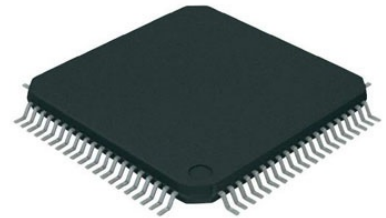


PIC/DSPIC Microcontroller, Embedded Connectivity, PIC32 Family PIC32MZ DA Series Microcontrollers

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



Images are for reference only

Please submit RFQ for PIC32MZ2048ECH144-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

Temperature Range:

40°C to 85°C;

40°C to 125°C (planned)

Operating voltage range of 2.2V to 3.6V

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 16 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

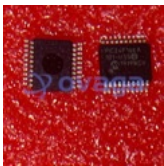
4-wire MIPS® Enhanced JTAG interface

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



[PIC16F1936-I/SS](#)

Microchip Technology, Inc
SSOP-28



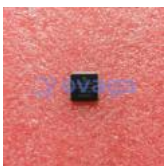
[PIC16F1938-I/SP](#)

Microchip Technology, Inc
PDIP-28



[PIC18F23K22-I/SP](#)

Microchip Technology, Inc
SPDIP-28



[PIC18F6520-I/PT](#)

Microchip Technology, Inc
TQFP-64



[PIC18F2620-I/SP](#)

Microchip Technology, Inc
SPDIP-28



[PIC18F2620-I/SO](#)

Microchip Technology, Inc
SOIC-28



[PIC18F97J60T-I/PT](#)

Microchip Technology, Inc
TQFP-100