

Microcontroller PIC/DSPIC, PIC32 Family PIC32MX Series, 32bit, 40MHz, 16KB, 4KB RAM, SOIC-28

Manufacturers	Microchip Technology, Inc
Package/Case	SOIC-28
Product Type	Embedded Processors & Controllers
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for PIC32MX110F016B-I/SO or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

DEVICE OVERVIEW

This document contains device-s PIC32MX1XX/2XX devices.

Operating Conditions

- 2.3V to 3.6V, -40°C to +105°C, DC to 40 MHz

Core: 40 MHz MIPS32® M4K®

- MIPS16e® mode for up to 40% smaller code size
- 1.56 DMIPS/MHz (Dhrystone 2.1) performance
- Code-efficient (C and Assembly) architecture
- Single-cycle (MAC) 32x16 and two-cycle 32x32 multiply

Clock Management

- 0.9% internal oscillator
- Programmable PLLs and oscillator clock sources
- Fail-Safe Clock Monitor (FSCM)
- Independent Watchdog Timer
- Fast wake-up and start-up

Power Management

- Low-power management modes (Sleep, Idle)
- Integrated Power-on Reset and Brown-out Reset
- 0.5 mA/MHz dynamic current (typical)
- 20 µA IPD current (typical)

Timers/Output Compare/Input Capture

- Five General Purpose Timers:
 - Five 16-bit and up to two 32-bit Timers/Counters
- Five Output Compare (OC) modules
- Five Input Capture (IC) modules

- Peripheral Pin Select (PPS) to allow function remap
- Real-Time Clock and Calendar (RTCC) module

Communication Interfaces

- USB 2.0-compliant Full-speed OTG controller
- Two UART modules (10 Mbps)
 - Supports LIN 2.0 protocols and IrDA® support
- Two 4-wire SPI modules (20 Mbps)
- Two I2C modules (up to 1 Mbaud) with SMBus support
- Peripheral Pin Select (PPS) to allow function remap
- Parallel Master Port (PMP)

Direct Memory Access (DMA)

- Four channels of hardware DMA with automatic data size detection
- Two additional channels dedicated for USB
- Programmable Cyclic Redundancy Check (CRC)

Input/Output

- 15 mA source/sink on all I/O pins
- 5V-tolerant pins
- Selectable open drain, pull-ups, and pull-downs
- External interrupts on all I/O pins

Qualification and Class B Support

- AEC-Q100 REVG (Grade 2 -40°C to +105°C) planned
- Class B Safety Library, IEC 60730

Debugger Development Support

- In-circuit and in-application programming
- 4-wire MIPS® Enhanced JTAG interface
- Unlimited program and six complex data breakpoints
- IEEE 1149.2-compatible (JTAG) boundary scan

Features

40 MHz, 32-bit RISC CPU with less than 0.5 mA/MHz current consumption

Two I2S/SPI modules for Codec and serial communications

Peripheral Pin Select (PPS) functionality

Parallel Master Port (PMP) for graphics interfaces

Charge Time Measurement Unit (CTMU) for mTouch™ Capacitive touch buttons and sliders

Temperature Range - 40°C to 105°C

Microcontroller Features

Operating voltage range of 2.3V to 3.6V

Up to 32KB Flash memory (plus an additional 3 KB of Boot Flash)

Up to 8K SRAM memory

1.56 DMIPS/MHz (Dhrystone 2.1) performance

MIPS32® M4K® core with MIPS16e® mode for up to 40% smaller code size

Pin-compatible with most Microchip 16-bit devices

Multiple power management modes

Configurable WDT with on-chip Low-Power RC oscillator for reliable operation

Peripheral Features

Peripheral Pin Select (PPS) functionality

Up to 4 channels of hardware DMA with automatic data size detection

Two UART and I2C™ modules

Separate PLLs for CPU and USB clocks

Hardware Real-Time Clock and Calendar (RTCC)

Five 16-bit Timers/Counters (two 16-bit pairs combine to create two 32-bit timers)

Five Capture inputs and Five Compare/PWM outputs

Audio Interface Features

Data communication: I2S, LJ, RJ, DSP modes

Control interface: SPI and I2C™

Master clock:

Generation of fractional clock frequencies

Can be synchronized with USB clock

Can be tuned in run-time

Analog Features

Up to 13-channel, 10-bit ADC

Three Analog Comparators

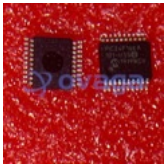
Charge Time Measurement Unit (CTMU)

Debug Features

Two programming and debugging Interfaces

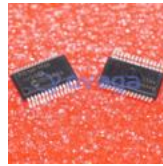
IEEE Standard 1149.2 compatible (JTAG) boundary scan

Related Products



[PIC24F16KA101-I/SS](#)

Microchip Technology, Inc
SSOP-20



[PIC16F1936-I/SS](#)

Microchip Technology, Inc
SSOP-28



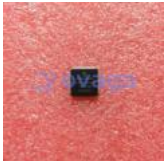
[PIC16F1938-I/SP](#)

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