XMC4400F100K512BAXQMA1

Data Sheet

32bit Cortex M4 Microcontroller, 120MHz, 512 kB Flash, 100-Pin LQFP

Manufacturers	Infineon Technologies Corporation
Package/Case	100-LQFP
Product Type	Embedded Processors & Controllers
RoHS	
Lifecycle	

Images are for reference only

Please submit RFQ for XMC4400F100K512BAXQMA1 or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

XMC4400 combines Infineon's leading-edge peripheral set with an industry-standard ARM® Cortex™-M4. As one of its key features it offers a high-resolution PWM unit with a tiny resolution of 150ps. This unique peripheral makes it especially suitable for digital power conversion in applications like solar inverters as well as SMPS and uninterruptible power supplies (UPS). Other applications are motor controllers, sense&control and IO devices for factory automation and user interface systems (HMI). XMC4400 is supported by Infineon's integrated development platform DAVE™ 4, which makes convenient, fast and application-orientated software development possible.

Features

ARM® Cortex™-M4, 120MHz, incl. single cycle DSP MAC and floating point unit (FPU)

8-channel DMA + dedicated DMAs for USB and Ethernet

USIC 4ch [Quad SPI, SCI/UART, I²C, I²S, LIN]

Supply voltage range: 3.13 - 3.63V

USB 2.0 full-speed on-the-go

CPU Frequency: 120MHz

Peripherals Clock: 120 [MHZ]

eFlash: 512kB including hardware ECC

80kB SRAM

10/100 Ethernet MAC (/w IEEE 1588)

2x CAN, 64 MO

Package: PG-LQFP-100

4x ΔΣ-Demodulator

Temperature range: range: -40°… 125°

Application

System cost down: Inverters manufacturers will continuously optimize the price per output power on system level.

System efficiency: Efficiency is key for return of investment.

Reliability: 5+years lifetime for string inverters and 25 years for micro inverter and optimizer.

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). 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.

Some functionalities that makes XMC4200 suited to motor control application:

Rich connectivity: 2x Can nodes, 4-channel serial COM unit 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.

4-channel 150 ps HRPWM timer (XMC4200/4400 series)

Related Products

[XMC4500F100K1024ACXQSA1]

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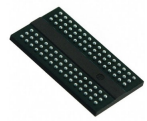
100-LQFP



[XMC4700E196K2048AAXQMA1]

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196-LFBGA

[XMC4500F144F1024ACXQMA1]

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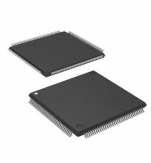
144-LQFP



[XMC4500F144K1024ACXQMA1]

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144-LQFP

[XMC4300F100F256AAXQMA1]

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100-LQFP

[XMC4700F144K2048AAXQMA1]

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144-LQFP

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