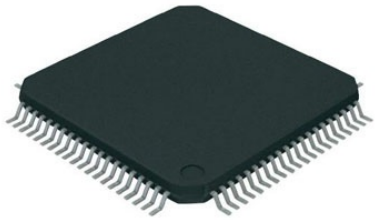
DSPIC33EP512GP506T-I/PT

Data Sheet

Digital Signal Processors & Controllers - DSP, DSC 16B DSC 512KB Flsh 48KB RAM OpAmp Cmptr

Manufacturers	Microchip Technology, Inc
Package/Case	TQFP-64
Product Type	Embedded Processors & Controllers
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for DSPIC33EP512GP506T-I/PT or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

Microchip's dsPIC33E general purpose DSC family features the highest speed 70 MIPS core with excellent performance and code density. It offers superior ADC performance, CAN communication, CTMU, Op Amps and Peripheral Trigger Generator (PTG) for high-end general purpose applications. These devices are available in various packages and with an extended (125°C) temp option.

Features

Operating Conditions

3.0V to 3.6V, -40ºC to +85ºC, DC to 70 MIPS

3.0V to 3.6V, -40ºC to +150ºC, DC to 60 MIPS

dsPIC33E DSC Core

Modified Harvard Architecture

C Compiler Optimized Instruction Set

16-bit Wide Data Path

24-bit Wide Instructions

16x16 Integer Multiply Operations

32/16 and 16/16 Integer Divide Operations

Two 40-bit Accumulators with Rounding and Saturation Options

Single-Cycle Multiply and Accumulate

Single-Cycle shifts for up to 40-bit Data

16x16 Fractional Multiply/Divide Operations

Programmable Cyclic Redundancy Check (CRC)

Advanced Analog Features

ADC: Configurable as 10-bit, 1.1 Msps with four S&H or12-bit, 500 ksps with one S&H

Up to three Op amp/Comparators

Op Amp direct connection to the ADC module

Additional dedicated comparator

Programmable references with 32 voltage points for comparators

Charge Time Measurement Unit (CTMU)

Timers/Output Compare/Input Capture

12 general purpose timers

Five 16-bit and up to two 32-bit timers/counters

Four OC modules configurable as timers/counters

PTG module with two configurable timers/counters

32-bit Quadrature Encoder Interface (QEI) module configurable as a timer/counter

Four IC modules

Peripheral Trigger Generator (PTG) for scheduling complex sequences

Communication Interfaces

Two UART modules (15 Mbps)

Two 4-wire SPI modules (15 Mbps)

CAN™ module (1 Mbaud) CAN 2.0B support

Two I2C™ modules (up to 1 Mbaud) with SMBus support

PPS to allow function remap

Direct Memory Access (DMA)

4-channel DMA with user-selectable priority arbitration

Related Products

[DSPIC30F6014A-20E/PF](#)

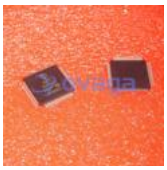
Microchip Technology, Inc

TQFP-80

[DSPIC33EP512MU814-I/PH](#)

Microchip Technology, Inc

TQFP-144



[DSPIC30F5011-30I/PT](#)

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TQFP-64

[DSPIC33EP512GM710-I/PF](#)

Microchip Technology, Inc

TQFP-100

[DSPIC33FJ256MC710-I/PF](#)

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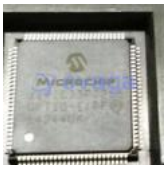
TQFP-100



[DSPIC33FJ256GP710-I/PF](#)

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TQFP-100

[DSPIC30F5015-30I/PT](#)

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TQFP-64

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TQFP-44