

PIC/DSPIC Microcontroller, PIC24 Family PIC24HJ GP Series Microcontrollers, PIC24, 16bit, 40 MHz

Manufacturers	<a href="#">Microchip Technology, Inc</a>
Package/Case	SOIC-28
Product Type	Embedded Processors & Controllers
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for PIC24HJ128GP502-I/SO or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The PIC24H 16-bit device family employs a powerful 16-bit architecture, ideal for applications that rely on high-speed, repetitive computations, as well as control. The devices are pin compatible with the dsPIC33F family of devices, and share a very high degree of compatibility with the dsPIC30F family devices. This allows seamless migration options from/to PIC24F, dsPIC30F and dsPIC33F devices.

## Features

### Operating Conditions

Up to 40 MIPS operation

3.0V to 3.6V, -40°C to +150°C, DC to 20 MIPS

3.0V to 3.6V, -40°C to +125°C, DC to 40 MIPS

High-Efficiency PIC24H core

Modified Harvard architecture

C compiler optimized instruction set

16-bit wide data path, 24-bit wide instructions

Single-cycle MUL plus hardware divide

16 x 16 multiply operations

32/16 and 16/16 divide operations

Up to  $\pm 16$ -bit shifts for up to 40-bit data

Clock Management

2% internal oscillator

Programmable PLL and oscillator clock sources

Fail-Safe Clock Monitor (FSCM)

Independent Watchdog Timer

Low-power management modes

Fast wake-up and start-up

Advanced Analog Features

10/12-bit ADC with 1.1Msps/500 Ksps conversion rate: - Up to 13 ADC input channels and four S&H

Flexible/Independent trigger sources

150 ns Comparators: - Up to two Analog Comparator modules

4-bit DAC with two ranges for Analog Comparators

Input/Output

Software remappable pin functions

5V-tolerant pins

Selectable open drain and internal pull-ups

Up to 5 mA overvoltage clamp current/pin

Multiple external interrupts

System Peripherals

Cyclic Redundancy Check (CRC) module

Up to five 16-bit and up to two 32-bit Timers/ Counters

Up to four Input Capture (IC) modules

Up to four Output Compare (OC) modules

Real-Time Clock and Calendar (RTCC) module

Communication Interfaces

Parallel Master Port (PMP)

Two UART modules (10 Mbps) - Supports LIN 2.0 protocols - RS-232, RS-485, and IrDA® support

Two 4-wire SPI modules (15 Mbps)

I2C module (100K, 400K and 1Mbaud) with SM Bus support

Enhanced CAN (ECAN) module (1 Mbaud) with 2.0B support

Direct Memory Access (DMA)

8-channel hardware DMA with no CPU stalls or overhead

Most peripherals support DMA

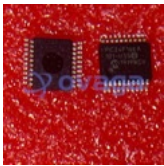
Debugger Development Support

In-circuit and in-application programming

Two program breakpoints

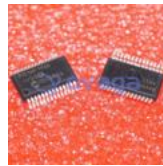
Trace and run-time watch

## Related Products



### [PIC24F16KA101-I/SS](#)

Microchip Technology, Inc  
SSOP-20



### [PIC16F1936-I/SS](#)

Microchip Technology, Inc  
SSOP-28



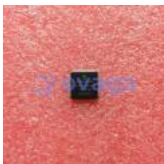
### [PIC16F1938-I/SP](#)

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