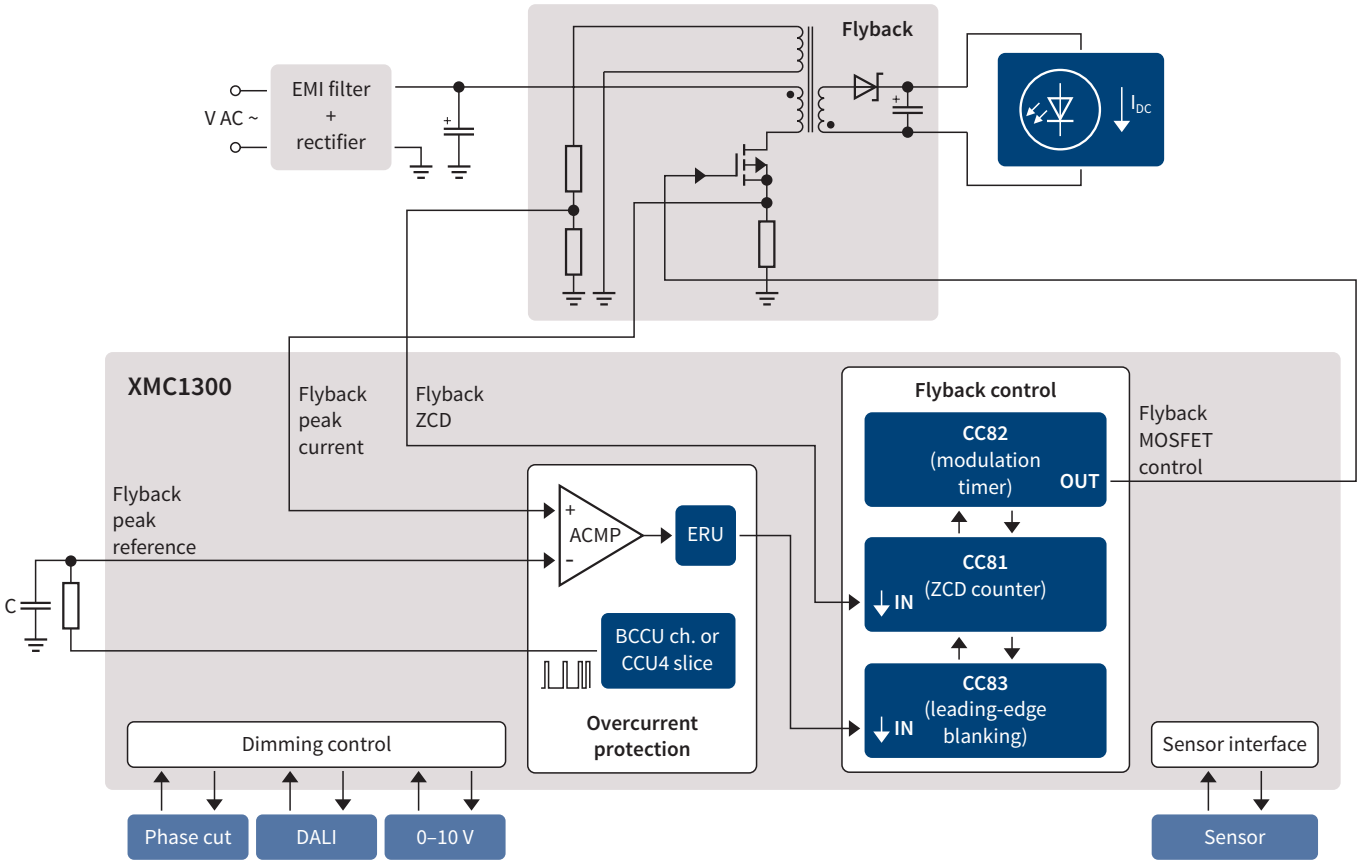
The approved DALI 2.0 software is available for free to enable you jumpstart development.

The block diagram below shows an example of an XMC1000 family microcontroller in a smart lighting application. An XMC1402 microcontroller is used here for the direct constant-current control of a 4-channel RGBA LED lighting system, while also handling DMX and DALI communication.



Looking for the right kit? Go to page 22 for the application specific kit.

Here is one example of a full smart lighting system consisting of single-channel flyback PFC constant-current LED driver, sensor (e.g. 24 GHz radar) and various dimming options (DALI, 0–10 V and phase cut).



Elevators

Modern elevators have strong safety requirements. The new TriCore™ family AURIX™ with state-of-the-art safety features enables your system to meet the highest safety levels that are required in your system. Combining AURIX™ and XMC™ families from Infineon is enabling you a powerful solution that will reduce your software overhead significantly and help your fast time-to-market.

Application features

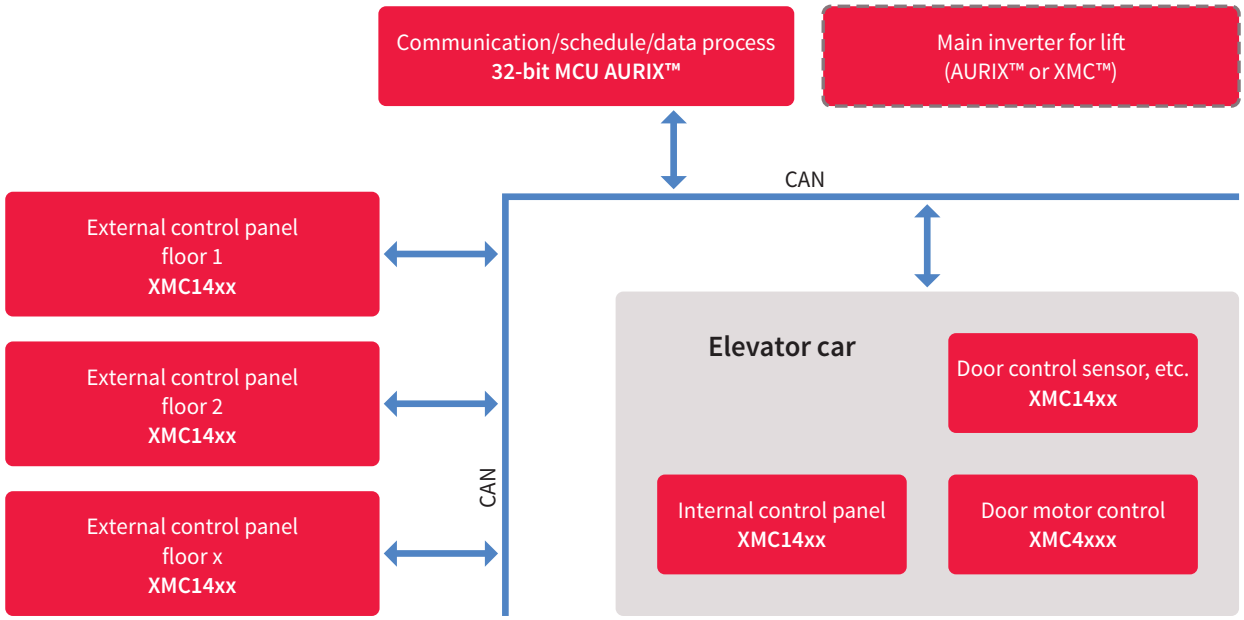
- Multiprocessor support for reliability and safety
- Platform concept to allow extensive customization
- Up to 12 CAN for communication in system
- External bus interface (32-bit) with cache
- SRAM up to 6.9 MB
- Flash up to 16 MB
- Long term availability

System benefits

- High computing performance: up to 6x 300 MHz
- Scalable family with compatibility: SW, pin-out
- High-speed asymmetric single/dual/triple core
- Up to 12 CAN or CAN FD nodes
- Resolver I/F
- Encoder I/F with digital noise filter
- Safety requirements supported up to IEC 61508/SIL3

Suggested products

- AURIX™: TC33x, TC36x, TC37x, TC38x, TC39x
- XMC™: XMC14xx, XMC4xxx



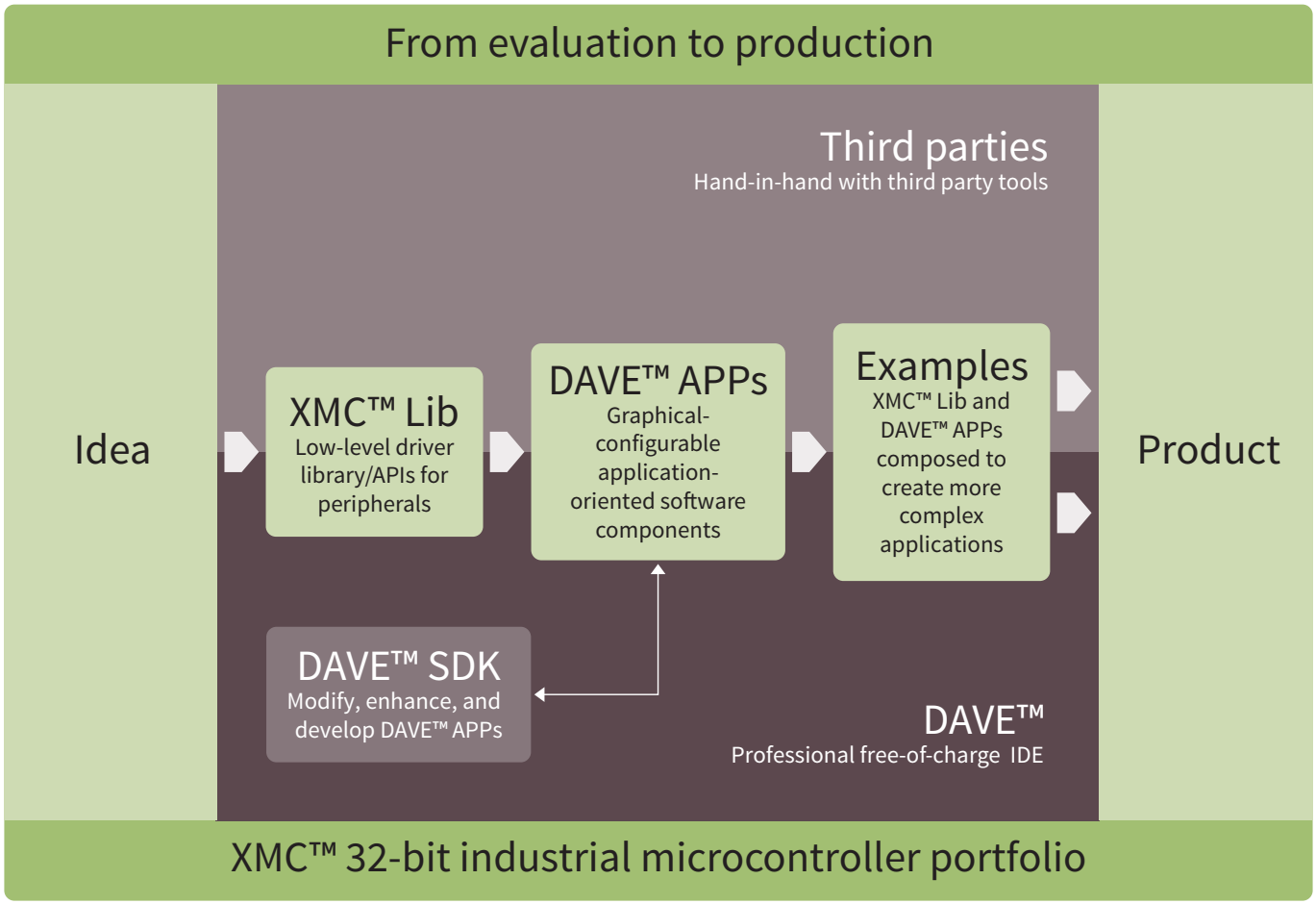
Efficient tools, software and services from evaluation until production – XMC™ ecosystem and enablement

A comprehensive set of development tools, ready-to-use software solutions and support services are available for the XMC™ microcontrollers portfolio. These tools and software products support the complete development cycle to ensure an efficient and fast design process. www.infineon.com/xmc-ecosystem

DAVE™

Free-of-charge IDE using GNU C-compiler, providing graphical system design methods, a wide and configurable code repository and automatic code generator for users of the ARM® Cortex®-M XMC™ industrial microcontroller along the entire process – from Evaluation-to-Production (E2P).

XMC™ Lib and DAVE™ generated code can be used with other third-party tool chains. www.infineon.com/dave



XMC™ Library for Embedded Coder® for MATLAB® and Simulink®

The XMC™ Library for Embedded Coder® provides support for code generation on all XMC™ microcontrollers from MATLAB® and Simulink®. The free-of-charge XMC™ Library for Embedded Coder® lets you control system and peripheral initialization as well as use automatic code generation from MATLAB® and Simulink® for XMC™ microcontrollers.
www.infineon.com/matlab

µC/Probe™ XMC™

Graphical dashboard to fine-tune your application – read/write, monitor, modify, and track the internals of XMC™ MCUs.

› Build our User Interface – drag and drop
› Fine-tune in real-time – nonintrusive access
› Simple connect and extend debugging capabilities
› Support all XMC™ MCUs and evaluation boards

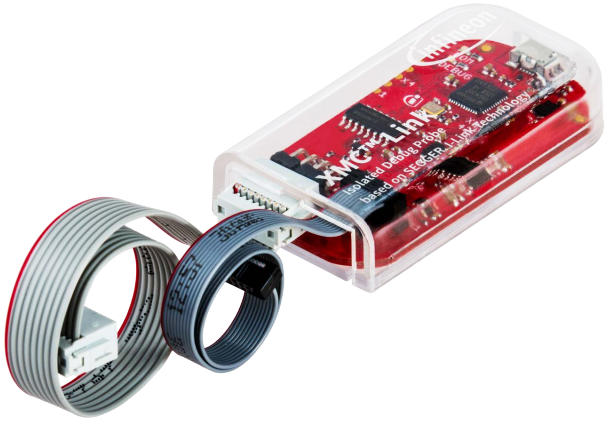
www.infineon.com/ucprobexmc

XMC™ link

Isolated debug probe, based on SEGGER J-Link technology

XMC™ link is a functionally isolated debug probe for all XMC™ microcontrollers.

Its technology is based on SEGGER J-Link and can therefore be used with all well-known ARM® Cortex® compiler/IDEs and tools chains, as well as DAVE™.
www.infineon.com/xmclink

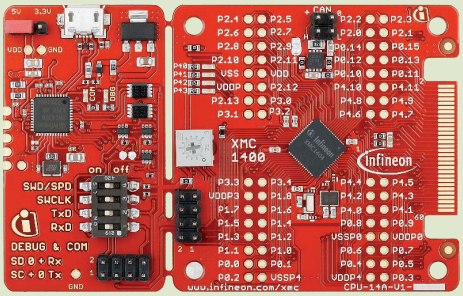


Kits and evaluation boards

XMC1400 boot kit series

Order No.: KIT_XMC14_BOOT_001

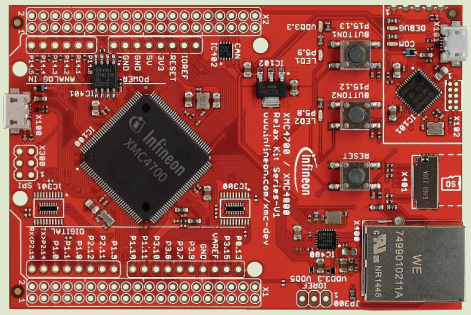
- XMC1400 MCU series, ARM® Cortex®-M0
- On-board CAN node
- Hardware compatible with XMC™ LED lighting cards and motor control board



XMC4700 relax kit series

Order No.: KIT_XMC47_RELAX_V1

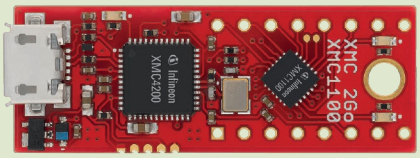
- XMC4700 MCU series, ARM® Cortex®-M4
- XMC4700 relax kit with Ethernet TCP/IP, CAN node, SD/MMC card slot, quad SPI flash, RTC
- Hardware compatible with Arduino



XMC 2Go

KIT_XMC_2GO_XMC1100_V1

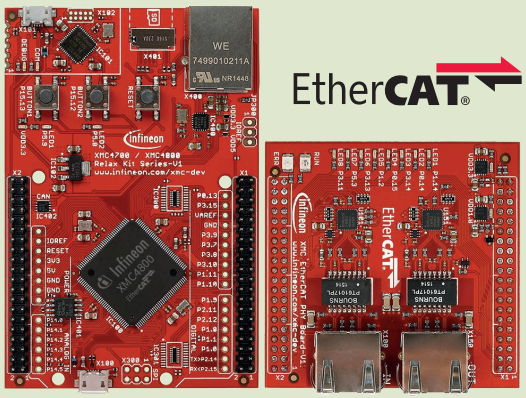
- XMC1100 (ARM® Cortex™-M0 based)
- On-board J-link lite debugger (Realized with XMC4200 ,microcontroller)
- Power over USB (Micro USB)
- ESD and reverse current protection
- 2x user LED pin header 2x 8-pins suitable for breadbord



XMC4800 relax EtherCAT® kit

Order No.: KIT_XMC48_RELAX_ECAT_V1

- XMC4800 MCU series, ARM® Cortex®-M4
- EtherCAT® slave controller on-chip
- On-board Ethernet TCP/IP, CAN node, SD/MMC card slot, quad SPI flash, RTC
- Physical layer for the EtherCAT® communication realized via the XMC™ EtherCAT® PHY board add-on



Kits and evaluation boards

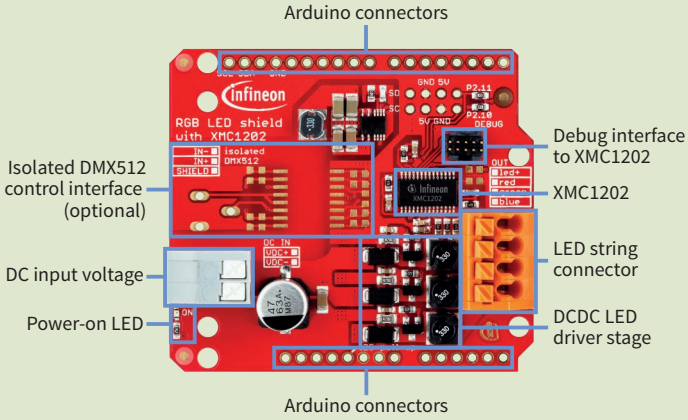
RGB LED lighting shield with XMC1202 for Arduino

Order No.: KIT_LED_XMC1202_AS_01

The RGB LED lighting shield with XMC1202 for Arduino uses a DC-DC buck topology and is able to drive up to 3 LED channels with constant current. The shield itself is powered by a programmable XMC™ 32-bit ARM® MCU with embedded brightness color control unit (BCCU, XMC1200 MCU series), for flicker-free LED dimming and color control.

Key features

- Compatible with Arduino Uno R3 and XMC1100 boot kit from Infineon
- Easily configurable for various light engines and any input voltage (within operating conditions)
- Wide DC input voltage range
- Simple I^2C interface
- Nominal: 12–48 V input voltage (max. 6–60 V)
- Average LED current up to 700 mA (max. peak current 1 A)



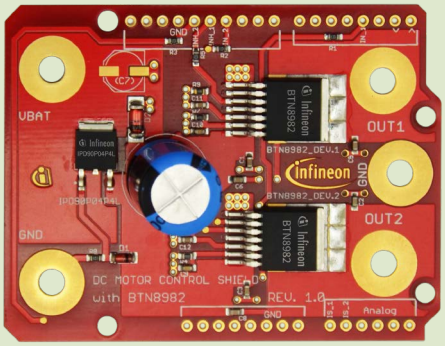
This infineon shield is hardware compatible with Arduino and Infineon's XMC™ boot and relax kits.
www.infineon.com/kit_led_xmc1202_as

DC motor control shield .with BTN8982TA for Arduino

Order No.: DC-MOTORCONTR_BTN8982

The motor control shield is equipped with 2x BTN8982TA half-bridge (NovalithIC™) for motor control for:

- 2x uni-directional motor control (current limitation level of 55 A min.)
- Bi-directional motor control in an H-bridge configuration
- Functional range: 6–40 V; Nominal range: 8–18 V, up to 70 A I_{nom} output, I_{sense}
- **Capable of high frequency PWM, e.g. 30 kHz**
- Adjustable slew rates for optimized EMI by changing external resistor
- Driver circuit with logic level inputs
- **Diagnosis with current sense**
- **Protection e.g. against overtemperature and overcurrent, reverse polarity (shield)**

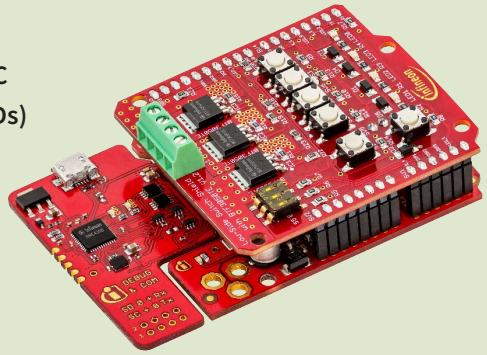


This infineon shield is hardware compatible with Arduino and Infineon's XMC™ boot and relax kits.
www.infineon.com/dc-motor-shield

Low-side switch shield with BTF3050TE for Arduino

Order No.: SHIELD_BTF3050TE

The low-side switch shield from Infineon consists out of three BTF3050TE protected low-side switch



Key features

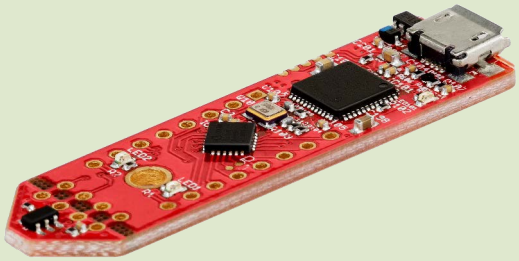
- **Drives resistive, capacitive and inductive loads with PWM or in DC (eg. truck bulbs, car bulbs, valves, motors, relays, capacitors, LEDs)**
- Nominal battery voltage: 8 to 18 V, extended battery voltage: 3 to 28 V
- Nominal load current: 3 A Protection of load and driver circuit (R_{DSON} 50 mΩ)
- **Capable of PWM up to14 kHz (at 10% duty cycle)**
- **Protection of load (OV, OT, OC, auto-restart) and driver circuit**

This infineon shield is hardware compatible with Arduino and Infineon's XMC™ boot and relax kits.

www.infineon.com/ls-switch-shield

3D magnetic sensor 2GO

The 3D magnetic sensor 2GO is a budget-priced evaluation board equipped with a magnetic sensor for three dimensional measurement



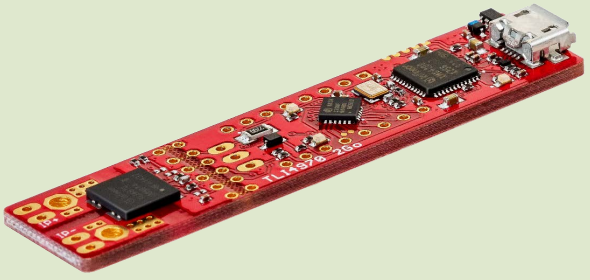
Key features

- XMC1100 (ARM® Cortex™-M0 based)
- On-board J-link lite debugger (realized with XMC4200 microcontroller)
- Power over USB (micro USB)
- ESD and reverse current protection
- 2x user LED
- Pin header 2x 8 pins suitable for breadboard

www.infineon.com/3d-magnet-2go

Current sensor 2GO

The current sensor 2GO Kit is a budget-priced evaluation board equipped with a current sensor



Key features

- XMC1100 (ARM® Cortex™-M0 based)
- On-board J-link lite ddebugger (realized with XMC4200 microcontroller)
- Power over USB (micro USB)
- ESD and reverse current protection
- 2x user LED
- Pin header 2x 8 pins suitable for breadboard

www.infineon.com/current-2go

Kits and evaluation boards

XMC4800 automation board V2 – explore XMC4800 microcontroller based on ARM® Cortex®-M4

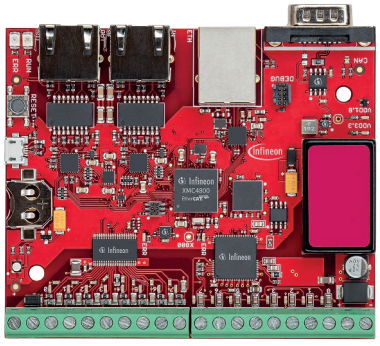
The XMC4800 automation board V2 utilizes Infineon's industry leading XMC™ ARM® Cortex®-M4 microcontroller in combination with Infineon supply, interface, communication and safety products. The XMC4800 automation board V2 is designed to evaluate the capabilities of the XMC4800 microcontroller especially in EtherCAT® slave applications and can be used with a wide range of development tools including Infineon's free of charge Eclipse based IDE, DAVE™.

Key features

- XMC4800-E196 MCU based on ARM® Cortex®-M4 at 144 MHz
- EtherCAT® slave controller, 2 MB flash and 352 KB RAM
- OPTIGA™ Trust E embedded security solution (CC EAL6+)
- Real time clock crystal
- SPI FRAM (64 kB non-volatile memory)
- EtherCAT® slave node (2 EtherCAT® PHY and RJ45 Jacks)
- 24 V ISOFACE™ 8-channel inputs and 8-channel outputs CAN transceiver
- CAN transceiver

Customer benefits

- Complete Automation kit gateway
- Combined MCU with EtherCAT slave application
- Isolated interfaces w/ diagnose
- Ethernet connectivity with soft ware examples available
- 24 V Supply
- CAN connectivity
- Full soft ware DAVE™ examples

XMC4800 automation board V2	Type	Description	Ordering code
 Ordering code: KIT_XMC48_AUT_BASE_V2	KIT_XMC48_AUT_BASE_V2	The XMC4800 Automation Board V2 utilizes Infineon's industry leading XMC ARM® Cortex®-M4 microcontroller in combination with Infineon supply, interface/ communication and safety products.	KITXMC48AUTBASEV2TOBO1
	XMC4800-E196K2048	ARM® Cortex®-M4 microcontroller	XMC4800E196K2048AAXQMA1
	ISO2H823V2.5	24 V 8-channel isolated output	ISO2H823V25XUMA1
	ISO1I813T	24 V 8-channel isolated input	ISO1I813TXUMA1
	SLS 32AIA020A4 USON10	OPTIGA™ Trust E – embedded security solution	SLS32AIA020A4USON10XTMA2
	TLE6250GV33	Infineon CAN transceiver	TLE6250GV33XUMA1
	IFX54441LDV	Infineon voltage regulator	IFX54441LDVXUMA1

XMC™ digital power explorer kit

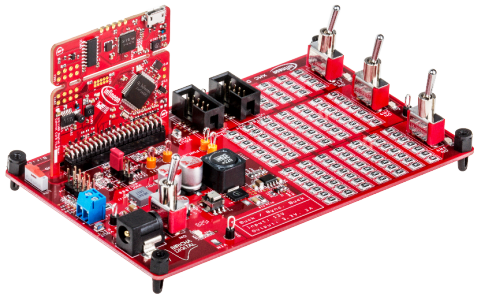
The new digital power explorer kit is designed with the particular goal of making it easy for engineers to take the first steps into digital power control with XMC™ microcontrollers. It showcases both XMC™ families Cortex®-M microcontrollers: XMC4000 and XMC1000, 30 V dual N-channel OptiMOS™ MOSFETs and IRS2011S gate drivers. The kit includes two different control card options, XMC1300 control card (ARM® Cortex®-M0) and XMC4200 control card (ARM® Cortex®-M4F), which allow designers to evaluate both XMC™ microcontroller families and make the right price/performance choice for their application.

Key features

- Synchronous buck converter evaluation kit controlled with XMC4200 or XMC1300 ARM® Cortex®-M microcontrollers
- On-board resistive load banks
- Featuring BSC0924NDI dual N-channel OptiMOS™ and IRS2011S high and low-side gate driver
- Different control schemes possible
  - Voltage mode control
  - Peak current mode control (with slope compensation)

Customer benefits

- Easy entry in digital power control applications
- Understand the details of voltage/peak current control and how to extract the maximum of XMC™ devices
- DAVE™ v4 APPs for buck converter and much more examples

XMC™ digital power explorer kit	Specification		Infineon components	
 Ordering code: KITXMCDPEXP01TOBO1	V_{IN}	12 V DC	MCU	XMC4200 or XMC1300
	V_{OUT_nom}	3.3 V DC	MOSFETs	OptiMOS™ BSC0924NDI
	I_{OUT}	2 A	MOSFET HB driver	IRS2011S
	P_{OUT}	6 W		

Kits and evaluation boards

100 W motor drive evaluation board with FOC sensorless control

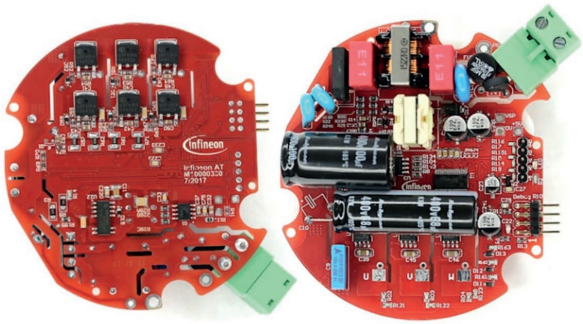
The EVAL_100W_DRIVE_CFD2 motor drive board does not only offer a sensorless synchronous rectification BLDC/PMSM control algorithm to reduce reverse-current hard-commutation stress, but also gives the user the option to change switching frequency up to 20kHz and to choose between two-phase or three-phase modulation, which helps reduce switching losses.

Summary of features

- Sensorless field orientated BLDC control (FOC)
- Best-in-class high voltage MOSFETs for hard commoutation topology [B6 inverter]
- Low bill-of-material cost contributed by CoolMOS™ CFD and XMC™ algorithm
- Quasi-resonant CoolSET™ offers lower EMI and higher efficiency
- Graphical user interface (GUI) allowing ease-of-use

Summary of benefits

- High efficiency
- Cost effective
- Simplified design
- Near to productive solution

EVAL_100W_DRIVE_CFD2	Configuration	Description
 Ordering code: EVAL100WDRIVECFD2TOBO1	IPD65R1k4CFD 2EDL05N06PF ICE5QR4770AG XMC1302-T038X0200 AB FX1763XEJ V50 BAT54W	The EVAL_100W_DRIVE_CFD2 motor drive board does not only offer a sensorless synchronous rectification BLDC/PMSM control algorithm to reduce reverse-current hard-commutation stress, but also gives the user the option to change switching frequency up to 20 kHz and to choose between two-phase or three-phase modulation, which helps reduce switching losses.

600 W LLC digital control

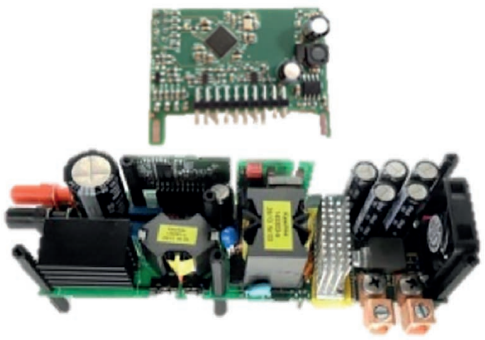
600 W LLC digital control evaluation board shows how to design the half-bridge LLC stage of a server SMPS with the target to meet 80+ Titanium standard eff iciency requirements. On this purpose the latest CoolMOS™ technologies, 600 V CoolMOS™ C7 or P6 power MOSFET have been applied on the primary side, and OptiMOS™ low voltage power MOSFET in SuperSO8 BSC010N04LS, in the synchronous rectification secondary stage in combination with QR CoolSET™ ICE2QR2280Z, hi-low-side driver 2EDL05N06PF, low-side gate driver 2EDN7524F and a XMC4200 microcontroller.

Key features

- 600 W LLC half-bridge stage with synchronous rectification (SR)
- All controlled with XMC4200 including:
  - Start up (PWM to PFM) and burst mode algorithms
  - Adaptive dead time and capacitive mode detection
  - No hard commutation at any condition

Customer benefits

- Learn LLC topology with a complete system solution from Infineon
  - Hardware and software available
- Close to customer solution
  - High efficiency → 97.8 %
  - Reliability and power density

600 W LLC digital control	Specification		Infineon components	
 Ordering code: EVAL600W12VLLCCFD7TOBO1	V_{IN}	350 – 410 V DC	MCU	XMC4200 (VQFN48)
	V_{OUT_nom}	12 V DC	MOSFET SR	BSC010N04LS
	I_{OUT}	50 A	HB driver	2EDL05N06PF
	P_{OUT}	600 W	LLC HB MOSFET	CoolMOS™ IPP60R190P6
	f_{res}	157 kHz	Auxiliary PSU	ICE2QR2280Z

www.infineon.com/eval_600w_12_llc

XMC™ peripherals

IEC60730 class B library for XMC™

Supporting the XMC1xxx and XMC4xxx families
In collaboration with the consultancy Hitex, we developped a IEC60730 – class B software library for XMC™ industrial microcontrollers for household electrical appliances. This is a dedicated software library for XMC™ MCUs with routines for internal supervisory functions and for self-diagnostics.

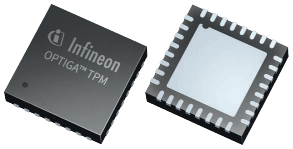
Extended documentation and pre-certified software libraries to XMC™ Cortex® ARM® based controllers are free of charge. For more information, please check: www.hitex.com/classb

Documentation	Consultancy
Safety application note **Failure mode report** **FMEDA tool** by Infineon, revised in workshops by TÜV Süd	hitex EMBEDDED TOOLS & SOLUTIONS Implementation support by Hitex

Embedded security for XMC™ MCUs

IP protection and field updates

Infineon and its partners provide solutions which support you in protecting your data, allowing authentication and encryption and securing firmware file updates to prevent cloning and downtimes.

Security solutions		
Software	**Hardware**	
Secure bootloader by Infineon, XMC1000	**OPTIGA™ family** by Infineon – hardware-based security solutions	
CodeMeter µEmbedded by WIBU, XMC4000 exclusive	**OPTIGA™ Trust family**	**OPTIGA™ TPM family**
KMS/CycurKEYS by ESCRYPT, XMC4000		
emSecure by SEGGER	Turnkey and programmable security solutions	Standardized certified turnkey solution

AURIX™ and XMC™ PDH partners

Preferred Design Houses (PDH) and software resellers

Optimized open-market customer support set up for systems using AURIX™ and XMC™, including software and other Infineon products, such as power products, sensor products and modules. Our partners are trained to using AURIX™ and XMC™.

Classic (Free of charge)	› 1st level customer support covering Infineon products/solutions › Technical interface and support to the customer	› Driving design @ customer › Basic training for design teams @ customer › 24 h response time to the customer
Premium (Consultancy mode) To be agreed between customers and PDH	› Project management and project-specific application support › Specification of general software architecture, defining required layers, control and data flow structure etc. › Specification and implementation of custom device drivers › Optimization of software components with regard to speed/code size	› Software testing › Support for project-specific functional safety engineering › Project-specific support for security solution › Safety support › Security support › Multicore support

Optimized regional and application-specific presence

	EMEA														Americas				China
Support capabilities	BLUE WIND	AVL	HIGHTEC	intecs	hitex	SST	FROBAS	MIXED MODE	PiN Team	RDM GROUP	MecTronik	driveXpert	ULMA	Autogramma	NEUTRONS	D3 Engineering		EWD	E-FUSE
AUTOSAR	●	●	●	●	●	●			●	●	●	●	●		●	●	●	●	●
Motor control	●	●		●	●	●	●		●	●	●	●	●	●	●	●	●	●	●
Lighting	●	●			●	●	●		●	●	●	●	●		●	●	●	●	●
PFC/power conversion	●	●			●	●	●		●	●	●	●	●		●	●	●	●	●
AURIX™ general support HW	●	●	●	●	●	●	●		●	●	●		●	●	●	●	●	●	●
AURIX™ general support SW	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●
Safety support IEC 61508	●	●	●	●	●	●			●	●	●		●		●	●	●	●	●
Safety support ISO 26262	●	●	●	●	●	●			●	●	●	●	●		●	●	●	●	●
Security support/SHE+	●	●	●		●	●		●	●	●	●		●		●	●	●	●	●
XMC™ general support HW	●			●	●	●	●	●	●	●	●	●	●		●	●	●	●	●
XMC™ general support SW	●			●	●	●	●	●	●	●	●	●	●		●	●	●	●	●
Class B certification	●	●	●		●				●	●	●		●			●	●	●	●
Capacitive sensing with XMC™	●				●	●			●	●	●		●		●	●	●	●	●
Secure boot for XMC™	●				●			●	●	●	●		●		●	●	●	●	●

Basic ●
Essential principles and elementary know-how to support a customer; provision of basic training for design teams

Advanced ●
High-level project-specific application support/consulting

Expert ●
Extensive knowledge and ability to fully support development

www.infineon.com/pdh

AURIX™ and XMC™ PDH partners

XMC™ ecosystem for software, tools and services

In addition to DAVE™, Infineon offers a wide range of 3rd party development tools, ready-to-use software stacks and supporting services to enable an efficient design process for XMC™ microcontrollers.

XMC™

Embedded software, RTOS and middleware

CMX SYSTEMS
Embedded Office
eTasTM
expresslogic
rt:labs
freeRTOS
HCC embedded
KEIL Tools by ARM
Matrikon Embedded OPC UA
Micrium Embedded Software
port PROFESSIONAL INDUSTRIAL COMMUNICATION
SEGGER www.segger.com
SEVENSTAX EMBEDDED TECHNOLOGIES
WIBU SYSTEMS

Modelling, simulation and auto code generation

MathWorks
protos software gmbh
SiSy Simple System
WILLERT.

Integrated Compiler environment

Altium
IAR SYSTEMS
KEIL Tools by ARM
SEGGER www.segger.com

Debugger, test and verification

GOPEL electronic Enjoy Testing
hitex EMBEDDED TOOLS & SOLUTIONS
IAR SYSTEMS
iSYSTEM
LAUTERBACH DEVELOPMENT TOOLS
PE micro
pls Development Tools
SEGGER www.segger.com
VECTOR software

Flash tools and programming services

btv
Data I/O
ELNEC
HI-LO SYSTEMS
HTV
ProMik Trusted Solutions
PE micro
SMH Technologies UNIVERSAL PRODUCTION IN-SYSTEM PROGRAMMING
XELTEK
SEGGER www.segger.com
pls Development Tools
BPM

Training and engineering services

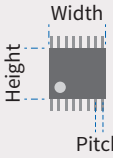
BLUE WIND
hitex EMBEDDED TOOLS & SOLUTIONS
protos software gmbh
MICRO CONSULT

Free tools and software

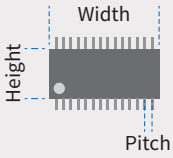
freeRTOS
Infineon
iSYSTEM
Micrium Embedded Software
SEGGER www.segger.com

XMC™ package overview

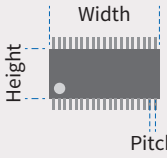
XMC1000



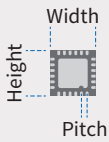
TSSOP-16	
Body	4.4 x 5 mm (H x W)
Pitch	0.65 mm



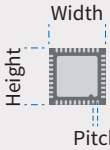
TSSOP-28	
Body	4.4 x 9.7 mm (H x W)
Pitch	0.65 mm



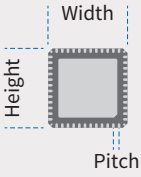
TSSOP-38	
Body	4.4 x 9.7 mm (H x W)
Pitch	0.5 mm



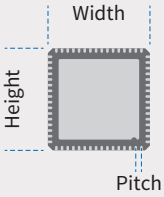
VQFN-24	
Body	4 x 4 mm (H x W)
Pitch	0.5 mm



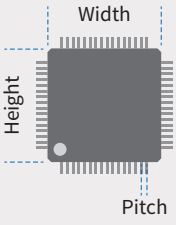
VQFN-40	
Body	5 x 5 mm (H x W)
Pitch	0.4 mm



VQFN-48	
Body	7 x 7 mm (H x W)
Pitch	0.5 mm

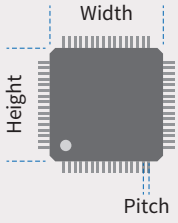


VQFN-64	
Body	9 x 9 mm (H x W)
Pitch	0.5 mm

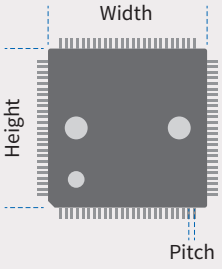


LQFP-64	
Body	10 x 10 mm (H x W)
Pitch	0.5 mm

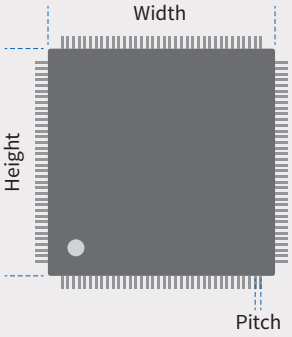
XMC4000



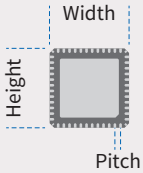
TQFP-64	
Body	10 x 10 mm (H x W)
Pitch	0.5 mm



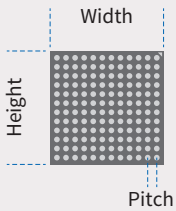
LQFP-100	
Body	14 x 14 mm (H x W)
Pitch	0.5 mm



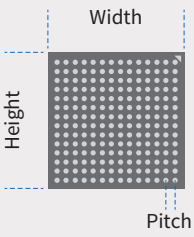
LQFP-144	
Body	20 x 20 mm (H x W)
Pitch	0.5 mm



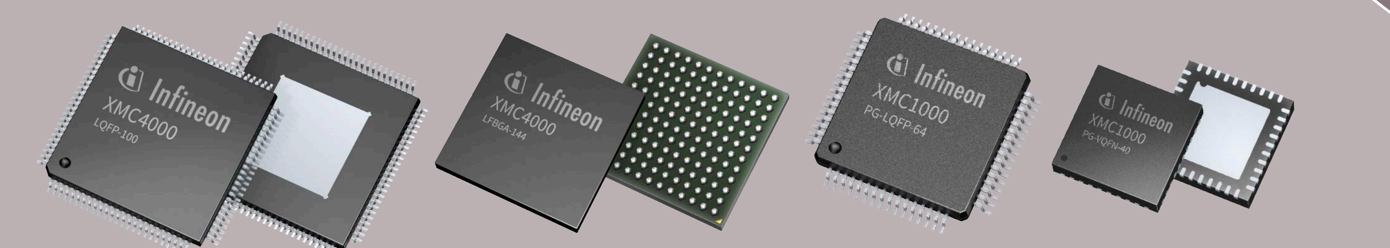
VQFN-48	
Body	7 x 7 mm (H x W)
Pitch	0.5 mm



LFBGA-144	
Body	10 x 10 mm (H x W)
Pitch	0.8 mm



LFBGA-196	
Body	12 x 12 mm (H x W)
Pitch	0.8 mm



Feature overview XMC™ family

	Markets						Core		Co-processor			System							Debug				Memory								Analog			Timer/PWM						Communication															
Product type/partnumber	Automotive	Industrial	Consumer	Budgetary web price [€/1 kpcs]	Package	GPIOs	Processor type	Core frequency [MHz]	CORDIC/DIV	DSP	FPU	ERU	DMA	MPU	CRC	PRNG	Watchdog	Real-Time Clock	SWD, SPD	JTAG, Trace	Supply voltage [V]	Operating temperature range T_A [°C]	Flash	ECC	RAM	Cache	EEPROM emulationin flash	Data/IP protection	Secure bootloader	Peripherals clock [MHz]	No. of 12-bit ADC/ No. of sample & hold/ No. of inputs	12-bit DAC	Comparator	CCU4	CCU8	HRPWM (150 ps)	ΔΣ Demodulator	POSIF	BCCU/LED	EtherCAT®	IEEE1588 Ethernet MAC	CAN 2.0B nodes	USB	SDIO/SD/MMC	USIC (Universal Serial Interface Controller): # channels	SPI	Dual SPI	Quad SPI	UART/SCI	IIC/I^2C	IIS/I^2S	LIN	External Bus Unit (EBU)	LED display	Capacitive touch
XMC1100 series																																																							
XMC1100-T016F0008	–	●	●	0.56	TSSOP-16	14	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	8	–	16	–	●	–	●	64	1/1/7	–	–	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1100-T016F0016	–	●	●	0.61	TSSOP-16	14	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	16	–	16	–	●	–	●	64	1/1/7	–	–	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1100-T016X0016	–	●	●	0.65	TSSOP-16	14	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	16	–	16	–	●	–	●	64	1/1/7	–	–	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1100-T016X0032	–	●	●	0.76	TSSOP-16	14	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	32	–	16	–	●	–	●	64	1/1/7	–	–	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1100-T016F0032	–	●	●	0.72	TSSOP-16	14	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	32	–	16	–	●	–	●	64	1/1/7	–	–	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1100-T016F0064	–	●	●	0.94	TSSOP-16	14	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	64	–	16	–	●	–	●	64	1/1/7	–	–	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1100-T016X0064	–	●	●	0.99	TSSOP-16	14	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	64	–	16	–	●	–	●	64	1/1/7	–	–	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1100-T038F0016	–	●	●	0.70	TSSOP-38	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	16	–	16	–	●	–	●	64	1/1/12	–	–	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1100-T038F0032	–	●	●	0.81	TSSOP-38	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	32	–	16	–	●	–	●	64	1/1/12	–	–	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1100-T038F0064	–	●	●	1.03	TSSOP-38	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	64	–	16	–	●	–	●	64	1/1/12	–	–	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1100-T038X0064	–	●	●	1.08	TSSOP-38	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	64	–	16	–	●	–	●	64	1/1/12	–	–	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1100-Q024F0008	–	●	●	0.61	VQFN-24	22	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	64	–	16	–	●	–	●	64	1/1/9	–	–	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1100-Q024F0016	–	●	●	0.65	VQFN-24	22	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	16	–	16	–	●	–	●	64	1/1/9	–	–	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1100-Q024F0032	–	●	●	0.76	VQFN-24	22	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	32	–	16	–	●	–	●	64	1/1/9	–	–	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1100-Q024F0064	–	●	●	0.99	VQFN-24	22	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	64	–	16	–	●	–	●	64	1/1/9	–	–	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1100-Q040F0016	–	●	●	0.72	VQFN-40	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	16	–	16	–	●	–	●	64	1/1/12	–	–	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1100-Q040F0032	–	●	●	0.83	VQFN-40	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	32	–	16	–	●	–	●	64	1/1/12	–	–	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1100-Q040F0064	–	●	●	1.06	VQFN-40	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	64	–	16	–	●	–	●	64	1/1/12	–	–	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1200 series																																																							
XMC1200-T038F0200	–	●	●	1.91	TSSOP-38	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	200	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	2x 64 segment	16 ch
XMC1201-T038F0016	–	●	●	0.79	TSSOP-38	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	16	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	2x 64 segment	16 ch
XMC1201-T038F0032	–	●	●	0.89	TSSOP-38	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	32	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	2x 64 segment	16 ch
XMC1201-T038F0064	–	●	●	1.12	TSSOP-38	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	64	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	2x 64 segment	16 ch
XMC1201-T038F0128	–	●	●	1.46	TSSOP-38	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	128	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	2x 64 segment	16 ch
XMC1201-T038F0200	–	●	●	1.91	TSSOP-38	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	200	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	2x 64 segment	16 ch
XMC1201-Q040F0016	–	●	●	0.81	VQFN-40	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	16	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	2x 64 segment	16 ch
XMC1201-Q040F0032	–	●	●	0.92	VQFN-40	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	32	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	2x 64 segment	16 ch
XMC1201-Q040F0064	–	●	●	1.15	VQFN-40	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	64	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	2x 64 segment	16 ch
XMC1201-Q040F0128	–	●	●	1.48	VQFN-40	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	128	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	2x 64 segment	16 ch
XMC1201-Q040F0200	–	●	●	1.93	VQFN-40	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	200	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	2x 64 segment	16 ch
XMC1201-T028F0016	–	●	●	0.74	TSSOP-28	26	Cortex®-M1	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	16	–	16	–	●	–	●	64	1/2/10	–	2x	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	2x 64 segment	16 ch
XMC1202-T016X0016	–	●	●	0.74	TSSOP-16	14	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	16	–	16	–	●	–	●	64	1/2/7	–	2x	4 ch	–	–	–	–	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1202-T016X0032	–	●	●	0.85	TSSOP-16	14	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	32	–	16	–	●	–	●	64	1/2/7	–	2x	4 ch	–	–	–	–	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1202-T028X0016	–	●	●	0.79	TSSOP-28	26	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	16	–	16	–	●	–	●	64	1/2/10	–	3x	4 ch	–	–	–	–	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1202-T028X0032	–	●	●	0.90	TSSOP-28	26	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	32	–	16	–	●	–	●	64	1/2/10	–	3x	4 ch	–	–	–	–	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1202-T028X0064	–	●	●	1.13	TSSOP-28	26	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	64	–	16	–	●	–	●	64	1/2/10	–	3x	4 ch	–	–	–	–	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1202-Q024X0016	–	●	●	0.79	VQFN-24	22	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	16	–	16	–	●	–	●	64	1/2/9	–	3x	4 ch	–	–	–	–	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1202-Q024X0032	–	●	●	0.90	VQFN-24	22	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	32	–	16	–	●	–	●	64	1/2/9	–	3x	4 ch	–	–	–	–	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1202-Q040X0016	–	●	●	0.85	VQFN-40	26	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	16	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	–	–	–	–	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1202-Q040X0032	–	●	●	0.97	VQFN-40	26	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	32	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	–	–	–	–	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1202-T016X0064	–	●	●	1.09	TSSOP-16	14	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 106	64	–	16	–	●	–	●	64	1/2/7	–	2x	4 ch	–	–	–	–	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1300 series																																																							
XMC1301-T016F0008	–	●	●	0.61	TSSOP-16	14	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	8	–	16	–	●	–	●	64	1/2/7	–	2x	4 ch	4 ch	–	–	1x	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1301-T016X0008	–	●	●	0.65	TSSOP-16	14	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	8	–	16	–	●	–	●	64	1/2/7	–	2x	4 ch	4 ch	–	–	1x	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1301-T016F0016	–	●	●	0.65	TSSOP-16	14	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	16	–	16	–	●	–	●	64	1/2/7	–	2x	4 ch	4 ch	–	–	1x	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1301-T016X0016	–	●	●	0.70	TSSOP-16	14	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	16	–	16	–	●	–	●	64	1/2/7	–	2x	4 ch	4 ch	–	–	1x	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1301-T038F0008	–	●	●	0.70	TSSOP-38	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	8	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	4 ch	–	–	1x	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1301-T038F0016	–	●	●	0.74	TSSOP-38	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	16	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	4 ch	–	–	1x	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1301-T038F0032	–	●	●	0.85	TSSOP-38	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	32	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	4 ch	–	–	1x	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1301-Q024F0008	–	●	●	0.65	VQFN-24	22	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	8	–	16	–	●	–	●	64	1/2/9	–	3x	4 ch	4 ch	–	–	1x	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1301-Q024F0016	–	●	●	0.70	VQFN-24	22	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	16	–	16	–	●	–	●	64	1/2/9	–	3x	4 ch	4 ch	–	–	1x	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1301-Q040F0008	–	●	●	0.72	VQFN-40	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	8	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	4 ch	–	–	1x	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1301-Q040F0016	–	●	●	0.76	VQFN-40	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	16	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	4 ch	–	–	1x	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1301-Q040F0032	–	●	●	0.88	VQFN-40	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	32	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	4 ch	–	–	1x	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1301-T016F0032	–	●	●	0.77	TSSOP-16	14	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	32	–	16	–	●	–	●	64	1/2/7	–	2x	–	4 ch	–	–	1x	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1301-T038X0064	–	●	●	1.13	TSSOP-38	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	64	–	16	–	●	–	●	64	1/2/12	–	3x	–	4 ch	–	–	1x	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1301-T038F0064	–	●	●	1.09	TSSOP-38	34	Cortex®-M0	32	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	64	–	16	–	●	–	●	64	1/2/12	–	3x	–	4 ch	–	–	1x	–	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1302-T016X0008	–	●	●	0.70	TSSOP-16	14	Cortex®-M0	32	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	8	–	16	–	●	–	●	64	1/2/7	–	2x	4 ch	4 ch	–	–	1x	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1302-T016X0016	–	●	●	0.74	TSSOP-16	14	Cortex®-M0	32	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	16	–	16	–	●	–	●	64	1/2/7	–	2x	4 ch	4 ch	–	–	1x	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1302-T016X0032	–	●	●	0.85	TSSOP-16	14	Cortex®-M0	32	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	32	–	16	–	●	–	●	64	1/2/7	–	2x	4 ch	4 ch	–	–	1x	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1302-T038X0016	–	●	●	0.83	TSSOP-38	34	Cortex®-M0	32	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	16	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	4 ch	–	–	1x	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1302-T038X0032	–	●	●	0.94	TSSOP-38	34	Cortex®-M0	32	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	32	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	4 ch	–	–	1x	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1302-T038X0064	–	●	●	1.17	TSSOP-38	34	Cortex®-M0	32	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	8	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	4 ch	–	–	1x	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1302-T038X0128	–	●	●	1.51	TSSOP-38	34	Cortex®-M0	32	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	128	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	4 ch	–	–	1x	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1302-T038X0200	–	●	●	1.96	TSSOP-38	34	Cortex®-M0	32	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	200	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	4 ch	–	–	1x	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1302-Q024F0016	–	●	●	0.74	VQFN-24	22	Cortex®-M0	32	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	16	–	16	–	●	–	●	64	1/2/9	–	3x	4 ch	4 ch	–	–	1x	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1302-Q024F0032	–	●	●	0.85	VQFN-24	22	Cortex®-M0	32	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	32	–	16	–	●	–	●	64	1/2/9	–	3x	4 ch	4 ch	–	–	1x	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1302-Q024F0064	–	●	●	1.08	VQFN-24	22	Cortex®-M0	32	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	64	–	16	–	●	–	●	64	1/2/9	–	3x	4 ch	4 ch	–	–	1x	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1302-Q024X0016	–	●	●	0.79	VQFN-24	22	Cortex®-M0	32	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	16	–	16	–	●	–	●	64	1/2/9	–	3x	4 ch	4 ch	–	–	1x	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1302-Q024X0032	–	●	●	0.90	VQFN-24	22	Cortex®-M0	32	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	32	–	16	–	●	–	●	64	1/2/9	–	3x	4 ch	4 ch	–	–	1x	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1302-Q024X0064	–	●	●	1.12	VQFN-24	22	Cortex®-M0	32	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	64	–	16	–	●	–	●	64	1/2/9	–	3x	4 ch	4 ch	–	–	1x	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1302-Q040X0016	–	●	●	0.85	VQFN-40	34	Cortex®-M0	32	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	16	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	4 ch	–	–	1x	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1302-Q040X0032	–	●	●	0.97	VQFN-40	26	Cortex®-M0	32	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	32	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	4 ch	–	–	1x	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1302-Q040X0064	–	●	●	1.19	VQFN-40	34	Cortex®-M0	32	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	64	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	4 ch	–	–	1x	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1302-Q040X0128	–	●	●	1.53	VQFN-40	34	Cortex®-M0	32	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	128	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	4 ch	–	–	1x	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1302-Q040X0200	–	●	●	1.99	VQFN-40	34	Cortex®-M0	32	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	200	–	16	–	●	–	●	64	1/2/12	–	3x	4 ch	4 ch	–	–	1x	9 ch	–	–	–	–	–	2 ch	●	●	●	●	●	●	●	–	–	–
XMC1400 series																																																							
XMC1401-Q048F0064	–	●	●	1.27	VQFN-48	42	Cortex®-M0	48	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	128	–	16	–	●	–	●	96	1/2/12	–	–	8 ch	–	–	–	–	–	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	3x 64 segment	24 ch
XMC1401-Q048F0128	–	●	●	1.63	VQFN-48	42	Cortex®-M0	48	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	128	–	16	–	●	–	●	96	1/2/12	–	–	8 ch	–	–	–	–	–	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	3x 64 segment	24 ch
XMC1401-F064F0064	–	●	●	1.37	LQFP-64	55	Cortex®-M0	48	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	64	–	16	–	●	–	●	96	1/2/12	–	–	8 ch	–	–	–	–	–	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	3x 64 segment	24 ch
XMC1401-F064F0128	–	●	●	1.72	LQFP-64	55	Cortex®-M0	48	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 85	128	–	16	–	●	–	●	96	1/2/12	–	–	8 ch	–	–	–	–	–	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	3x 64 segment	24 ch
XMC1402-Q040X0032	–	●	●	1.08	VQFN-40	35	Cortex®-M0	48	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	32	–	16	–	●	–	●	96	1/2/12	–	3x	8 ch	8 ch	–	–	2x	9 ch	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	–	–
XMC1402-Q040X0064	–	●	●	1.31	VQFN-40	35	Cortex®-M0	48	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	64	–	16	–	●	–	●	96	1/2/12	–	3x	8 ch	8 ch	–	–	2x	9 ch	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	–	–
XMC1402-Q040X0128	–	●	●	1.67	VQFN-40	35	Cortex®-M0	48	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	128	–	16	–	●	–	●	96	1/2/12	–	3x	8 ch	8 ch	–	–	2x	9 ch	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	–	–
XMC1402-Q048X0032	–	●	●	1.12	VQFN-48	42	Cortex®-M0	48	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	32	–	16	–	●	–	●	96	1/2/12	–	4x	8 ch	8 ch	–	–	2x	9 ch	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	–	–
XMC1402-Q048X0064	–	●	●	1.36	VQFN-48	42	Cortex®-M0	48	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	64	–	16	–	●	–	●	96	1/2/12	–	4x	8 ch	8 ch	–	–	2x	9 ch	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	–	–
XMC1402-Q048X0128	–	●	●	1.72	VQFN-48	42	Cortex®-M0	48	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	128	–	16	–	●	–	●	96	1/2/12	–	4x	8 ch	8 ch	–	–	2x	9 ch	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	–	–
XMC1402-Q064X0064	–	●	●	1.46	VQFN-64	55	Cortex®-M0	48	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	64	–	16	–	●	–	●	96	1/2/12	–	4x	8 ch	8 ch	–	–	2x	9 ch	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	–	–
XMC1402-Q064X0128	–	●	●	1.82	VQFN-64	55	Cortex®-M0	48	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	128	–	16	–	●	–	●	96	1/2/12	–	4x	8 ch	8 ch	–	–	2x	9 ch	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	–	–
XMC1402-Q064X0200	–	●	●	2.29	VQFN-64	55	Cortex®-M0	48	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	200	–	16	–	●	–	●	96	1/2/12	–	4x	8 ch	8 ch	–	–	2x	9 ch	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	–	–
XMC1402-F064X0064	–	●	●	1.46	LQFP-64	55	Cortex®-M0	48	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	64	–	16	–	●	–	●	96	1/2/12	–	4x	8 ch	8 ch	–	–	2x	9 ch	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	–	–
XMC1402-F064X0128	–	●	●	1.82	LQFP-64	55	Cortex®-M0	48	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	128	–	16	–	●	–	●	96	1/2/12	–	4x	8 ch	8 ch	–	–	2x	9 ch	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	–	–
XMC1402-F064X0200	–	●	●	2.29	LQFP-64	55	Cortex®-M0	48	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	200	–	16	–	●	–	●	96	1/2/12	–	4x	8 ch	8 ch	–	–	2x	9 ch	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	–	–
XMC1403-Q048X0064	–	●	●	1.39	VQFN-48	42	Cortex®-M0	48	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	64	–	16	–	●	–	●	96	1/2/12	–	–	8 ch	–	–	–	–	–	–	–	2	–	–	4 ch	●	●	●	●	●	●	●	–	–	–
XMC1403-Q048X0128	–	●	●	1.74	VQFN-48	42	Cortex®-M0	48	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	128	–	16	–	●	–	●	96	1/2/12	–	–	8 ch	–	–	–	–	–	–	–	2	–	–	4 ch	●	●	●	●	●	●	●	–	–	–
XMC1403-Q048X0200	–	●	●	2.22	VQFN-48	42	Cortex®-M0	48	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	200	–	16	–	●	–	●	96	1/2/12	–	–	8 ch	–	–	–	–	–	–	–	2	–	–	4 ch	●	●	●	●	●	●	●	–	–	–
XMC1403-Q064X0064	–	●	●	1.48	VQFN-64	55	Cortex®-M0	48	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	64	–	16	–	●	–	●	96	1/2/12	–	–	8 ch	–	–	–	–	–	–	–	2	–	–	4 ch	●	●	●	●	●	●	●	–	–	–

Feature overview XMC™ family

Product type/partnumber	Markets			Budgetary web price [€/1 kpcs]	Package	GPIOs	Core		Co-processor			System							Debug		Supply voltage [V]	Operating temperature range T_A [°C]	Memory					Data/IP protection	Secure bootloader	Peripherals clock [MHz]	Analog			Timer/PWM						Communication														LED display	Capacitive touch
																																													USIC (Universal Serial Interface Controller)										
	Automotive	Industrial	Consumer				Processor type	Core frequency [MHz]	CORDIC/DIV	DSP	FPU	ERU	DMA	MPU	CRC	PRNG	Watchdog	Real-Time Clock	SWD, SPD	JTAG, Trace			Flash	ECC	RAM	Cache	EEPROM emulationin flash				No. of 12-bit ADC/ No. of sample & hold/ No. of inputs	12-bit DAC	Comparator	CCU4	CCU8	HRPWM (150 ps)	ΔΣ Demodulator	POSIF	BCCU/LED	EtherCAT®	IEEE1588 Ethernet MAC	CAN 2.0B nodes	USB	SDIO/SD/MMC	# channels	SPI	Dual SPI	Quad SPI	UART/SCI	IIC/I²C	IIS/I²S	LIN	External Bus Unit (EBU)		
XMC1400 series																																																							
XMC1403-Q064X0128	–	●	●	1.84	VQFN-64	55	Cortex®-M0	48	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	128	–	16	–	●	–	●	96	1/2/12	–	–	8 ch	–	–	–	–	–	–	–	2	–	–	4 ch	●	●	●	●	●	●	●	–	–	–
XMC1403-Q064X0200	–	●	●	2.32	VQFN-64	55	Cortex®-M0	48	–	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	200	–	16	–	●	–	●	96	1/2/12	–	–	8 ch	–	–	–	–	–	–	–	2	–	–	4 ch	●	●	●	●	●	●	●	–	–	–
XMC1404-Q048X0064	–	●	●	1.48	VQFN-48	42	Cortex®-M0	48	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	64	–	16	–	●	–	●	96	1/2/12	–	4x	8 ch	8 ch	–	–	2x	9 ch	–	–	2	–	–	4 ch	●	●	●	●	●	●	●	–	3x 64 segment	24 ch
XMC1404-Q048X0128	–	●	●	1.84	VQFN-48	42	Cortex®-M0	48	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	128	–	16	–	●	–	●	96	1/2/12	–	4x	8 ch	8 ch	–	–	2x	9 ch	–	–	2	–	–	4 ch	●	●	●	●	●	●	●	–	3x 64 segment	24 ch
XMC1404-Q048X0200	–	●	●	2.32	VQFN-48	42	Cortex®-M0	48	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	200	–	16	–	●	–	●	96	1/2/12	–	4x	8 ch	8 ch	–	–	2x	9 ch	–	–	2	–	–	4 ch	●	●	●	●	●	●	●	–	3x 64 segment	24 ch
XMC1404-Q064X0064	–	●	●	1.58	VQFN-64	55	Cortex®-M0	48	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	64	–	16	–	●	–	●	96	1/2/12	–	4x	8 ch	8 ch	–	–	2x	9 ch	–	–	2	–	–	4 ch	●	●	●	●	●	●	●	–	3x 64 segment	24 ch
XMC1404-Q064X0128	–	●	●	1.94	VQFN-64	55	Cortex®-M0	48	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	128	–	16	–	●	–	●	96	1/2/12	–	4x	8 ch	8 ch	–	–	2x	9 ch	–	–	2	–	–	4 ch	●	●	●	●	●	●	●	–	3x 64 segment	24 ch
XMC1404-Q064X0200	–	●	●	2.41	VQFN-64	55	Cortex®-M0	48	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	200	–	16	–	●	–	●	96	1/2/12	–	4x	8 ch	8 ch	–	–	2x	9 ch	–	–	2	–	–	4 ch	●	●	●	●	●	●	●	–	3x 64 segment	24 ch
XMC1404-F064X0064	–	●	●	1.58	LQFP-64	55	Cortex®-M0	48	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	64	–	16	–	●	–	●	96	1/2/12	–	4x	8 ch	8 ch	–	–	2x	9 ch	–	–	2	–	–	4 ch	●	●	●	●	●	●	●	–	3x 64 segment	24 ch
XMC1404-F064X0128	–	●	●	1.94	LQFP-64	55	Cortex®-M0	48	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	128	–	16	–	●	–	●	96	1/2/12	–	4x	8 ch	8 ch	–	–	2x	9 ch	–	–	2	–	–	4 ch	●	●	●	●	●	●	●	–	3x 64 segment	24 ch
XMC1404-F064X0200	–	●	●	2.41	LQFP-64	55	Cortex®-M0	48	●	–	–	1	–	–	–	●	●	●	●	–	1.8 to 5.5	-40 to 105	200	–	16	–	●	–	●	96	1/2/12	–	4x	8 ch	8 ch	–	–	2x	9 ch	–	–	2	–	–	4 ch	●	●	●	●	●	●	●	–	3x 64 segment	24 ch
XMC4100 series																																																							
XMC4108-Q48K64	–	●	●	2.17	VQFN-48	30	Cortex®-M4	80	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	64	●	20	1	●	●	–	80	2/2/8	2 ch	–	8 ch	4 ch	–	–	1x	–	–	–	1	–	–	4 ch	●	●	●	●	●	●	●	–	–	–
XMC4108-F64K64	–	●	●	2.52	TQFP-64	45	Cortex®-M4	80	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	64	●	20	1	●	●	–	80	2/2/9	2 ch	–	8 ch	4 ch	–	–	1x	–	–	–	1	–	–	4 ch	●	●	●	●	●	●	●	–	–	–
XMC4104-Q48F64	–	●	●	2.70	VQFN-48	30	Cortex®-M4	80	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	64	●	20	1	●	●	–	80	2/2/8	2 ch	–	8 ch	4 ch	●	–	1x	–	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4104-Q48F128	–	●	●	2.80	VQFN-48	30	Cortex®-M4	80	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	128	●	20	1	●	●	–	80	2/2/8	2 ch	–	8 ch	4 ch	●	–	1x	–	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4104-Q48K64	–	●	●	2.97	VQFN-48	30	Cortex®-M4	80	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	64	●	20	1	●	●	–	80	2/2/8	2 ch	–	8 ch	4 ch	●	–	1x	–	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4104-Q48K128	–	●	●	3.09	VQFN-48	30	Cortex®-M4	80	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	128	●	20	1	●	●	–	80	2/2/8	2 ch	–	8 ch	4 ch	●	–	1x	–	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4104-F64F64	–	●	●	2.82	TQFP-64	45	Cortex®-M4	80	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	64	●	20	1	●	●	–	80	2/2/9	2 ch	–	8 ch	4 ch	●	–	1x	–	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4104-F64F128	–	●	●	2.92	TQFP-64	45	Cortex®-M4	80	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	128	●	20	1	●	●	–	80	2/2/9	2 ch	–	8 ch	4 ch	●	–	1x	–	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4104-F64K64	–	●	●	3.20	TQFP-64	45	Cortex®-M4	80	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	64	●	20	1	●	●	–	80	2/2/9	2 ch	–	8 ch	4 ch	●	–	1x	–	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4104-F64K128	–	●	●	3.31	TQFP-64	45	Cortex®-M4	80	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	128	●	20	1	●	●	–	80	2/2/9	2 ch	–	8 ch	4 ch	●	–	1x	–	–	–	–	–	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4100-Q48F128	–	●	●	3.01	VQFN-48	30	Cortex®-M4	80	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	128	●	20	1	●	●	–	80	2/2/8	2 ch	–	8 ch	4 ch	●	–	1x	–	–	–	2	●	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4100-Q48K128	–	●	●	3.21	VQFN-48	30	Cortex®-M4	80	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	128	●	20	1	●	●	–	80	2/2/8	2 ch	–	8 ch	4 ch	●	–	1x	–	–	–	2	●	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4100-F64F128	–	●	●	3.12	TQFP-64	45	Cortex®-M4	80	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	128	●	20	1	●	●	–	80	2/2/9	2 ch	–	8 ch	4 ch	●	–	1x	–	–	–	2	●	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4100-F64K128	–	●	●	3.54	TQFP-64	45	Cortex®-M4	80	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	128	●	20	1	●	●	–	80	2/2/9	2 ch	–	8 ch	4 ch	●	–	1x	–	–	–	2	●	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4200 series																																																							
XMC4200-Q48F256	–	●	●	3.12	VQFN-48	30	Cortex®-M4	80	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	256	●	40	1	●	●	–	80	2/2/8	2 ch	–	8 ch	4 ch	●	–	1x	–	–	–	2	●	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4200-Q48K256	–	●	●	3.33	VQFN-48	30	Cortex®-M4	80	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	256	●	40	1	●	●	–	80	2/2/8	2 ch	–	8 ch	4 ch	●	–	1x	–	–	–	2	●	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4200-F64F256	–	●	●	3.22	TQFP-64	45	Cortex®-M4	80	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	256	●	40	1	●	●	–	80	2/2/9	2 ch	–	8 ch	4 ch	●	–	1x	–	–	–	2	●	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4200-F64K256	–	●	●	3.66	TQFP-64	45	Cortex®-M4	80	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	256	●	40	1	●	●	–	80	2/2/9	2 ch	–	8 ch	4 ch	●	–	1x	–	–	–	2	●	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4300 series																																																							
XMC4300-F100F256	–	●	–	7.97	LQFP-100	75	Cortex®-M4	144	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	256	●	128	8	●	●	–	144	2/2/14	2 ch	–	8 ch	4 ch	–	–	–	–	●	●	2	●	●	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4300-F100K256	–	●	–	8.77	LQFP-100	75	Cortex®-M4	144	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	256	●	128	8	●	●	–	144	2/2/14	2 ch	–	8 ch	4 ch	–	–	–	–	●	●	2	●	●	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4400 series																																																							
XMC4402-F64F256	–	●	●	4.23	TQFP-64	41	Cortex®-M4	120	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	256	●	80	4	●	●	–	120	4/4/9	2 ch	–	16 ch	8 ch	●	4 ch	2x	–	–	–	2	●	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4402-F64K256	–	●	●	4.80	TQFP-64	41	Cortex®-M4	120	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	256	●	80	4	●	●	–	120	4/4/9	2 ch	–	16 ch	8 ch	●	4 ch	2x	–	–	–	2	●	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4402-F100F256	–	●	●	4.53	LQFP-100	75	Cortex®-M4	120	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	256	●	80	4	●	●	–	120	4/4/18	2 ch	–	16 ch	8 ch	●	4 ch	2x	–	–	–	2	●	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4402-F100K256	–	●	●	5.14	LQFP-100	75	Cortex®-M4	120	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	256	●	80	4	●	●	–	120	4/4/18	2 ch	–	16 ch	8 ch	●	4 ch	2x	–	–	–	2	●	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4400-F64F256	–	●	●	4.43	TQFP-64	41	Cortex®-M4	120	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	256	●	80	4	●	●	–	120	4/4/9	2 ch	–	16 ch	8 ch	●	4 ch	2x	–	–	●	2	●	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4400-F64F512	–	●	●	4.64	TQFP-64	41	Cortex®-M4	120	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	512	●	80	4	●	●	–	120	4/4/9	2 ch	–	16 ch	8 ch	●	4 ch	2x	–	–	●	2	●	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4400-F64K256	–	●	●	5.03	TQFP-64	41	Cortex®-M4	120	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	256	●	80	4	●	●	–	120	4/4/9	2 ch	–	16 ch	8 ch	●	4 ch	2x	–	–	●	2	●	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4400-F64K512	–	●	●	5.26	TQFP-64	41	Cortex®-M4	120	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	512	●	80	4	●	●	–	120	4/4/9	2 ch	–	16 ch	8 ch	●	4 ch	2x	–	–	●	2	●	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4400-F100F256	–	●	●	4.88	LQFP-100	75	Cortex®-M4	120	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	256	●	80	4	●	●	–	120	4/4/18	2 ch	–	16 ch	8 ch	●	4 ch	2x	–	–	●	2	●	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4400-F100F512	–	●	●	4.94	LQFP-100	75	Cortex®-M4	120	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	512	●	80	4	●	●	–	120	4/4/18	2 ch	–	16 ch	8 ch	●	4 ch	2x	–	–	●	2	●	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4400-F100K256	–	●	●	5.37	LQFP-100	75	Cortex®-M4	120	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	256	●	80	4	●	●	–	120	4/4/18	2 ch	–	16 ch	8 ch	●	4 ch	2x	–	–	●	2	●	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4400-F100K512	–	●	●	5.43	LQFP-100	75	Cortex®-M4	120	–	●	●	2	8 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	512	●	80	4	●	●	–	120	4/4/18	2 ch	–	16 ch	8 ch	●	4 ch	2x	–	–	●	2	●	–	4 ch	●	●	●	●	●	●	●	–	1x 64 segment	8 ch
XMC4500 series																																																							
XMC4504-F100F512	–	●	●	4.79	LQFP-100	75	Cortex®-M4	120	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	512	●	128	4	●	●	–	120	4/4/18	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	–	–	–	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4504-F100K512	–	●	●	5.27	LQFP-100	75	Cortex®-M4	120	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	512	●	128	4	●	●	–	120	4/4/18	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	–	–	–	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4504-F144F512	–	●	●	5.18	LQFP-144	119	Cortex®-M4	120	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	512	●	128	4	●	●	–	120	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	–	–	–	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4504-F144K512	–	●	●	5.70	LQFP-144	119	Cortex®-M4	120	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	512	●	128	4	●	●	–	120	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	–	–	–	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4502-F100F768	–	●	●	5.18	LQFP-100	75	Cortex®-M4	120	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	768	●	160	4	●	●	–	120	4/4/18	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	–	3	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4502-F100K768	–	●	●	5.70	LQFP-100	75	Cortex®-M4	120	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	768	●	160	4	●	●	–	120	4/4/18	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	–	3	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4500-F100F768	–	●	●	5.57	LQFP-100	75	Cortex®-M4	120	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	768	●	160	4	●	●	–	120	4/4/18	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	●	3	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4500-F100F1024	–	●	●	5.77	LQFP-100	75	Cortex®-M4	120	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	1024	●	160	4	●	●	–	120	4/4/18	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	●	3	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4500-F100K768	–	●	●	6.13	LQFP-100	75	Cortex®-M4	120	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	768	●	160	4	●	●	–	120	4/4/18	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	●	3	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4500-F100K1024	–	●	●	6.54	LQFP-100	75	Cortex®-M4	120	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	1024	●	160	4	●	●	–	120	4/4/18	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	●	3	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4500-F144F768	–	●	●	5.96	LQFP-144	119	Cortex®-M4	120	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	768	●	160	4	●	●	–	120	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	●	3	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4500-F144F1024	–	●	●	6.16	LQFP-144	119	Cortex®-M4	120	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	1024	●	160	4	●	●	–	120	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	●	3	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4500-F144K768	–	●	●	6.13	LQFP-144	119	Cortex®-M4	120	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	768	●	160	4	●	●	–	120	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	●	3	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4500-F144K1024	–	●	●	6.77	LQFP-144	119	Cortex®-M4	120	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	1024	●	160	4	●	●	–	120	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	●	3	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4500-E144F1024	–	●	●	6.67	LFBGA-144	119	Cortex®-M4	120	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	1024	●	160	4	●	●	–	120	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	●	3	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4500-E144X1024	–	●	●	7.08	LFBGA-144	119	Cortex®-M4	120	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 105	1024	●	160	4	●	●	–	120	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	●	3	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4700 series																																																							
XMC4700-F100F1536	–	●	●	7.16	LQFP-100	75	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	1536	●	276	8	●	●	–	144	4/4/18	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4700-F100F2048	–	●	●	7.97	LQFP-100	75	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	2048	●	352	8	●	●	–	144	4/4/18	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4700-F100K1536	–	●	●	7.88	LQFP-100	75	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	1536	●	276	8	●	●	–	144	4/4/18	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4700-F100K2048	–	●	●	8.77	LQFP-100	75	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	2048	●	352	8	●	●	–	144	4/4/18	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4700-F144F1536	–	●	●	7.58	LQFP-144	119	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	1536	●	276	8	●	●	–	144	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4700-F144F2048	–	●	●	8.38	LQFP-144	119	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	2048	●	352	8	●	●	–	144	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4700-F144K1536	–	●	●	8.34	LQFP-144	119	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	40 to 125	1536	●	276	8	●	●	–	144	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4700-F144K2048	–	●	●	9.22	LQFP-144	119	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	2048	●	352	8	●	●	–	144	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4700-E196F1536	–	●	●	7.99	LFBGA-196	155	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	1536	●	276	8	●	●	–	144	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4700-E196F2048	–	●	●	8.80	LFBGA-196	155	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	2048	●	352	8	●	●	–	144	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4700-E196K1536	–	●	●	8.79	LFBGA-196	155	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	1536	●	276	8	●	●	–	144	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4700-E196K2048	–	●	●	9.68	LFBGA-196	155	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	2048	●	352	8	●	●	–	144	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	–	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4800 series																																																							
XMC4800-F100F1024	–	●	–	11.84	LQFP-100	75	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	1024	●	200	8	●	●	–	144	4/4/18	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	●	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4800-F100F1536	–	●	–	12.71	LQFP-100	75	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	1536	●	276	8	●	●	–	144	4/4/18	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	●	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4800-F100F2048	–	●	–	13.58	LQFP-100	75	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	2048	●	352	8	●	●	–	144	4/4/18	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	●	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4800-F100K1024	–	●	–	13.02	LQFP-100	75	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	1024	●	200	8	●	●	–	144	4/4/18	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	●	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4800-F100K1536	–	●	–	13.98	LQFP-100	75	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	1536	●	276	8	●	●	–	144	4/4/18	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	●	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4800-F100K2048	–	●	–	14.94	LQFP-100	75	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to125	2048	●	352	8	●	●	–	144	4/4/18	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	●	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4800-F144F1024	–	●	–	12.29	LQFP-144	119	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	1024	●	200	8	●	●	–	144	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	●	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4800-F144F1536	–	●	–	13.16	LQFP-144	119	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	1536	●	276	8	●	●	–	144	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	●	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4800-F144F2048	–	●	–	14.03	LQFP-144	119	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	2048	●	352	8	●	●	–	144	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	●	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4800-F144K1024	–	●	–	13.51	LQFP-144	119	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	1024	●	200	8	●	●	–	144	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	●	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4800-F144K1536	–	●	–	14.47	LQFP-144	119	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	1536	●	276	8	●	●	–	144	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	●	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4800-F144K2048	–	●	–	15.43	LQFP-144	119	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to125	2048	●	352	8	●	●	–	144	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	●	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4800-E196F1024	–	●	–	12.73	LFBGA-196	155	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	1024	●	200	8	●	●	–	144	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	●	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4800-E196F1536	–	●	–	13.60	LFBGA-196	155	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	1536	●	276	8	●	●	–	144	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	●	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4800-E196F2048	–	●	–	14.47	LFBGA-196	155	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 85	2048	●	352	8	●	●	–	144	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	●	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4800-E196K1024	–	●	–	14.01	LFBGA-196	155	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	1024	●	200	8	●	●	–	144	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	●	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4800-E196K1536	–	●	–	14.96	LFBGA-196	155	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to 125	1536	●	276	8	●	●	–	144	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	●	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch
XMC4800-E196K2048	–	●	–	15.92	LFBGA-196	155	Cortex®-M4	144	–	●	●	2	12 ch	1	1	●	●	●	●	●	3.13 to 3.63	-40 to125	2048	●	352	8	●	●	–	144	4/4/26	2 ch	–	16 ch	8 ch	–	4 ch	2x	–	●	●	6	●	●	6 ch	●	●	●	●	●	●	●	●	1x 64 segment	8 ch

BCCU = Brightness and Color Control Unit for LED lighting
CCU = Capture Compare Unit
FPU = Floating Point Unit
MMC = Multi Media Card

POSIF = Motor Position Interface
SDIO = SD Card Interface with Input/Output
USIC = UART/SCI, SPI, Dual-SPI, Quad-SPI, IIC/I²C, IIS/I²S, LIN

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