**MCU 32-bit PIC RISC 64KB Flash 2.5V/3.3V 28-Pin SOIC W Tube**

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| **Manufacturer:** | Microchip Technology, Inc |
| **Package/Case:** | SOIC |
| **Product Type:** | Embedded Processors & Controllers |
| **RoHS:** | RoHS Compliant/Lead free RoHS |
| **Lifecycle:** | Active |
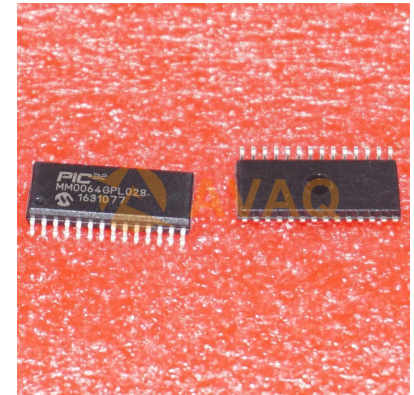
Images are for reference only

Inquiry

## General Description

The PIC32MM family is Microchip's lowest power and most cost-effective family of 32-bit PIC32 microcontrollers. For applications demanding low power, longer battery life and space constraints, the PIC32MM devices offer sleep modes down to 500 nA and packages as small as 4 × 4 mm. This family features core independent peripherals, designed to offload the CPU, such as Configurable Logic Cells (CLC) and Multiple-output Capture Compare PWMs (MCCPs) which help enable sensorless BLDC motor control applications. The PIC32MM devices achieve a 79 CoreMark™ score at 25 MHz operation, featuring the compact microMIPS™ instructions, microAptiv™ UC core and a shadow register set for fast interrupt context switching. The microMIPS ISA combines 16-bit and 32-bit instructions for compact code size. The PIC32MM GPL devices are supported by Microchip's MPLAB® Code Configurator (MCC) to help simplify designs. Target applications include IoT sensor nodes, connected thermostats, environmental monitoring devices, portable medical or fitness devices, building automation and low cost motor control applications.

## Key Features

Low-Power Operation

500 nA Sleep Current for RAM Retention mode

5 µA for Sleep with Regulator Standby mode

2 µA for lowest Sleep Mode with RTCC

High-Performance 32-Bit RISC CPU

79 CoreMark performance at 25MHz operation

microAptiv™ UC 32-Bit Core with 5-Stage Pipeline

microMIPS™ Instruction Set for 35% Smaller Code and 98% Performance compared to MIPS32 Instructions

Two Sets of 32 Core Register Files (32-bit) to Reduce Interrupt Latency

16-Bit/32-Bit Wide Instructions with 32-Bit Wide Data Path

Two Sets of 32 Core Register Files (32-bit) to Reduce Interrupt Latency

Single-Cycle 32x16 Multiply and Two-Cycle 32x32 Multiply

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Hardware Divide Unit

Zero Wait State Flash with ECC to Maximize Endurance/Retention

Memory

Up to 64K ECC Flash Memory

Up to 8K Data Memory

Analog Features

Up to 14-Channel, Software-Selectable 10/12-Bit SAR Analog-to-Digital Converter (ADC):

12-bit, 200K samples/second conversion rate (single Sample-and-Hold)

10-bit, 300K samples/second conversion rate (single Sample-and-Hold)

Two Analog Comparators with Input Multiplexing

5-Bit DAC with Output Pin

Peripheral Features

Two 4-Wire SPI modules (up to 25 Mbps) with I2S

Two UART modules with LIN

CRC module

Hardware Real-Time Clock and Calendar (RTCC)

Up to 20 Peripheral Pin Select (PPS) Remappable Pins

Seven Total 16-Bit Timers:

Timer1: Dedicated 16-bit timer/counter

Two additional 16-bit timers in each MCCP and SCCP module

Capture/Compare/PWM/Timer modules:

Two 16-bit timers or one 32-bit timer in each module

PWM resolution down to 21 ns

One Multiple Output (MCCP) module:

Flexible configuration as PWM, input capture, output compare or timers

Six PWM outputs

Programmable dead time

Auto-shutdown

Two Single Output (SCCP) modules:

Flexible configuration as PWM, input capture, output compare or timers
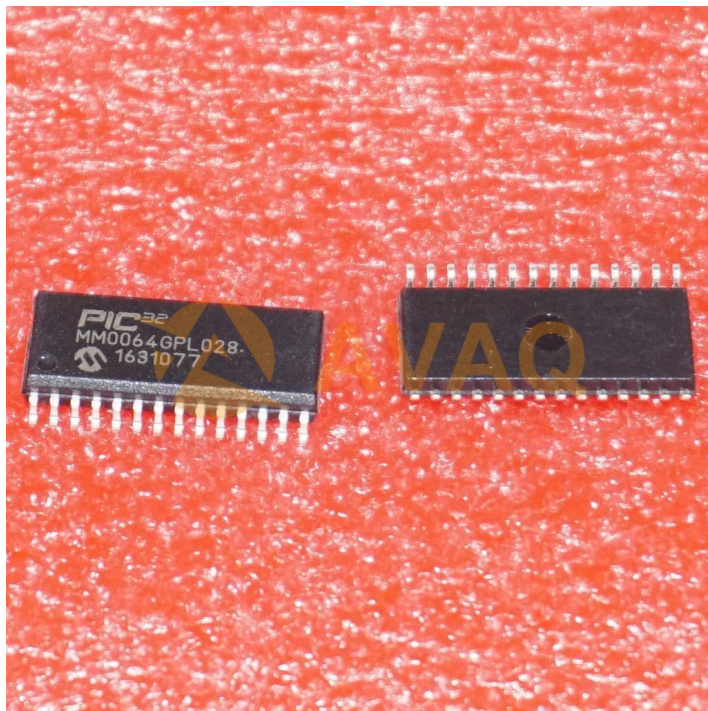
Single PWM output

Two Configurable Logic Cells (CLC) with Internal Connections to Select Peripherals and PPS

Small Footprint Packages

4x4 mm in 20 QFN and 28 UQFN

5x5 mm in 40 uQFN

6x6 mm in 28 QFN and 36 QFN



## Recommended For You

| PIC16F84A-20/P | PIC16F54-I/P | PIC18F2320-I/SP |
|---|---|---|
| Microchip Technology, Inc | Microchip Technology, Inc | Microchip Technology, Inc |
| DIP18 | DIP | DIP28 |

| PIC18F2685-I/SP | PIC16F767-I/SO | PIC16F630-I/SL |
|---|---|---|
| Microchip Technology, Inc | Microchip Technology, Inc | Microchip Technology, Inc |
| SPDIP-28 | SOP | SOP14 |

| PIC16F15345-I/SO | PIC16F84-04/P | PIC18F4320-I/PT |
|---|---|---|
| Microchip Technology, Inc | Microchip Technology, Inc | Microchip Technology, Inc |
| SOP20 | DIP18 | QFP |

| PIC16C622A-04/P | PIC16F84A-04/P | PIC18F2480-I/SP |
|---|---|---|
| Microchip Technology, Inc | Microchip Technology, Inc | Microchip Technology, Inc |
| DIP | DIP18 | DIP |

**PIC16F628-04/P**

Microchip Technology, Inc

DIP

**PIC16F877-20/L**

Microchip Technology, Inc

PLCC44

**PIC16F676-I/P**

Microchip Technology, Inc

DIP-14

**PIC16F628-04/P**

Microchip Technology, Inc

**PIC16F877-20/L**

Microchip Technology, Inc

**PIC16F676-I/P**

Microchip Technology, Inc

**AVAQ SEMICONDUCTOR CO., LIMITED**　　　　　　　　　　**Email: sales@avaq.com**