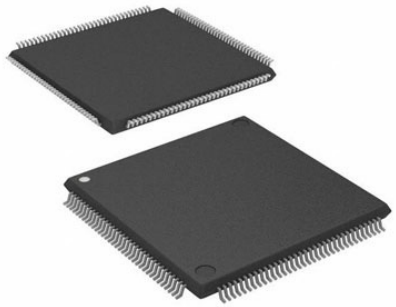
XMC4700F144K2048AAXQMA1

Data Sheet

ARM MCU, XMC Family XMC47xx Series Microcontrollers, ARM Cortex-M4, 32bit, 144 MHz, 352 KB, 2 MB

Manufacturers	Infineon Technologies Corporation
Package/Case	144-LQFP
Product Type	Embedded Processors & Controllers
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for XMC4700F144K2048AAXQMA1 or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The XMC4700 device is a member of the XMC4000 family of microcontrollers based on the ARM Cortex-M4 processor core. The growing complexity of today's energy efficient embedded control applications are demanding microcontroller solutions with higher performance CPU cores featuring DSP and FPU capabilities. The XMC4700 family of microcontrollers take advantage of Infineon's decades of experience in the industrial market to provide an optimized solution to meet the performance challenges of today's embedded control applications.

Features

ARM ® Cortex ®-M4 @ 144MHz

2048kB Flash, 352kB RAM

Data and IP Protection on Flash

Supply voltage range: 3.13 - 3.63V

6 x CAN nodes

EthernetMAC, USB OTG,

Application

Platform concept to allow extensive customization

Performance, efficiency and cost competitiveness

Accurate analog-mixed signal peripherals

Fast timer/PMW peripheral

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

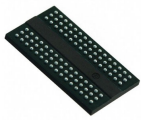
SD/MMC	UP to 4X 12-bit ADC with a sample time of 70 ns ensure fast reaction times and tighter control loops.
6 channel USIC (configurable to SPI, UART, IIC, IIS)	4-channel 150 ps HRPWM timer (XMC4200/4400 series)
External Bus Unit	
4 x 12-bit ADC, 26 input channels, 4 x parallel sampling and conversion	
2 channel 12bit DAC	
4 channel ΔΣ Demodulator	
24 x 16-bit special purpose timers, dead time generation	
2 x Position Interface	
Watch Dog Timer, Real Time Clock	
XMC4000 Functional Safety Package	
Package: LQFP144	
Temperature range: -40 - 125°C	
Safety package supporting SIL-2/3	

Related Products

XMC4500F100K1024ACXQSA1

Infineon Technologies Corporation

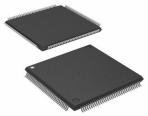
100-LQFP



XMC4700E196K2048AAXQMA1

Infineon Technologies Corporation

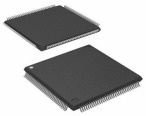
196-LFBGA



XMC4500F144F1024ACXQMA1

Infineon Technologies Corporation

144-LQFP



XMC4500F144K1024ACXQMA1

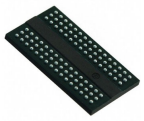
Infineon Technologies Corporation

144-LQFP

XMC4300F100F256AAXQMA1

Infineon Technologies Corporation

100-LQFP



XMC4800E196K2048AAXQMA1

Infineon Technologies Corporation

196-LFBGA

XMC4300F100K256AAXQMA1

Infineon Technologies Corporation

100-LQFP

XMC4700F100K2048AAXQMA1

Infineon Technologies Corporation

100-LQFP