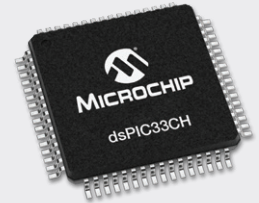


# dsPIC33CH FACT SHEET

## dsPIC33CH Dual-Core Family Simplified Development for High-end Embedded Control

### Summary

System developers designing high-end embedded control applications with multiple software teams can benefit from a new dsPIC® Digital Signal Controller (DSC) with two cores in a single chip enabling easier software integration. In the master-slave architecture the slave core is for executing dedicated, time-critical control code while the master core is busy running the user interface, system monitoring and communications functions, customized for the end application.

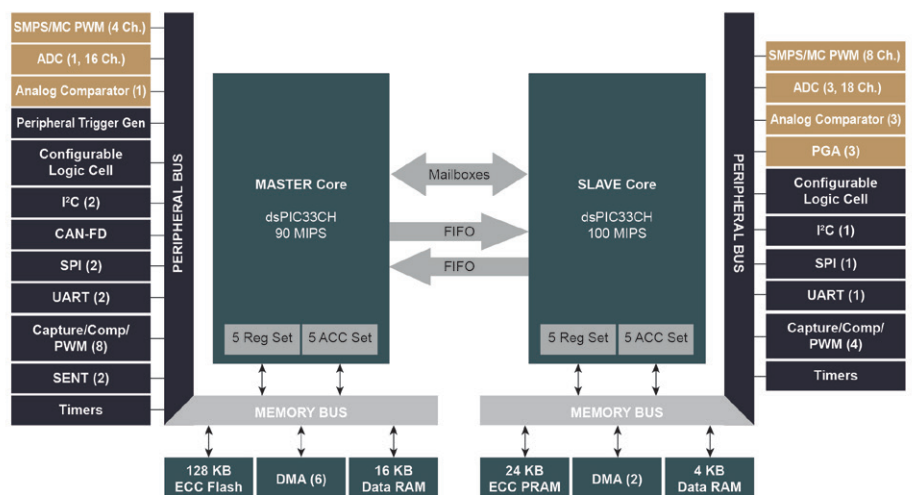


### Product Description

The devices from the dsPIC33CH family are the first Microchip dual core, 16-bit microcontrollers. The dsPIC33CH128MP508 has two Digital Signal Controllers (DSC) cores that can run independently. The dsPIC33CH family delivers unprecedented integration in package as small as 5 x 5 mm. To reduce system costs and board size, advanced peripherals are available to each core including high-speed ADCs, DACs with waveform generation, analog comparators, analog programmable gain amplifiers and high-resolution Pulse Width Modulation (PWM) hardware.

### Key Applications

- ▶ Digital Power
  - Power Supplies
  - Wireless Power
- ▶ Motor Control
  - Pumps & Fans
  - Appliances & Power Tools
- ▶ High Performance Embedded
  - Automation & Control (Industry 4.0, IIOT)
  - Automotive grade



### Key Highlights

- ▶ Simplified firmware development with dual independent cores
  - Dual cores and peripheral sets facilitate robust systems and improve functional safety
  - First dsPIC33 with CAN-FD for robust communication with increased bandwidth
  - Live update of firmware for high-availability systems, especially important for power supplies
- ▶ Maximum analog integration including high-speed ADCs, DACs with waveform generation, analog comparators and PGAs for increased functionality in less space
- ▶ Lifetime commitment
  - Microchip's customer driven, obsolescence policy allows you to design without concern for supply longevity

## Tools and Software

### ▶ [dsPIC33CH Curiosity Development Board](#)



Includes digital power features and MikroElektronika click board™ interfaces

### ▶ [dsPIC33CH128MP508 Motor Control Plug-In Module \(PIM\)](#)



Plugs into Motor Control Development Boards such as MCLV/MCHV

### ▶ [dsPIC33CH128MP508 Motor Control Plug-In Module \(PIM\)](#)



Plugs into Motor Control Development Boards such as MCLV/MCHV

### ▶ [MPLAB® Integrated Development Environment](#)



The dsPIC33CH is supported by Microchip's MPLAB® development ecosystem including Microchip's free, downloadable and award-winning MPLAB X Integrated Development Environment (IDE), MPLAB XC16 Compiler and MPLAB Code Configurator (MCC).

## Available Documentation & Resources

### ▶ Customer facing:

- [dsPIC33CH Web Page](#)
- [Family Data Sheet](#)
- [dsPIC33CH Customer Presentation](#) (Savo)

### ▶ Training/Technical Resources:

- [DFAE Webex](#): Learn how two dsPIC DSC cores in the dsPIC33CH family simplify firmware develop
- [Video about dsPIC33CH dual core motor control](#) demo

### ▶ Marcom:

- [Press release](#)
- [Application, Chip graphics, Block Diagram](#)

## Sampling and Pricing

### ▶ Samples: Available now

### ▶ Pricing: June 2018 price book

## Complementary Devices

Customers designing with the dsPIC33CH128MP508 may also be interested in the following products:

### ▶ Analog Components ([Treelink Web Tool](#))

- [Op Amps](#)
- [MOSFET Drivers & MOSFETS](#)
- [Linear and Switching Regulators](#)

### ▶ Industrial Interfaces and Communication

- [EtherCat Slave Controller](#)
- [LIN & CAN-FD transceivers](#)
- [Ethernet controller and Switches](#)
- [Wireless Modules](#)

### ▶ Other

- [Serial EEPROMs](#)
- [Timing components / MEMS](#)
- [Security devices \(e.g. ATECC608A\)](#)
- [MikroElektronika](#) click boards™
- More to come from [Microsemi](#)

## Services

Microchip [Design Partner Program](#) and Distribution [FAE Trainings](#) (e.g. [Masters](#))

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