XMC4500F100K1024ACXQSA1

Data Sheet

MCU 32-bit ARM Cortex M4 RISC 1MB Flash 3.3V 100-Pin LQFP EP Tray

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

Images are for reference only

Please submit RFQ for XMC4500F100K1024ACXQSA1 or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

XMC4500 combines Infineon's leading-edge peripheral set with an industry-standard ARM® Cortex®-M4 core resulting in a power pack for energy-efficient industrial applications.
XMC4500 controllers feature a configurable peripheral set that allow to tailor the device to specific application needs. To capitalize fully on this flexibility, Infineon offers an industry-proven development environment DAVE™ that greatly eases SW development. DAVE™ 3 hosts a graphical user interface, low-level drivers, application libraries, an auto code generation engine and interfaces to generic or customer-selected development tools.

Features

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

IEEE 1588 compliant Ethernet MAC

USB 2.0 full-speed on-the-go

CPU Frequency: 120MHz

eFlash: 1,024kB including hardware ECC

160kB SRAM

Package: PG-LQFP-100

3x CAN, 64 MO

4xΔΣ-Demodulator

USIC 6ch [Quad SPI, SCI/UART, I²C, I²S, LIN]

Supply voltage range: 3.13 - 3.63V

Temperature range: -40°.....125°

Long-term availability with >15 years

Application

Platform concept to allow extensive customization

Performance, efficiency and cost competitiveness

Accurate analog-mixed signal peripherals

Fast timer/PMW peripheral

Solar inverters:

Infineon provides a comprehensive portfolio to deliver the best efficiency and reliability for solar applications. Infineon's leading edge technology like Superjunction MOSFET, Trench + Field stop IGBT, Coreless transformer driver, etc, combined with rich experience and highest quality, ensured our No.1 position in solar application. Solar power conversion has three distinctive requirements:

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 XMC4000 suited to motor control application:

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.

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

Related Products

XMC4700E196K2048AAXQMA1

Infineon Technologies Corporation

196-LFBGA

XMC4500F144F1024ACXQMA1

Infineon Technologies Corporation

144-LQFP

XMC4500F144K1024ACXQMA1

Infineon Technologies Corporation

144-LQFP

XMC4700F144K2048AAXQMA1

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144-LQFP

XMC4300F100K256AAXQMA1

Infineon Technologies Corporation

100-LQFP

XMC4300F100F256AAXQMA1

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100-LQFP

XMC4800E196K2048AAXQMA1

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196-LFBGA

XMC4700F100K2048AAXQMA1

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