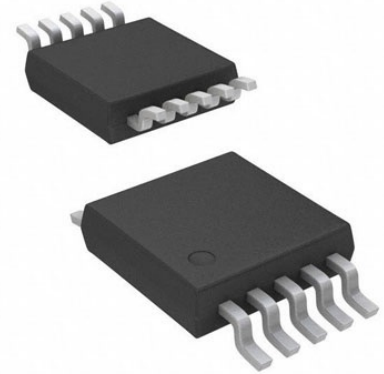


ARM MCU, XMC Family XMC13xx Series Microcontrollers, ARM Cortex-M0, 32bit, 32 MHz, 200 KB, 16 KB



Images are for reference only

Manufacturers	Infineon Technologies Corporation
Package/Case	38-TFSOP (0.173, 4.40mm Width)
Product Type	Embedded Processors & Controllers
RoHS	
Lifecycle	

Please submit RFQ for XMC1302T038X0200ABXUMA1 or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com). We will contact you in 12 hours. [RFQ](#)

General Description

32-bit Microcontrollers with ARM® Cortex®-M0 with focus on low-cost embedded control applications. XMC1000 is the number one choice for bringing traditional 32-bit designs to the next level, addressing a broad application spectrum from typical 32-bit applications up to digital power conversion and even field-oriented motor control. XMC1300 family can integrate all the control and analog interface functions required for sensor less Field Oriented Control (FOC), brushless (BLDC), brushed DC and PMSM motors.

Features

Application

200 KB Flash, 16 KB Ram 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

Supply voltage range: 2.0 – 5.5V POSIF interface to directly connect hall sensors and incremental encoder.

12-bit ADC with on-chip adjustable gain of x1, x3, x6 or x12

2 channel USIC

(configurable to SPI, UART, IIC, IIS)

Smart Lighting:

8 x 16-bit special purpose timers, dead time generation

XMC™ microcontrollers help bring this new dimension into traditional LED lighting systems. With their Brightness and Color Control Unit (BCCU), XMC1300 series products offer an industry-unique module for automatically controlling the dimming level and color of multi-channel LED lamps and can also add DALI or DMX communication capability, facilitating advanced single-chip smart lighting solutions.

Up to 3 x Comparators

Some Key features for smart lighting applications:

12 channel 12-bit ADC, 2 x parallel sampling

Automatic brightness control (using high-frequency pulse density modulation) based on the $\Sigma\Delta$ principle enables completely flicker-free dimming through 9 output channels

Peripherals Clock: 64 [MHZ]

Automatic exponential dimming and linear intensity changes make brightness or color changes appear smooth and natural to the human eye

Temperature sensor

Switched mode power supplies:

The system contains real Time Clock and Watch dog Timer

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).

Pseudo Random Number Generator

Some functionalities that makes XMC1300 suited to motor control application:

PG-TSSOP-38

Rich connectivity: 2x Can nodes, 4-channel serial COM unit (configurable to SPI, I²C, I²S, UART), USB FS.

Temperature range: -40° to 105°

UP to 4X 12-bit ADC with a sample time of 70 ns ensure fast reaction times and tighter control loops.

Analog comparators with only 3 mV input offset voltage and a propagation delay of 30 ns

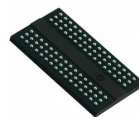
Analog comparators with only 3 mV input offset voltage and a propagation delay of 30 ns

Related Products



[XMC4500F100K1024ACXQSA1](#)

Infineon Technologies Corporation
100-LQFP



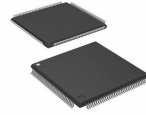
[XMC4700E196K2048AAXQMA1](#)

Infineon Technologies Corporation
196-LFBGA



[XMC4500F144F1024ACXQMA1](#)

Infineon Technologies Corporation
144-LQFP



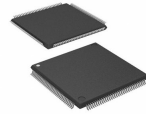
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144-LQFP



[XMC4300F100F256AAXQMA1](#)

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100-LQFP



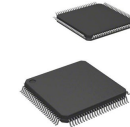
[XMC4700F144K2048AAXQMA1](#)

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[XMC4800E196K2048AAXQMA1](#)

Infineon Technologies Corporation
196-LFBGA



[XMC4300F100K256AAXQMA1](#)

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