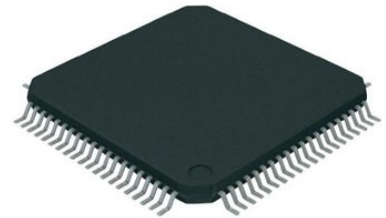


PIC/DSPIC Microcontroller, Embedded Connectivity, PIC32 Family PIC32MZ DA Series Microcontrollers

Manufacturers	Microchip Technology, Inc
Package/Case	TQFP-144
Product Type	Embedded Processors & Controllers
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for PIC32MZ2048ECM144-I/PH or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

Features

200 MHz/330 DMIPS, microAptiv core

DSP-enhanced core:

Four 64-bit accumulators

Single-cycle MAC, saturating and fractional math

Dual Panel Flash for live update support

10-bit, 500 KSPS, 48-channel ADC module

Memory Management Unit for optimum embedded OS execution

microMIPS mode for up to 35% code compression

CAN, UART, I2C, PMP, EBI, SQI & Analog Comparators

SPI/I2S interfaces for audio processing and playback

Hi-Speed USB 2.0 Device/Host/OTG

10/100 Mbps Ethernet MAC with MII and RMII interface

Crypto Engine with a RNG for data encryption/decryption and authentication (AES, 3DES, SHA, MD5, and HMAC)

Temperature Range:

40°C to 85°C;

40°C to 125°C (planned)

Operating voltage range of 2.2V to 3.6V

Please consider PIC32MZ2048EFM144 for new designs

2MB Flash memory (plus an additional 160 KB of Boot Flash)

512KB SRAM memory

microMIPS mode for up to 35% smaller code size

DSP-enhanced core:

Four 64-bit accumulators

Single-cycle MAC, saturating and fractional math

Code-efficient (C and Assembly) architecture

Low-power management modes (Idle and Sleep)

50 MHz External Bus Interface (EBI)

50 MHz Serial Quad Interface (SQI)

Peripheral Pin Select (PPS) functionality to enable function remap

8 channels of hardware programmable DMA and 18 channels of dedicated DMA with automatic data size detection

Six UART modules (25 Mbps): Supports LIN 1.2 and IrDA protocols

Two CAN modules 2.0B Active with DeviceNet addressing support

Six 4-wire SPI modules (50 Mbps)

SQI configurable as an additional SPI module (50 MHz)

Five I2C modules (up to 1 Mbaud) with SMBus support

Parallel Master Port (PMP)

Hardware Real-Time Clock and Calendar (RTCC)

Nine 16-bit Timers/Counters (four 16-bit pairs combine to create four 32-bit timers)

Nine Capture inputs and Nine Compare/PWM outputs

Graphics interface: EBI or PMP

Audio data communication: I2S, LJ, RJ, USB

Audio data control interface: SPI and I2C™

Audio data master clock: Fractional clock frequencies with USB synchronization

10-bit ADC Module:

500 Ksps rate with one Sample and Hold (S&H) circuits

Up to 48 analog inputs

Flexible and independent ADC trigger sources

6 digital filters and comparators

Two analog comparators with 32 programmable voltage references

Temperature sensor with $\pm 2^{\circ}\text{C}$ accuracy

In-circuit and in-application programming

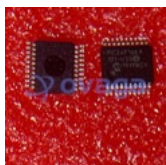
4-wire MIPS® Enhanced JTAG interface

Unlimited program and 12 complex data breakpoints

IEEE 1149.2-compatible (JTAG) boundary scan

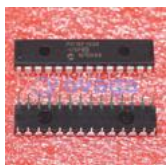
Non-intrusive hardware-based instruction trace

Related Products



[PIC24F16KA101-I/SS](#)

Microchip Technology, Inc
SSOP-20



[PIC16F1938-I/SP](#)

Microchip Technology, Inc
PDIP-28



[PIC18F6520-I/PT](#)

Microchip Technology, Inc
TQFP-64



[PIC16F1936-I/SS](#)

Microchip Technology, Inc
SSOP-28



[PIC18F23K22-I/SP](#)

Microchip Technology, Inc
SPDIP-28



[PIC18F2620-I/SP](#)

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SPDIP-28



[PIC18F2620-I/SO](#)

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SOIC-28



[PIC18F97J60T-I/PT](#)

Microchip Technology, Inc
TQFP-100