Introducing the dsPIC33CH Dual-Core Family:

www.microchip.com/dsPIC33CH

System developers designing high-end embedded control applications with multiple software teams can benefit from a new Digital Signal Controller (DSC) with two dsPIC® cores in a single chip enabling easier software integration. The dsPIC33CH has one core that is a master while the other is a slave. 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.

The dsPIC33CH is designed to facilitate independent code development for each core by separate design teams and allows later enables seamless integration when they are brought together in one chip. The dsPIC33CH family is optimized for high-performance digital power, motor control and other applications requiring sophisticated algorithms. This includes applications such as wireless power, server power supplies, drones and automotive sensors.

What's New:

- 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
- Maximum analog integration including high-speed ADCs, DACs with waveform generation, analog comparators and PGAs for increased functionality in less space
- Live Update of firmware for high-availability systems, especially important for power supplies

The dsPIC33CH is supported by Microchip's MPLAB® development ecosystem including MPLAB X Integrated Development Environment (IDE). Supported by the popular MPLAB Code Configurator (MCC) tool, setting up pin assignments, peripheral modes and application stacks has never been easier and customers can bring their design to market faster than ever before.

Development Tools:

dsPIC33CH Curiosity Development Board

- Orderable PN: DM330028
- Price US$34.99
- Includes digital power features and MikroElektronika click board™ interfaces

dsPIC33CH128MP508 Motor Control Plug-In Module (PIM)

- Orderable PN: MA330039
- Price: US$25.00
- Plugs into Motor Control Development Boards such as dsPICDEM MCLV-2 Development Board (DM330021-2) or the dsPICDEM MCHV-2/3 Development System (DM330023-2/3)

dsPIC33CH128MP508 General Purpose Plug-In Module (PIM)

- Orderable PN: MA330040
- Price: US$25.00
- Plugs into the Explorer 16/32 Development Board (DM240001-2)

Target Applications:

Digital Power	Motor Control	High Performance Embedded
• Industrial: AC/DC & DC/DC Power Supplies • Automotive: Converters, Chargers, Inverters • Consumer: Wireless Power	• Automotive: Pumps, Fans • Industrial: Drones, Robotics • Consumer: Appliances, Toys	• Automotive: Electronic Sensors • Industrial: Automation and Control • Medical: Diagnostic Equipment, Monitors • IoT: Gateways and Central Processors

dsPIC33CH Family Product Variants:

Package*	Part Number	Flash
80-pin TQFP (12 x 12 mm) - PT	dsPIC33CH128MP508 dsPIC33CH128MP208 dsPIC33CH64MP508 dsPIC33CH64MP208	128 KB 64 KB
64-pin QFN (9 x 9 mm) - MR 64-pin TQFP (10 x 10 mm) – PT	dsPIC33CH128MP506 dsPIC33CH128MP206 dsPIC33CH64MP506 dsPIC33CH64MP206	128 KB 64 KB
48-pin uQFN (6 x 6 mm) – M4 48-pin TQFP (7 x 7 mm) – PT	dsPIC33CH128MP505 dsPIC33CH128MP205 dsPIC33CH64MP505 dsPIC33CH64MP205	128 KB 64 KB
36-pin uQFN (5 x 5 mm) -- M5	dsPIC33CH128MP503 dsPIC33CH128MP203 dsPIC33CH64MP503 dsPIC33CH64MP203	128 KB 64 KB
28-pin SSOP (10.2 x 5.3 mm) -- SS 28-pin uQFN (6 x 6 mm) – 2N	dsPIC33CH128MP502 dsPIC33CH128MP202 dsPIC33CH64MP502	128 KB 64 KB

	dsPIC33CH64MP202	

* Tape & reel options available