MICROCHIP

Focus Product Selector Guide

Microcontrollers • Digital Signal Controllers • Analog • Memory • Wireless

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Microchip: A Partner in Your Success

Microchip is a leading provider of microcontroller and analog semiconductors, providing low-risk product development, lower total system cost and faster time to market for thousands of diverse customer applications worldwide. Offering outstanding technical support along with dependable delivery and quality, Microchip serves over 70,000 customers in more than 65 countries who are designing high-volume embedded control applications in the consumer, automotive, office automation, communications and industrial control markets worldwide.

8-bit PIC® Microcontrollers

8-bit PIC microcontrollers provide developers with an easy migration path from 6 to 100 pins, with little or no code change required. Our flexible 8-bit PIC MCU portfolio offers a number of product families with varying levels of intelligent peripheral integration and operating capability, enabling you to find the best PIC MCU for your specific application.

The 8-bit PIC MCU portfolio's true strength lies in the vast array of flexible hardware peripherals that are available to increase capability in any control system. Working in concert, our selection of Core Independent Peripherals (CLC, CWG/COG, NCO, PSMC, ZCD and more), Intelligent Analog (op amps, comparators, ADC, DAC, CTMU), human interface peripherals (LCD, mTouch® technology) and on-board communications can enable system functions on PIC MCUs with minimal code footprint, reduced power consumption and accelerated time-to-market. Common application functions like power and motor control, environmental sensing, system management and user interface can be combined onto a single PIC MCU to develop an extremely cost-effective solution.

A powerful, unified development environment harnesses the power of PIC MCUs to ease your design-in process. MPLAB® Code Configurator ensures an efficient development experience by automatically generating source code for system set-up and function implementation. For more information visit: www.microchip.com/8bit.

16-bit PIC Microcontrollers

The 16-bit PIC24 family is comprised of two sub-families. The PIC24F offers a cost-effective low-power step up in performance, memory and peripherals for many applications that are pushing the envelope of 8-bit microcontroller capabilities. For more demanding applications, the PIC24H/E offers up to 70 MIPS performance, up to 150°C operation, more memory and additional peripherals, such as CAN communication modules. For more information visit: www.microchip.com/16bit.

dsPIC® Digital Signal Controllers

The dsPIC family of Digital Signal Controllers (DSCs) features a fully implemented digital signal processor (DSP) engine, with up to 70 MIPS performance, C compiler-friendly design and a familiar microcontroller architecture and design environment. The dsPIC 16-bit Flash DSCs provide the industry's highest performance, and have features supporting motor control, digital power conversion, speech and audio, intelligent sensing and general purpose embedded control applications. For more information visit: www.microchip.com/dspic.

32-bit PIC Microcontrollers

The PIC32 family adds more performance and more memory while maintaining pin, peripheral and software compatibility with Microchip's 16-bit MCU/DSC families. The PIC32 family operates at up to 330 DMIPS and offers ample code and data space capabilities with up to 2048 KB Flash and 512 KB RAM. From simple USB device connectivity to RTOS-driven graphical user interface applications with advanced audio processing, there is a PIC32 device to meet your design challenges. For more information visit: www.microchip.com/32bit.

Analog and Interface Products

Microchip's integrated analog technology, peripherals and features are engineered to meet today's demanding design requirements. Our broad spectrum of analog products addresses thermal management, power management, battery management, mixed-signal, linear, interface and safety and security solutions. Our broad portfolio of stand-alone analog and interface devices offers highly integrated solutions that combine various analog functions in space-saving packages and support a variety of bus interfaces. Many of these devices support functionality that enhances the analog features currently available on PIC microcontrollers. For more information visit: www.microchip.com/analog.

Timing and Communication Products

Microchip has an expansive, wide-ranging clock and timing portfolio that delivers total solutions for your complex timing requirements. Our oscillator products offer both low-jitter and low-power online configurable products with the option of choosing a traditional quartz-based solution or going with our MEMS silicon-based resonator products. The clock generation line offers online configurable, single-chip, multiple-frequency clock tree solutions. Our clock and data distribution product line includes one of the industry's largest portfolios of buffers, logic translators and multiplexers, rounding off selection to provide our customers with a truly total solution for their clock and timing requirements.

With the right products, configuration tools and technical support, Microchip's Timing and Communications products are ideal for all designs, from simple to high-performance systems.

Microchip: A Partner in Your Success

Real-Time Clocks

Microchip offers a family of highly integrated, low-cost Real-Time Clock/Calendar devices with battery backup capability, digital trimming, plus on-board EEPROM and SRAM memory. For more information visit: www.microchip.com/clock.

Memory Products

Microchip's broad portfolio of memory devices includes Serial EEPROM, Serial SRAM, Serial Flash and Parallel Flash devices. Our innovative, low-power designs and extensive testing have ensured industry-leading robustness and endurance along with best-in-class quality at low costs. For more information visit: www.microchip.com/memory.

Wireless Products

The Microchip wireless portfolio is focused on offering extremely low-power operation and is designed for sensing or command/control operation products. This extensive portfolio is comprised of solutions for Wi-Fi, Bluetooth®, LoRa® technology, 802.15.4 (such as ZigBee® or MiWi™ wireless networking protocol) along with proprietary 2.4 GHz and Sub-GHz communications. For more information visit: www.microchip.com/wireless.

High-Throughput USB and Ethernet Interface Solutions

In many industrial, Internet of Things (IoT), consumer and automotive applications, high-speed networking is the backbone. Microchip offers a complete portfolio of Ethernet PHYs, switches, controllers and bridge devices, enabling Gigabit-speed communications in harsh environments. The USB offering spans low-cost to SuperSpeed and incorporates value-rich solutions such as USB smart hub controllers, power delivery and charging, transceivers/switches, Flash media controllers and security solutions. For more information visit www.microchip.com/usb and www.microchip.com/ethernet.

Motion Solutions

Microchip makes it easy to design motion-based applications. Microchip offers an easy-to-use, time-saving motion module in a small, solderable form factor. Microchip offers discrete, chip-down solutions for both Windows® 8.X applications and for embedded and IoT applications. Our motion coprocessors come programmed with sophisticated sensor fusion algorithms. The coprocessors intelligently filter, compensate and combine the raw sensor data to output accurate position and orientation information to the host MCU of the embedded device over I^2C. For more information visit: www.microchip.com/motion.

MOST® Technology

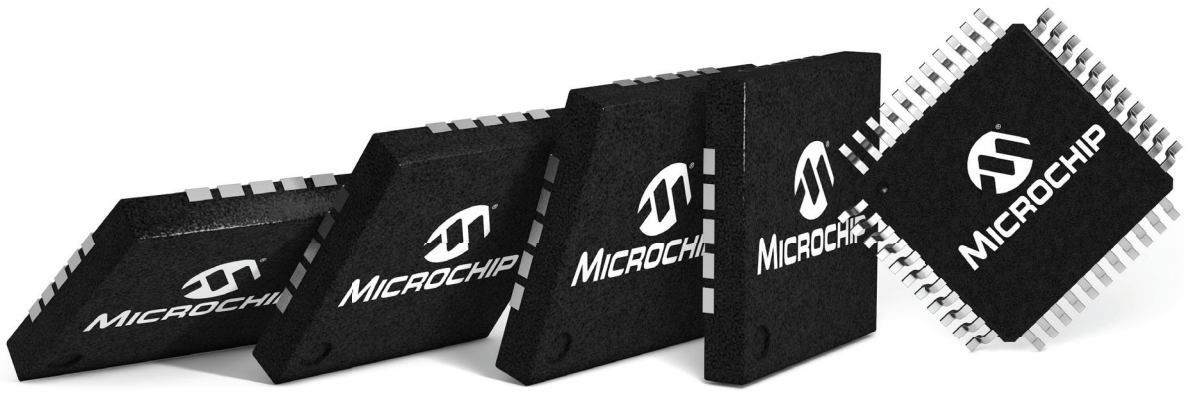
Media Oriented Systems Transport (MOST) is the accepted standard in high-bandwidth automotive infotainment systems. MOST technology is broadly standardized from the physical layer up to the application level. Various speed grades and physical layers are available. MOST carries A/V streaming, packet, isochronous and control data, has a high flexibility and scalability and is approved to carry DVD and Blu-ray™ content using Digital Transmission Content Protection (DTCP). For more information visit: www.microchip.com/automotiveproducts.

Embedded Controllers and Super I/O

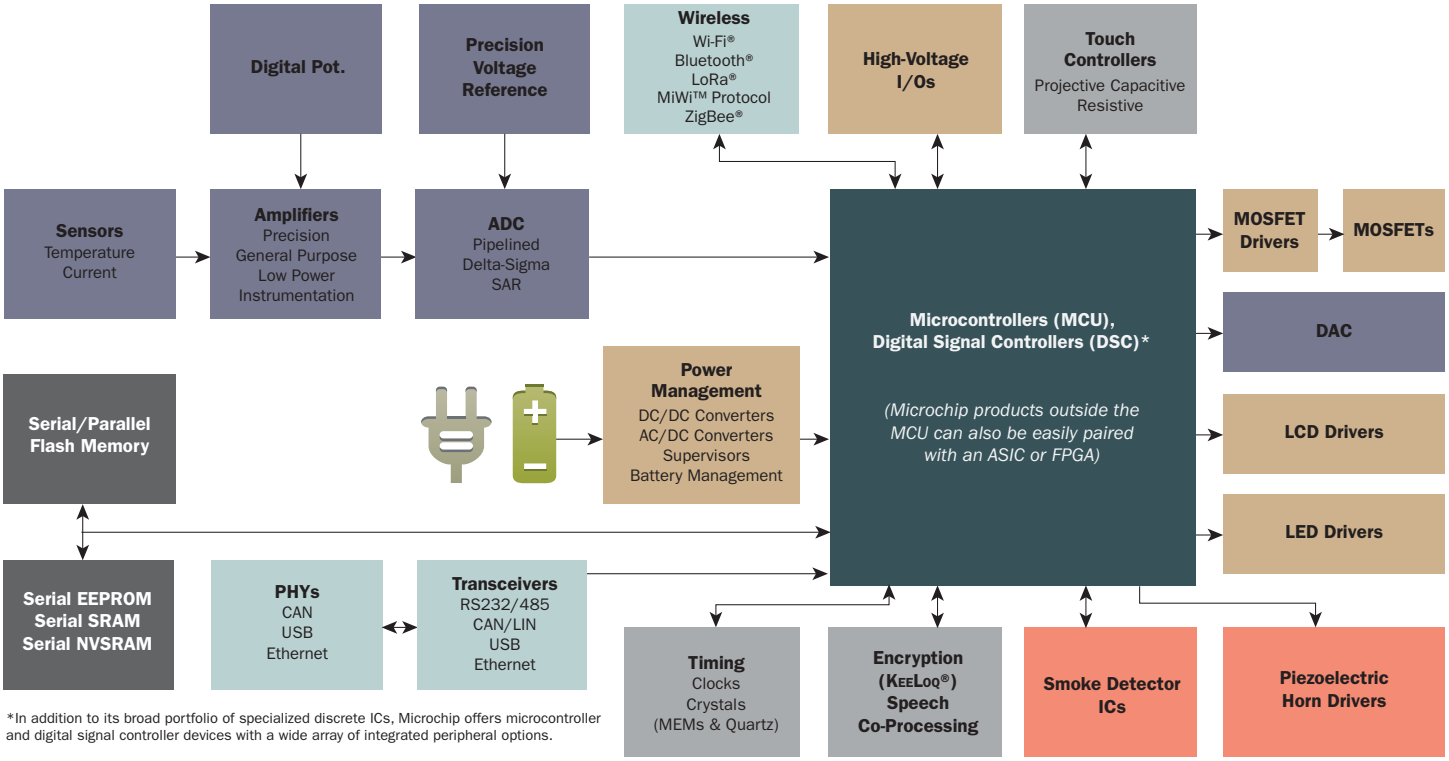
Microchip offers a full line of computing solutions including embedded controllers, keyboard controllers (KBC), I/O controllers and legacy I/O devices. For more information visit: www.microchip.com/computing.

Touch, Multi-Touch and 3D Gesture Control

Microchip offers the most feature-complete solutions in capacitive sensing. From single touch buttons and proximity sensing to touchpads, touch screens and free-space 3D gesture control. Microchip's turnkey solutions come with GUI software tools for easy design-in cycles that shorten your time to market. For more information please visit: www.microchip.com/mtouch.



Microchip Block Diagram Support



*In addition to its broad portfolio of specialized discrete ICs, Microchip offers microcontroller and digital signal controller devices with a wide array of integrated peripheral options.

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8-BIT PIC® MICROCONTROLLERS

	Product	Released (R)/Not Released (NR)	Pins		Core	Memory				Voltage Range	Operating Speed		Intelligent Analog										Waveform Control							Timing and Measurements					Logic and Math			Safety and Monitoring				Comm.			Human Interface		Low Power and System Flexibility			5 ku Pricing†	Packages (Designator)
			Total	I/O		Program	Self-Read/Write	Data RAM (B)	Data EE (B)		Maximum Speed	Internal Oscillator	8-bit ADC	10-bit ADC	12-bit ADC	ADC²	Comparators	DAC (5b/8b/9b/10b)	HC I/O (mA)	Op Amp	PRG/SlopeComp	ZCD	CTMU	PWM (10b/16b)*	CCP (10b PWM)	ECCP (10b PWM)	PSMC (16b PWM)*	CWG/COG	NCO*	DSM	8-/16-bit Timer	HLT	AngTMR	SMT	Temp. Indicator	CLC	Hardware Multiply	MatchACC	CRC/SCAN	WWDT	Resets	PLVD	EUSART/AUSART	I²C/SPI	USB 2.0 Device	mTouch® Channels	LCD Segments	PPS	IDLE/PMD	DOZE		
6-Pin	PIC10F200	R	6	4	BL	0.375 KB 0.25 Kw	–	16	–	2–5.5V	4 MHz	4 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1/0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	$0.30	PDIP (P), 2 × 3 DFN (MC), SOT-23 (OT)
	PIC10F202	R	6	4	BL	0.75 KB 0.50 Kw	–	24	–	2–5.5V	4 MHz	4 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1/0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	$0.33	PDIP (P), 2 × 3 DFN (MC), SOT-23 (OT)
	PIC10F204	R	6	4	BL	0.375 KB 0.25 Kw	–	16	–	2–5.5V	4 MHz	4 MHz	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	1/0	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	$0.33	PDIP (P), 2 × 3 DFN (MC), SOT-23 (OT)
	PIC10F206	R	6	4	BL	0.75 KB 0.50 Kw	–	24	–	2–5.5V	4 MHz	4 MHz	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	1/0	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	$0.36	PDIP (P), 2 × 3 DFN (MC), SOT-23 (OT)
	PIC10F220	R	6	4	BL	0.375 KB 0.25 Kw	–	16	–	2–5.5V	8 MHz	4 MHz, 8 MHz	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1/0	–	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	$0.36	PDIP (P), 2 × 3 DFN (MC), SOT-23 (OT)
	PIC10F222	R	6	4	BL	0.75 KB 0.50 Kw	–	23	–	2–5.5V	8 MHz	4 MHz, 8 MHz	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1/0	–	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	$0.39	PDIP (P), 2 × 3 DFN (MC), SOT-23 (OT)
	PIC10F320 XLP	R	6	4	MR	0.4375 KB 0.25 Kw	RW	32	–	1.8–5.5V	16 MHz	16 MHz	3	–	–	–	–	–	–	–	–	–	–	2/0	–	–	–	1/0	1	–	2/1	–	–	–	✓	1	–	–	–	BOR	SW◊	–	–	–	3	–	–	–	$0.39	PDIP (P), 2 × 3 DFN (MC), SOT-23 (OT)
	PIC10F322 XLP	R	6	4	MR	0.875 KB 0.50 Kw	RW	64	–	1.8–5.5V	16 MHz	16 MHz	3	–	–	–	–	–	–	–	–	–	–	2/0	–	–	–	1/0	1	–	2/1	–	–	–	✓	1	–	–	–	BOR	SW◊	–	–	–	3	–	–	–	$0.42	PDIP (P), 2 × 3 DFN (MC), SOT-23 (OT)
8-Pin	PIC16F15313 XLP	NR	8	6	EMR	3.5 KB 2 Kw	RW	256	–	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	5	–	–	1	1/0/0/0	–	–	–	✓	–	4/0	2	–	–	1/0	1	–	1/2	✓	–	–	✓	4	–	–	–	✓	LPBOR/ POR	–	1/0	1	–	–	–	✓	✓	✓	call for pricing	PDIP (P), SOIC (SN), DFN (MC), UDFN (MU)
	PIC12F1571 XLP	R	8	6	EMR	1.75 KB 1 Kw	RW	128	HEF	1.8–5.5V	32 MHz	32 MHz	–	4	–	–	1	1/0/0/0	–	–	–	–	–	0/3	–	–	–	1/0	–	–	2/1	–	–	–	✓	–	–	–	–	–	BOR/ POR/ LPBOR	–	–	–	–	4	–	–	–	$0.39	PDIP (P), MSOP (MS), SOIC (SN), UDFN (RF), 3 × 3 DFN (MF)
	PIC12F1572 XLP	R	8	6	EMR	3.5 KB 2 Kw	RW	256	HEF	1.8–5.5V	32 MHz	32 MHz	–	4	–	–	1	1/0/0/0	–	–	–	–	–	0/3	–	–	–	1/0	–	–	2/1	–	–	–	✓	–	–	–	–	–	BOR/ POR/ LPBOR	–	1/0	–	–	4	–	–	–	$0.43	PDIP (P), MSOP (MS), SOIC (SN), UDFN (RF), 3 × 3 DFN (MF)
	PIC12F1501 XLP	R	8	6	EMR	1.75 KB 1 Kw	RW	64	HEF	1.8–5.5V	20 MHz	16 MHz	–	4	–	–	1	–	–	–	–	–	–	4/0	–	–	–	1/0	1	–	2/1	–	–	–	✓	1	–	–	–	–	PBOR	SW◊	–	–	–	4	–	–	–	$0.49	PDIP (P), SOIC (SN), MSOP (MS), 2 × 3 DFN (MC), 2 × 3 UDFN (MU)
	PIC16F18313 XLP	R	8	6	EMR	3.5 KB 2 Kw	RW	256	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	5	–	–	1	1/0/0/0	–	–	–	–	–	2/0	2	–	–	1/0	1	1	2/1	–	–	–	✓	2	–	–	–	–	PBOR/ POR/ LPBOR	–	1/0	1	–	5	–	✓	✓	✓	$0.53	PDIP (P), SOIC (SN), UDFN (RF)
	PIC12F1612 XLP	R	8	6	EMR	3.5 KB 2 Kw	RW	256	HEF	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	4	–	–	1	0/1/0/0	–	–	–	✓	–	–	2	–	–	1/0	–	–	1/1	✓	–	2	✓	–	–	–	✓	✓	PBOR	–	–	–	–	4	–	–	–	$0.56	PDIP (P), SOIC (SN), DFN (MC), UDFN (MU)
	PIC12F752 XLP	R	8	6	MR	1.75 KB 1 Kw	RW	64	–	2–5.5V	20 MHz	4 MHz, 8 MHz	–	4	–	–	2	1/0/0/0	50	–	–	–	–	–	1	–	–	0/1	–	–	3/1	–	–	–	–	–	–	–	–	–	BOR	SW◊	–	–	–	4	–	–	–	$0.59	PDIP (P), SOIC (SN), 3 × 3 DFN (MF)
	PIC12LF1552 XLP	R	8	6	EMR	3.5 KB 2 Kw	RW	256	HEF	1.8–3.6V	32 MHz	16 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1/0	–	–	–	✓	–	–	–	–	–	BOR	–	–	1	–	5	–	–	–	$0.66	PDIP (P), MSOP (MS), SOIC (SN), 2 × 3 DFN (MC)
	PIC12F1822 XLP	R	8	6	EMR	3.5 KB 2 Kw	RW	128	256	1.8-5.5V	32 MHz	32 MHz, 31 kHz	–	4	–	–	1	–	–	–	–	–	–	–	–	1	–	–	–	1	2/1	–	–	–	✓	–	–	–	–	–	BOR	SW◊	1/0	1	–	4	–	–	–	$0.73	PDIP (P), SOIC (SN), 3 × 3 DFN (MF), 3 × 3 UDFN (RF)
	PIC12F1840 XLP	R	8	6	EMR	7 KB 4 Kw	RW	256	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	4	–	–	1	–	–	–	–	–	–	–	–	1	–	–	–	1	2/1	–	–	–	✓	–	–	–	–	–	PBOR	SW	1/0	1	–	–	–	–	–	–	$0.78	PDIP (P), SOIC (SN), 6 × 5 DFN (MF)

Products sorted by pin count followed by pricing.
† Pricing subject to change; please contact your Microchip representative for most current pricing.
◊ Software PLVD implemented via ADC.
* Usable as a General Purpose Timer.
XLP eXtreme Low Power variants available.

8-BIT PIC® MICROCONTROLLERS

	Product	Released (R)/Not Released (NR)	Pins: Total	Pins: I/O	Core	Memory: Program	Memory: Self-Read/Write	Memory: Data RAM (B)	Memory: Data EE (B)	Voltage Range	Operating Speed: Maximum Speed	Operating Speed: Internal Oscillator	Intelligent Analog: 8-bit ADC	Intelligent Analog: 10-bit ADC	Intelligent Analog: 12-bit ADC	Intelligent Analog: ADC²	Intelligent Analog: Comparators	Intelligent Analog: DAC (5b/8b/9b/10b)	Intelligent Analog: HC I/O (mA)	Intelligent Analog: Op Amp	Intelligent Analog: PRG/SlopeComp	Intelligent Analog: ZCD	Intelligent Analog: CTMU	Waveform Control: PWM (10b/16b)*	Waveform Control: CCP (10b PWM)	Waveform Control: ECCP (10b PWM)	Waveform Control: PSMC (16b PWM)*	Waveform Control: CWG/COG	Waveform Control: NCO*	Waveform Control: DSM	Timing and Measurements: 8-/16-bit Timer	Timing and Measurements: HLT	Timing and Measurements: AngTMR	Timing and Measurements: SMT	Timing and Measurements: Temp. Indicator	Logic and Math: CLC	Logic and Math: Hardware Multiply	Logic and Math: MatcACC	Safety and Monitoring: CRC/SCAN	Safety and Monitoring: WWDT	Safety and Monitoring: Resets	Safety and Monitoring: PLVD	Comm.: EUSART/AUSART	Comm.: I²C/SPI	Comm.: USB 2.0 Device	Human Interface: mTouch® Channels	Human Interface: LCD Segments	Low Power and System Flexibility: PPS	Low Power and System Flexibility: IDLE/PMD	Low Power and System Flexibility: DOZE	5 ku Pricing†	Packages (Designator)
14-Pin	PIC16F15323 XLP	NR	14	12	EMR	3.5 KB 2 Kw	RW	256	–	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	11	–	–	2	1/0/0/0	–	–	–	✓	–	4/0	2	–	–	1/0	1	–	1/2	✓	–	–	✓	4	–	–	–	✓	LPBOR/ POR	–	1/0	1	–	–	–	✓	✓	✓	call for pricing	PDIP (P), SOIC (SL), TSSOP (ST), 4 × 4 QFN (ML), 4 × 4 UQFN (JQ)
	PIC16F15324 XLP	NR	14	12	EMR	7 KB 4 Kw	RW	512	–	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	11	–	–	2	1/0/0/0	–	–	–	✓	–	4/0	2	–	–	1/0	1	–	1/2	✓	–	–	✓	4	–	–	–	✓	LPBOR/ POR	–	2/0	1	–	–	–	✓	✓	✓	call for pricing	PDIP (P), SOIC (SL), TSSOP (ST), 4 × 4 QFN (ML), 4 × 4 UQFN (JQ)
	PIC16F15325 XLP	NR	14	12	EMR	14 KB 8 Kw	RW	1K	–	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	11	–	–	2	1/0/0/0	–	–	–	✓	–	4/0	2	–	–	1/0	1	–	1/2	✓	–	–	✓	4	–	–	–	✓	LPBOR/ POR	–	2/0	1	–	–	–	✓	✓	✓	call for pricing	PDIP (P), SOIC (SL), TSSOP (ST), 4 × 4 QFN (ML), 4 × 4 UQFN (JQ)
	PIC16F505	R	14	12	BL	1.5 KB 1 Kw	–	72	–	2–5.5V	20 MHz	4 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1/0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	$0.48	PDIP (P), SOIC (SL), TSSOP (ST), 3 × 3 QFN (MG)
	PIC16F506	R	14	12	BL	1.5 KB 1 Kw	–	67	–	2–5.5V	20 MHz	4/8 MHz	4	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	1/0	–	–	–	–	–	–	–	–	–	–	4	–	–	–	–	$0.52	PDIP (P), SOIC (SL), TSSOP (ST), 3 × 3 QFN (MG)
	PIC16F526	R	14	12	BL	1.5 KB 1 Kw	–	67	64	2–5.5V	20 MHz	4/8 MHz	4	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	1/0	–	–	–	–	–	–	–	–	–	–	4	–	–	–	–	$0.55	PDIP (P), SOIC (SL), TSSOP (ST), 3 × 3 QFN (MG)
	PIC16F1503 XLP	R	14	12	EMR	3.5 KB 2 Kw	RW	128	HEF	1.8–5.5V	20 MHz	16 MHz	–	8	–	–	2	–	–	–	–	–	–	4/0	–	–	–	1/0	1	–	2/1	–	–	–	✓	1	–	–	–	–	PBOR	SW◊	–	1	–	8	–	–	–	–	$0.55	SOIC (SL), TSSOP (ST), PDIP (P), 3 × 3 QFN (MG), 3 × 3 UQFN (MV)
	PIC16F18323 XLP	R	14	12	EMR	3.5 KB 2 Kw	RW	256	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	11	–	–	2	1/0/0/0	–	–	–	–	–	2/0	2	–	–	1/0	1	1	2/1	–	–	–	✓	2	–	–	–	–	PBOR/ POR/ LPBOR	–	1/0	1	–	11	–	✓	✓	✓	$0.57	TSSOP (ST), SOIC (SL), UQFN (JQ), PDIP (P)
	PIC16LF1554 XLP	R	14	12	EMR	7KB 4 Kw	RW	256	HEF	1.8–3.6V	32 MHz	16 MHz	–	11	–	–	–	1/0/0/0	–	–	–	–	–	2/0	1	–	–	–	–	–	2/1	–	–	–	✓	–	–	–	–	–	BOR	–	1/0	1	–	11	–	–	–	–	$0.60	PDIP (P), SOIC (SL), 4 × 4 QFN (ML)
	PIC16F1613 XLP	R	14	12	EMR	3.5 KB 2 Kw	RW	256	HEF	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	8	–	–	2	0/1/0/0	–	–	–	✓	–	–	2	–	–	1/0	–	–	1/1	✓	–	2	✓	–	–	–	✓	✓	PBOR	–	–	–	–	8	–	–	–	–	$0.60	PDIP (P), TSSOP (ST), SOIC (SN), 4 × 4 QFN (MC)
	PIC16F1703 XLP	R	14	12	EMR	3.5 KB 2 Kw	RW	256	HEF	1.8–5.5V	32 MHz	16 MHz	–	8	–	–	0	–	–	2	–	✓	–	–	2	–	–	0/0	–	–	2/1	–	–	–	✓	–	–	–	–	–	POR/ LPBOR	–	–	1	–	8	–	✓	–	–	$0.62	PDIP (P), TSSOP (ST), 4 × 4 × QFN (ML), SOIC (SL)
	PIC16F753 XLP	R	14	12	MR	3.5 KB 2 Kw	RW	128	–	2–5.5V	20 MHz	4/8 MHz	–	8	–	–	2	0/0/1/0	50	1	1	–	–	–	1	1	–	0/1	–	–	3/1	–	–	–	–	–	–	–	–	–	BOR	SW◊	–	–	–	8	–	–	–	–	$0.63	PDIP (P), SOIC (SL), TSSOP (ST), 4 × 4 QFN (ML)
	PIC16F1574 XLP	R	14	12	EMR	7 KB 4 Kw	RW	512	HEF	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	12	–	–	2	1/0/0/0	–	–	–	–	–	0/4	–	–	–	1/0	–	–	2/1	–	–	–	✓	–	–	–	–	–	POR/ PBOR/ LPBOR	–	1/0	–	–	12	–	✓	–	–	$0.64	PDIP (P), TSSOP (ST), SOIC (SL), UQFN (JQ)
	PIC16F18324 XLP	R	14	12	EMR	7 KB 4 Kw	RW	512	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	11	–	–	2	1/0/0/0	–	–	–	–	–	2/0	4	–	–	2/0	1	–	4/3	–	–	–	✓	4	–	–	–	–	PBOR/ POR/ LPBOR	–	1/0	1	–	11	–	✓	✓	✓	$0.64	TSSOP (ST), SOIC (SL), UQFN (JQ), PDIP (P)
	PIC16F1704 XLP	R	14	12	EMR	7 KB 4 Kw	RW	512	HEF	1.8–5.5V	32 MHz	16 MHz	–	8	–	–	2	0/1/0/0	–	2	–	✓	–	2/0	2	–	–	0/1	–	1	4/1	–	–	–	✓	3	–	–	–	–	POR/ LPBOR	–	1/0	1	–	8	–	✓	–	–	$0.67	PDIP (P), TSSOP (ST), 4 × 4 QFN (ML), SOIC (SL)
	PIC16F1614 XLP	R	14	12	EMR	7 KB 4 Kw	RW	512	HEF	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	8	–	–	2	0/1/0/0	100	–	–	✓	–	2/0	2	–	–	1/0	–	–	3/1	✓	✓	2	✓	2	–	✓	✓	✓	PBOR	–	1/0	1	–	8	–	✓	–	–	$0.70	PDIP (P), TSSOP (ST), SOIC (SL), QFN (ML)
	PIC16F1575 XLP	R	14	12	EMR	14 KB 8 Kw	RW	1K	HEF	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	12	–	–	2	1/0/0/0	–	–	–	–	–	0/4	–	–	–	1/0	–	–	2/1	–	–	–	✓	–	–	–	–	–	POR/ PBOR/ LPBOR	–	1/0	–	–	12	–	✓	–	–	$0.71	PDIP (P), TSSOP (ST), SOIC (SO), UQFN (JQ)

Products sorted by pin count followed by pricing.
† Pricing subject to change; please contact your Microchip representative for most current pricing.
◊ Software PLVD implemented via ADC.
* Usable as a General Purpose Timer.
XLP eXtreme Low Power variants available.

8-BIT PIC® MICROCONTROLLERS

	Product	Released (R)/Not Released (NR)	Pins		Core	Memory				Voltage Range	Operating Speed		Intelligent Analog										Waveform Control							Timing and Measurements					Logic and Math			Safety and Monitoring				Comm.			Human Interface		Low Power and System Flexibility			5 ku Pricing†	Packages (Designator)
			Total	I/O		Program	Self-Read/Write	Data RAM (B)	Data EE (B)		Maximum Speed	Internal Oscillator	8-bit ADC	10-bit ADC	12-bit ADC	ADC²	Comparators	DAC (5b/8b/9b/10b)	HC I/O (mA)	Op Amp	PRG/SlopeComp	ZCD	CTMU	PWM (10b/16b)*	CCP (10b PWM)	ECCP (10b PWM)	PSMC (16b PWM)*	CWG/COG	NCO*	DSM	8-/16-bit Timer	HLT	AngTMR	SMT	Temp. Indicator	CLC	Hardware Multiply	MatchACC	CRC/SCAN	WWDT	Resets	PLVD	EUSART/AUSART	I²C/SPI	USB 2.0 Device	mTouch® Channels	LCD Segments	PPS	IDLE/PMD	DOZE		
14-Pin (Cont.)	PIC16F18325 XLP	R	14	12	EMR	14 KB 8 Kw	RW	1K	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	11	–	–	2	1/0/0/0	–	–	✓–	–	–	2/0	4	–	–	2/0	1	1	4/3	–	–	–	✓	4	–	–	–	–	PBOR/ POR/ LPBOR	–	1/0	2	–	11	–	✓	✓	✓	$0.71	TSSOP (ST), SOIC (SL), UQFN (JQ), PDIP (P)
	PIC16F1705 XLP	R	14	12	EMR	14 KB 8 Kw	RW	1K	HEF	1.8–5.5V	32 MHz	16 MHz	–	8	–	–	2	0/1/0/0	–	2	–	✓	–	2/0	2	–	–	0/1	–	–	4/1	–	–	–	✓	3	–	–	–	–	POR/ LPBOR	–	1/0	1	-	8	–	✓	–	–	$0.73	PDIP (P), TSSOP (ST), 4 × 4 QFN (ML), SOIC (SL)
	PIC16F18326 XLP	R	14	12	EMR	28 KB 16 Kw	RW	512	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	11	–	–	2	1/0/0/0	–	–	–	–	–	2/0	4	–	–	2/0	1	1	4/3	–	–	–	✓	4	–	–	–	–	PBOR/ POR/ LPBOR	–	1/0	2	–	11	–	✓	✓	✓	$0.78	TSSOP (ST), SOIC (SL), UQFN (JQ), PDIP (P)
	PIC16F1823 XLP	R	14	12	EMR	3.5 KB 2 Kw	RW	128	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	8	–	–	2	–	–	–	–	–	–	–	1	–	–	–	1	2/1	–	–	–	✓	–	–	–	–	–	BOR	SW◊	1/0	1	–	8	–	–	–	–	$0.78	PDIP (P), SOIC (SL), TSSOP (ST), 4 × 4 QFN (ML), 4 × 4 UQFN (JQ)
	PIC16F1826 XLP	R	14	12	EMR	28 KB 16 Kw	RW	512	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	11	–		2	1/0/0/0	–	–	–	–	–	2/0	4	–	–	2/0	1	1	4/3	–	–	–	✓	4	–	–	–	–	PBOR/ BOR/ LPBOR	–	1/0	2	–	11	–	✓	✓	✓	$0.78	TSSOP (ST), SOIC (SL), UQFN (JQ), PDIP (P)
	PIC16F1615 XLP	R	14	12	EMR	14 KB 8 Kw	RW	1K	HEF	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	8	–	–	2	0/1/0/0	100	–	–	✓	–	2/0	2	–	–	1/0	–	–	3/1	✓	✓	2	✓	2	–	✓	✓	✓	PBOR	–	1/0	1	–	8	–	✓	–	–	$0.81	PDIP (P), TSSOP (ST), SOIC (SL), QFN (ML)
	PIC16F1824 XLP	R	14	12	EMR	7 KB 4 Kw	RW	256	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	8	–	–	2	–	–	–	–	–	–	–	2	2	–	–	1	4/1	–	–	–	✓	–	–	–	–	–	BOR	SW◊	1/0	1	–	8	–	–	–	–	$0.84	PDIP (P), SOIC (SL), TSSOP (ST), 4 × 4 QFN (ML), 4 × 4 UQFN (JQ)
	PIC16F1764 XLP	R	14	12	EMR	7 KB 4 Kw	RW	512	HEF	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	8	–	–	2	1/0/0/1	100	1	1	✓	–	1/1	1	–	–	0/1	–	1	4/3	✓	–	–	✓	3	–	–	–	–	POR/ LPBOR	–	1/0	1	–	8	–	✓	–	–	$0.91	PDIP (P), TSSOP (ST), SOIC (SL), QFN (ML)
	PIC16F1454 XLP	R	14	12	EMR	7 KB 4 Kw	RW	512	–	1.8–5.5V	48 MHz	48 MHz, 31 kHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1/1	–	–	–	✓	–	–	–	–	–	PBOR	SW	1/0	1	✓	–	–	–	–	–	$0.91	PDIP (P), TSSOP (ST), SOIC (SL), 4 × 4 QFN (ML)
	PIC16F1825 XLP	R	14	12	EMR	14 KB 8 Kw	RW	1K	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	8	–	–	2	–	–	–	–	–	–	–	2	2	–	–	1	4/1	–	–	–	✓	–	–	–	–	–	BOR	SW◊	1/0	1	–	8	–	–	–	–	$0.92	PDIP (P), SOIC (SL), TSSOP (ST), 4 × 4 QFN (ML), 4 × 4 UQFN (JQ)
	PIC16F1765 XLP	R	14	12	EMR	14 KW 8 Kw	RW	1K	HEF	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	8	–	–	2	1/0/0/1	100	1	1	✓	–	2/2	2	–	–	0/1	–	1	4/3	✓	–	–	✓	3	–	–	–	–	POR/ LPBOR	–	1/0	1	–	8	–	✓	–	–	$0.98	PDIP (P), TSSOP (ST), SOIC (SL), QFN (ML)
	PIC16F1455 XLP	R	14	12	EMR	14 KB 8 Kw	RW	1K	–	1.8–5.5V	48 MHz	48 MHz, 31 kHz	–	5	–	–	2	–	–	–	–	–	–	2/0	–	–	–	–	–	–	2/1	–	–	–	✓	–	–	–	–	–	PBOR	SW	1/0	1	✓	5	–	–	–	–	$1.04	PDIP (P), TSSOP (ST),SOIC (SL), 4 × 4 QFN (ML)
18-Pin	PIC16F54	R	18	12	BL	0.75 KB 0.50 Kw	–	25	–	2–5.5V	20 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1/0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	$0.39	PDIP (P), SOIC (SO), SSOP (SS)
	PIC16F1826 XLP	R	18	16	EMR	3.5 KB 2 Kw	RW	256	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	12	–	–	2	–	–	–	–	–	–	–	–	1	–	–	1	2/1	–	–	–	✓	–	–	–	–	–	BOR	SW◊	1/0	1	–	12	–	–	–	–	$0.97	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)
	PIC16F1827 XLP	R	18	16	EMR	7 KB 4 Kw	RW	384	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	12	–	–	2	–	–	–	–	–	–	–	2	2	–	–	1	4/1	–	–	–	✓	–	–	–	–	–	BOR	SW◊	1/0	2	–	12	–	–	–	–	$1.04	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)
	PIC16F1847 XLP	R	18	16	EMR	14 KB 8 Kw	RW	1K	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	12	–	–	2	–	–	–	–	–	–	–	2	2	–	–	1	4/1	–	–	–	✓	–	–	–	–	–	PBOR	SW	1/0	2	–	12	–	–	–	–	$1.09	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML), UQFN (MV)

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8-BIT PIC® MICROCONTROLLERS

	Product	Released (R)/Not Released (NR)	Pins: Total	Pins: I/O	Core	Memory: Program	Memory: Self-Read/Write	Memory: Data RAM (B)	Memory: Data EE (B)	Voltage Range	Operating Speed: Maximum Speed	Operating Speed: Internal Oscillator	Intelligent Analog: 8-bit ADC	Intelligent Analog: 10-bit ADC	Intelligent Analog: 12-bit ADC	Intelligent Analog: ADC²	Intelligent Analog: Comparators	Intelligent Analog: DAC (5b/8b/9b/10b)	Intelligent Analog: HC I/O (mA)	Intelligent Analog: Op Amp	Intelligent Analog: PRG/SlopeComp	Intelligent Analog: ZCD	Intelligent Analog: CTMU	Waveform Control: PWM (10b/16b)*	Waveform Control: CCP (10b PWM)	Waveform Control: ECCP (10b PWM)	Waveform Control: PSMC (16b PWM)*	Waveform Control: CWG/COG	Waveform Control: NCO*	Waveform Control: DSM	Timing and Measurements: 8-/16-bit Timer	Timing and Measurements: HLT	Timing and Measurements: AngTMR	Timing and Measurements: SMT	Timing and Measurements: Temp. Indicator	Logic and Math: CLC	Logic and Math: Hardware Multiply	Logic and Math: MatchACC	Safety and Monitoring: CRC/SCAN	Safety and Monitoring: WWDT	Safety and Monitoring: Resets	Safety and Monitoring: PLVD	Comm.: EUSART/AUSART	Comm.: I²C/SPI	Comm.: USB 2.0 Device	Human Interface: mTouch® Channels	Human Interface: LCD Segments	Low Power and System Flexibility: PPS	Low Power and System Flexibility: IDLE/PMD	Low Power and System Flexibility: DOZE	5 ku Pricing†	Packages (Designator)
20-Pin	PIC16F15344 XLP	NR	20	18	EMR	7 KB 4 Kw	RW	512	–	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	17	–	–	2	1/0/0/0	–	–	–	✓	–	4/0	2	–	–	1/0	1	–	1/2	✓	–	–	✓	4	–	–	–	✓	LPBOR/ POR	–	2/0	1	–	–	–	✓	✓	✓	call for pricing	PDIP (P), SOIC(SO), SSOP (SS), 4 × 4 QFN (ML), 4 × 4 UQFN (GZ)
	PIC16F15345 XLP	NR	20	18	EMR	14 KB 8 Kw	RW	1K	–	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	17	–	–	2	1/0/0/0	–	–	–	✓	–	4/0	2	–	–	1/0	1	–	1/2	✓	–	–	✓	4	–	–	–	✓	LPBOR/ POR	–	2/0	1	–	–	–	✓	✓	✓	call for pricing	PDIP (P), SOIC(SO), SSOP (SS), 4 × 4 QFN (ML), 4 × 4 UQFN (GZ)
	PIC16F527 XLP	R	20	18	EBL	1.5 KB 1 Kw	RW	68	64	2–5.5V	20 MHz	8 MHz	8	–	–	–	2	–	–	2	–	–	–	–	–	–	–	–	–	–	1/0	–	–	–	–	–	–	–	–	–	BOR	–	–	–	–	8	–	–	–	–	$0.49	PDIP (P), 4 × 4 QFN (ML), SSOP (SS), SOIC (SO)
	PIC16F1507 XLP	R	20	18	EMR	3.5 KB 2 Kw	RW	128	HEF	1.8–5.5V	20 MHz	16 MHz	–	12	–	–	–	–	–	–	–	–	–	4/0	–	–	–	1/0	1	–	2/1	–	–	–	✓	2	–	–	–	–	PBOR	SW	–	–	–	12	–	–	–	–	$0.69	PDIP (P), SOIC (SO), SSOP, 4 × 4 QFN (ML), 4 × 4 UQFN (GZ)
	PIC16F1578 XLP	R	20	18	EMR	7 KB 4 Kw	RW	512	HEF	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	8	–	–	2	1/0/0/0	–	–	–	–	–	0/4	–	–	–	1/0	–	–	2/1	–	–	–	✓	–	–	–	–	–	POR/ PBOR/ LPBOR	–	1/0	–	–	8	–	✓	–	–	$0.70	PDIP (P), SSOP (SS), SOIC (SL), UQFN (GZ)
	PIC16F18344 XLP	R	20	18	EMR	7 KB 4 Kw	RW	512	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	17	–	–	2	1/0/0/0	–	–	–	–	–	2/0	4	–	–	2/0	1	1	4/3	–	–	–	✓	4	–	–	–	–	PBOR/ POR/ LPBOR	–	1/0	1	–	17	–	✓	✓	✓	$0.70	SSOP (SS), SOIC (SO), 4 × 4 UQFN (GZ), PDIP (P)
	PIC16LF1559 XLP	R	20	18	EMR	14 KB 8 Kw	RW	512	HEF	1.8–3.6V	32 MHz	16 MHz	–	17	–	–	–	–	–	–	–	–	–	2/0	–	–	–	–	–	–	2/1	–	–	–	✓	–	–	–	–	–	BOR	–	1/0	1	–	17	–	–	–	–	$0.73	PDIP (P), SSOP (SS), 4 × 4 QFN (ML)
	PIC16F1618 XLP	R	20	18	EMR	7 KB 4 Kw	RW	512	HEF	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	12	–	–	–	0/1/0/0	100	–	–	✓	–	2/0	2	–	–	1/0	–	–	3/1	✓	✓	2	✓	4	–	✓	✓	✓	PBOR	–	1/0	1	–	12	–	✓	–	–	$0.74	PDIP (P), SSOP (SS), SOIC (SO), 5 × 5 QFN (MQ)
	PIC16F1579 XLP	R	20	18	EMR	14 KB 8 Kw	RW	1K	HEF	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	12	–	–	2	1/0/0/0	–	–	–	–	–	0/4	–	–	–	1/0	–	–	2/1	–	–	–	✓	–	–	–	–	–	POR/ PBOR/ LPBOR	–	1/0	–	–	12	–	✓	–	–	$0.77	PDIP (P), SSOP (SS), SOIC (SO), 4 × 4 UQFN (GZ)
	PIC16F18345 XLP	R	20	18	EMR	14 KB 8 Kw	RW	1K	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	17	–	–	2	1/0/0/0	–	–	–	–	–	2/0	4	–	–	2/0	1	1	4/3	–	–	–	✓	4	–	–	–	–	PBOR/ POR/ LPBOR	–	1/0	2	–	17	–	✓	✓	✓	$0.77	SSOP (SS), SOIC (SO), 4 × 4 UQFN (GZ), PDIP (P)
	PIC16F1508 XLP	R	20	18	EMR	7 KB 4 Kw	RW	256	HEF	1.8–5.5V	20 MHz	16 MHz	–	12	–	–	2	–	–	–	–	–	–	4/0	–	–	–	1/0	1	–	2/1	–	–	–	✓	–	–	–	–	–	PBOR	SW	1/0	1	–	2	–	–	–	–	$0.77	PDIP (P), SOIC (SO), SSOP, 4 × 4 QFN (ML), 4 × 4 UQFN (GZ)
	PIC16F1707 XLP	R	20	18	EMR	3.5 KB 2 Kw	RW	256	HEF	1.8–5.5V	32 MHz	16 MHz	–	8	–	–	0	–	–	2	–	✓	–	–	2	–	–	0/0	–	–	2/1	–	–	–	✓	–	–	–	–	–	POR/ LPBOR	–	–	1	–	8	–	✓	–	–	$0.77	PDIP (P), 4 × 4 QFN (ML), SOIC (SO), SSOP (SS)
	PIC16F1509 XLP	R	20	18	EMR	14 KB 8 Kw	RW	512	HEF	1.8–5.5V	20 MHz	16 MHz	–	12	–	–	2	–	–	–	–	–	–	4/0	–	–	–	1/0	1	–	2/1	–	–	–	✓	4	–	–	–	–	PBOR	SW	1/0	1	–	2	–	–	–	–	$0.81	PDIP (P), SOIC (SO), SSOP, 4 × 4 QFN (ML), 4 × 4 UQFN (GZ)
	PIC16F1708 XLP	R	20	18	EMR	7 KB 4 Kw	RW	512	HEF	1.8–5.5V	32 MHz	16 MHz	–	12	–	–	2	0/1/0/0	–	2	–	✓	–	2/0	2	–	–	0/1	–	–	4/1	–	–	–	✓	3	–	–	–	–	POR/ LPBOR	–	1/0	1	–	12	–	✓	–	–	$0.83	PDIP (P), 4 × 4 QFN (ML), SOIC (SO), SSOP (SS)
	PIC16F18346 XLP	R	20	18	EMR	28 KB 16 Kw	RW	512	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	17	–	–	2	1/0/0/0	–	–	–	–	–	2/0	4	–	–	2/0	1	1	4/3	–	–	–	✓	4	–	–	–	–	PBOR/ POR/ LPBOR	–	1/0	2	–	11	–	✓	✓	✓	$0.84	TSSOP (ST), SOIC (SL), UQFN (JQ), PDIP (P)
	PIC16F1619 XLP	R	20	18	EMR	14 KB 8 Kw	RW	1K	HEF	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	12	–	–	2	0/1/0/0	100	–	–	✓	–	2/0	2	–	–	1/0	–	–	3/1	✓	✓	2	✓	4	–	✓	✓	✓	PBOR	–	1/0	1	–	12	–	✓	–	–	$0.85	PDIP (P), SSOP (SS), SOIC (SO), 5 × 5 QFN (MQ)
	PIC16F1709 XLP	R	20	18	EMR	14 KB 8 Kw	RW	1K	HEF	1.8–5.5V	32 MHz	16 MHz	–	12	–	–	2	0/1/0/0	–	2	–	✓	–	2/0	2	–	–	0/1	–	–	4/1	–	–	–	✓	3	–	–	–	–	POR/ LPBOR	–	1/0	1	–	12	–	✓	–	–	$0.88	PDIP (P), 4 × 4 QFN (ML), SOIC (SO), SSOP (SS)
	PIC16F1828 XLP	R	20	18	EMR	7 KB 4 Kw	RW	256	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	12	–	–	2	–	–	–	–	–	–	–	2	2	–	–	–	1	4/1	–	–	–	✓	–	–	–	–	–	BOR	SW◊	1/0	1	–	12	–	–	–	–	$0.99	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)

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XLP eXtreme Low Power variants available.

8-BIT PIC® MICROCONTROLLERS

	Product	Released (R)/Not Released (NR)	Pins: Total	Pins: I/O	Core	Memory: Program	Memory: Self-Read/Write	Memory: Data RAM (B)	Memory: Data EE (B)	Voltage Range	Operating Speed: Maximum Speed	Operating Speed: Internal Oscillator	Intelligent Analog: 8-bit ADC	Intelligent Analog: 10-bit ADC	Intelligent Analog: 12-bit ADC	Intelligent Analog: ADC²	Intelligent Analog: Comparators	Intelligent Analog: DAC (5b/8b/9b/10b)	Intelligent Analog: HC I/O (mA)	Intelligent Analog: Op Amp	Intelligent Analog: PRG/SlopeComp	Intelligent Analog: ZCD	Intelligent Analog: CTMU	Waveform Control: PWM (10b/16b)*	Waveform Control: CCP (10b PWM)	Waveform Control: ECCP (10b PWM)	Waveform Control: PSMC (16b PWM)*	Waveform Control: CWG/COG	Waveform Control: NCO*	Waveform Control: DSM	Timing and Measurements: 8-/16-bit Timer	Timing and Measurements: HLT	Timing and Measurements: AngTMR	Timing and Measurements: SMT	Timing and Measurements: Temp. Indicator	Logic and Math: CLC	Logic and Math: Hardware Multiply	Logic and Math: MatcACC	Safety and Monitoring: CRC/SCAN	Safety and Monitoring: WWDT	Safety and Monitoring: Resets	Safety and Monitoring: PLVD	Comm.: EUSART/AUSART	Comm.: I²C/SPI	Comm.: USB 2.0 Device	Human Interface: mTouch® Channels	Human Interface: LCD Segments	Low Power and System Flexibility: PPS	Low Power and System Flexibility: IDLE/PMD	Low Power and System Flexibility: DOZE	5 ku Pricing†	Packages (Designator)
20-Pin (Cont.)	PIC16F1829 XLP	R	20	18	EMR	14 KB 8 Kw	RW	1K	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	12	–	–	2	–	–	–	–	–	–	–	2	2	–	–	–	1	4/1	–	–	–	✓	–	–	–	–	–	BOR	SW◊	1/0	2	–	12	–	–	–	–	$1.06	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)
	PIC16F1768 XLP	R	20	18	EMR	7 KB 4 Kw	RW	512	HEF	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	12	–	–	4	2/0/0/2	100	2	2	✓	–	3/3	3	–	–	0/2	–	2	4/3	✓	–	–	✓	3	–	–	–	–	POR/ LPBOR	–	1/0	1	–	12	–	✓	–	–	$1.16	PDIP (P), SSOP (SS), SOIC (SO), 4 × 4 QFN (MQ)
	PIC16F1459 XLP	R	20	18	EMR	14 KB 8 Kw	RW	1K	–	1.8–5.5V	48 MHz	48 MHz, 31 kHz	–	9	–	–	2	–	–	–	–	–	–	2/0	–	–	–	–	–	–	2/1	–	–	–	✓	–	–	–	–	–	PBOR	SW◊	1/0	1	✓	9	–	–	–	–	$1.18	PDIP (P), SOIC (SO), SSOP (SS), 4 × 4 QFN (ML)
	PIC16F1769 XLP	R	20	18	EMR	14 KB 8 Kw	RW	1K	HEF	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	12	–	–	4	2/0/0/2	100	2	2	✓	–	4/4	4	–	–	0/2	–	2	4/3	✓	–	–	✓	3	–	–	–	–	POR/ LPBOR	–	1/0	1	–	12	–	✓	–	–	$1.24	PDIP (P), SSOP (SS), SOIC (SO), 4 × 4 QFN (MQ)
	PIC18F13K22 XLP	R	20	18	PIC18	8 KB 4 Kw	RW	256	256	1.8–5.5V	64 MHz	64 MHz, 31 kHz	–	12	–	–	2	–	–	–	–	–	–	–	–	1	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	PBOR	SW◊	1/0	1	–	12	–	–	–	–	$1.33	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)
	PIC18F13K50 XLP	R	20	15	PIC18	8 KB 4 Kw	RW	512	256	1.8–5.5V	48 MHz	32 MHz, 31 kHz	–	9	–	–	2	–	–	–	–	–	–	–	–	1	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	PBOR	SW◊	1/0	1	✓	9	–	–	–	–	$1.39	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)
	PIC18F14K22 XLP	R	20	18	PIC18	16 KB 8 Kw	RW	512	256	1.8–5.5V	64 MHz	64 MHz, 31 kHz	–	12	–	–	2	–	–	–	–	–	–	–	–	1	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	PBOR	SW◊	1/0	1	–	12	–	–	–	–	$1.47	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)
	PIC18F14K50 XLP	R	20	15	PIC18	16 KB 8 Kw	RW	768	256	1.8–5.5V	48 MHz	32 MHz, 31 kHz	–	9	–	–	2	–	–	–	–	–	–	–	–	1	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	PBOR	SW◊	1/0	1	✓	9	–	–	–	–	$1.53	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)
28-Pin	PIC16F15354 XLP	NR	28	25	EMR	7 KB 4 Kw	RW	512	–	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	24	–	–	2	1/0/0/0	–	–	–	✓	–	4/0	2	–	–	1/0	1	–	1/2	✓	–	–	✓	4	–	–	–	✓	LPBOR/ POR	–	2/0	2	–	–	–	✓	✓	✓	call for pricing	SOIC (SO), SSOP (SS), SPDIP (SP), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)
	PIC16F15355 XLP	NR	28	25	EMR	14 KB 8 Kw	RW	1K	–	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	24	–	–	2	1/0/0/0	–	–	–	✓	–	4/0	2	–	–	1/0	1	–	1/2	✓	–	–	✓	4	–	–	–	✓	LPBOR/ POR	–	2/0	2	–	–	–	✓	✓	✓	call for pricing	SOIC (SO), SSOP (SS), SPDIP (SP), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)
	PIC16F15356 XLP	NR	28	25	EMR	28 KB 16 Kw	RW	256	–	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	24	–	–	2	1/0/0/0	–	–	–	✓	–	4/0	2	–	–	1/0	1	–	1/2	✓	–	–	✓	4	–	–	–	✓	LPBOR/ POR	–	2/0	2	–	–	–	✓	✓	✓	call for pricing	SOIC (SO), SSOP (SS), SPDIP (SP), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)
	PIC18F24K40 XLP	NR	28	25	PIC18	16 KB 8 Kw	RW	1K	256	1.8–5.5V	64 MHz	64 MHz, 31 kHz	–	24	–	✓	2	1/0/0/0	–	–	–	✓	–	2/0	2	–	–	1/0	–	1	4/3	✓	–	–	✓	–	✓	–	✓	✓	POR/ PBOR/ LPBOR	✓	1/0	1	–	24	–	✓	✓	✓	call for pricing	SOIC (SO), SPDIP (SP), SSOP (SS), QFN (ML), 4 × 4 UQFN (MV)
	PIC18F25K40 XLP	NR	28	25	PIC18	32 KB 16 Kw	RW	2K	256	1.8–5.5V	64 MHz	64 MHz, 31 kHz	–	24	–	✓	2	1/0/0/0	–	–	–	✓	–	2/0	2	–	–	1/0	–	1	4/3	✓	–	–	✓	–	✓	–	✓	✓	POR/ PBOR/ LPBOR	✓	1/0	1	–	24	–	✓	✓	✓	call for pricing	SOIC (SO), SPDIP (SP), SSOP (SS), QFN (ML), 4 × 4 UQFN (MV)
	PIC18F26K40 XLP	NR	28	25	PIC18	64 KB 32 Kw	RW	4K	1K	1.8–5.5V	64 MHz	64 MHz, 31 kHz	–	24	–	✓	2	1/0/0/0	–	–	–	✓	–	2/0	2	–	–	1/0	–	1	4/3	✓	–	–	✓	–	✓	–	✓	✓	POR/ PBOR/ LPBOR	✓	2/0	2	–	24	–	✓	✓	✓	call for pricing	SOIC (SO), SPDIP (SP), SSOP (SS), 6 × 6 QFN (ML)
	PIC18F27K40 XLP	NR	28	25	PIC18	128 KB 64 Kw	RW	4K	1K	1.8–5.5V	64 MHz	64 MHz, 31 kHz	–	24	–	✓	2	1/0/0/0	–	–	–	✓	–	2/0	2	–	–	1/0	–	1	4/3	✓	–	–	✓	–	✓	–	✓	✓	POR/ PBOR/ LPBOR	✓	2/0	2	–	24	–	✓	✓	✓	call for pricing	SOIC (SO), SPDIP (SP), SSOP (SS), 6 × 6 QFN (ML)
	PIC16F57	R	28	20	BL	3 KB 2 Kw	–	72	–	2–5.5V	20 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1/0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	$0.52	SPDIP (SP), SOIC (SO), SSOP (SS)
	PIC16F570 XLP	R	28	25	BL	3 KB 2 Kw	RW	132	64	2–5.5V	20 MHz	8 MHz	8	–	–	–	2	–	–	2	–	–	–	–	–	–	–	–	–	–	1/0	–	–	–	–	–	–	–	–	–	BOR	–	–	–	–	8	–	–	–	–	$0.60	SPDIP (SP), 6 × 6 QFN (ML), SSOP (SS), SOIC (SO)

Products sorted by pin count followed by pricing.
† Pricing subject to change; please contact your Microchip representative for most current pricing.
◊ Software PLVD implemented via ADC.
* Usable as a General Purpose Timer.
XLP eXtreme Low Power variants available.

8-BIT PIC® MICROCONTROLLERS

	Product	Released (R)/Not Released (NR)	Pins: Total	Pins: I/O	Core	Memory: Program	Memory: Self-Read/Write	Memory: Data RAM (B)	Memory: Data EE (B)	Voltage Range	Operating Speed: Maximum Speed	Operating Speed: Internal Oscillator	Intelligent Analog: 8-bit ADC	Intelligent Analog: 10-bit ADC	Intelligent Analog: 12-bit ADC	Intelligent Analog: ADC²	Intelligent Analog: Comparators	Intelligent Analog: DAC (5b/8b/9b/10b)	Intelligent Analog: HC I/O (mA)	Intelligent Analog: Op Amp	Intelligent Analog: PRG/SlopeComp	Intelligent Analog: ZCD	Intelligent Analog: CTMU	Waveform Control: PWM (10b/16b)*	Waveform Control: CCP (10b PWM)	Waveform Control: ECCP (10b PWM)	Waveform Control: PSMC (16b PWM)*	Waveform Control: CWG/COG	Waveform Control: NCO*	Waveform Control: DSM	Timing and Measurements: 8-/16-bit Timer	Timing and Measurements: HLT	Timing and Measurements: AngTMR	Timing and Measurements: SMT	Timing and Measurements: Temp. Indicator	Logic and Math: CLC	Logic and Math: Hardware Multiply	Logic and Math: MatcACC	Safety and Monitoring: CRC/SCAN	Safety and Monitoring: WWDT	Safety and Monitoring: Resets	Safety and Monitoring: PLVD	Comm.: EUSART/AUSART	Comm.: I²C/SPI	Comm.: USB 2.0 Device	Human Interface: mTouch® Channels	Human Interface: LCD Segments	Low Power and System Flexibility: PPS	Low Power and System Flexibility: IDLE/PMD	Low Power and System Flexibility: DOZE	5 ku Pricing†	Packages (Designator)
28-Pin (Cont.)	PIC16F722A XLP	R	28	25	MR	3.5 KB 2 Kw	R	128	–	1.8–5.5V	20 MHz	16 MHz	11	–	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	2/1	–	–	–	–	–	–	–	–	–	BOR	SW◊	0/1	1	–	11	–	–	–	–	$0.78	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)
	PIC16LF1902 XLP	R	28	25	EMR	3.5 KB 2 Kw	RW	128	–	1.8–3.6V	20 MHz	16 MHz	–	11	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1/1	–	–	–	✓	–	–	–	–	–	–	SW◊	–	–	–	11	72	–	–	–	$0.78	SPDIP (SP), SOIC (SO), SSOP (SS), 4 × 4 UQFN (MV)
	PIC16F1512 XLP	R	28	25	EMR	3.5 KB 2 Kw	RW	128	HEF	1.8–5.5V	20 MHz	16 MHz, 31 kHz	–	17	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	2/1	–	–	–	✓	–	–	–	–	–	PBOR	SW	1/0	1	–	17	–	–	–	–	$0.81	SPDIP (SP), SOIC (SO), SSOP (SS), 4 × 4 UQFN (MV)
	PIC16LF1566 XLP	R	28	25	EMR	14 KB 8 Kw	RW	1K	HEF	1.8–3.6V	32 MHz	16 MHz	–	2× 24	–	–	–	–	–	–	–	–	–	2/0	–	–	–	–	–	–	2/1	✓	–	–	✓	–	–	–	–	–	POR/ PBOR/ LPBOR	–	1/0	2	–	2× 24	–	–	–	–	$0.84	SOIC (SO), SPDIP (SP), SSOP (SS), QFN (ML), 4 × 4 UQFN (MV)
	PIC16F723A XLP	R	28	25	MR	7 KB 4 Kw	R	192	–	1.8–5.5V	20 MHz	16 MHz	11	–	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	2/1	–	–	–	–	–	–	–	–	–	BOR	SW◊	0/1	1	–	11	–	–	–	–	$0.85	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)
	PIC16LF1903 XLP	R	28	25	EMR	7 KB 4 Kw	RW	256	–	1.8–3.6V	20 MHz	16 MHz	–	11	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1/1	–	–	–	✓	–	–	–	–	–	–	SW◊	–	–	–	11	72	–	–	–	$0.85	SPDIP (SP), SOIC (SO), SSOP (SS), 4 × 4 UQFN (MV)
	PIC16F1513 XLP	R	28	25	EMR	7 KB 4 Kw	RW	256	HEF	1.8–5.5V	20 MHz	16 MHz, 31 kHz	–	17	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	2/1	–	–	–	✓	–	–	–	–	–	PBOR	SW	1/0	1	–	17	–	–	–	–	$0.88	SPDIP (SP), SOIC (SO), SSOP (SS), 4 × 4 UQFN (MV)
	PIC16LF1906 XLP	R	28	25	EMR	14 KB 8 Kw	RW	512	–	1.8–3.6V	20 MHz	16 MHz	–	11	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1/1	–	–	–	✓	–	–	–	–	–	–	SW◊	1/0	–	–	11	72	–	–	–	$0.91	SPDIP (SP), SOIC (SO), SSOP (SS), 4 × 4 UQFN (MV)
	PIC16F1713 XLP	R	28	25	EMR	7 KB 4 Kw	RW	512	HEF	1.8–5.5V	32 MHz	16 MHz	–	17	–	–	2	1/1/0/0	–	2	–	✓	–	2/0	2	–	–	0/1	1	–	4/1	–	–	–	✓	4	–	–	–	–	POR/ LPBOR	–	1/0	1	–	17	–	✓	–	–	$0.92	SOIC (SO), SSOP (SS), SPDIP (SP), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)
	PIC16F1516 XLP	R	28	25	EMR	14 KB 8 Kw	RW	512	HEF	1.8–5.5V	20 MHz	16 MHz	–	17	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	2/1	–	–	–	✓	–	–	–	–	–	PBOR	SW	1/0	1	–	17	–	–	–	–	$0.95	SPDIP (SP), SOIC (SO), SSOP (SS), 4 × 4 UQFN (MV)
	PIC16F1716 XLP	R	28	25	EMR	14 KB 8 Kw	RW	1K	HEF	1.8–5.5V	32 MHz	16 MHz	–	17	–	–	2	1/1/0/0	–	2	–	✓	–	2/0	2	–	–	0/1	1	–	4/1	–	–	–	✓	4	–	–	–	–	POR/ LPBOR	–	1/0	1	–	17	–	✓	–	–	$0.98	SOIC (SO), SSOP (SS), SPDIP (SP), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)
	PIC16F1518 XLP	R	28	25	EMR	28 KB 16 Kw	RW	1K	HEF	1.8–5.5V	20 MHz	16 MHz	–	17	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	2/1	–	–	–	✓	–	–	–	–	–	PBOR	SW	1/0	1	–	17	–	–	–	–	$1.01	SPDIP (SP), SOIC (SO), SSOP (SS), 4 × 4 UQFN (MV)
	PIC16F1718 XLP	R	28	25	EMR	28 KB 16 Kw	RW	2K	HEF	1.8–5.5V	32 MHz	16 MHz	–	17	–	–	2	1/1/0/0	–	2	–	✓	–	2/0	2	–	–	0/1	1	–	4/1	–	–	–	✓	4	–	–	–	–	POR/ LPBOR	–	1/0	1	–	17	–	✓	–	–	$1.05	SOIC (SO), SSOP (SS), SPDIP (SP), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)
	PIC16F18854 XLP	NR	28	25	EMR	7 KB 4 Kw	RW	512	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	24	–	✓	2	1/0/0/0	–	–	–	✓	–	2/0	5	–	–	3/0	1	1	4/3	✓	–	2	✓	4	–	–	✓	✓	POR/ LPBOR	–	1/0	2	–	–	–	✓	✓	✓	$1.12	SPDIP (SP), SSOP (SS), SOIC (SO), 5 × 5 QFN (MQ), 4 × 4 UQFN (MV)
	PIC16F18855 XLP	R	28	25	EMR	14 KB 8 Kw	RW	1K	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	24	–	✓	2	1/0/0/0	–	–	–	✓	–	2/0	5	–	–	3/0	1	1	4/3	✓	–	2	✓	4	–	–	✓	✓	POR/ LPBOR	–	1/0	2	–	–	–	✓	✓	✓	$1.19	SPDIP (SP), SSOP (SS), SOIC (SO), 6 × 6 QFN (MQ), 4 × 4 UQFN (MV)

Products sorted by pin count followed by pricing.
† Pricing subject to change; please contact your Microchip representative for most current pricing.
◊ Software PLVD implemented via ADC.
* Usable as a General Purpose Timer.
XLP eXtreme Low Power variants available.

8-BIT PIC® MICROCONTROLLERS

	Product	Released (R)/Not Released (NR)	Pins: Total	Pins: I/O	Core	Memory: Program	Memory: Self-Read/Write	Memory: Data RAM (B)	Memory: Data EE (B)	Voltage Range	Operating Speed: Maximum Speed	Operating Speed: Internal Oscillator	Intelligent Analog: 8-bit ADC	Intelligent Analog: 10-bit ADC	Intelligent Analog: 12-bit ADC	Intelligent Analog: ADC²	Intelligent Analog: Comparators	Intelligent Analog: DAC (5b/8b/9b/10b)	Intelligent Analog: HC I/O (mA)	Intelligent Analog: Op Amp	Intelligent Analog: PRG/SlopeComp	Intelligent Analog: ZCD	Intelligent Analog: CTMU	Waveform Control: PWM (10b/16b)*	Waveform Control: CCP (10b PWM)	Waveform Control: ECCP (10b PWM)	Waveform Control: PSMC (16b PWM)*	Waveform Control: CWG/COG	Waveform Control: NCO*	Waveform Control: DSM	Timing and Measurements: 8-/16-bit Timer	Timing and Measurements: HLT	Timing and Measurements: AngTMR	Timing and Measurements: SMT	Timing and Measurements: Temp. Indicator	Logic and Math: CLC	Logic and Math: Hardware Multiply	Logic and Math: MatchACC	Safety and Monitoring: CRC/SCAN	Safety and Monitoring: WWDT	Safety and Monitoring: Resets	Safety and Monitoring: PLVD	Comm.: EUSART/AUSART	Comm.: I²C/SPI	Comm.: USB 2.0 Device	Human Interface: mTouch® Channels	Human Interface: LCD Segments	Low Power and System Flexibility: PPS	Low Power and System Flexibility: IDLE/PMD	Low Power and System Flexibility: DOZE	5 ku Pricing†	Packages (Designator)
28-Pin (Cont.)	PIC16F1782 XLP	R	28	25	EMR	3.5 KB 2 Kw	RW	256	256	1.8–5.5V	32 MHz	32 MHz	–	–	11	–	3	0/1/0/0	–	2	–	–	–	–	2	–	2	–	–	–	2/1	–	–	–	✓	–	–	–	–	–	BOR	SW◊	1/0	1	–	11	–	–	–	–	$1.23	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)
	PIC16F1933 XLP	R	28	25	EMR	7 KB 4 Kw	RW	256	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	11	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	4/1	–	–	–	✓	–	–	–	–	–	PBOR	SW◊	1/0	1	–	11	60	–	–	–	$1.23	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)
	PIC18F23K20 XLP	R	28	25	PIC18	8 KB 4 Kw	RW	512	256	1.8–3.6V	64 MHz	16 MHz, 31 kHz	–	11	–	–	2	–	–	–	–	–	–	–	1	1	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	BOR	✓	1/0	1	–	11	–	–	–	–	$1.23	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)
	PIC16F18856 XLP	NR	28	25	EMR	28 KB 16 Kw	RW	2K	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	24	–	✓	2	1/0/0/0	–	–	–	✓	–	2/0	5	–	–	3/0	1	1	4/3	✓	–	2	✓	4	–	–	✓	✓	POR/ LPBOR	–	1/0	2	–	–	–	✓	✓	✓	$1.27	SPDIP (SP), SSOP (SS), SOIC (SO), 5 × 5 QFN (ML), 4 × 4 UQFN (MV)
	PIC16F1783 XLP	R	28	25	EMR	7 KB 4 Kw	RW	512	256	1.8–5.5V	32 MHz	32 MHz	–	–	11	–	3	0/1/0/0	–	2	–	–	–	–	2	–	2	–	–	–	2/1	–	–	–	✓	–	–	–	–	–	BOR	SW◊	1/0	1	–	11	–	–	–	–	$1.30	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)
	PIC16F1936 XLP	R	28	25	EMR	14 KB 8 Kw	RW	512	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	11	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	4/1	–	–	–	✓	–	–	–	–	–	PBOR	SW◊	1/0	1	–	11	60	–	–	–	$1.30	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)
	PIC18F24K20 XLP	R	28	25	PIC18	16 KB 8 Kw	RW	768	256	1.8–3.6V	64 MHz	16 MHz, 31 kHz	–	11	–	–	2	–	–	–	–	–	–	–	1	1	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	PBOR	✓	1/0	1	–	11	–	–	–	–	$1.30	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML)
	PIC16F18857 XLP	NR	28	25	EMR	56 KB 32 Kw	RW	4K	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	24	–	✓	2	1/0/0/0	–	–	–	✓	–	2/0	5	–	–	3/0	1	1	4/3	✓	–	2	✓	4	–	–	✓	✓	POR/ LPBOR	–	1/0	2	–	–	–	✓	✓	✓	$1.37	SPDIP (SP), SSOP (SS), SOIC (SO), 5 × 5 QFN (ML), 4 × 4 UQFN (MV)
	PIC16F1786 XLP	R	28	25	EMR	14 KB 8 Kw	RW	1K	256	1.8–5.5V	32 MHz	32 MHz	–	–	11	–	4	0/1/0/0	–	2	–	–	–	–	3	–	3	–	–	–	2/1	–	–	–	✓	–	–	–	–	–	BOR	SW◊	1/0	1	–	11	–	–	–	–	$1.37	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML)
	PIC16F1938 XLP	R	28	25	EMR	28 KB 16 Kw	RW	1K	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	11	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	4/1	–	–	–	✓	–	–	–	–	–	PBOR	SW◊	1/0	1	–	11	60	–	–	–	$1.37	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)
	PIC18F25K20 XLP	R	28	25	PIC18	32 KB 16 Kw	RW	1536	256	1.8–3.6V	64 MHz	16 MHz, 31 kHz	–	11	–	–	2	–	–	–	–	–	–	–	1	1	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	PBOR	✓	1/0	1	–	11	–	–	–	–	$1.37	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML)
	PIC16F1773 XLP	R	28	25	EMR	7 KB 4 Kw	RW	512	HEF	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	17	–	✓	6	3/0/0/3	100	3	3	✓	–	3/3	3	–	–	3/0	–	3	5/3	✓	–	–	✓	4	–	–	–	–	–	POR/ PBOR/ LPBOR	–	1/0	1	–	17	–	✓	–	–	$1.41	SDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 UQFN (MX)
	PIC18F23K22 XLP	R	28	25	PIC18	8 KB 4 Kw	RW	512	256	1.8–5.5V	64 MHz	16 MHz, 31 kHz	–	17	–	–	2	–	–	–	–	–	✓	–	1	1	–	–	–	–	0/3	–	–	–	–	–	✓	–	–	–	PBOR	✓	2/0	2	–	17	–	–	–	–	$1.41	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)
	PIC18F24J10	R	28	21	PIC18	16 KB 8 Kw	RW	1K	–	2–3.6V	40 MHz	32 kHz	–	10	–	–	2	–	–	–	–	–	–	–	2	–	–	–	–	–	0/2	–	–	–	–	–	✓	–	–	–	BOR	–	1/0	1	–	10	–	–	–	–	$1.44	SPDIP (SP), SOIC (SO), QFN (ML)
	PIC16F1788 XLP	R	28	25	EMR	28 KB 16 Kw	RW	2K	256	1.8–5.5V	32 MHz	32 MHz	–	–	11	–	4	3/1/0/0	–	2	–	–	–	–	3	–	4	–	–	–	2/1	–	–	–	✓	4	–	–	–	–	BOR	SW◊	1/0	1	–	11	–	–	–	–	$1.44	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML)
	PIC16F1776 XLP	R	28	25	EMR	14 KB 8 Kw	RW	1K	HEF	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	17	–	–	6	3/0/0/3	100	3	3	✓	–	3/3	3	–	–	3/0	–	3	5/3	✓	–	–	✓	4	–	–	–	–	–	POR/ PBOR/ LPBOR	–	1/0	1	–	17	–	✓	–	–	$1.48	SDIP (SP), SOIC (SO), SSOP (SS), UQFN (MX)
	PIC18F24K22 XLP	R	28	25	PIC18	16 KB 8 Kw	RW	768	256	1.8–5.5V	64 MHz	16 MHz, 31 kHz	–	17	–	–	2	–	–	–	–	–	✓	–	1	1	–	–	–	–	0/3	–	–	–	–	–	✓	–	–	–	PBOR	✓	2/0	2	–	17	–	–	–	–	$1.48	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)

Products sorted by pin count followed by pricing.
† Pricing subject to change; please contact your Microchip representative for most current pricing.
◊ Software PLVD implemented via ADC.
* Usable as a General Purpose Timer.
XLP eXtreme Low Power variants available.

8-BIT PIC® MICROCONTROLLERS

	Product	Released (R)/Not Released (NR)	Pins: Total	Pins: I/O	Core	Memory: Program	Memory: Self-Read/Write	Memory: Data RAM (B)	Memory: Data EE (B)	Voltage Range	Operating Speed: Maximum Speed	Operating Speed: Internal Oscillator	Intelligent Analog: 8-bit ADC	Intelligent Analog: 10-bit ADC	Intelligent Analog: 12-bit ADC	Intelligent Analog: ADC²	Intelligent Analog: Comparators	Intelligent Analog: DAC (5b/8b/9b/10b)	Intelligent Analog: HC I/O (mA)	Intelligent Analog: Op Amp	Intelligent Analog: PRG/SlopeComp	Intelligent Analog: ZCD	Intelligent Analog: CTMU	Waveform Control: PWM (10b/16b)*	Waveform Control: CCP (10b PWM)	Waveform Control: ECCP (10b PWM)	Waveform Control: PSMC (16b PWM)*	Waveform Control: CWG/COG	Waveform Control: NCO*	Waveform Control: DSM	Timing and Measurements: 8-/16-bit Timer	Timing and Measurements: HLT	Timing and Measurements: AngTMR	Timing and Measurements: SMT	Timing and Measurements: Temp. Indicator	Logic and Math: CLC	Logic and Math: Hardware Multiply	Logic and Math: MatchACC	Safety and Monitoring: CRC/SCAN	Safety and Monitoring: WWDT	Safety and Monitoring: Resets	Safety and Monitoring: PLVD	Comm.: EUSART/AUSART	Comm.: I²C/SPI	Comm.: USB 2.0 Device	Human Interface: mTouch® Channels	Human Interface: LCD Segments	Low Power and System Flexibility: PPS	Low Power and System Flexibility: IDLE/PMD	Low Power and System Flexibility: DOZE	5 ku Pricing†	Packages (Designator)
28-Pin (Cont.)	PIC16F1778 XLP	R	28	25	EMR	28 KB 16 Kw	RW	2K	HEF	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	17	–	–	6	3/0/0/3	100	3	3	✓	–	3/3	3	–	–	3/0	–	3	5/3	✓	–	–	✓	4	–	–	–	–	POR/ PBOR/ LPBOR	–	1/0	1	–	17	–	✓	–	–	$1.57	SDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 UQFN (MX)
	PIC18F25J10	R	28	21	PIC18	32 KB 16 Kw	RW	1K	–	2–3.6V	40 MHz	32 kHz	–	10	–	–	2	–	–	–	–	–	–	–	2	–	–	–	–	0/2	–	–	–	–	–	✓	–	–	–	BOR	–	1/0	1	–	10	–	–	–	–	$1.58	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC18F25K22 XLP	R	28	25	PIC18	32 KB 16 Kw	RW	1536	256	1.8–5.5V	64 MHz	16 MHz, 31 kHz	–	17	–	–	2	–	–	–	–	–	✓	–	2	3	–	–	–	–	0/4	–	–	–	–	–	✓	–	–	–	PBOR	✓	2/0	2	–	17	–	–	–	–	$1.62	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML)
	PIC18F24J11	R	28	21	PIC18	16 KB 8 Kw	RW	3800	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	10	–	–	2	–	–	–	–	–	✓	–	–	2	–	–	–	–	0/3	–	–	–	–	–	✓	–	–	–	BOR	SW◊	2/0	2	–	10	–	–	–	–	$1.65	SPDIP (SP), SOIC (SO), QFN (ML)
	PIC18F24K50 XLP	R	28	25	PIC18	16 KB 8 Kw	RW	2K	256	1.8–5.5V	48 MHz	48 MHz	–	14	–	–	2	–	–	–	–	–	✓	–	1	1	–	–	–	–	2/2	–	–	–	–	–	✓	–	–	–	BOR	–	1/0	1	✓	14	–	–	–	–	$1.65	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML)
	PIC18F26K20 XLP	R	28	25	PIC18	64 KB 32 Kw	RW	3936	1K	1.8–3.6V	64 MHz	16 MHz, 31 kHz	–	11	–	–	2	–	–	–	–	–	–	–	1	1	–	–	–	–	0/3	–	–	–	–	–	✓	–	–	–	PBOR	✓	1/0	1	–	11	–	–	–	–	$1.65	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML)
	PIC18F25K50 XLP	R	28	25	PIC18	16 KB 16 Kw	RW	2K	256	1.8–5.5V	48 MHz	48 MHz	–	14	–	–	2	–	–	–	–	–	✓	–	1	1	–	–	–	–	2/2	–	–	–	–	–	✓	–	–	–	BOR	–	1/0	1	✓	14	–	–	–	–	$1.76	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML)
	PIC18F25J11	R	28	21	PIC18	32 KB 16 Kw	RW	3800	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	10	–	–	2	–	–	–	–	–	✓	–	–	2	–	–	–	–	0/3	–	–	–	–	–	✓	–	–	–	BOR	SW◊	2/0	2	–	10	–	–	–	–	$1.79	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC18F24J50	R	28	22	PIC18	16 KB 8 Kw	RW	3800	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	10	–	–	2	–	–	–	–	–	✓	–	–	2	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	BOR	SW◊	2/0	2	✓	10	–	–	–	–	$1.86	SPDIP (SP), SOIC (SO), QFN (ML)
	PIC18F26K22 XLP	R	28	25	PIC18	64 KB 32 Kw	RW	3896	1K	1.8–5.5V	64 MHz	16 MHz, 31 kHz	–	17	–	–	2	–	–	–	–	–	✓	–	2	3	–	–	–	–	3/4	–	–	–	–	–	✓	–	–	–	PBOR	✓	2/0	2	–	17	–	–	–	–	$1.92	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML)
	PIC18F25K80 XLP	R	28	24	PIC18	32 KB 16 Kw	RW	3648	1K	1.8–5.5V	64 MHz	8 MHz, 31 kHz	–	–	8	–	2	–	–	–	–	–	✓	–	4	1	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	PBOR	✓	2/0	1	–	8	–	–	–	–	$1.93	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC18F25J50	R	28	22	PIC18	32 KB 16 Kw	RW	3800	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	10	–	–	2	–	–	–	–	–	✓	–	–	2	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	BOR	SW◊	2/0	2	✓	10	–	–	–	–	$2.00	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC18F26J11	R	28	21	PIC18	64 KB 32 Kw	RW	3800	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	10	–	–	2	–	–	–	–	–	✓	–	–	2	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	BOR	SW◊	2/0	2	–	10	–	–	–	–	$2.07	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC18F26K80 XLP	R	28	24	PIC18	64 KB 32 Kw	RW	3648	1K	1.8–5.5V	64 MHz	8 MHz, 31 kHz	–	–	8	–	2	–	–	–	–	–	✓	–	4	1	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	PBOR	✓	2/0	1	–	8	–	–	–	–	$2.21	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC18F26J13	R	28	23	PIC18	64 KB 32 Kw	RW	3808	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	–	10	–	3	–	–	–	–	–	✓	–	7	3	–	–	–	–	4/4	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	–	10	–	–	–	–	$2.24	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC18F26J50	R	28	22	PIC18	64 KB 32 Kw	RW	3800	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	10	–	–	2	–	–	–	–	–	✓	–	–	2	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	BOR	SW◊	2/0	2	✓	10	–	–	–	–	$2.28	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC18F26J53	R	28	22	PIC18	64 KB 32 Kw	RW	3808	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	–	10	–	3	–	–	–	–	–	✓	–	7	3	–	–	–	–	4/4	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	✓	10	–	–	–	–	$2.45	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC18F27J13	R	28	23	PIC18	128 KB 64 Kw	RW	3808	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	–	10	–	3	–	–	–	–	–	✓	–	7	3	–	–	–	–	4/4	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	–	10	–	–	–	–	$2.48	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC18F27J53	R	28	22	PIC18	128 KB 64 Kw	RW	3808	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	–	10	–	3	–	–	–	–	–	✓	–	7	3	–	–	–	–	4/4	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	✓	10	–	–	–	–	$2.69	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)

Products sorted by pin count followed by pricing.
† Pricing subject to change; please contact your Microchip representative for most current pricing.
◊ Software PLVD implemented via ADC.
* Usable as a General Purpose Timer.
XLP eXtreme Low Power variants available.

8-BIT PIC® MICROCONTROLLERS

	Product	Released (R)/Not Released (NR)	Pins: Total	Pins: I/O	Core	Memory: Program	Memory: Self-Read/Write	Memory: Data RAM (B)	Memory: Data EE (B)	Voltage Range	Operating Speed: Maximum Speed	Operating Speed: Internal Oscillator	Intelligent Analog: 8-bit ADC	Intelligent Analog: 10-bit ADC	Intelligent Analog: 12-bit ADC	Intelligent Analog: ADC²	Intelligent Analog: Comparators	Intelligent Analog: DAC (5b/8b/9b/10b)	Intelligent Analog: HC I/O (mA)	Intelligent Analog: Op Amp	Intelligent Analog: PRG/SlopeComp	Intelligent Analog: ZCD	Intelligent Analog: CTMU	Waveform Control: PWM (10b/16b)*	Waveform Control: CCP (10b PWM)	Waveform Control: ECCP (10b PWM)	Waveform Control: PSMC (16b PWM)*	Waveform Control: CWG/COG	Waveform Control: NCO*	Waveform Control: DSM	Timing and Measurements: 8-/16-bit Timer	Timing and Measurements: HLT	Timing and Measurements: AngTMR	Timing and Measurements: SMT	Timing and Measurements: Temp. Indicator	Logic and Math: CLC	Logic and Math: Hardware Multiply	Logic and Math: MatchACC	Safety and Monitoring: CRC/SCAN	Safety and Monitoring: WWDT	Safety and Monitoring: Resets	Safety and Monitoring: PLVD	Comm.: EUSART/AUSART	Comm.: I²C/SPI	Comm.: USB 2.0 Device	Human Interface: mTouch® Channels	Human Interface: LCD Segments	Low Power and System Flexibility: PPS	Low Power and System Flexibility: IDLE/PMD	Low Power and System Flexibility: DOZE	5 ku Pricing†	Packages (Designator)
40/44/48-Pin	PIC16F15375 XLP	NR	40	36	EMR	14 KB 8 Kw	RW	1K	–	1.8–5.5V	32 MHz	32 MHz, 31 kHZ	–	35	–	–	2	1/0/0/0	–	–	–	✓	–	4/0	2	–	–	1/0	1	–	1/2	✓	–	–	✓	4	–	–	–	✓	LPBOR/ POR	–	2/0	2	–	–	–	✓	✓	✓	call for pricing	PDIP (P), TQFP (PT), 8 × 8 QFN (ML), 5 × 5 UQFN (MV)
	PIC16F15376 XLP	NR	40	36	EMR	28 KB 16 Kw	RW	2K	–	1.8–5.5V	32 MHz	32 MHz, 31 kHZ	–	35	–	–	2	1/0/0/0	–	–	–	✓	–	4/0	2	–	–	1/0	1	–	1/2	✓	–	–	✓	4	–	–	–	✓	LPBOR/ POR	–	2/0	2	–	–	–	✓	✓	✓	call for pricing	PDIP (P), TQFP (PT), 8 × 8 QFN (ML), 5 × 5 UQFN (MV)
	PIC18F45K40 XLP	NR	40	36	PIC18	32 KB 16 Kw	RW	2K	256	1.8–5.5V	64 MHz	64 MHz, 31 kHz	–	35	–	✓	2	1/0/0/0	–	–	–	✓	–	2/0	2	–	–	1/0	–	1	4/3	✓	–	–	✓	–	✓	–	✓	✓	POR/ PBOR/ LPBOR	✓	2/0	2	–	35	–	✓	✓	✓	call for pricing	TQFP (PT), QFN (ML), PDIP (P), 5 × 5 UQFN (MV)
	PIC18F46K40 XLP	NR	40	36	PIC18	64 KB 32 Kw	RW	4K	1K	1.8–5.5V	64 MHz	64 MHz, 31 kHz	–	35	–	✓	2	1/0/0/0	–	–	–	✓	–	2/0	2	–	–	1/0	–	1	4/3	✓	–	–	✓	–	✓	–	✓	✓	POR/ PBOR/ LPBOR	✓	2/0	2	–	35	–	✓	✓	✓	call for pricing	TQFP (PT), QFN (ML), PDIP (P), 5 × 5 UQFN (MV)
	PIC18F47K40 XLP	NR	40	36	PIC18	128 KB 64 Kw	RW	4K	1K	1.8–5.5V	64 MHz	64 MHz, 31 kHz	–	35	–	✓	2	1/0/0/0	–	–	–	✓	–	2/0	2	–	–	1/0	–	1	4/3	✓	–	–	✓	–	✓	–	✓	✓	POR/ PBOR/ LPBOR	✓	2/0	2	–	35	–	✓	✓	✓	call for pricing	TQFP (PT), QFN (ML), PDIP (P), 5 × 5 UQFN (MV)
	PIC16F15385 XLP	NR	48	44	EMR	14 KB 8 Kw	RW	1K	-	1.8–5.5V	32 MHz	32 MHz, 31 kHZ	–	43	–	–	2	1/0/0/0	–	–	–	✓	–	4/0	2	–	–	1/0	1	–	1/2	✓	–	–	✓	4	–	–	–	✓	LPBOR/ POR	–	2/0	2	–	–	–	✓	✓	✓	call for pricing	TQFP (PT), QFN (ML), UQFN (MV)
	PIC16F15386 XLP	NR	48	44	EMR	28 KB 16 Kw	RW	2K	-	1.8–5.5V	32 MHz	32 MHz, 31 kHZ	–	43	–	–	2	1/0/0/0	–	–	–	✓	–	4/0	2	–	–	1/0	1	–	1/2	✓	–	–	✓	4	–	–	–	✓	LPBOR/ POR	–	2/0	2	–	–	–	✓	✓	✓	call for pricing	TQFP (PT), QFN (ML), UQFN (MV)
	PIC16F59	R	40	32	BL	3 KB 2 Kw	–	134	–	2–5.5V	20 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1/0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	$0.85	PDIP (P), TQFP (PT)
	PIC16LF1567 XLP	R	40	36	EMR	14 KB 8 Kw	RW	1K	HEF	1.8–3.6V	32 MHz	16 MHz	–	2x 24	–	–	–	–	–	–	–	–	–	2/0	–	–	–	–	–	–	2/1	✓	–	–	✓	–	–	–	–	–	POR/ PBOR/ LPBOR	–	1/0	2	–	2x 24	–	–	–	–	$0.98	PDIP (P), 5 × 5 UQFN (MV), TQFP (PT), QFN (ML)
	PIC16LF1904 XLP	R	40	36	EMR	7 KB 4 Kw	RW	256	–	1.8–3.6V	20 MHz	16 MHz	–	14	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1/1	–	–	–	✓	–	–	–	–	–	–	1/0	–	–	14	116	–	–	–	$1.19	PDIP (P), TQFP (PT), 5 × 5 UQFN (MV)
	PIC16LF1907 XLP	R	40	36	EMR	14 KB 8 Kw	RW	512	–	1.8–3.6V	20 MHz	16 MHz	–	14	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1/1	–	–	–	✓	–	–	–	–	–	–	1/0	–	–	14	116	–	–	–	$1.25	PDIP (P), TQFP (PT), 5 × 5 UQFN (MV)
	PIC16F18875 XLP	R	40	36	EMR	14 KB 8 Kw	RW	1K	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	35	–	✓	2	1/0/0/0	–	–	–	✓	–	2/0	5	–	–	3/0	1	1	4/3	✓	–	2	✓	4	–	–	✓	✓	POR/ LPBOR	–	1/0	2	–	–	–	✓	✓	✓	$1.27	PDIP (P), TQFP (PT), QFN (MQ), 5 × 5 UQFN (MV)
	PIC16F1517 XLP	R	40	36	EMR	14 KB 8 Kw	RW	512	HEF	1.8–5.5V	20 MHz	16 MHz	–	28	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	2/1	–	–	–	✓	–	–	–	–	–	PBOR	SW	1/0	1	–	28	–	–	–	–	$1.32	PDIP (P), TQFP (PT), 5 × 5 UQFN (MV)
	PIC16F18876 XLP	NR	40	36	EMR	28 KB 16 Kw	RW	2K	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	35	–	✓	2	1/0/0/0	–	–	–	✓	–	2/0	5	–	–	3/0	1	1	4/3	✓	–	2	✓	4	–	–	✓	✓	POR/ LPBOR	–	1/0	2	–	–	–	✓	✓	✓	$1.36	PDIP (P), TQFP (PT), QFN (MQ), 5 × 5 UQFN (MV)
	PIC16F1717 XLP	R	40	36	EMR	14 KB 8 Kw	RW	1K	HEF	1.8–5.5V	32 MHz	16 MHz	–	28	–	–	2	1/1/0/0	–	2	–	✓	–	2/0	2	–	–	0/1	1	–	4/1	–	–	–	✓	4	–	–	–	–	POR/ LPBOR	–	1/0	1	–	28	–	✓	–	–	$1.36	PDIP (P), TQFP (PT), 5 × 5 UQFN (MV)
	PIC16F1519 XLP	R	40	36	EMR	28 KB 16 Kw	RW	1K	HEF	1.8–5.5V	20 MHz	16 MHz	–	28	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	2/1	–	–	–	✓	–	–	–	–	–	PBOR	SW	1/0	1	–	28	–	–	–	–	$1.37	PDIP (P), TQFP (PT), 5 × 5 UQFN (MV)
	PIC16F724 XLP	R	40	36	MR	7 KB 4 Kw	RW	192	–	1.8–5.5V	20 MHz	16 MHz	14	–	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	2/1	–	–	–	–	–	–	–	–	–	BOR	SW◊	0/1	1	–	16	–	–	–	–	$1.40	PDIP (P), TQFP (PT), 8 × 8 QFN (ML), 5 × 5 UQFN (MV)
	PIC16F1719 XLP	R	40	36	EMR	28 KB 16 Kw	RW	2K	HEF	1.8–5.5V	32 MHz	16 MHz	–	28	–	–	2	1/1/0/0	–	2	–	✓	–	2/0	2	–	–	0/1	1	–	4/1	–	–	–	✓	4	–	–	–	–	POR/ LPBOR	–	1/0	1	–	28	–	✓	–	–	$1.41	PDIP (P), TQFP (PT), 5 × 5 UQFN (MV)
	PIC16F1934 XLP	R	40	36	EMR	7 KB 4 Kw	RW	256	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	14	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	4/1	–	–	–	✓	–	–	–	–	–	PBOR	SW◊	1/0	1	–	16	96	–	–	–	$1.47	PDIP (P), TQFP (PT), 8 × 8 QFN (ML), 5 × 5 UQFN (MV)
	PIC18F43K20 XLP	R	40	36	PIC18	8 KB 4 Kw	RW	512	256	1.8–3.6V	64 MHz	16 MHz, 31 kHz	–	14	–	–	2	–	–	–	–	–	–	–	1	1	–	–	–	–	1/3	–	–	–	–	–	–	–	–	–	BOR	✓	1/0	1	–	14	–	–	–	–	$1.47	PDIP (P), TQFP (PT), 8 × 8 QFN (ML), 5 × 5 UQFN (MV)
	PIC16F18877 XLP	NR	40	36	EMR	56 KB 32 Kw	RW	4K	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	35	–	✓	2	1/0/0/0	–	–	–	✓	–	2/0	5	–	–	3/0	1	1	4/3	✓	–	2	✓	4	–	–	✓	✓	POR/ LPBOR	–	1/0	2	–	–	–	✓	✓	✓	$1.53	PDIP (P), TQFP (PT), QFN (MQ), 5 × 5 UQFN (MV)
	PIC16F1784 XLP	R	40	36	EMR	7 KB 4 Kw	RW	512	256	1.8–5.5V	32 MHz	32 MHz	–	–	14	–	4	0/1/0/0	–	3	–	–	–	–	3	–	3	–	–	–	2/1	–	–	–	✓	–	–	–	–	–	BOR	SW◊	1/0	1	–	14	–	–	–	–	$1.54	PDIP (P), TQFP (PT), 8 × 8 QFN (ML), 5 × 5 UQFN (MV)
	PIC16F1937 XLP	R	40	36	EMR	14 KB 8 Kw	RW	512	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	14	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	4/1	–	–	–	✓	–	–	–	–	–	PBOR	SW◊	1/0	1	–	16	96	–	–	–	$1.54	PDIP (P), TQFP (PT), 8 × 8 QFN (ML), 5 × 5 UQFN (MV)

Products sorted by pin count followed by pricing.
† Pricing subject to change; please contact your Microchip representative for most current pricing.
◊ Software PLVD implemented via ADC.
* Usable as a General Purpose Timer.
XLP eXtreme Low Power variants available.

8-BIT PIC® MICROCONTROLLERS

	Product	Released (R)/Not Released (NR)	Pins: Total	Pins: I/O	Core	Memory: Program	Memory: Self-Read/Write	Memory: Data RAM (B)	Memory: Data EE (B)	Voltage Range	Operating Speed: Maximum Speed	Operating Speed: Internal Oscillator	Intelligent Analog: 8-bit ADC	Intelligent Analog: 10-bit ADC	Intelligent Analog: 12-bit ADC	Intelligent Analog: ADC²	Intelligent Analog: Comparators	Intelligent Analog: DAC (5b/8b/9b/10b)	Intelligent Analog: HC I/O (mA)	Intelligent Analog: Op Amp	Intelligent Analog: PRG/SlopeComp	Intelligent Analog: ZCD	Intelligent Analog: CTMU	Waveform Control: PWM (10b/16b)*	Waveform Control: CCP (10b PWM)	Waveform Control: ECCP (10b PWM)	Waveform Control: PSMC (16b PWM)*	Waveform Control: CWG/COG	Waveform Control: NCO*	Waveform Control: DSM	Timing and Measurements: 8-/16-bit Timer	Timing and Measurements: HLT	Timing and Measurements: AngTMR	Timing and Measurements: SMT	Timing and Measurements: Temp. Indicator	Logic and Math: CLC	Logic and Math: Hardware Multiply	Logic and Math: MatchACC	Safety and Monitoring: CRC/SCAN	Safety and Monitoring: WWDT	Safety and Monitoring: Resets	Safety and Monitoring: PLVD	Comm.: EUSART/AUSART	Comm.: I²C/SPI	Comm.: USB 2.0 Device	Human Interface: mTouch® Channels	Human Interface: LCD Segments	Low Power and System Flexibility: PPS	Low Power and System Flexibility: IDLE/PMD	Low Power and System Flexibility: DOZE	5 ku Pricing†	Packages (Designator)
40/44/48-Pin (Cont.)	PIC18F44K20 XLP	R	40	36	PIC18	16 KB 8 Kw	RW	768	256	1.8–3.6V	64 MHz	16 MHz, 31 kHz	–	14	–	–	2	–	–	–	–	–	–	–	1	1	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	PBOR	✓	1/0	1	–	14	–	–	–	–	$1.54	PDIP (P), TQFP (PT), 8×8 QFN (ML), 5×5 UQFN (MV)
	PIC16F1787 XLP	R	40	36	EMR	14 KB 8 Kw	RW	1K	256	1.8–5.5V	32 MHz	32 MHz	–	–	14	–	4	0/1/0/0	–	3	–	–	–	–	3	–	3	–	–	–	2/1	–	–	–	✓	–	–	–	–	–	BOR	SW◊	1/0	1	–	14	–	–	–	–	$1.61	PDIP (P), TQFP (PT), 8×8 QFN (ML), 5×5 UQFN (MV)
	PIC16F1939 XLP	R	40	36	EMR	28 KB 16 Kw	RW	1K	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	14	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	4/1	–	–	–	✓	–	–	–	–	–	PBOR	SW◊	1/0	1	–	16	96	–	–	–	$1.61	PDIP (P), TQFP (PT), 8×8 QFN (ML), 5×5 UQFN (MV)
	PIC18F45K20 XLP	R	40	36	PIC18	32 KB 16 Kw	RW	1536	256	1.8–3.6V	64 MHz	16 MHz, 31 kHz	–	14	–	–	2	–	–	–	–	–	–	–	1	1	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	PBOR	✓	1/0	1	–	14	–	–	–	–	$1.61	PDIP (P), TQFP (PT), 8×8 QFN (ML), 5×5 UQFN (MV)
	PIC18F44J10	R	40	32	PIC18	16 KB 8 Kw	RW	1K	–	2–3.6V	40 MHz	31 kHz	–	13	–	–	2	–	–	–	–	–	–	–	1	1	–	–	–	–	1/2	–	–	–	–	–	✓	–	–	–	BOR	–	1/0	2	–	13	–	–	–	–	$1.67	PDIP (P), TQFP (PT), QFN (ML)
	PIC18F43K22 XLP	R	40	36	PIC18	8 KB 4 Kw	RW	512	256	1.8–5.5V	64 MHz	16 MHz, 31 kHz	–	28	–	–	2	–	–	–	–	–	✓	–	1	1	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	PBOR	P	2/0	2	–	28	–	–	–	–	$1.68	PDIP (P), TQFP (PT), 8×8 QFN (ML), 5×5 UQFN (MV)
	PIC18F1789 XLP	R	40	36	EMR	28 KB 16 kW	RW	2K	256	1.8–5.5V	32 MHz	32 MHz	–	–	14	–	4	3/1/0/0	–	3	–	–	–	–	3	–	4	–	–	–	2/1	–	–	–	✓	–	✓	–	–	–	BOR	–	1/0	1	–	14	–	–	–	–	$1.68	SPDIP (SP), SOIC (SO), SSOP (SS), 6×6 QFN (ML), 4×4 UQFN (MV)
	PIC18F44K22 XLP	R	40	36	PIC18	16 KB 8 Kw	RW	768	256	1.8–5.5V	64 MHz	16 MHz, 31 kHz	–	28	–	–	2	–	–	–	–	–	✓	–	1	1	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	PBOR	P	2/0	2	–	28	–	–	–	–	$1.75	PDIP (P), TQFP (PT), 8×8 QFN (ML), 5×5 UQFN (MV)
	PIC16F887	R	40	36	MR	14 KB 8 Kw	RW	368	256	2–5.5V	20 MHz	8 MHz, 31 kHz	–	14	–	–	2	–	–	–	–	–	–	–	1	1	–	–	–	–	2/1	–	–	–	–	–	–	–	–	–	BOR	SW◊	1/0	1	–	14	–	–	–	–	$1.78	PDIP (P), TQFP (PT), 8×8 QFN (ML)
	PIC18F45J10	R	40	32	PIC18	32 KB 16 Kw	RW	1K	–	2–3.6V	40 MHz	31 kHz	–	13	–	–	2	–	–	–	–	–	–	–	1	1	–	–	–	–	1/2	–	–	–	–	–	✓	–	–	–	BOR	–	1/0	2	–	13	–	–	–	–	$1.81	PDIP (P), TQFP (PT), QFN (ML)
	PIC18F46K20 XLP	R	40	36	PIC18	64 KB 32 Kw	RW	3936	1024	1.8–3.6V	64 MHz	16 MHz, 31 kHz	–	14	–	–	2	–	–	–	–	–	–	–	1	1	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	PBOR	✓	1/0	1	–	14	–	–	–	–	$1.82	PDIP (P), TQFP (PT), 8×8 QFN (ML)
	PIC16F1777 XLP	R	40	36	EMR	14 KB 8 Kw	RW	1K	HEF	1.8–5.5V	32 MHz	32 MHz, 31 kHZ	–	28	–	–	8	4/0/0/4	100	4	4	✓	–	4/4	4	–	–	4/0	–	4	5/3	✓	–	–	✓	4	–	–	–	–	POR/ PBOR/ LPBOR	–	1/0	1	–	28	–	✓	–	–	$1.83	PDIP (P), TQFP (PT), 5×5 UQFN (MV)
	PIC18F45K22 XLP	R	40	36	PIC18	32 KB 16 Kw	RW	1536	256	1.8–5.5V	64 MHz	16 MHz, 31 kHz	–	28	–	–	2	–	–	–	–	–	✓	–	2	2	–	–	–	–	3/4	–	–	–	–	–	✓	–	–	–	PBOR	✓	2/0	2	–	28	–	–	–	–	$1.89	PDIP (P), TQFP (PT), 8×8 QFN (ML), 5×5 UQFN (MV)
	PIC16F1779 XLP	R	40	36	EMR	28 KB 16 Kw	RW	2K	HEF	1.8–5.5V	32 MHz	32 MHz, 31 kHZ	–	28	–	–	8	4/0/0/4	100	4	4	✓	–	4/4	4	–	–	4/0	–	4	5/3	✓	–	–	✓	4	–	–	–	–	POR/ PBOR/ LPBOR	–	1/0	1	–	28	–	✓	–	–	$1.92	PDIP (P), TQFP (PT), 5×5 UQFN (MV)
	PIC18F44J11 XLP	R	40	34	PIC18	16 KB 8 Kw	RW	3800	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	13	–	–	2	–	–	–	–	–	✓	–	–	2	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	BOR	SW◊	2/0	2	–	13	–	–	–	–	$1.95	TQFP (PT), QFN (ML)
	PIC18F45K50 XLP	R	40	36	PIC18	32KB 16 kW	RW	2K	256	1.8–5.5V	48 MHz	48 MHz	–	25	–	–	2	–	–	–	–	–	✓	–	1	1	–	–	–	–	2/2	–	–	–	–	–	✓	–	–	–	BOR	–	1/0	1	✓	25	–	–	–	–	$1.99	PDIP (P), TQFP (PT), 5×5 UQFN (MV)

Products sorted by pin count followed by pricing.
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◊ Software PLVD implemented via ADC.
* Usable as a General Purpose Timer.
XLP eXtreme Low Power variants available.

8-BIT PIC® MICROCONTROLLERS

	Product	Released (R)/Not Released (NR)	Pins		Core	Memory				Voltage Range	Operating Speed		Intelligent Analog										Waveform Control							Timing and Measurements					Logic and Math			Safety and Monitoring				Comm.			Human Interface		Low Power and System Flexibility			5 ku Pricing†	Packages (Designator)
			Total	I/O		Program	Self-Read/Write	Data RAM (B)	Data EE (B)		Maximum Speed	Internal Oscillator	8-bit ADC	10-bit ADC	12-bit ADC	ADC²	Comparators	DAC (5b/8b/9b/10b)	HC I/O (mA)	Op Amp	PRG/SlopeComp	ZCD	CTMU	PWM (10b/16b)*	CCP (10b PWM)	ECCP (10b PWM)	PSMC (16b PWM)*	CWG/COG	NCO*	DSM	8-/16-bit Timer	HLT	AngTMR	SMT	Temp. Indicator	CLC	Hardware Multiply	MatchACC	CRC/SCAN	WWDT	Resets	PLVD	EUSART/AUSART	I²C/SPI	USB 2.0 Device	mTouch® Channels	LCD Segments	PPS	IDLE/PMD	DOZE		
40/44/48-Pin (Cont.)	PIC18F45J11	R	40	34	PIC18	32 KB 16 Kw	RW	3800	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	13	–	–	2	–	–	–	–	–	✓	–	–	2	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	BOR	SW◊	2/0	2	–	13	–	–	–	–	$2.09	TQFP (PT), QFN (ML)
	PIC18F44J50	R	40	34	PIC18	16 KB 8 Kw	RW	3800	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	13	–	–	2	–	–	–	–	–	✓	–	–	2	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	BOR	SW◊	2/0	2	✓	13	–	–	–	–	$2.16	TQFP (PT), QFN (ML)
	PIC18F45K80 XLP	R	40	35	PIC18	32 KB 16 Kw	RW	3648	1024	1.8–5.5V	64 MHz	8 MHz, 31 kHz	–	–	11	–	2	–	–	–	–	–	✓	–	4	1	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	PBOR	✓	2/0	1	–	11	–	–	–	–	$2.17	PDIP (P), TQFP (PT), QFN (ML)
	PIC18F46K22 XLP	R	40	36	PIC18	64 KB 32 Kw	RW	3896	1024	1.8–5.5V	64 MHz	16 MHz, 31 kHz	–	28	–	–	2	–	–	–	–	–	✓	–	2	2	–	–	–	–	3/4	–	–	–	–	–	✓	–	–	–	PBOR	✓	2/0	2	–	28	–	–	–	–	$2.17	PDIP (P), TQFP (PT), 8 × 8 QFN (ML), 5 × 5 UQFN (MV)
	PIC18F45J50	R	40	34	PIC18	32 KB 16 Kw	RW	3800	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	13	–	–	2	–	–	–	–	–	✓	–	–	2	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	BOR	SW◊	2/0	2	✓	13	–	–	–	–	$2.30	TQFP (PT), QFN (ML)
	PIC18F46J11	R	40	34	PIC18	64 KB 32 Kw	RW	3800	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	13	–	–	2	–	–	–	–	–	✓	–	–	2	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	BOR	SW◊	2/0	2	–	13	–	–	–	–	$2.37	PDIP (P), TQFP (PT), QFN (ML)
	PIC18F46K80 XLP	R	44	35	PIC18	64 KB 32 Kw	RW	3648	1024	1.8–5.5V	64 MHz	8 MHz, 31 kHz	–	–	11	–	2	–	–	–	–	–	✓	–	4	1	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	PBOR	✓	2/0	1	–	11	–	–	–	–	$2.45	PDIP (P), TQFP (PT), QFN (ML)
	PIC18F46J13	R	44	34	PIC18	64 KB 32 Kw	RW	3808	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	–	13	–	3	–	–	–	–	–	✓	–	7	3	–	–	–	–	4/4	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	–	13	–	–	–	–	$2.52	TQFP (PT), QFN (ML)
	PIC18F46J53 XLP	R	44	33	PIC18	64 KB 32 Kw	RW	3808	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	–	13	–	3	–	–	–	–	–	✓	–	7	3	–	–	–	–	4/4	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	✓	13	–	–	–	–	$2.73	TQFP (PT), QFN (ML)
	PIC18F47J13	R	44	34	PIC18	128 KB 64 Kw	RW	3808	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	–	13	–	3	–	–	–	–	–	✓	–	7	3	–	–	–	–	4/4	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	–	13	–	–	–	–	$2.76	TQFP (PT), QFN (ML)
	PIC18F47J53	R	44	33	PIC18	128 KB 64 Kw	RW	3808	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	–	13	–	3	–	–	–	–	–	✓	–	7	3	–	–	–	–	4/4	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	✓	13	–	–	–	–	$2.97	TQFP (PT), QFN (ML)
64-Pin	PIC18F65K40 XLP	NR	64	59	PIC18	32 KB 16 Kw	RW	2K	1K	1.8–5.5V	64 MHz	64 MHz, 31 kHz	–	47	–	–	3	1/0/0/0	–	–	–	✓	–	2/0	5	–	–	1/0	–	1	5/4	✓	–	2	✓	–	✓	–	✓	✓	POR/ PBOR/ LPBOR	✓	5/0	2	–	47	–	✓	✓	✓	call for pricing	TQFP (PT), QFN (MR)
	PIC18F66K40 XLP	NR	64	59	PIC18	64 KB 32 Kw	RW	4K	1K	1.8–5.5V	64 MHz	64 MHz, 31 kHz	–	47	–	–	3	1/0/0/0	–	–	–	✓	–	2/0	5	–	–	1/0	–	1	5/4	✓	–	2	✓	–	✓	–	✓	✓	POR/ PBOR/ LPBOR	✓	5/0	2	–	47	–	✓	✓	✓	call for pricing	TQFP (PT), QFN (MR)
	PIC18F67K40 XLP	NR	64	59	PIC18	128 KB 64 Kw	RW	4K	1K	1.8–5.5V	64 MHz	64 MHz, 31 kHz	–	47	–	–	3	1/0/0/0	–	–	–	✓	–	2/0	5	–	–	1/0	–	1	5/4	✓	–	2	✓	–	✓	–	✓	✓	POR/ PBOR/ LPBOR	✓	5/0	2	–	47	–	✓	✓	✓	call for pricing	TQFP (PT), QFN (MR)
	PIC16F1526 XLP	R	64	54	EMR	14 KB 8 Kw	RW	768	HEF	1.8–5.5V	20 MHz	16 MHz	–	30	–	–	–	–	–	–	–	–	–	–	10	–	–	–	–	–	6/3	–	–	–	✓	–	–	–	–	–	PBOR	SW◊	2/0	2	–	30	–	–	–	–	$1.47	TQFP (PT), QFN (MR)
	PIC16F1527 XLP	R	64	54	EMR	28 KB 16 Kw	RW	1536	HEF	1.8–5.5V	20 MHz	16 MHz	–	30	–	–	–	–	–	–	–	–	–	–	10	–	–	–	–	–	6/3	–	–	–	✓	–	–	–	–	–	PBOR	SW◊	2/0	2	–	30	–	–	–	–	$1.54	TQFP (PT), QFN (MR)
	PIC16F1946 XLP	R	64	53	EMR	14 KB 8 Kw	RW	512	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	17	–	–	3	–	–	–	–	–	–	–	2	3	–	–	–	–	4/1	–	–	–	✓	–	–	–	–	–	BOR	SW◊	2/0	2	–	17	184	–	–	–	$1.75	TQFP (PT), QFN (MR)
	PIC16F1947 XLP	R	64	53	EMR	28 KB 16 Kw	RW	1K	256	1.8–5.5V	32 MHz	32 MHz, 31 kHz	–	17	–	–	3	–	–	–	–	–	–	–	2	3	–	–	–	–	4/1	–	–	–	✓	–	–	–	–	–	BOR	SW◊	2/0	2	–	17	184	–	–	–	$1.82	TQFP (PT), QFN (MR)
	PIC18F63J11	R	64	54	PIC18	8 KB 4 Kw	RW	1K	–	2–3.6V	40 MHz	8 MHz, 31 kHz	–	12	–	–	2	–	–	–	–	–	–	–	2	–	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	PBOR	SW◊	1/1	1	–	12	–	–	–	–	$2.20	TQFP (PT)
	PIC18F65J10	R	64	50	PIC18	32 KB 16 Kw	RW	2K	–	2–3.6V	40 MHz	31 kHz	–	11	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	–	11	–	–	–	–	$2.25	TQFP (PT)
	PIC18F64J11	R	64	54	PIC18	16 KB 8 Kw	RW	1K	–	2–3.6V	40 MHz	8 MHz, 31 kHz	–	12	–	–	2	–	–	–	–	–	–	–	2	–	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	BOR	SW◊	1/1	1	–	12	–	–	–	–	$2.27	TQFP (PT)
	PIC18F63J90	R	64	51	PIC18	8 KB 4 Kw	RW	1K	–	2–3.6V	40 MHz	8 MHz, 31 kHz	–	12	–	–	2	–	–	–	–	–	–	–	2	–	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	BOR	✓	1/1	1	–	12	132	–	–	–	$2.35	TQFP (PT)
	PIC18F65J11	R	64	54	PIC18	32 KB 16 Kw	RW	2K	–	2–3.6V	40 MHz	8 MHz, 31 kHz	–	12	–	–	2	–	–	–	–	–	–	–	2	–	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	BOR	SW◊	1/1	1	–	12	–	–	–	–	$2.37	TQFP (PT)
	PIC18F65J94	R	64	51	PIC18	32 KB 16 Kw	RW	4K	–	2–3.6V	64 MHz	64 MHz	–	16	16	–	3	–	–	–	–	–	✓	✓	7	3	–	–	–	–	4/4	–	–	–	–	–	✓	–	–	–	BOR	–	0/4	2	✓	24	224	–	–	–	$2.38	QFN (MR), TQFP (PT)
	PIC18F65K22 XLP	R	64	53	PIC18	32 KB 16 Kw	RW	2K	1024	1.8–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz	–	–	16	–	3	–	–	–	–	–	✓	–	5	3	–	–	–	–	4/4	–	–	–	–	–	–	✓	–	–	–	✓	2/0	2	–	16	–	–	–	–	$2.39	TQFP (PT), QFN (MR)

Products sorted by pin count followed by pricing.
† Pricing subject to change; please contact your Microchip representative for most current pricing.
◊ Software PLVD implemented via ADC.
* Usable as a General Purpose Timer.
XLP eXtreme Low Power variants available.

8-BIT PIC® MICROCONTROLLERS

	Product	Released (R)/Not Released (NR)	Pins		Core	Memory				Voltage Range	Operating Speed		Intelligent Analog										Waveform Control							Timing and Measurements					Logic and Math			Safety and Monitoring				Comm.			Human Interface		Low Power and System Flexibility			5 ku Pricing†	Packages (Designator)
			Total	I/O		Program	Self-Read/Write	Data RAM (B)	Data EE (B)		Maximum Speed	Internal Oscillator	8-bit ADC	10-bit ADC	12-bit ADC	ADC²	Comparators	DAC (5b/8b/9b/10b)	HC I/O (mA)	Op Amp	PRG/SlopeComp	ZCD	CTMU	PWM (10b/16b)*	CCP (10b PWM)	ECCP (10b PWM)	PSMC (16b PWM)*	CWG/COG	NCO*	DSM	8-/16-bit Timer	HLT	AngTMR	SMT	Temp. Indicator	CLC	Hardware Multiply	MatcACC	CRC/SCAN	WWDT	Resets	PLVD	EUSART/AUSART	I²C/SPI	USB 2.0 Device	mTouch® Channels	LCD Segments	PPS	IDLE/PMD	DOZE		
64-Pin (Cont.)	PIC18F64J90	R	64	51	PIC18	16 KB 8 Kw	RW	1K	–	2–3.6V	40 MHz	8 MHz, 31 kHz	–	12	–	–	2	–	–	–	–	–	–	–	2	–	–	–	–	–	1/3	–	–	–	–	–	–	✓	–	–	–	✓	1/1	1	–	12	132	–	–	–	$2.41	TQFP (PT)
	PIC18F66J10	R	64	50	PIC18	64 KB 32 Kw	RW	2K	–	2–3.6V	40 MHz	31 kHz	–	11	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	2/3	–	–	–	–	–	–	✓	–	–	–	✓	2/0	2	–	11	–	–	–	–	$2.49	TQFP (PT)
	PIC18F65J90	R	64	50	PIC18	32 KB 16 Kw	RW	2K	–	2–3.6V	40 MHz	8 MHz, 31 kHz	–	12	–	–	2	–	–	–	–	–	–	–	2	–	–	–	–	–	1/3	–	–	–	–	–	–	✓	–	–	–	✓	1/1	1	–	12	132	–	–	–	$2.52	TQFP (PT)
	PIC18F65K90 XLP	R	64	53	PIC18	32 KB 16 Kw	RW	2K	1024	1.8–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz	–	–	16	–	3	–	–	–	–	–	✓	–	5	3	–	–	–	–	4/4	–	–	–	–	–	–	✓	–	–	–	✓	2/0	2	–	16	132	–	–	–	$2.53	TQFP (PT), QFN (MR)
	PIC18F65J50	R	64	49	PIC18	32 KB 16 Kw	RW	3904	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	8	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	2/3	–	–	–	–	–	–	✓	–	–	–	✓	2/0	2	✓	8	–	–	–	–	$2.63	TQFP (PT)
	PIC18F66J11	R	64	50	PIC18	64 KB 32 Kw	RW	3904	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	11	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	2/3	–	–	–	–	–	–	✓	–	–	–	✓	2/0	2	–	11	–	–	–	–	$2.63	TQFP (PT)
	PIC18F66J94	R	64	51	PIC18	64 KB 32 Kw	RW	4K	–	2–3.6V	64 MHz	64 MHz	–	16	16	–	3	–	–	–	–	–	✓	✓	7	3	–	–	–	–	4/4	–	–	–	–	–	–	✓	–	–	–	–	4/0	2	✓	24	224	–	–	–	$2.69	QFN (MR), TQFP (PT)
	PIC18F66J93	R	64	51	PIC18	64 KB 32 Kw	RW	3900	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	–	12	–	2	–	–	–	–	–	✓	–	2	–	–	–	–	–	1/3	–	–	–	–	–	–	✓	–	–	–	✓	1/1	1	–	12	132	–	–	–	$2.70	TQFP (PT)
	PIC18F65K80 XLP	R	64	54	PIC18	32 KB 16 Kw	RW	3648	1K	1.8–5.5V	64 MHz	8 MHz, 31 kHz	–	–	11	–	2	–	–	–	–	–	✓	–	4	1	–	–	–	–	2/3	–	–	–	–	–	–	✓	–	–	–	✓	2/0	1	–	11	–	–	–	–	$2.70	TQFP (PT), QFN (MR)
	PIC18F66K22 XLP	R	64	53	PIC18	64 KB 32 Kw	RW	4K	1K	1.8–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz	–	–	16	–	3	–	–	–	–	–	✓	–	7	3	–	–	–	–	6/5	–	–	–	–	–	–	✓	–	–	–	✓	2/0	2	–	16	–	–	–	–	$2.70	TQFP (PT), QFN (MR)
	PIC18F67J10	R	64	50	PIC18	128 KB 64 Kw	RW	3936	–	2–3.6V	40 MHz	31 kHz	–	11	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	2/3	–	–	–	–	–	–	✓	–	–	–	✓	2/0	2	–	11	–	–	–	–	$2.77	TQFP (PT)
	PIC18F66K90 XLP	R	64	53	PIC18	64 KB 32 Kw	RW	4K	1K	1.8–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz	–	–	16	–	3	–	–	–	–	–	✓	–	7	3	–	–	–	–	6/5	–	–	–	–	–	–	✓	–	–	–	✓	2/0	2	–	16	132	–	–	–	$2.84	TQFP (PT), QFN (MR)
	PIC18F66J50	R	64	49	PIC18	64 KB 32 Kw	RW	3904	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	8	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	2/3	–	–	–	–	–	–	✓	–	–	–	✓	2/0	2	✓	8	–	–	–	–	$2.90	TQFP (PT)
	PIC18F67J11	R	64	50	PIC18	128 KB 64 Kw	RW	3904	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	11	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	2/3	–	–	–	–	–	–	✓	–	–	–	✓	2/0	2	–	11	–	–	–	–	$2.93	TQFP (PT)
	PIC18F67J94	R	64	51	PIC18	128 KB 64 Kw	RW	4K	–	2–3.6V	64 MHz	64 MHz	–	16	16	–	3	–	–	–	–	–	✓	✓	7	3	–	–	–	–	4/4	–	–	–	–	–	–	✓	–	–	–	–	4/0	2	✓	24	224	–	–	–	$2.93	QFN (MR), TQFP (PT)
	PIC18F67K22 XLP	R	64	53	PIC18	128 KB 64 Kw	RW	4K	1K	1.8–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz	–	–	16	–	3	–	–	–	–	–	✓	–	7	3	–	–	–	–	6/5	–	–	–	–	–	–	✓	–	–	–	✓	2/0	2	–	16	–	–	–	–	$2.94	TQFP (PT), QFN (MR)
	PIC18F66K80 XLP	R	64	54	PIC18	64 KB 32 Kw	RW	3648	1K	1.8–5.5V	64 MHz	8 MHz, 31 kHz	–	–	11	–	2	–	–	–	–	–	✓	–	4	1	–	–	–	–	2/3	–	–	–	–	–	–	✓	–	–	–	✓	2/0	1	–	11	–	–	–	–	$2.98	TQFP (PT), QFN (MR)
	PIC18F67J93	R	64	51	PIC18	128 KB 64 Kw	RW	3900	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	–	12	–	2	–	–	–	–	–	✓	–	2	–	–	–	–	–	1/3	–	–	–	–	–	–	✓	–	–	–	✓	1/1	1	–	12	132	–	–	–	$3.00	TQFP (PT)
	PIC18F67K90 XLP	R	64	53	PIC18	128 KB 64 Kw	RW	4K	1K	1.8–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz	–	–	16	–	3	–	–	–	–	–	✓	–	7	3	–	–	–	–	6/5	–	–	–	–	–	–	✓	–	–	–	✓	2/0	2	–	16	132	–	–	–	$3.08	TQFP (PT), QFN (MR)
	PIC18F67J50	R	64	49	PIC18	128 KB 64 Kw	RW	3904	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	8	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	2/3	–	–	–	–	–	–	✓	–	–	–	✓	2/0	2	✓	8	–	–	–	–	$3.19	TQFP (PT)
80-Pin	PIC18F83J11	R	80	70	PIC18	8 KB 4 Kw	RW	1K	–	2–3.6V	40 MHz	8 MHz, 31 kHz	–	12	–	–	2	–	–	–	–	–	–	–	2	–	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	BOR	SW◊	1/1	1	–	12	–	–	–	–	$2.46	TQFP (PT)
	PIC18F85J10	R	80	66	PIC18	32 KB 16 Kw	RW	2K	–	2–3.6V	40 MHz	31 kHz	–	15	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	–	15	–	–	–	–	$2.49	TQFP (PT)
	PIC18F84J11	R	80	70	PIC18	16 KB 8 Kw	RW	1K	–	2–3.6V	40 MHz	8 MHz, 31 kHz	–	12	–	–	2	–	–	–	–	–	–	–	2	–	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	BOR	SW◊	1/1	1	–	12	–	–	–	–	$2.52	TQFP (PT)
	PIC18F83J90	R	80	66	PIC18	8 KB 4 Kw	RW	1K	–	2–3.6V	40 MHz	8 MHz, 31 kHz	–	12	–	–	2	–	–	–	–	–	–	–	2	–	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	BOR	✓	1/1	1	–	12	192	–	–	–	$2.60	TQFP (PT)
	PIC18F85J11	R	80	70	PIC18	32 KB 16 Kw	RW	2K	–	2–3.6V	40 MHz	8 MHz, 31 kHz	–	12	–	–	2	–	–	–	–	–	–	–	2	–	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	BOR	SW◊	1/1	1	–	12	–	–	–	–	$2.63	TQFP (PT)
	PIC18F85J94	R	80	67	PIC18	32 KB 16 Kw	RW	4K	–	2–3.6V	64 MHz	64 MHz	–	24	24	–	3	–	–	–	–	–	✓	✓	7	3	–	–	–	–	4/4	–	–	–	–	–	✓	–	–	–	BOR	–	4/0	2	✓	24	352	–	–	–	$2.65	TQFP (PT)
	PIC18F85K22 XLP	R	80	69	PIC18	32 KB 16 Kw	RW	2K	1K	1.8–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz	–	–	24	–	3	–	–	–	–	–	✓	–	5	3	–	–	–	–	4/4	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	–	24	–	–	–	–	$2.66	TQFP (PT)

Products sorted by pin count followed by pricing.
† Pricing subject to change; please contact your Microchip representative for most current pricing.
◊ Software PLVD implemented via ADC.
* Usable as a General Purpose Timer.
XLP eXtreme Low Power variants available.

8-BIT PIC® MICROCONTROLLERS

	Product	Released (R)/Not Released (NR)	Pins		Core	Memory				Voltage Range	Operating Speed		Intelligent Analog												Waveform Control								Timing and Measurements					Logic and Math			Safety and Monitoring				Comm.			Human Interface		Low Power and System Flexibility			5 ku Pricing†	Packages (Designator)
			Total	I/O		Program	Self-Read/Write	Data RAM (B)	Data EE (B)		Maximum Speed	Internal Oscillator	8-bit ADC	10-bit ADC	12-bit ADC	ADC²	Comparators	DAC (5b/8b/9b/10b)	HC I/O (mA)	Op Amp	PRG/SlopeComp	ZCD	CTMU	PWM (10b/16b)*	CCP (10b PWM)	ECCP (10b PWM)	PSMC (16b PWM)*	CWG/COG	NCO*	DSM	8-/16-bit Timer	HLT	AngTMR	SMT	Temp. Indicator	CLC	Hardware Multiply	MatcACC	CRC/SCAN	WWDT	Resets	PLVD	EUSART/AUSART	I²C/SPI	USB 2.0 Device	mTouch® Channels	LCD Segments	PPS	IDLE/PMD	DOZE		
80-Pin (Cont.)	PIC18F84J90	R	80	66	PIC18	16 KB 8 Kw	RW	1K	–	2–3.6V	40 MHz	8 MHz, 31 kHz	–	12	–	–	2	–	–	–	–	–	–	–	2	–	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	BOR	✓	1/1	1	–	12	192	–	–	–	$2.67	TQFP (PT)
	PIC18F86J10	R	80	66	PIC18	64 KB 32 Kw	RW	2K	–	2–3.6V	40 MHz	31 kHz	–	15	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	–	15	–	–	–	–	$2.74	TQFP (PT)
	PIC18F85J90	R	80	66	PIC18	32 KB 16 Kw	RW	2K	–	2–3.6V	40 MHz	8 MHz, 31 kHz	–	12	–	–	2	–	–	–	–	–	–	–	2	–	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	BOR	✓	1/1	1	–	12	192	–	–	–	$2.77	TQFP (PT), LQFP (PL)
	PIC18F85K90 XLP	R	80	69	PIC18	32 KB 16 Kw	RW	2K	1K	1.8–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz	–	–	24	–	3	–	–	–	–	–	✓	–	5	3	–	–	–	–	4/4	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	–	24	192	–	–	–	$2.80	TQFP (PT)
	PIC18F85J50	R	80	65	PIC18	32 KB 16 Kw	RW	3904	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	12	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	✓	12	–	–	–	–	$2.90	TQFP (PT)
	PIC18F86J11	R	80	66	PIC18	64 KB 32 Kw	RW	3904	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	15	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	–	15	–	–	–	–	$2.90	TQFP (PT)
	PIC18F86J94	R	80	67	PIC18	64 KB 32 Kw	RW	4K	–	2–3.6V	64 MHz	64 MHz	–	24	24	–	3	–	–	–	–	–	–	✓	7	3	–	–	–	–	4/4	–	–	–	–	–	✓	–	–	–	BOR	–	4/0	2	✓	24	352	–	–	–	$2.95	TQFP (PT)
	PIC18F86J93	R	80	67	PIC18	64 KB 32 Kw	RW	3900	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	–	12	–	2	–	–	–	–	–	✓	–	2	–	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	BOR	✓	1/1	1	–	12	192	–	–	–	$2.97	TQFP (PT)
	PIC18F86K22 XLP	R	80	69	PIC18	64 KB 32 Kw	RW	4K	1K	1.8–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz	–	–	24	–	3	–	–	–	–	–	✓	–	7	3	–	–	–	–	6/5	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	–	24	–	–	–	–	$2.97	TQFP (PT)
	PIC18F87J10	R	80	66	PIC18	128 KB 64 Kw	RW	3936	–	2–3.6V	40 MHz	31 kHz	–	15	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	–	15	–	–	–	–	$3.02	TQFP (PT), LQFP (PL)
	PIC18F86K90 XLP	R	80	69	PIC18	64 KB 32 Kw	RW	4K	1K	1.8–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz	–	–	24	–	3	–	–	–	–	–	✓	–	7	3	–	–	–	–	6/5	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	–	24	192	–	–	–	$3.11	TQFP (PT)
	PIC18F86J50	R	80	65	PIC18	64 KB 32 Kw	RW	3904	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	12	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	✓	12	–	–	–	–	$3.15	TQFP (PT)
	PIC18F87J11	R	80	66	PIC18	128 KB 64 Kw	RW	3904	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	15	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	–	15	–	–	–	–	$3.19	TQFP (PT)
	PIC18F87J94	R	80	67	PIC18	128 KB 64 Kw	RW	4K	–	2–3.6V	64 MHz	64 MHz	–	24	24	–	3	–	–	–	–	–	✓	✓	7	3	–	–	–	–	4/4	–	–	–	–	–	✓	–	–	–	BOR	–	4/0	2	✓	24	352	–	–	–	$3.19	TQFP (PT)
	PIC18F87K22 XLP	R	80	69	PIC18	128 KB 64 Kw	RW	4K	1K	1.8–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz	–	–	24	–	3	–	–	–	–	–	✓	–	7	3	–	–	–	–	6/5	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	–	24	–	–	–	–	$3.21	TQFP (PT)
	PIC18F87J93	R	80	67	PIC18	128 KB 64 Kw	RW	3900	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	–	12	–	2	–	–	–	–	–	✓	–	2	–	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	BOR	✓	1/1	1	–	12	192	–	–	–	$3.26	TQFP (PT)
	PIC18F87K90 XLP	R	80	69	PIC18	128 KB 64 Kw	RW	4K	1K	1.8–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz	–	–	24	–	3	–	–	–	–	–	✓	–	7	3	–	–	–	–	6/5	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	–	24	192	–	–	–	$3.35	TQFP (PT)
	PIC18F87J50	R	80	65	PIC18	128 KB 64 Kw	RW	3904	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	12	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	✓	12	–	–	–	–	$3.44	TQFP (PT)
	PIC18F86J60	R	80	55	PIC18	64 KB 32 Kw	RW	3808	–	2–3.6V	42 MHz	31 kHz	–	15	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	1	–	15	–	–	–	–	$3.63	TQFP (PT)
	PIC18F87J60	R	80	55	PIC18	128 KB 64 Kw	RW	3808	–	2–3.6V	42 MHz	32 kHz, 31 kHz	–	15	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	1	–	15	–	–	–	–	$3.92	TQFP (PT)
	PIC18F86J72	R	80	51	PIC18	64 KB 32 Kw	RW	3923	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	–	12	–	2	–	–	–	–	–	✓	–	2	–	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	BOR	✓	1/1	1	–	12	132	–	–	–	$4.12	TQFP (PT)
	PIC18F87J72	R	80	51	PIC18	128 KB 64 Kw	RW	3923	–	2–3.6V	48 MHz	8 MHz, 31 kHz	–	–	12	–	2	–	–	–	–	–	✓	–	2	–	–	–	–	–	1/3	–	–	–	–	–	✓	–	–	–	BOR	✓	1/1	1	–	12	132	–	–	–	$4.35	TQFP (PT)
100-Pin	PIC18F95J94	R	100	85	PIC18	32 KB 16 Kw	RW	4K	–	2–3.6V	64 MHz	64 MHz	–	24	24	–	3	–	–	–	–	–	✓	✓	7	3	–	–	–	–	4/4	–	–	–	–	–	✓	–	–	–	BOR	–	4/0	2	✓	24	480	–	–	–	$2.83	TQFP (PT/PF)
	PIC18F96J94	R	100	85	PIC18	64 KB 32 Kw	RW	4K	–	2–3.6V	64 MHz	64 MHz	–	24	24	–	3	–	–	–	–	–	✓	✓	7	3	–	–	–	–	4/4	–	–	–	–	–	✓	–	–	–	BOR	–	4/0	2	✓	24	480	–	–	–	$3.14	TQFP (PT/PF)
	PIC18F97J94	R	100	85	PIC18	128 KB 64 Kw	RW	4K	–	2–3.6V	64 MHz	64 MHz	–	24	24	–	3	–	–	–	–	–	✓	✓	7	3	–	–	–	–	4/4	–	–	–	–	–	✓	–	–	–	BOR	–	4/0	2	✓	24	480	–	–	–	$3.37	TQFP (PT/PF)
	PIC18F96J60	R	100	70	PIC18	64 KB 32 Kw	RW	3808	–	2–3.6V	42 MHz	31 kHz	–	16	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	–	16	–	–	–	–	$3.84	TQFP (PT)
	PIC18F97J60	R	64–100	70	PIC18	128 KB 64 Kw	RW	3808	–	2–3.6V	42 MHz	31 kHz	–	16	–	–	2	–	–	–	–	–	–	–	2	3	–	–	–	–	2/3	–	–	–	–	–	✓	–	–	–	BOR	✓	2/0	2	–	16	–	–	–	–	$4.13	TQFP (PT), LQFP (PL)

Products sorted by pin count followed by pricing.
† Pricing subject to change; please contact your Microchip representative for most current pricing.
◊ Software PLVD implemented via ADC.
* Usable as a General Purpose Timer.
XLP eXtreme Low Power variants available.

16-BIT PIC® MICROCONTROLLERS (PIC24F)

	Product	Released (R) Not Released (NR)	I/O Pins	Core	Memory				Voltage Range	Operating Speed		Analog Sensing & Measurement				LCD Segments	Graphics Controller	Output Compare/PWM	Input Capture	16-bit Timer[2]	Communication		Hardware Crypto	PMP	RTCC/CRC	PPS	5 ku Pricing†	Monitors	Packages (Designator)
					Program (KB)	Data RAM (B)	EEPROM	DMA #Ch		Maximum MIPS	Internal Oscillator	Charge Time Measurement Unit	ADC	16-bit ADC (diff ch)	Comparators						Digital Communication	USB 2.0 (Peripheral, Host, OTC)						System Mgmt. Features	
14-Pin	PIC24F04KL100 XLP	R	12	PIC24	4	512	AN1095[1]	–	1.8V–3.6V	16	8 MHz, 32 kHz	–	–	–	1	–	–	2	2	2	1 UART, 1 SPI/I²C (MSSP)	–	–	–	–	–	$1.06	BOR, HLVD, POR, PWRT, WDT, XLP	PDIP (P), TSSOP (ST)
	PIC24F04KA200 XLP	R	12	PIC24	4	512	AN1095[1]	–	1.8V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 7 ch 10-bit	–	2	–	–	1	1	3	1 UART, 1 SPI, 1 I²C	–	–	–	–	–	$1.16	BOR, POR, WDT, Deep Sleep, XLP	SPDIP (SP), TSSOP (ST)
	PIC24F08KL200 XLP	R	12	PIC24	8	512	AN1095[1]	–	1.8V–3.6V	16	8 MHz, 32 kHz	–	1 ADC, 7 ch 10-bit	–	1	–	–	2	2	2	1 UART, 1 SPI/I²C (MSSP)	–	–	–	–	–	$1.25	BOR, HLVD, POR, PWRT, WDT, XLP	PDIP (P), TSSOP (ST)
20-Pin	PIC24F08KM101 XLP	R	18	PIC24	8	1024	512	–	1.8V–5.5V	16	8 MHz, 32kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	–	1	–	–	5	5	11	1 UART, 1 SPI/I²C (MSSP)	–	–	–	✓	–	$1.08	BOR, HLVD, POR,WDT, OST, XLP	PDIP (P), SOIC (SO)
	PIC24F04KL101 XLP	R	17	PIC24	4	512	AN1095[1]	–	1.8V–3.6V	16	8 MHz, 32 kHz	–	–	–	1	–	–	2	2	2	1 UART, 1 SPI/I²C (MSSP)	–	–	–	–	–	$1.15	BOR, HLVD, POR, PWRT, WDT, XLP	PDIP (P), SOIC (SO), SSOP (SS), 5 × 5 QFN (MQ)
	PIC24F04KA201 XLP	R	18	PIC24	4	512	AN1095[1]	–	1.8V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 9 ch 10-bit	–	2	–	–	1	1	3	1 UART, 1 SPI, 1 I²C	–	–	–	–	–	$1.25	BOR, POR, WDT, Deep Sleep, XLP	PDIP (P), SOIC (SO), SSOP (SS), QFN (MQL)
	PIC24F08KL201 XLP	R	17	PIC24	8	512	AN1095[1]	–	1.8V–3.6V	16	8 MHz, 32 kHz	–	1 ADC, 12 ch 10-bit	–	1	–	–	2	2	2	1 UART, 1 SPI/I²C (MSSP)	–	–	–	–	–	$1.30	BOR, HLVD, POR, PWRT, WDT, XLP	PDIP (P), SOIC (SO), SSOP (SS), 5 × 5 QFN (MQ)
	PIC24F08KL301 XLP	R	18	PIC24	8	1024	256	–	1.8V–3.6V	16	8 MHz, 32 kHz	–	–	–	2	–	–	6	3	2	2 UART, 2 SPI/I²C (MSSP)	–	–	–	–	–	$1.27	BOR, HLVD, POR, PWRT, WDT, XLP	PDIP (P), SOIC (SO), SSOP (SS), 5 × 5 QFN (MQ)
	PIC24F08KL401 XLP	R	18	PIC24	8	1024	512	–	1.8V–3.6V	16	8 MHz, 32 kHz	–	1 ADC, 12 ch 10-bit	–	2	–	–	6	3	2	2 UART, 2 SPI/I²C (MSSP)	–	–	–	–	–	$1.36	BOR, HLVD, POR, PWRT, WDT, XLP	PDIP (P), SOIC (SO), SSOP (SS), 5 × 5 QFN (MQ)
	PIC24F16KL401 XLP	R	18	PIC24	16	1024	512	–	1.8V–3.6V	16	8 MHz, 32 kHz	–	1 ADC, 12 ch 10-bit	–	2	–	–	6	3	2	2 UART, 2 SPI/I²C (MSSP)	–	–	–	–	–	$1.43	BOR, HLVD, POR, PWRT, WDT, XLP	PDIP (P), SOIC (SO), SSOP (SS), 5 × 5 QFN (MQ)
	PIC24F08KA101 XLP	R	18	PIC24	8	1536	512	–	1.8V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 9 ch 10-bit	–	2	–	–	1	1	3	2 UART, 1 SPI, 1 I²C	–	–	–	✓	–	$1.44	BOR, POR, WDT, Deep Sleep, XLP	PDIP (P), SOIC (SO), SSOP (SS), QFN (MQL)
	PIC24F16KA101 XLP	R	18	PIC24	16	1536	512	–	1.8V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 9 ch 10-bit	–	2	–	–	1	1	3	2 UART, 1 SPI, 1 I²C	–	–	–	✓	–	$1.51	BOR, POR, WDT, Deep Sleep, XLP	PDIP (P), SOIC (SO), SSOP (SS), QFN (MQL)
	PIC24FJ16MC101	R	15	PIC24	16	1024	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 kHz	✓	1 ADC, 4 ch 10-bit	–	3	–	–	8	3	3	1 UART, 1 SPI, 1 I²C	–	–	–	✓	✓	$1.57	BOR, POR, WDT	PDIP (P), SOIC (SO), SSOP (SS), QFN (MQL)
	PIC24FJ32MC101	R	15	PIC24	32	2048	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-bit	–	3	–	–	8	3	5	1 UART, 1 SPI, 1 I²C	–	–	–	✓	✓	$1.68	BOR, POR, WDT	PDIP (P), SOIC (SO), SSOP (SS), QFN (MQL)
	PIC24F16KA301 XLP	R	18	PIC24	16	2048	512	–	1.8V–5.5V	16	8 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	–	3	–	–	3	3	5	2 UART, 2 SPI, 2 I²C	–	–	–	✓	–	$1.86	PWRT, HLVD, POR, OST, WDT	SPDIP (SP), SSOP (SS), SOIC (SO)
	PIC24F32KA301 XLP	R	18	PIC24	32	2048	512	–	1.8V–5.5V	16	8 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	–	3	–	–	3	3	5	2 UART, 2 SPI, 2 I²C	–	–	–	✓	–	$2.00	PWRT, HLVD, POR, OST, WDT	SPDIP (SP), SSOP (SS), SOIC (SO)
28-Pin	PIC24F08KL302 XLP	R	24	PIC24	8	1024	256	–	1.8V–3.6V	16	8 MHz, 32 kHz	–	–	–	2	–	–	6	3	2	2 UART, 2 SPI/I²C (MSSP)	–	–	–	–	–	$1.32	BOR, HLVD, POR, PWRT, WDT, XLP	SPDIP (SP), SOIC (SO), SSOP (SS), 5 × 5 QFN (MQ), 6 × 6 QFN (ML)
	PIC24F08KL402 XLP	R	24	PIC24	8	1024	512	–	1.8V–3.6V	16	8 MHz, 32 kHz	–	1 ADC, 12 ch 10-bit	–	2	–	–	6	3	2	2 UART, 2 SPI/I²C (MSSP)	–	–	–	–	–	$1.40	BOR, HLVD, POR, PWRT, WDT, XLP	SPDIP (SP), SOIC (SO), SSOP (SS), 5 × 5 QFN (MQ), 6 × 6 QFN (ML)
	PIC24F16KL402 XLP	R	24	PIC24	16	1024	512	–	1.8V–3.6V	16	8 MHz, 32 kHz	–	1 ADC, 12 ch 10-bit	–	2	–	–	6	3	2	2 UART, 2 SPI/I²C (MSSP)	–	–	–	–	–	$1.47	BOR, HLVD, POR, PWRT, WDT, XLP	SPDIP (SP), SOIC (SO), SSOP (SS), 5 × 5 QFN (MQ), 6 × 6 QFN (ML)
	PIC24F08KA102 XLP	R	24	PIC24	8	1536	512	–	1.8V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 9 ch 10-bit	–	2	–	–	1	1	3	2 UART, 1 SPI, 1 I²C	–	–	–	✓	–	$1.51	BOR, POR, WDT, Deep Sleep, XLP	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC24F16KA102 XLP	R	24	PIC24	16	1536	512	–	1.8V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 9 ch 10-bit	–	2	–	–	1	1	3	2 UART, 1 SPI, 1 I²C	–	–	–	✓	–	$1.58	BOR, POR, WDT, Deep Sleep, XLP	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC24FJ16MC102	R	21	PIC24	16	2048	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 kHz	✓	1 ADC, 8 ch 10-bit	–	3	–	–	8	3	5	1 UART, 1 SPI, 1 I²C	–	–	–	✓	✓	$1.68	BOR, POR, WDT	PDIP (P), SOIC (SO), SSOP (SS), QFN (MQL)
	PIC24FJ16GA002	R	21	PIC24	16	4096	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	–	1 ADC, 10 ch 10-bit	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	–	✓	✓	✓	$1.74	BOR, LVD, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC24FJ32MC102	R	21	PIC24	32	2048	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 kHz	✓	1 ADC, 8 ch 10-bit	–	3	–	–	8	3	5	1 UART, 1 SPI, 1 I²C	–	–	–	✓	✓	$1.76	BOR, POR, WDT	PDIP (P), SOIC (SO), SSOP (SS), QFN (MQL)
	PIC24F08KM102 XLP	R	24	PIC24	8	1024	512	–	1.8V–5.5V	16	8 MHz, 32 kHz	✓	1 ADC, 19 ch 10-/12-bit, 1100/500 ksps	–	1	–	–	5	5	11	1 UART, 1 SPI/I²C (MSSP)	–	–	–	✓	–	$1.75	BOR, HLVD, POR,WDT, OST, XLP	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MQL)
	PIC24F16KM102 XLP	R	24	PIC24	16	1024	512	–	1.8V–5.5V	16	8 MHz, 32 kHz	✓	1 ADC, 19 ch 10-/12-bit, 1100/500 ksps	–	1	–	–	5	5	11	1 UART, 1 SPI/I²C (MSSP)	–	–	–	✓	–	$1.82	BOR, HLVD, POR,WDT, OST, XLP	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MQL)
	PIC24F08KM202 XLP	R	24	PIC24	8	2048	512	–	1.8V–5.5V	16	8 MHz, 32 kHz	✓	1 ADC, 19 ch 10-/12-bit, 1100/500 ksps	–	3	–	–	5	5	11	2 UART, 2 SPI/I²C (MSSP)	–	–	–	✓	–	$1.82	BOR, HLVD, POR,WDT, OST, XLP	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MQL)
	PIC24F16KM202 XLP	R	24	PIC24	16	2048	512	–	1.8V–5.5V	16	8 MHz, 32 kHz	✓	1 ADC, 19 ch 10-/12-bit, 1100/500 ksps	–	3	–	–	5	5	11	2 UART, 2 SPI/I²C (MSSP)	–	–	–	✓	–	$1.89	BOR, HLVD, POR,WDT, OST, XLP	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MQL)
	PIC24FJ32GA002	R	21	PIC24	32	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	–	1 ADC, 10 ch 10-bit	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	–	✓	✓	✓	$2.06	BOR, LVD, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)

* Parts available with High Temperature Options (150°C).

Note 1: See Application Note "AN1095: Emulating Data EEPROM".

2: Two 16-bit timers can be concatenated to form a 32-bit timer.

Products sorted by pin count followed by pricing.

† Pricing subject to change; please contact your Microchip representative for most current pricing.

◊ Software PLVD implemented via ADC.

* Usable as a General Purpose Timer.

XLP eXtreme Low Power variants available.

16-BIT PIC® MICROCONTROLLERS (PIC24F)

	Product	Released (R) Not Released (NR)	I/O Pins	Core	Memory				Voltage Range	Operating Speed		Analog Sensing & Measurement			LCD Segments	Graphics Controller	Output Compare/PWM	Input Capture	16-bit Timer[2]	Communication		Hardware Crypto	PMP	RTCC/CRC	PPS	5 ku Pricing†	Monitors	Packages (Designator)
					Program (KB)	Data RAM (B)	EEPROM	DMA #Ch		Maximum MIPS	Internal Oscillator	Charge Time Measurement Unit	ADC	16-bit ADC (diff ch)	Comparators						Digital Communication	USB 2.0 (Peripheral, Host, OTC)						System Mgmt. Features	
28-Pin (Cont.)	PIC24F16KA302 XLP	R	24	PIC24	16	2048	512	–	1.8V–5.5V	16	8 MHz, 32 kHz	✓	1 ADC, 10 ch 10-/12-bit, 1100/500 ksps	–	3	–	–	3	3	5	2 UART, 2 SPI, 2 I²C	–	–	–	✓	–	$2.06	PWRT, HLVD, POR, OST, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC24F32KA302 XLP	R	24	PIC24	32	2048	512	–	1.8V–5.5V	16	8 MHz, 32 kHz	✓	1 ADC, 10 ch 10-/12-bit, 1100/500 ksps	–	3	–	–	3	3	5	2 UART, 2 SPI, 2 I²C	–	–	–	✓	–	$2.20	PWRT, HLVD, POR, OST, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC24FJ32GA102 XLP	R	21	PIC24	32	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 10 ch 10-bit	–	3	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	–	✓	✓	✓	$2.23	BOR, LVD, POR, WDT, Deep Sleep, XLP	SPDIP (SP), SOIC (SO), QFN (ML)
	PIC24FJ32GB002 XLP	R	19	PIC24	32	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 9 ch 10-bit	–	3	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	✓	–	✓	✓	✓	$2.44	BOR, LVD, POR, WDT, Deep Sleep, XLP	SPDIP (SP), SOIC (SO), QFN (ML)
	PIC24FJ64GA002	R	21	PIC24	64	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	–	1 ADC, 10 ch 10-bit	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	–	✓	✓	✓	$2.48	BOR, LVD, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC24FJ64GA202 XLP	R	21	PIC24	64	8192	AN1095[1]	6	2.0V-3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 10 ch 10-/12-bit, 1100/500 ksps	–	3	–	–	6	6	5	4 UART, 3 SPI, 2 I²C	–	✓	–	✓	✓	$2.51	BOR, HLVD, POR,WDT, OST, XLP	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	PIC24FJ64GA102 XLP	R	21	PIC24	64	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 10 ch 10-bit	–	3	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	–	✓	✓	✓	$2.65	BOR, LVD, POR, WDT, Deep Sleep, XLP	SPDIP (SP), SOIC (SO), QFN (ML)
	PIC24FJ128GA202 XLP	R	21	PIC24	128	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 10 ch 10-/12-bit, 1100/500 ksps	–	3	–	–	6	6	5	4 UART, 3 SPI, 2 I²C	–	✓	–	✓	✓	$2.76	BOR, HLVD, POR,WDT, OST, XLP	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	PIC24FJ64GB202 XLP	R	20	PIC24	64	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	–	3	–	–	6	6	5	4 UART, 3 SPI, 2 I²C	✓	✓	–	✓	✓	$2.77	BOR, HLVD, POR,WDT, OST, XLP	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	PIC24FJ64GB002 XLP	R	19	PIC24	64	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 9 ch 10-bit	–	3	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	✓	–	✓	✓	✓	$2.86	BOR, LVD, POR, WDT, Deep Sleep, XLP	SPDIP (SP), SOIC (SO), QFN (ML)
	PIC24FJ128GB202 XLP	R	20	PIC24	128	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	–	3	–	–	6	6	5	4 UART, 3 SPI, 2 I²C	✓	✓	–	✓	✓	$2.97	BOR, HLVD, POR, WDT, OST, XLP	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
44-Pin	PIC24FJ16GA004	R	35	PIC24	16	4096	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	–	1 ADC, 13 ch 10-bit	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	–	✓	✓	✓	$1.93	BOR, LVD, POR, WDT	TQFP (PT), QFN (ML)
	PIC24FJ32MC104	R	35	PIC24	32	2048	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 kHz	✓	1 ADC, 14 ch 10-bit	–	3	–	–	8	3	5	1 UART, 1 SPI, 1 I²C	–	–	–	✓	✓	$2.02	BOR POR, WDT	TQFP (PT), TLA, QFN (ML)
	PIC24F16KM104 XLP	R	38	PIC24	16	1024	512	–	1.8V–5.5V	16	8 MHz, 32 kHz	✓	1 ADC, 22 ch 10-/12-bit, 1100/500 ksps	–	1	–	–	5	5	11	1 UART, 1 SPI/I²C (MSSP)	–	–	–	✓	–	$2.06	BOR, HLVD, POR,WDT, OST, XLP	TQFP (PT), QFN (ML), UQFN (MV)
	PIC24F08KM204 XLP	R	38	PIC24	8	2048	512	–	1.8V–5.5V	16	8 MHz, 32 kHz	✓	1 ADC, 22 ch 10-/12-bit, 1100/500 ksps	–	3	–	–	5	5	11	2 UART, 2 SPI/I²C (MSSP)	–	–	–	✓	–	$2.06	BOR, HLVD, POR,WDT, OST, XLP	TQFP (PT), QFN (ML), UQFN (MV)
	PIC24F16KM204 XLP	R	38	PIC24	16	2048	512	–	1.8V–5.5V	16	8 MHz, 32 kHz	✓	1 ADC, 22 ch 10-/12-bit, 1100/500 ksps	–	3	–	–	5	5	11	2 UART, 2 SPI/I²C (MSSP)	–	–	–	✓	–	$2.13	BOR, HLVD, POR,WDT, OST, XLP	TQFP (PT), QFN (ML), UQFN (MV)
	PIC24FJ32GA004	R	35	PIC24	32	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	–	1 ADC, 13 ch 10-bit	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	–	✓	✓	✓	$2.30	BOR, LVD, POR, WDT	TQFP (PT), QFN (ML)
	PIC24F16KA304 XLP	R	38	PIC24	16	2048	512	–	1.8V–5.5V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	–	3	–	–	3	3	5	2 UART, 2 SPI, 2 I²C	–	–	–	✓	–	$2.30	PWRT, HLVD, POR, OST, WDT	TQFP (PT), QFN (ML), UQFN (MV)
	PIC24FJ32GA104 XLP	R	35	PIC24	32	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 13 ch 10-bit	–	3	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	–	✓	✓	✓	$2.44	BOR, LVD, POR, WDT, Deep Sleep, XLP	TQFP (PT), QFN (ML)
	PIC24F32KA304 XLP	R	38	PIC24	32	2048	512	–	1.8V–5.5V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	–	3	–	–	3	3	5	2 UART, 2 SPI, 2 I²C	–	–	–	✓	–	$2.44	PWRT, HLVD, POR, OST, WDT	TQFP (PT), QFN (ML), UQFN (MV)
	PIC24FJ32GB004 XLP	R	33	PIC24	32	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 13 ch 10-bit	–	3	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	✓	–	✓	✓	✓	$2.65	BOR, LVD, POR, WDT, Deep Sleep, XLP	TQFP (PT), QFN (ML)
	PIC24FJ64GA004	R	35	PIC24	64	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	–	1 ADC, 13 ch 10-bit	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	–	✓	✓	✓	$2.72	BOR, LVD, POR, WDT	TQFP (PT), QFN (ML)
	PIC24FJ64GA204 XLP	R	35	PIC24	64	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 13 ch 10-/12-bit, 1100/500 ksps	–	3	–	–	6	6	5	4 UART, 3 SPI/ 2 I²C	–	✓	✓	✓	✓	$2.72	BOR, HLVD, POR, WDT, OST, XLP	TQFP (PT), QFN (ML)
	PIC24FJ64GA104 XLP	R	35	PIC24	64	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 13 ch 10-bit	–	3	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	–	✓	✓	✓	$2.86	BOR, LVD, POR, WDT, Deep Sleep, XLP	TQFP (PT), QFN (ML)
	PIC24FJ64GB204 XLP	R	34	PIC24	64	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 12 ch 10-/12-bit, 1100/500 ksps	–	3	–	–	6	6	5	4 UART, 3 SPI/ 2 I²C	✓	✓	✓	✓	✓	$2.93	BOR, HLVD, POR, WDT, OST, XLP	TQFP (PT), QFN (ML)
	PIC24FJ128GA204 XLP	R	35	PIC24	128	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 13 ch 10-/12-bit, 1100/500 ksps	–	3	–	–	6	6	5	4 UART, 3 SPI/ 2 I²C	–	✓	✓	✓	✓	$2.97	BOR, HLVD, POR, WDT, OST, XLP	TQFP (PT), QFN (ML)
	PIC24FJ64GB004 XLP	R	33	PIC24	64	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 13 ch 10-bit	–	3	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	✓	–	✓	✓	✓	$3.07	BOR, LVD, POR, WDT, Deep Sleep, XLP	TQFP (PT), QFN (ML)
	PIC24FJ128GB204 XLP	R	34	PIC24	128	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 12 ch 10-/12-bit, 1100/500 ksps	–	3	–	–	6	6	5	4 UART, 3 SPI/ 2 I²C	✓	✓	✓	✓	✓	$3.18	BOR, HLVD, POR, WDT, OST, XLP	TQFP (PT), QFN (ML)

* Parts available with High Temperature Options (150°C).

Note 1: See Application Note "AN1095: Emulating Data EEPROM".

2: Two 16-bit timers can be concatenated to form a 32-bit timer.

Products sorted by pin count followed by pricing.

† Pricing subject to change; please contact your Microchip representative for most current pricing.

◊ Software PLVD implemented via ADC.

* Integrated Temperature Indicator: Reference Application Note AN1333 for implementation.

XLP eXtreme Low Power variants available.

16-BIT PIC® MICROCONTROLLERS (PIC24F)

	Product	Released (R) Not Released (NR)	I/O Pins	Core	Memory: Program (KB)	Memory: Data RAM (B)	Memory: EEPROM	Memory: DMA #Ch	Voltage Range	Operating Speed: Maximum MIPS	Operating Speed: Internal Oscillator	Analog Sensing & Measurement: Charge Time Measurement Unit	Analog Sensing & Measurement: ADC	Analog Sensing & Measurement: 16-bit ADC (diff ch)	Analog Sensing & Measurement: Comparators	LCD Segments	Graphics Controller	Output Compare/PWM	Input Capture	16-bit Timer[2]	Communication: Digital Communication	Communication: USB 2.0 (Peripheral, Host, OTC)	Hardware Crypto	PMP	RTCC/CRC	PPS	5 ku Pricing†	Monitors: System Mgmt. Features	Packages (Designator)
64-Pin	PIC24FJ64GA306 XLP	R	53	PIC24	64	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	–	3	240	–	7	7	5	4 UART, 2 SPI, 2 I²C	–	–	✓	✓	✓	$2.77	BOR, LVD, POR, WDT, XLP, Deep Sleep	TQFP (PT), QFN (MR)
	PIC24FJ128GA606	R	53	PIC24	128	32768	AN1095[1]	8	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12 bit, 500/200 ksps	–	3	–	–	6	6	5	6 UART, 3 SPI, 3 I²C	–	–	EPMP	✓	✓	$2.80	BOR, LVD, POR, WDT,	TQFP (PT), QFN (ML)
	PIC24FJ256GA606	R	53	PIC24	256	32768	AN1095[1]	8	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12 bit, 500/200 ksps	–	3	–	–	6	6	5	6 UART, 3 SPI, 3 I²C	–	–	EPMP	✓	✓	$2.88	BOR, LVD, POR, WDT,	TQFP (PT), QFN (ML)
	PIC24FJ128GB606	R	53	PIC24	128	32768	AN1095[1]	8	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12 bit, 500/200 ksps	–	3	–	–	6	6	5	6 UART, 3 SPI, 3 I²C	1	–	EPMP	✓	✓	$2.94	BOR, LVD, POR, WDT,	TQFP (PT), QFN (ML)
	PIC24FJ512GA606	R	53	PIC24	512	32768	AN1095[1]	8	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12 bit, 500/200 ksps	–	3	–	–	6	6	5	6 UART, 3 SPI, 3 I²C	–	–	EPMP	✓	✓	$2.98	BOR, LVD, POR, WDT,	TQFP (PT), QFN (ML)
	PIC24FJ128GA306 XLP	R	53	PIC24	128	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	–	3	240	–	7	7	5	4 UART, 2 SPI, 2 I²C	–	–	✓	✓	✓	$3.00	BOR, LVD, POR, WDT, XLP, Deep Sleep	TQFP (PT), QFN (MR)
	PIC24FJ64GA006	R	53	PIC24	64	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	–	1 ADC, 16 ch 10-bit	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	–	✓	✓	–	$3.05	BOR, POR, WDT	TQFP (PT)
	PIC24FJ256GB606	R	53	PIC24	256	32768	AN1095[1]	8	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12 bit, 500/200 ksps	–	3	–	–	6	6	5	6 UART, 3 SPI, 3 I²C	1	–	EPMP	✓	✓	$3.02	BOR, LVD, POR, WDT,	TQFP (PT), QFN (ML)
	PIC24FJ1024GA606	R	53	PIC24	1024	32768	AN1095[1]	8	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12 bit, 500/200 ksps	–	3	–	–	6	6	5	6 UART, 3 SPI, 3 I²C	–	–	EPMP	✓	✓	$3.11	BOR, LVD, POR, WDT,	TQFP (PT), QFN (ML)
	PIC24FJ512GB606	R	53	PIC24	512	32768	AN1095[1]	8	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12 bit, 500/200 ksps	–	3	–	–	6	6	5	6 UART, 3 SPI, 3 I²C	1	–	EPMP	✓	✓	$3.12	BOR, LVD, POR, WDT,	TQFP (PT), QFN (ML)
	PIC24FJ64GA406 XLP	R	53	PIC24	64	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 500/200 ksps	–	3	248	–	–	6	31	6 UART, 4 SPI, 3 I²C	–	✓	✓	✓	✓	$3.14	BOR, LVD, POR, WDT, XLP, VBAT	TQFP (PT), QFN (ML)
	PIC24FJ1024GB606	R	53	PIC24	1024	32768	AN1095[1]	8	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12 bit, 500/200 ksps	–	3	–	–	6	6	5	6 UART, 3 SPI, 3 I²C	1	–	EPMP	✓	✓	$3.25	BOR, LVD, POR, WDT,	TQFP (PT), QFN (ML)
	PIC24FJ128GA406 XLP	R	53	PIC24	128	16384	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 500/200 ksps	–	3	248	–	–	6	31	6 UART, 4 SPI, 3 I²C	–	✓	✓	✓	✓	$3.28	BOR, LVD, POR, WDT, XLP, VBAT	TQFP (PT), QFN (ML)
	PIC24FJ64GA106	R	53	PIC24	64	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	–	–	✓	✓	✓	$3.32	BOR, LVD, POR, WDT	TQFP (PT), QFN (MR)
	PIC24FJ64GB406 XLP	R	52	PIC24	64	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 500/200 ksps	–	3	248	–	–	6	31	6 UART, 4 SPI, 3 I²C	✓	✓	✓	✓	✓	$3.35	BOR, LVD, POR, WDT, XLP, VBAT	TQFP (PT), QFN (ML)
	PIC24FJ128GA006	R	53	PIC24	128	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	–	1 ADC, 16 ch 10-bit	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	–	✓	✓	–	$3.35	BOR, POR, WDT	TQFP (PT)
	PIC24FJ256GA406 XLP	R	53	PIC24	256	16384	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 500/200 ksps	–	3	248	–	–	6	31	6 UART, 4 SPI, 3 I²C	–	✓	✓	✓	✓	$3.44	BOR, LVD, POR, WDT, XLP, VBAT	TQFP (PT), QFN (ML)
	PIC24FJ128GB406 XLP	R	52	PIC24	128	16384	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 500/200 ksps	–	3	248	–	–	6	31	6 UART, 4 SPI, 3 I²C	✓	✓	✓	✓	✓	$3.49	BOR, LVD, POR, WDT, XLP, VBAT	TQFP (PT), QFN (ML)
	PIC24FJ128GA106	R	53	PIC24	128	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	–	–	✓	✓	✓	$3.56	BOR, LVD, POR, WDT	TQFP (PT), QFN (MR)
	PIC24FJ64GC006 XLP	R	48	PIC24	64	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 30 ch 10-/12-bit, 1100/500 ksps	2	3	248	–	9	9	5	4 UART, 2 SPI, 2 I²C	✓	–	✓	✓	✓	$3.63	BOR, HLVD, POR, WDT, OST, XLP, VBAT	QFN (MR), TQFP (PT)
	PIC24FJ64GB106	R	52	PIC24	64	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	✓	✓	✓	$3.64	BOR, LVD, POR, WDT	TQFP (PT), QFN (MR)
	PIC24FJ256GB406 XLP	R	52	PIC24	256	16384	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 500/200 ksps	–	3	248	–	–	6	31	6 UART, 4 SPI, 3 I²C	✓	✓	✓	✓	✓	$3.65	BOR, LVD, POR, WDT, XLP, VBAT	TQFP (PT), QFN (ML)
	PIC24FJ128GC006 XLP	R	48	PIC24	128	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 30 ch 10-/12-bit, 1100/500 ksps	2	3	248	–	9	9	5	4 UART, 2 SPI, 2 I²C	✓	–	✓	✓	✓	$3.85	BOR, HLVD, POR, WDT, OST, XLP, VBAT	QFN (MR), TQFP (PT)
	PIC24FJ128GB106	R	52	PIC24	128	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	✓	✓	✓	$3.93	BOR, LVD, POR, WDT	TQFP (PT), QFN (MR)
	PIC24FJ256GA106	R	53	PIC24	256	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	–	–	✓	✓	✓	$3.98	BOR, LVD, POR, WDT	TQFP (PT), QFN (MR)
	PIC24FJ128GB206	R	52	PIC24	128	98304	AN1095[1]	–	2.2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	✓	✓	✓	$4.30	BOR, LVD, POR, WDT	TQFP (PT), QFN (MR)
	PIC24FJ128DA106	R	52	PIC24	128	24576	AN1095[1]	–	2.2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	✓	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	–	✓	✓	$4.34	BOR, LVD, POR, WDT	TQFP (PT), QFN (MR)
	PIC24FJ256GB106	R	52	PIC24	256	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	✓	✓	✓	$4.35	BOR, LVD, POR, WDT	TQFP (PT), QFN (MR)

* Parts available with High Temperature Options (150°C).

Note 1: See Application Note "AN1095: Emulating Data EEPROM".

2: Two 16-bit timers can be concatenated to form a 32-bit timer.

Products sorted by pin count followed by pricing.

† Pricing subject to change; please contact your Microchip representative for most current pricing.

16-BIT PIC® MICROCONTROLLERS (PIC24F)

	Product	Released (R) Not Released (NR)	I/O Pins	Core	Memory				Voltage Range	Operating Speed		Analog Sensing & Measurement				LCD Segments	Graphics Controller	Output Compare/PWM	Input Capture	16-bit Timer[2]	Communication		Hardware Crypto	PMP	RTCC/CRC	PPS	5 ku Pricing†	Monitors	Packages (Designator)
					Program (KB)	Data RAM (B)	EEPROM	DMA #Ch		Maximum MIPS	Internal Oscillator	Charge Time Measurement Unit	ADC	16-bit ADC (diff ch)	Comparators						Digital Communication	USB 2.0 (Peripheral, Host, OTC)						System Mgmt. Features	
64-Pin (Cont.)	PIC24FJ256GB206	R	52	PIC24	256	98304	AN1095[1]	–	2.2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	✓	✓	✓	$4.65	BOR, LVD, POR, WDT	TQFP (PT), QFN (MR)
	PIC24FJ256DA106	R	52	PIC24	256	24576	AN1095[1]	–	2.2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	✓	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	–	✓	✓	$4.69	BOR, LVD, POR, WDT	TQFP (PT), QFN (MR)
	PIC24FJ128DA206	R	52	PIC24	128	98304	AN1095[1]	–	2.2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	✓	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	–	✓	✓	$4.76	BOR, LVD, POR, WDT	TQFP (PT), QFN (MR)
	PIC24FJ256DA206	R	52	PIC24	256	98304	AN1095[1]	–	2.2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	✓	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	–	✓	✓	$5.11	BOR, LVD, POR, WDT	TQFP (PT), QFN (MR)
80-Pin	PIC24FJ64GA308 XLP	R	69	PIC24	64	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	–	3	368	–	7	7	5	4 UART, 2 SPI, 2 I²C	–	–	✓	✓	✓	$2.98	BOR, LVD, POR, WDT, XLP, Deep Sleep	TQFP (PT)
	PIC24FJ128GA308 XLP	R	69	PIC24	128	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	–	3	368	–	7	7	5	4 UART, 2 SPI, 2 I²C	–	–	✓	✓	✓	$3.23	BOR, LVD, POR, WDT, XLP, Deep Sleep	TQFP (PT)
	PIC24FJ64GA008	R	69	PIC24	64	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	–	1 ADC, 16 ch 10-bit	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	–	✓	✓	–	$3.30	BOR, POR, WDT	TQFP (PT)
	PIC24FJ64GA108	R	69	PIC24	64	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	–	–	✓	✓	✓	$3.58	BOR, LVD, POR, WDT	TQFP (PT)
	PIC24FJ128GA008	R	69	PIC24	128	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	–	1 ADC, 16 ch 10-bit	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	–	✓	✓	–	$3.60	BOR, POR, WDT	TQFP (PT)
	PIC24FJ128GA108	R	69	PIC24	128	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	–	–	✓	✓	✓	$3.82	BOR, LVD, POR, WDT	TQFP (PT)
	PIC24FJ64GB108	R	68	PIC24	64	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	✓	✓	✓	$3.91	BOR, LVD, POR, WDT	TQFP (PT)
	PIC24FJ128GB108	R	68	PIC24	128	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	✓	✓	✓	$4.20	BOR, LVD, POR, WDT	TQFP (PT)
	PIC24FJ256GA108	R	69	PIC24	256	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	–	–	✓	✓	✓	$4.24	BOR, LVD, POR, WDT	TQFP (PT)
	PIC24FJ256GB108	R	68	PIC24	256	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	✓	✓	✓	$4.62	BOR, LVD, POR, WDT	TQFP (PT)
100-Pin	PIC24FJ128GA610	R	85	PIC24	128	32768	AN1095[1]	8	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12 bit, 500/200 ksps	–	3	–	–	6	6	5	6 UART, 3 SPI, 3 I²C	–	–	EPMP	✓	✓	$2.97	BOR, LVD, POR, WDT	TQFP (PT), TFBGA (BG)
	PIC24FJ256GA610	R	85	PIC24	256	32768	AN1095[1]	8	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12 bit, 500/200 ksps	–	3	–	–	6	6	5	6 UART, 3 SPI, 3 I²C	–	–	EPMP	✓	✓	$3.05	BOR, LVD, POR, WDT	TQFP (PT), TFBGA (BG)
	PIC24FJ128GB610	R	85	PIC24	128	32768	AN1095[1]	8	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12 bit, 500/200 ksps	–	3	–	–	6	6	5	6 UART, 3 SPI, 3 I²C	1	–	EPMP	✓	✓	$3.11	BOR, LVD, POR, WDT	TQFP (PT), TFBGA (BG)
	PIC24FJ512GA610	R	85	PIC24	512	32768	AN1095[1]	8	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12 bit, 500/200 ksps	–	3	–	–	6	6	5	6 UART, 3 SPI, 3 I²C	–	–	EPMP	✓	✓	$3.16	BOR, LVD, POR, WDT	TQFP (PT), TFBGA (BG)
	PIC24FJ64GA310 XLP	R	85	PIC24	64	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12-bit, 1100/500 ksps	–	3	480	–	7	7	5	4 UART, 2 SPI, 2 I²C	–	–	✓	✓	✓	$3.16	BOR, LVD, POR, WDT, Deep Sleep	TQFP (PT), BGA121 (BG)
	PIC24FJ256GB610	R	85	PIC24	256	32768	AN1095[1]	8	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12 bit, 500/200 ksps	–	3	–	–	6	6	5	6 UART, 3 SPI, 3 I²C	1	–	EPMP	✓	✓	$3.19	BOR, LVD, POR, WDT	TQFP (PT), TFBGA (BG)
	PIC24FJ1024GA610	R	85	PIC24	1024	32768	AN1095[1]	8	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12 bit, 500/200 ksps	–	3	–	–	6	6	5	6 UART, 3 SPI, 3 I²C	–	–	EPMP	✓	✓	$3.28	BOR, LVD, POR, WDT	TQFP (PT), TFBGA (BG)
	PIC24FJ512GB610	R	85	PIC24	512	32768	AN1095[1]	8	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12 bit, 500/200 ksps	–	3	–	–	6	6	5	6 UART, 3 SPI, 3 I²C	1	–	EPMP	✓	✓	$3.30	BOR, LVD, POR, WDT	TQFP (PT), TFBGA (BG)
	PIC24FJ1024GB610	R	85	PIC24	1024	32768	AN1095[1]	8	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12 bit, 500/200 ksps	–	3	–	–	6	6	5	6 UART, 3 SPI, 3 I²C	1	–	EPMP	✓	✓	$3.42	BOR, LVD, POR, WDT	TQFP (PT), TFBGA (BG)
	PIC24FJ128GA310 XLP	R	85	PIC24	128	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12-bit, 1100/500 ksps	–	3	480	–	7	7	5	4 UART, 2 SPI, 2 I²C	–	–	✓	✓	✓	$3.42	BOR, LVD, POR, WDT, Deep Sleep	TQFP (PT), BGA121 (BG)
	PIC24FJ64GA410 XLP	R	85	PIC24	64	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12-bit, 500/200 ksps	–	3	480	–	–	6	31	6 UART, 4 SPI, 3 I²C	–	✓	✓	✓	✓	$3.51	BOR, LVD, POR, WDT, XLP, V_{BAT}	TQFP (PT)
	PIC24FJ64GA010	R	85	PIC24	64	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	–	1 ADC, 16 ch 10-bit	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	–	✓	✓	–	$3.51	BOR, POR, WDT	TQFP (PT)

* Parts available with High Temperature Options (150°C).

Note 1: See Application Note "AN1095: Emulating Data EEPROM".

2: Two 16-bit timers can be concatenated to form a 32-bit timer.

Products sorted by pin count followed by pricing.

† Pricing subject to change; please contact your Microchip representative for most current pricing.

16-BIT PIC® MICROCONTROLLERS (PIC24F)

	Product	Released (R) Not Released (NR)	I/O Pins	Core	Memory: Program (KB)	Memory: Data RAM (B)	Memory: EEPROM	Memory: DMA #Ch	Voltage Range	Operating Speed: Maximum MIPS	Operating Speed: Internal Oscillator	Analog Sensing & Measurement: Charge Time Measurement Unit	Analog Sensing & Measurement: ADC	Analog Sensing & Measurement: 16-bit ADC (diff ch)	Analog Sensing & Measurement: Comparators	LCD Segments	Graphics Controller	Output Compare/PWM	Input Capture	16-bit Timer[2]	Communication: Digital Communication	Communication: USB 2.0 (Peripheral, Host, OTG)	Hardware Crypto	PMP	RTCC/CRC	PPS	5 ku Pricing†	Monitors: System Mgmt. Features	Packages (Designator)
100-Pin (Cont.)	PIC24FJ128GA410 XLP	R	85	PIC24	128	16384	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12-bit, 500/200 ksps	–	3	480	–	–	6	31	6 UART, 4 SPI, 3 I²C	–	✓	✓	✓	✓	$3.65	BOR, LVD, POR, WDT, XLP, VBAT	TQFP (PT)
	PIC24FJ64GB410 XLP	R	84	PIC24	64	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12-bit, 500/200 ksps	–	3	480	–	–	6	31	6 UART, 4 SPI, 3 I²C	✓	✓	✓	✓	✓	$3.72	BOR, LVD, POR, WDT, XLP, VBAT	TQFP (PT)
	PIC24FJ64GA110	R	85	PIC24	64	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	–	–	✓	✓	✓	$3.79	BOR, LVD, POR, WDT	TQFP (PT), BGA121 (BG)
	PIC24FJ64GC010 XLP	R	80	PIC24	64	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 50 ch 10-/12-bit, 1100/500 ksps	2	3	472	–	9	9	5	4 UART, 2 SPI, 2 I²C,	✓	–	✓	✓	✓	$3.79	BOR, HLVD, POR,WDT, OST, XLP, VBAT	TQFP (PT), BGA (BG)
	PIC24FJ128GA010	R	85	PIC24	128	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	–	1 ADC, 16 ch 10-bit	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	–	✓	✓	–	$3.81	BOR, POR, WDT	TQFP (PT)
	PIC24FH256GA410 XLP	R	85	PIC24	256	16384	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12-bit, 500/200 ksps	–	3	480	–	–	6	31	6 UART, 4 SPI, 3 I²C	–	✓	✓	✓	✓	$3.82	BOR, LVD, POR, WDT, XLP, VBAT	TQFP (PT)
	PIC24FJ128GB410 XLP	R	84	PIC24	128	16384	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12-bit, 500/200 ksps	–	3	480	–	–	6	31	6 UART, 4 SPI, 3 I²C	✓	✓	✓	✓	✓	$3.86	BOR, LVD, POR, WDT, XLP, VBAT	TQFP (PT)
	PIC24FJ128GC010 XLP	R	80	PIC24	128	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 50 ch 10-/12-bit, 1100/500 ksps	2	3	472	–	9	9	5	4 UART, 2 SPI, 2 I²C,	✓	–	✓	✓	✓	$4.02	BOR, HLVD, POR, WDT, OST, XLP, VBAT	TQFP (PT), BGA (BG)
	PIC24FJ256GB410 XLP	R	84	PIC24	256	16384	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12-bit, 500/200 ksps	–	3	480	–	–	6	31	6 UART, 4 SPI, 3 I²C	✓	✓	✓	✓	✓	$4.03	BOR, LVD, POR, WDT, XLP, VBAT	TQFP (PT)
	PIC24FJ128GA110	R	85	PIC24	128	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	–	–	✓	✓	✓	$4.03	BOR, LVD, POR, WDT	TQFP (PT), BGA121 (BG)
	PIC24FJ64GB110	R	84	PIC24	64	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	✓	✓	✓	$4.12	BOR, LVD, POR, WDT	TQFP (PT), BGA121 (BG)
	PIC24FJ128GB110	R	84	PIC24	128	16384	AN1095[1]	–	2V–3.6V	16	16 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	✓	✓	✓	$4.41	BOR, LVD, POR, WDT	TQFP (PT), BGA121 (BG)
	PIC24FJ256GA110	R	85	PIC24	256	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	–	–	✓	✓	✓	$4.45	BOR, LVD, POR, WDT	TQFP (PT), BGA121 (BG)
	PIC24FJ128GB210	R	84	PIC24	128	98304	AN1095[1]	–	2.2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-bit	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	✓	✓	✓	$4.79	BOR, LVD, POR, WDT	TQFP (PT), BGA121 (BG)
	PIC24FJ128DA110	R	84	PIC24	128	24576	AN1095[1]	–	2.2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-bit	–	3	–	✓	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	✓	✓	✓	$4.83	BOR, LVD, POR, WDT	TQFP (PT), BGA121 (BG)
	PIC24FJ256GB110	R	84	PIC24	256	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 16 ch 10-bit	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	✓	✓	✓	$4.83	BOR, LVD, POR, WDT	TQFP (PT), BGA121 (BG)
	PIC24FJ256GB210	R	84	PIC24	256	98304	AN1095[1]	–	2.2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-bit	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	✓	✓	✓	$5.14	BOR, LVD, POR, WDT	TQFP (PT), BGA121 (BG)
	PIC24FJ256DA110	R	84	PIC24	256	24576	AN1095[1]	–	2.2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-bit	–	3	–	✓	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	✓	✓	✓	$5.18	BOR, LVD, POR, WDT	TQFP (PT), BGA121 (BG)
	PIC24FJ128DA210	R	84	PIC24	128	98304	AN1095[1]	–	2.2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-bit	–	3	–	✓	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	✓	✓	✓	$5.25	BOR, LVD, POR, WDT	TQFP (PT), BGA121 (BG)
	PIC24FJ256DA210	R	84	PIC24	256	98304	AN1095[1]	–	2.2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-bit	–	3	–	✓	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	✓	✓	✓	$5.60	BOR, LVD, POR, WDT	TQFP (PT), BGA121 (BG)
121-Pin	PIC24FJ64GA412 XLP	R	102	PIC24	64	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12-bit, 500/200 ksps	–	3	512	–	–	6	31	6 UART, 4 SPI, 3 I²C	–	✓	✓	✓	✓	$3.79	BOR, LVD, POR, WDT, XLP, VBAT	XBGA (BG)
	PIC24FJ128GA412 XLP	R	102	PIC24	128	16384	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12-bit, 500/200 ksps	–	3	512	–	–	6	31	6 UART, 4 SPI, 3 I²C	–	✓	✓	✓	✓	$3.93	BOR, LVD, POR, WDT, XLP, VBAT	XBGA (BG)
	PIC24FJ64GB412 XLP	R	101	PIC24	64	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12-bit, 500/200 ksps	–	3	512	–	–	6	31	6 UART, 4 SPI, 3 I²C	✓	✓	✓	✓	✓	$4.00	BOR, LVD, POR, WDT, XLP, VBAT	XBGA (BG)
	PIC24FJ256GA412 XLP	R	102	PIC24	256	16384	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12-bit, 500/200 ksps	–	3	512	–	–	6	31	6 UART, 4 SPI, 3 I²C	–	✓	✓	✓	✓	$4.10	BOR, LVD, POR, WDT, XLP, VBAT	XBGA (BG)
	PIC24FJ128GB412 XLP	R	101	PIC24	128	16384	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12-bit, 500/200 ksps	–	3	512	–	–	6	31	6 UART, 4 SPI, 3 I²C	✓	✓	✓	✓	✓	$4.14	BOR, LVD, POR, WDT, XLP, VBAT	XBGA (BG)
	PIC24FJ256GB412 XLP	R	101	PIC24	256	16384	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12-bit, 500/200 ksps	–	3	512	–	–	6	31	6 UART, 4 SPI, 3 I²C	✓	✓	✓	✓	✓	$4.31	BOR, LVD, POR, WDT, XLP, VBAT	XBGA (BG)

* Parts available with High Temperature Options (150°C).

Note 1: See Application Note "AN1095: Emulating Data EEPROM".

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† Pricing subject to change; please contact your Microchip representative for most current pricing.

16-BIT PIC® MICROCONTROLLERS (PIC24H/E)

	Product	Released (R) Not Released (NR)	I/O Pins	Core	Memory				Voltage Range	Operating Speed		Analog Sensing & Measurement				Output Compare/PWM	Motor Control PWM Ch.	QEI	Input Capture	16-bit Timer[2]	Communication			PMP	RTCC/CRC	PPS	5 ku Pricing†	Monitors	Packages (Designator)
					Program (KB)	Data RAM (B)	EEPROM	DMA #Ch		Maximum MIPS	Internal Oscillator	Charge Time Measurement Unit	ADC	Comparators	Op Amps						Digital Communication	CAN	FS USB OTG					System Mgmt. Features	
18-Pin	PIC24HJ12GP201	R	13	PIC24	12	1	AN1095[1]	–	3V–3.6V	40	7.37 MHz, 32 kHz	–	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	–	–	2	–	–	4	3	1 UART, 1 SPI, 1 I²C	–	–	–	–	✓	$2.09	PBOR, POR, WDT	PDIP (P), SOIC(SO)
28-Pin	PIC24EP32MC202	R	21	PIC24	32	4	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	1 +2*	2	10	6	1	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$1.89	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	PIC24EP32GP202	R	21	PIC24	32	4	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	1 +2*	2	4	–	–	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$1.89	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	PIC24EP64MC202	R	21	PIC24	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	1 +2*	2	10	6	1	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.45	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	PIC24EP64GP202	R	21	PIC24	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	1 +2*	2	4	–	–	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.45	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	PIC24EP128MC202	R	21	PIC24	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	1 +2*	2	10	6	1	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.66	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	PIC24EP128GP202	R	21	PIC24	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	1 +2*	2	4	–	–	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.66	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	PIC24EP256MC202	R	21	PIC24	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	1 +2*	2	10	6	1	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.14	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	PIC24EP256GP202	R	21	PIC24	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	1 +2*	2	4	–	–	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.14	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	PIC24EP512MC202	R	21	PIC24	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	1 +2*	2	10	6	1	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.50	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	PIC24EP512GP202	R	21	PIC24	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	1 +2*	2	4	–	–	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.50	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
44-Pin	PIC24EP32MC204	R	35	PIC24	32	4	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	1 +3*	3	10	6	1	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.03	PBOR, POR, WDT	QFN (ML), TQFP (PT)
	PIC24EP32GP204	R	35	PIC24	32	4	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	1 +3*	3	4	–	–	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.03	PBOR, POR, WDT	QFN (ML), TQFP (PT)
	PIC24EP64MC204	R	35	PIC24	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	1 +3*	3	10	6	1	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.59	PBOR, POR, WDT	QFN (ML), TQFP (PT)
	PIC24EP64GP204	R	35	PIC24	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	1 +3*	3	4	–	–	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.59	PBOR, POR, WDT	QFN (ML), TQFP (PT)
	PIC24EP128MC204	R	35	PIC24	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	1 +3*	3	10	6	1	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.80	PBOR, POR, WDT	QFN (ML), TQFP (PT)
	PIC24EP128GP204	R	35	PIC24	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	1 +3*	3	4	–	–	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.80	PBOR, POR, WDT	QFN (ML), TQFP (PT)
	PIC24EP256MC204	R	35	PIC24	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	1 +3*	3	10	6	1	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.28	PBOR, POR, WDT	QFN (ML), TQFP (PT)
	PIC24EP256GP204	R	35	PIC24	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	1 +3*	3	4	–	–	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.28	PBOR, POR, WDT	QFN (ML), TQFP (PT)
	PIC24EP512MC204	R	35	PIC24	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	1 +3*	3	10	6	1	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.64	PBOR, POR, WDT	QFN (ML), TQFP (PT)
	PIC24EP512GP204	R	35	PIC24	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	1 +3*	3	4	–	–	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.64	PBOR, POR, WDT	QFN (ML), TQFP (PT)
64-Pin	PIC24EP64MC206	R	53	PIC24	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	1 +3*	3	10	6	1	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.73	PBOR, POR, WDT	QFN (MR), TQFP (PT)
	PIC24EP64GP206	R	53	PIC24	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	1 +3*	3	4	–	–	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.73	PBOR, POR, WDT	QFN (MR), TQFP (PT)
	PIC24EP128MC206	R	53	PIC24	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	1 +3*	3	10	6	1	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.94	PBOR, POR, WDT	QFN (MR), TQFP (PT)

* Parts available with High Temperature Options (150°C).
† Op amp configured as comparator.
Note 1: See Application Note "AN1095: Emulating Data EEPROM".
2: Two 16-bit timers can be concatenated to form a 32-bit timer.

Products sorted by pin count followed by pricing.
† Pricing subject to change; please contact your Microchip representative for most current pricing.

16-BIT PIC® MICROCONTROLLERS (PIC24H/E)

	Product	Released (R) Not Released (NR)	I/O Pins	Core	Memory				Voltage Range	Operating Speed		Analog Sensing & Measurement				Output Compare/PWM	Motor Control PWM Ch.	QEI	Input Capture	16-bit Timer[2]	Communication			PMP	RTCC/CRC	PPS	5 ku Pricing†	Monitors	Packages (Designator)
					Program (KB)	Data RAM (B)	EEPROM	DMA #Ch		Maximum MIPS	Internal Oscillator	Charge Time Measurement Unit	ADC	Comparators	Op Amps						Digital Communication	CAN	FS USB OTG					System Mgmt. Features	
64-Pin (Cont.)	PIC24EP128GP206	R	53	PIC24	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	1 +3*	3	4	–	–	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.94	PBOR, POR, WDT	QFN (MR), TQFP (PT)
	PIC24EP256MC206	R	53	PIC24	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	1 +3*	3	10	6	1	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.42	PBOR, POR, WDT	QFN (MR), TQFP (PT)
	PIC24EP256GP206	R	53	PIC24	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	1 +3*	3	4	–	–	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.42	PBOR, POR, WDT	QFN (MR), TQFP (PT)
	PIC24EP512MC206	R	53	PIC24	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	1 +3*	3	10	6	1	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.78	PBOR, POR, WDT	QFN (MR), TQFP (PT)
	PIC24EP512GP206	R	53	PIC24	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	1 +3*	3	4	–	–	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.78	PBOR, POR, WDT	QFN (MR), TQFP (PT)
	PIC24EP512GP806	R	53	PIC24	536	52	AN1095[1]	15	3V–3.6V	70	7.37 MHz, 32 kHz	✓	2 ADC, 24 ch 10-/12-bit, 1100/500 ksps	3	–	16	–	–	16	9	4 UART, 2 SPI, 2 I²C	2	–	✓	✓	✓	$5.60	PBOR, POR, WDT	QFN (MR), TQFP (PT)
100-Pin	PIC24HJ64GP210A	R	85	PIC24	64	8	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 kHz	–	1 ADC, 32 ch 10-/12-bit, 1100/500 ksps	–	–	8	–	–	8	9	2 UART, 2 SPI, 2 I²C	–	–	–	–	–	$3.88	PBOR, POR, WDT	TQFP (PT, PF)
	PIC24HJ64GP510A	R	85	PIC24	64	8	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 kHz	–	1 ADC, 32 ch 10-/12-bit, 1100/500 ksps	–	–	8	–	–	8	9	2 UART, 2 SPI, 2 I²C	–	–	–	–	–	$3.88	PBOR, POR, WDT	TQFP (PT, PF)
	PIC24HJ128GP210A	R	85	PIC24	128	8	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 kHz	–	1 ADC, 32 ch 10-/12-bit, 1100/500 ksps	–	–	8	–	–	8	9	2 UART, 2 SPI, 2 I²C	–	–	–	–	–	$3.88	PBOR, POR, WDT	TQFP (PT, PF)
	PIC24HJ128GP310A	R	85	PIC24	128	16	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 kHz	–	1 ADC, 32 ch 10-/12-bit, 1100/500 ksps	–	–	8	–	–	8	9	2 UART, 2 SPI, 2 I²C	–	–	–	–	–	$3.88	PBOR, POR, WDT	TQFP (PT, PF)
	PIC24HJ128GP510A	R	85	PIC24	128	8	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 kHz	–	1 ADC, 32 ch 10-/12-bit, 1100/500 ksps	–	–	8	–	–	8	9	2 UART, 2 SPI, 2 I²C	–	–	–	–	–	$3.88	PBOR, POR, WDT	TQFP (PT, PF)
	PIC24HJ256GP210A	R	85	PIC24	256	16	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 kHz	–	1 ADC, 32 ch 10-/12-bit, 1100/500 ksps	–	–	8	–	–	8	9	2 UART, 2 SPI, 2 I²C	–	–	–	–	–	$3.88	PBOR, POR, WDT	TQFP (PT, PF)
	PIC24HJ256GP610A	R	85	PIC24	256	16	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 kHz	–	2 ADC, 32 ch 10-/12-bit, 1100/500 ksps	–	–	8	–	–	8	9	2 UART, 2 SPI, 2 I²C	2	–	–	–	–	$3.88	PBOR, POR, WDT	TQFP (PT, PF)
	PIC24EP256GU810	R	85	PIC24	280	28	AN1095[1]	15	3V–3.6V	60	7.37 MHz, 32 kHz	–	2 ADC, 32 ch 10-/12-bit, 1100/500 ksps	3	–	16	–	–	16	9	4 UART, 4 SPI, 2 I²C	2	✓	✓	✓	✓	$5.70	PBOR, POR, WDT	TQFP (PT, PF)
	PIC24EP512GU810	R	85	PIC24	536	52	AN1095[1]	15	3V–3.6V	60	7.37 MHz, 32 kHz	–	2 ADC, 32 ch 10-/12-bit, 1100/500 ksps	3	–	16	–	–	16	9	4 UART, 4 SPI, 2 I²C	2	✓	✓	✓	✓	$5.37	PBOR, POR, WDT	TQFP (PT, PF)
144-Pin	PIC24EP256GP814	R	122	PIC24	280	28	AN1095[1]	15	3V–3.6V	60	7.37 MHz, 32 kHz	–	2 ADC, 32 ch 10-/12-bit, 1100/500 ksps	3	–	16	–	–	16	9	4 UART, 4 SPI, 2 I²C	2	✓	✓	✓	✓	$6.31	PBOR, POR, WDT	TQFP (PH), LQFP (PL)
	PIC24EP512GU814	R	122	PIC24	536	28	AN1095[1]	15	3V–3.6V	60	7.37 MHz, 32 kHz	–	2 ADC, 32 ch 10-/12-bit, 1100/500 ksps	3	–	16	–	–	16	9	4 UART, 4 SPI, 2 I²C	2	✓	✓	✓	✓	$6.99	PBOR, POR, WDT	TQFP (PH), LQFP (PL)

* Parts available with High Temperature Options (150°C).
† Op amp configured as comparator.
Note 1: See Application Note "AN1095: Emulating Data EEPROM".
2: Two 16-bit timers can be concatenated to form a 32-bit timer.

dsPIC33 DSC GENERAL PURPOSE AND MOTOR CONTROL FAMILY

	Product	Released (R) Not Released (NR)	I/O Pins	Core	Memory				Voltage Range	Operating Speed		Analog Sensing & Measurement						Output Compare/PWM	Input Capture	Motor Control PWM Ch	QEI	16-bit Timer[2]	Communication			PMP	RTCC/CRC	PPS	5 ku Pricing†	Monitors	Packages (Designator)
					Program (KB)	Data RAM (B)	EEPROM	DMA #Ch		Maximum Speed MIPS	Internal Oscillator	Charge Time Measurement Unit	ADC	DAC	Comparators	Op Amps							Digital Communication	CAN	FS USB OTG					System Mgmt. Features	
20- Pin	dsPIC33FJ16GP101*	R	13	dsPIC® DSC	16	1	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 kHz	✓	1 ADC, 4 ch 10-bit	–	3	–	2	3	–	–	3	1 UART, 1 SPI, 1 I²C	–	–	–	✓	✓	$1.57	BOR, POR, WDT	PDIP (P), SOIC (SO), SSOP (SS)
	dsPIC33FJ16MC101*	R	15	dsPIC DSC	16	1	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 kHz	✓	1 ADC, 4 ch 10-bit	–	3	–	2	3	6	–	3	1 UART, 1 SPI, 1 I²C	–	–	–	✓	✓	$1.57	BOR, POR, WDT	PDIP (P), SOIC (SO), SSOP (SS)
	dsPIC33FJ32GP101*	R	13	dsPIC DSC	32	2	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	–	3	–	2	3	–	–	5	1 UART, 1 SPI, 1 I²C	–	–	–	✓	✓	$1.68	BOR, POR, WDT	PDIP (P), SOIC (SO), SSOP (SS)
	dsPIC33FJ32MC101*	R	15	dsPIC DSC	32	2	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	–	3	–	2	3	6	–	5	1 UART,1 SPI, 1 I²C	–	–	–	✓	✓	$1.68	BOR, POR, WDT	PDIP (P), SOIC (SO), SSOP (SS)

* Parts available with High Temperature Options (150°C).
† Op amp configured as comparator.
Note 1: See Application Note "AN1095: Emulating Data EEPROM".
2: Two 16-bit timers can be concatenated to form a 32-bit timer.

Products sorted by pin count followed by pricing.
† Pricing subject to change; please contact your Microchip representative for most current pricing.

dsPIC33 DSC GENERAL PURPOSE AND MOTOR CONTROL FAMILY

	Product	Released (R) Not Released (NR)	I/O Pins	Core	Memory				Voltage Range	Operating Speed		Analog Sensing & Measurement					Output Compare/PWM	Input Capture	Motor Control PWM Ch	QEI	16-bit Timer[2]	Communication			PMP	RTCC/CRC	PPS	5 ku Pricing†	Monitors	Packages (Designator)
					Program (KB)	Data RAM (B)	EEPROM	DMA #Ch		Maximum Speed MIPS	Internal Oscillator	Charge Time Measurement Unit	ADC	DAC	Comparators	Op Amps						Digital Communication	CAN	FS USB OTG					System Mgmt. Features	
28-Pin	dsPIC33FJ16GP102*	R	21	dsPIC® DSC	16	1	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-bit	–	3	–	2	3	-	–	3	1 UART, 1 SPI, 1 I²C	–	–	–	✓	✓	$1.68	BOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MQL)
	dsPIC33FJ16MC102*	R	21	dsPIC DSC	16	1	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-bit	–	3	–	2	3	6	–	3	1 UART, 1 SPI, 1 I²C	–	–	–	✓	✓	$1.68	BOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MQL)
	dsPIC33FJ32GP102*	R	21	dsPIC DSC	32	2	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 kHz	✓	1 ADC, 8 ch 10-/12-bit, 1100/500 ksps	–	3	–	2	3	–	–	5	1 UART, 1 SPI, 1 I²C	–	–	–	✓	✓	$1.73	BOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MQL)
	dsPIC33FJ32MC102*	R	21	dsPIC DSC	32	2	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 kHz	✓	1 ADC, 8 ch 10-/12-bit, 1100/500 ksps	–	3	–	2	3	6	–	5	1 UART,1 SPI, 1 I²C	–	–	–	✓	✓	$1.73	BOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	dsPIC33EV32GM002*	R	21	dsPIC DSC	32	4	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 11 ch 10-/12-bit, 1100/500 ksps	1×7-bit	4	3	4	4	6	–	5	2 UART, 2 SPI, 1 I²C	–	–	–	–	✓	$2.09	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), QFN (MN)
	dsPIC33EP32GP502*	R	21	dsPIC DSC	32	4	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	–	1 + 2ǂ	2	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$2.10	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	dsPIC33EP32MC502*	R	21	dsPIC DSC	32	4	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	–	1 + 2ǂ	2	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$2.10	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	dsPIC33EV32GM102*	R	32	dsPIC DSC	32	4	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 11 ch 10-/12-bit, 1100/500 ksps	1×7-bit	4	3	4	4	6	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	–	✓	$2.30	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), QFN (MN)
	dsPIC33EP64MC202*	R	21	dsPIC DSC	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	–	1 + 2ǂ	2	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.45	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	dsPIC33EV64GM002*	R	21	dsPIC DSC	64	8	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 11 ch 10-/12-bit, 1100/500 ksps	1×7-bit	4	3	4	4	6	–	5	2 UART, 2 SPI, 1 I²C	–	–	–	–	✓	$2.65	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), QFN (MM)
	dsPIC33EP64GP502*	R	21	dsPIC DSC	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	–	1 + 2ǂ	2	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$2.66	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	dsPIC33EP64MC502*	R	21	dsPIC DSC	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	–	1 + 2ǂ	2	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$2.66	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	dsPIC33EP128MC202*	R	21	dsPIC DSC	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	–	1 + 2ǂ	2	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.66	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	dsPIC33EV64GM102*	R	21	dsPIC DSC	64	8	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 11 ch 10-/12-bit, 1100/500 ksps	1×7-bit	4	3	4	4	6	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	–	✓	$2.86	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), QFN (MM)
	dsPIC33EV128GM002*	R	21	dsPIC DSC	128	8	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 11 ch 10-/12-bit, 1100/500 ksps	1×7-bit	4	3	4	4	6	–	5	2 UART, 2 SPI, 1 I²C	–	–	–	–	✓	$2.86	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), QFN (MM)
	dsPIC33EP128GP502*	R	21	dsPIC DSC	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	–	1 + 2ǂ	2	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$2.87	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	dsPIC33EP128MC502*	R	21	dsPIC DSC	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	–	1 + 2ǂ	2	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$2.87	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	dsPIC33EV128GM102*	R	21	dsPIC DSC	128	8	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 11 ch 10-/12-bit, 1100/500 ksps	1×7-bit	4	3	4	4	6	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	–	✓	$3.07	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), QFN (MM)
	dsPIC33EP256MC202*	R	21	dsPIC DSC	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	–	1 + 2ǂ	2	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.14	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	dsPIC33EV256GM002*	R	21	dsPIC DSC	256	16	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 11 ch 10-/12-bit, 1100/500 ksps	1×7-bit	4	3	4	4	6	–	5	2 UART, 2 SPI, 1 I²C	–	–	–	–	✓	$3.28	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), QFN (MM)
	dsPIC33EP256GP502*	R	21	dsPIC DSC	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	–	1 + 2ǂ	2	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.35	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	dsPIC33EP256MC502*	R	21	dsPIC DSC	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	–	1 + 2ǂ	2	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.35	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	dsPIC33FJ64GP802	R	21	dsPIC DSC	64	16	AN1095[1]	8	3V-3.6V	40	7.37 MHz, 32 kHz	✓	1 ADC, 13 ch 12-bit	4×16-bit	1	2	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.42	BOR, POR, WDT	SPDIP (SP), SOIC (SO), QFN-S (MM)
	dsPIC33EV256GM102*	R	21	dsPIC DSC	256	16	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 11 ch 10-/12-bit, 1100/500 ksps	1×7-bit	4	3	4	4	6	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	–	✓	$3.49	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), QFN (MM)
	dsPIC33EP512MC202*	R	21	dsPIC DSC	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	–	1 + 2ǂ	2	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.50	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	dsPIC33EP512GP502*	R	21	dsPIC DSC	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	–	1 + 2ǂ	2	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.71	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	dsPIC33EP512MC502*	R	21	dsPIC DSC	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 6 ch 10-/12-bit, 1100/500 ksps	–	1 + 2ǂ	2	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.71	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	dsPIC33FJ128GP802	R	21	dsPIC DSC	64	16	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 kHz	✓	1 ADC, 13 ch 12-bit	4×16-bit	1	2	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.72	BOR, POR, WDT	SPDIP (SP), SOIC (SO), QFN-S (MM)

* Parts available with High Temperature Options (150°C).
ǂ Op amp configured as comparator.
Note 1: See Application Note "AN1095: Emulating Data EEPROM".
2: Two 16-bit timers can be concatenated to form a 32-bit timer.

Products sorted by pin count followed by pricing.
† Pricing subject to change; please contact your Microchip representative for most current pricing.

dsPIC33 DSC GENERAL PURPOSE AND MOTOR CONTROL FAMILY

	Product	Released (R) Not Released (NR)	I/O Pins	Core	Memory				Voltage Range	Operating Speed		Analog Sensing & Measurement				Output Compare/PWM	Input Capture	Motor Control PWM Ch	QEI	16-bit Timer[2]	Communication			PMP	RTCC/CRC	PPS	5 ku Pricing†	Monitors	Packages (Designator)
					Program (KB)	Data RAM (B)	EEPROM	DMA #Ch		Maximum Speed MIPS	Internal Oscillator	Charge Time Measurement Unit	ADC	DAC	Comparators	Op Amps						Digital Communication	CAN	FS USB OTG					System Mgmt. Features	
44-Pin	dsPIC33FJ32GP104*	R	35	dsPIC® DSC	32	2	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 kHz	✓	1 ADC, 14 ch 10-/12-bit, 1100/500 ksps	–	3	–	2	3	–	–	5	1 UART, 1 SPI, 1 I²C	–	–	–	✓	✓	$2.02	BOR, POR, WDT	TQFP (PT), TLA, QFN (ML)
	dsPIC33FJ32MC104*	R	35	dsPIC DSC	32	2	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 kHz	✓	1 ADC, 14 ch 10-/12-bit, 1100/500 ksps	–	3	–	2	3	6	–	5	1 UART,1 SPI, 1 I²C	–	–	–	✓	✓	$2.02	BOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP32MC204*	R	35	dsPIC DSC	32	4	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.03	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EV32GM004*	R	35	dsPIC DSC	35	4	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12-bit, 1100/500 ksps	1×7-bit	5	4	4	4	6	–	5	2 UART, 2 SPI, 1 I²C	–	–	–	–	✓	$2.23	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP32GP504*	R	35	dsPIC DSC	32	4	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$2.24	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP32MC504*	R	35	dsPIC DSC	32	4	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$2.24	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EV32GM104*	R	35	dsPIC DSC	32	4	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12-bit, 1100/500 ksps	1×7-bit	5	4	4	4	6	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	–	✓	$2.44	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP64MC204*	R	35	dsPIC DSC	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.59	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EV64GM004*	R	35	dsPIC DSC	64	8	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12-bit, 1100/500 ksps	1×7-bit	5	4	4	4	6	0	5	2 UART, 2 SPI, 1 I²C	–	–	–	–	✓	$2.79	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP64GP504*	R	35	dsPIC DSC	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$2.80	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP128MC204*	R	35	dsPIC DSC	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.80	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EV64GM104*	R	35	dsPIC DSC	64	8	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12-bit, 1100/500 ksps	1×7-bit	5	4	4	4	6	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	–	✓	$3.00	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EV128GM004*	R	35	dsPIC DSC	128	8	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12-bit, 1100/500 ksps	1×7-bit	5	4	4	4	6	–	5	2 UART, 2 SPI, 1 I²C	–	–	–	–	✓	$3.00	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP128GP504*	R	35	dsPIC DSC	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.01	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP128MC504*	R	35	dsPIC DSC	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.01	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EV128GM104*	R	35	dsPIC DSC	128	8	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12-bit, 1100/500 ksps	1×7-bit	5	4	4	4	6	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	–	✓	$3.21	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP256MC204*	R	35	dsPIC DSC	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.28	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EV256MGM004*	R	35	dsPIC DSC	256	16	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12-bit, 1100/500 ksps	1×7-bit	5	4	4	4	6	–	5	2 UART, 2 SPI, 1 I²C	–	–	–	–	✓	$3.42	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP256GP504*	R	35	dsPIC DSC	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.49	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP256MC504*	R	35	dsPIC DSC	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.49	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EV256GM104*	R	35	dsPIC DSC	256	16	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 24 ch 10-/12-bit, 1100/500 ksps	1×7-bit	5	4	4	4	6	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	–	✓	$3.63	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP512MC204*	R	35	dsPIC DSC	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.64	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33FJ64GP804	R	35	dsPIC DSC	128	16	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 kHz	✓	1 ADC, 13 ch 12-bit	6×16-bit	2	2	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.65	BOR, POR, WDT	QFN (ML), TQFP (PT)
	dsPIC33EP128GM304*	R	35	dsPIC DSC	128	16	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	✓	2 ADC, 18 ch 10-/12-bit, 1100/500 ksps	–	1 + 4†	4	8	8	12	2	9	4 UART, 3 SPI, 2 I²C	–	–	–	✓	✓	$3.68	BOR, POR, WDT	TQFP (PT), QFN (ML)

* Parts available with High Temperature Options (150°C).
† Op amp configured as comparator.
Note 1: See Application Note "AN1095: Emulating Data EEPROM".
2: Two 16-bit timers can be concatenated to form a 32-bit timer.

Products sorted by pin count followed by pricing.
† Pricing subject to change; please contact your Microchip representative for most current pricing.

dsPIC33 DSC GENERAL PURPOSE AND MOTOR CONTROL FAMILY

	Product	Released (R) Not Released (NR)	I/O Pins	Core	Memory: Program (KB)	Memory: Data RAM (B)	Memory: EEPROM	Memory: DMA #Ch	Voltage Range	Operating Speed: Maximum Speed MIPS	Operating Speed: Internal Oscillator	Analog Sensing & Measurement: Charge Time Measurement Unit	Analog Sensing & Measurement: ADC	Analog Sensing & Measurement: DAC	Analog Sensing & Measurement: Comparators	Analog Sensing & Measurement: Op Amps	Output Compare/PWM	Input Capture	Motor Control PWM Ch	QEI	16-bit Timer[2]	Communication: Digital Communication	Communication: CAN	Communication: FS USB OTG	PMP	RTCC/CRC	PPS	5 ku Pricing†	Monitors: System Mgmt. Features	Packages (Designator)
44-Pin (Cont.)	dsPIC33EP256GM304*	R	35	dsPIC® DSC	256	32	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	✓	2 ADC, 18 ch 10-/12-bit, 1100/500 ksps	✓	1 + 4†	4	8	8	12	2	9	4 UART, 3 SPI, 2 I²C	–	–	–	✓	✓	$3.85	BOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP512GP504*	R	35	dsPIC DSC	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.85	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP512MC504*	R	35	dsPIC DSC	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 9 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.85	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP128GM604*	R	35	dsPIC DSC	128	16	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	✓	2 ADC, 18 ch 10-/12-bit, 1100/500 ksps	–	1 + 4†	4	8	8	12	2	9	4 UART, 3 SPI, 2 I²C	2	–	–	✓	✓	$3.89	BOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33FJ128GP804	R	35	dsPIC DSC	128	16	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 kHz	✓	1 ADC, 13 ch 12-bit	6×16-bit	2	2	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.96	BOR, POR, WDT	QFN (ML), TQFP (PT)
	dsPIC33EP256GM604*	R	35	dsPIC DSC	256	32	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	✓	2 ADC, 18 ch 10-/12-bit, 1100/500 ksps	✓	1 + 4†	4	8	8	12	2	9	4 UART, 3 SPI, 2 I²C	2	–	–	✓	✓	$4.06	BOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP512GM304*	R	35	dsPIC DSC	512	48	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	✓	2 ADC, 18 ch 10-/12-bit, 1100/500 ksps	–	1 + 4†	4	8	8	12	2	9	4 UART, 3 SPI, 2 I²C	–	–	–	✓	✓	$4.06	BOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP512GM604*	R	35	dsPIC DSC	512	48	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	✓	2 ADC, 18 ch 10-/12-bit, 1100/500 ksps	–	1 + 4†	4	8	8	12	2	9	4 UART, 3 SPI, 2 I²C	2	–	–	✓	✓	$4.27	BOR, POR, WDT	TQFP (PT), QFN (ML)
64-Pin	dsPIC33EV32GM006*	R	53	dsPIC DSC	32	4	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 36 ch 10-/12-bit, 1100/500 ksps	1×7-bit	5	4	4	4	6	–	5	2 UART, 2 SPI, 1 I²C	–	–	–	–	✓	$2.34	PBOR, POR, WDR	TQFP (PT), QFN (ML)
	dsPIC33EV32GM106*	R	53	dsPIC DSC	32	4	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 36 ch 10-/12-bit, 1100/500 ksps	1×7-bit	5	4	4	4	6	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	–	✓	$2.55	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP64MC206*	R	53	dsPIC DSC	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.73	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EV64GM006*	R	53	dsPIC DSC	64	8	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 36 ch 10-/12-bit, 1100/500 ksps	1×7-bit	5	4	4	4	6	0	5	2 UART, 2 SPI, 1 I²C	–	–	–	–	✓	$2.93	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP64GP506*	R	53	dsPIC DSC	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$2.94	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP64MC506*	R	53	dsPIC DSC	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$2.94	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP128MC206*	R	53	dsPIC DSC	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.94	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EV64GM106*	R	53	dsPIC DSC	64	8	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 36 ch 10-/12-bit, 1100/500 ksps	1×7-bit	5	4	4	4	6	0	5	2 UART, 2 SPI, 1 I²C	1	–	–	–	✓	$3.14	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EV128GM006*	R	53	dsPIC DSC	128	8	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 36 ch 10-/12-bit, 1100/500 ksps	1×7-bit	5	4	4	4	6	0	5	2 UART, 2 SPI, 1 I²C	–	–	–	–	✓	$3.14	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP128GP506*	R	53	dsPIC DSC	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.15	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP128MC506*	R	53	dsPIC DSC	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.15	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EV128GM106*	R	53	dsPIC DSC	128	8	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 36 ch 10-/12-bit, 1100/500 ksps	1×7-bit	5	4	4	4	6	0	5	2 UART, 2 SPI, 1 I²C	1	–	–	–	✓	$3.35	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP256MC206*	R	53	dsPIC DSC	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.42	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EV256GM006*	R	53	dsPIC DSC	256	16	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 36 ch 10-/12-bit, 1100/500 ksps	1×7-bit	5	4	4	4	6	0	5	2 UART, 2 SPI, 1 I²C	–	–	–	–	✓	$3.56	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP256GP506*	R	53	dsPIC DSC	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.63	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP256MC506*	R	53	dsPIC DSC	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.63	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EV256GM106*	R	53	dsPIC DSC	256	16	AN1095[1]	4	4.5V–5V	70	7.37 MHz, 32 kHz	✓	1 ADC, 36 ch 10-/12-bit, 1100/500 ksps	1×7-bit	5	4	4	4	6	0	5	2 UART, 2 SPI, 1 I²C	1	–	–	–	✓	$3.77	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP512MC206*	R	53	dsPIC DSC	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.78	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP128GM306*	R	53	dsPIC DSC	128	16	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	✓	2 ADC, 30 ch 10-/12-bit, 1100/500 ksps	–	1 + 4†	4	8	8	12	2	9	4 UART, 3 SPI, 2 I²C	–	–	✓	✓	✓	$3.89	BOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP512GP506*	R	53	dsPIC DSC	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.99	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP512MC506*	R	53	dsPIC DSC	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	✓	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.99	PBOR, POR, WDT	TQFP (PT), QFN (MR)

* Parts available with High Temperature Options (150°C).
† Op amp configured as comparator.
Note 1: See Application Note "AN1095: Emulating Data EEPROM".
2: Two 16-bit timers can be concatenated to form a 32-bit timer.

Products sorted by pin count followed by pricing.
† Pricing subject to change; please contact your Microchip representative for most current pricing.

dsPIC33 DSC GENERAL PURPOSE AND MOTOR CONTROL FAMILY

	Product	Released (R) Not Released (NR)	I/O Pins	Core	Memory: Program (KB)	Memory: Data RAM (B)	Memory: EEPROM	Memory: DMA #Ch	Voltage Range	Operating Speed: Maximum Speed MIPS	Operating Speed: Internal Oscillator	Analog Sensing & Measurement: Charge Time Measurement Unit	Analog Sensing & Measurement: ADC	Analog Sensing & Measurement: DAC	Analog Sensing & Measurement: Comparators	Analog Sensing & Measurement: Op Amps	Output Compare/PWM	Input Capture	Motor Control PWM Ch	QEI	16-bit Timer[2]	Communication: Digital Communication	Communication: CAN	Communication: FS USB OTG	PMP	RTCC/CRC	PPS	5 ku Pricing†	Monitors: System Mgmt. Features	Packages (Designator)
64-Pin (Cont.)	dsPIC33EP256GM306*	R	53	dsPIC® DSC	256	32	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	✓	2 ADC, 30 ch 10-/12-bit, 1100/500 ksps	–	1 + 4†	4	8	8	12	2	9	4 UART, 3 SPI, 2 I²C	–	–	✓	✓	✓	$4.06	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP128GM706*	R	53	dsPIC DSC	128	16	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	✓	2 ADC, 30 ch 10-/12-bit, 1100/500 ksps	–	1 + 4†	4	8	8	12	2	9	4 UART, 3 SPI, 2 I²C	2	–	✓	✓	✓	$4.10	BOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP256GM706*	R	53	dsPIC DSC	256	32	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	✓	2 ADC, 30 ch 10-/12-bit, 1100/500 ksps	–	1 + 4†	4	8	8	12	2	9	4 UART, 3 SPI, 2 I²C	2	–	✓	✓	✓	$4.27	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP512GM306*	R	53	dsPIC DSC	512	48	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	✓	2 ADC, 30 ch 10-/12-bit, 1100/500 ksps	–	1 + 4†	4	8	8	12	2	9	4 UART, 3 SPI, 2 I²C	–	–	✓	✓	✓	$4.27	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP512GM706*	R	53	dsPIC DSC	512	48	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	✓	2 ADC, 30 ch 10-/12-bit, 1100/500 ksps	–	1 + 4†	4	8	8	12	2	9	4 UART, 3 SPI, 2 I²C	2	–	✓	✓	✓	$4.48	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP512MC806*	R	53	dsPIC DSC	536	52	AN1095[1]	15	3V–3.6V	70	7.37 MHz, 32 kHz	–	2 ADC, 24 ch 10-/12-bit, 1100/500 ksps	–	3	–	16	16	8	2	9	4 UART, 2 SPI, 2 I²C	2	✓	✓	✓	✓	$5.22	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP512GP806*	R	53	dsPIC DSC	536	52	AN1095[1]	15	3V–3.6V	70	7.37 MHz, 32 kHz	–	2 ADC, 24 ch 10-/12-bit, 1100/500 ksps	–	3	–	16	16	–	–	9	4 UART, 2 SPI, 2 I²C	2	–	✓	✓	✓	$5.60	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP256MU806*	R	53	dsPIC DSC	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 kHz	–	2 ADC, 24 ch 10-/12-bit, 1100/500 ksps	–	3	–	16	16	8	2	9	4 UART, 2 SPI, 2 I²C	2	–	✓	✓	✓	$5.60	PBOR, POR, WDT	TQFP (PT), QFN (MR)
100/121-Pin	dsPIC33FJ64GP310A*	R	85	dsPIC DSC	64	16	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 kHz	–	1 ADC, 32 ch 10-/12-bit, 1100/500 ksps	–	–	–	8	8	–	–	9	2 UART, 2 SPI, 2 I²C	–	–	–	–	–	$3.99	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33FJ64MC510A*	R	85	dsPIC DSC	64	8	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 kHz	–	1 ADC, 24 ch 10-/12-bit, 1100/500 ksps	–	–	–	8	8	8	1	9	2 UART, 2 SPI, 2 I²C	1	–	–	–	–	$4.33	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33FJ128GP310A*	R	85	dsPIC DSC	128	16	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 kHz	–	1 ADC, 32 ch 10-/12-bit, 1100/500 ksps	–	–	–	8	8	–	–	9	2 UART, 2 SPI, 2 I²C	–	–	–	–	–	$4.25	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33FJ128MC510A*	R	85	dsPIC DSC	128	8	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 kHz	–	1 ADC, 24 ch 10-/12-bit, 1100/500 ksps	–	–	–	8	8	8	1	9	2 UART, 2 SPI, 2 I²C	1	–	–	–	–	$4.59	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33FJ64GP710A*	R	85	dsPIC DSC	64	16	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 kHz	–	2 ADC, 32 ch 10-/12-bit, 1100/500 ksps	–	–	–	8	8	–	–	9	2 UART, 2 SPI, 2 I²C	2	–	–	–	–	$4.61	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33FJ64MC710A*	R	85	dsPIC DSC	64	16	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 kHz	–	2 ADC, 24 ch 10-/12-bit, 1100/500 ksps	–	–	–	8	8	8	1	9	2 UART, 2 SPI, 2 I²C	2	–	–	–	–	$4.91	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33FJ256GP510A*	R	85	dsPIC DSC	256	16	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 kHz	–	1 ADC, 32 ch 10-/12-bit, 1100/500 ksps	–	–	–	8	8	–	–	9	2 UART, 2 SPI, 2 I²C	1	–	–	–	–	$4.66	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33FJ128GP710A*	R	85	dsPIC DSC	128	16	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 kHz	–	2 ADC, 32 ch 10-/12-bit, 1100/500 ksps	–	–	–	8	8	–	–	9	2 UART, 2 SPI, 2 I²C	2	–	–	–	–	$4.86	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33FJ256MC510A*	R	85	dsPIC DSC	256	16	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 kHz	–	1 ADC, 16 ch 10-/12-bit, 1100/500 ksps	–	–	–	8	8	8	1	9	2 UART, 2 SPI, 2 I²C	1	–	–	–	–	$4.97	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33FJ128MC710A*	R	85	dsPIC DSC	128	16	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 kHz	–	2 ADC, 24 ch 10-/12-bit, 1100/500 ksps	–	–	–	8	8	8	1	9	2 UART, 2 SPI, 2 I²C	2	–	–	–	–	$5.18	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33FJ256GP710A*	R	85	dsPIC DSC	256	30	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 kHz	–	2 ADC, 32 ch 10-/12-bit, 1100/500 ksps	–	–	–	8	8	–	–	9	2 UART, 2 SPI, 2 I²C	2	–	–	–	–	$5.32	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33FJ256MC710A*	R	85	dsPIC DSC	256	30	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 kHz	–	2 ADC, 24 ch 10-/12-bit, 1100/500 ksps	–	–	–	8	8	8	1	9	2 UART, 2 SPI, 2 I²C	2	–	–	–	–	$5.67	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33EP256MU810*	R	83	dsPIC DSC	280	28	AN1095[1]	15	3V–3.6V	60	7.37 MHz, 32 kHz	–	2 ADC, 32 ch 10-/12-bit, 1100/500 ksps	–	3	–	16	16	12	2	9	2 UART, 2 SPI, 2 I²C	2	✓	✓	✓	✓	$5.70	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33EP512MU810*	R	83	dsPIC DSC	536	52	AN1095[1]	15	3V–3.6V	60	7.37 MHz, 32 kHz	–	2 ADC, 32 ch 10-/12-bit, 1100/500 ksps	–	3	–	16	16	12	2	9	2 UART, 2 SPI, 2 I²C	2	✓	✓	✓	✓	$6.37	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33EP128GM310*	R	85	dsPIC DSC	128	16	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	✓	2 ADC, 49 ch 10-/12-bit, 1100/500 ksps	–	1 + 4†	4	8	8	12	2	9	4 UART, 3 SPI, 2 I²C	–	–	✓	✓	✓	$4.24	PBOR, POR, WDT	TQFP (PT, PF), TFBGA (BG)
	dsPIC33EP256GM310*	R	85	dsPIC DSC	256	32	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	✓	2 ADC, 49 ch 10-/12-bit, 1100/500 ksps	–	1 + 4†	4	8	8	12	2	9	4 UART, 3 SPI, 2 I²C	–	–	✓	✓	✓	$4.41	PBOR, POR, WDT	TQFP (PT, PF), TFBGA (BG)
	dsPIC33EP128GM710*	R	85	dsPIC DSC	128	16	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	✓	2 ADC, 49 ch 10-/12-bit, 1100/500 ksps	–	1 + 4†	4	8	8	12	2	9	4 UART, 3 SPI, 2 I²C	2	–	✓	✓	✓	$4.45	PBOR, POR, WDT	TQFP (PT, PF), TFBGA (BG)
	dsPIC33EP256GM710*	R	85	dsPIC DSC	256	32	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	✓	2 ADC, 49 ch 10-/12-bit, 1100/500 ksps	–	1 + 4†	4	8	8	12	2	9	4 UART, 3 SPI, 2 I²C	2	–	✓	✓	✓	$4.62	PBOR, POR, WDT	TQFP (PT, PF), TFBGA (BG)
	dsPIC33EP512GM310*	R	85	dsPIC DSC	512	48	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	✓	2 ADC, 49 ch 10-/12-bit, 1100/500 ksps	–	1 + 4†	4	8	8	12	2	9	4 UART, 3 SPI, 2 I²C	–	–	✓	✓	✓	$4.62	PBOR, POR, WDT	TQFP (PT, PF), TFBGA (BG)
	dsPIC33EP512GM710*	R	85	dsPIC DSC	512	48	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	✓	2 ADC, 49 ch 10-/12-bit, 1100/500 ksps	–	1 + 4†	4	8	8	12	2	9	4 UART, 3 SPI, 2 I²C	2	–	✓	✓	✓	$4.83	PBOR, POR, WDT	TQFP (PT, PF), TFBGA (BG)
144-Pin	dsPIC33EP256MU814*	R	122	dsPIC DSC	280	28	AN1095[1]	15	3V–3.6V	60	7.37 MHz, 32 kHz	–	2 ADC, 32 ch 10-/12-bit, 1100/500 ksps	–	3	–	16	16	12	2	9	2 UART, 2 SPI, 2 I²C	2	✓	✓	✓	✓	$6.31	PBOR, POR, WDT	TQFP (PH), LQFP (PL)
	dsPIC33EP512MU814*	R	122	dsPIC DSC	536	52	AN1095[1]	15	3V–3.6V	60	7.37 MHz, 32 kHz	–	2 ADC, 32 ch 10-/12-bit, 1100/500 ksps	–	3	–	16	16	12	2	9	2 UART, 2 SPI, 2 I²C	2	✓	✓	✓	✓	$6.99	PBOR, POR, WDT	TQFP (PH), LQFP (PL)

* Parts available with High Temperature Options (150°C).
† Op amp configured as comparator.
Note 1: See Application Note "AN1095: Emulating Data EEPROM".
2: Two 16-bit timers can be concatenated to form a 32-bit timer.
Products sorted by pin count followed by pricing.
† Pricing subject to change; please contact your Microchip representative for most current pricing.

dsPIC33 DSC SMPS AND DIGITAL POWER CONVERSION FAMILY

	Product	Released (R) Not Released (NR)	I/O Pins	Core	Memory				Voltage Range	Operating Speed		Analog			Output Compare/ PWM	Input Capture	Power Supply PWM Ch[2]	QEI	16-bit Timer[2]	Communication		PMP	RTCC	PPS	5 ku Pricing†	Monitors	Packages (Designator)
					Program (kB)	Data RAM (B)	EEPROM	DMA #Ch		Maximum Speed MIPS	Internal Oscillator	ADC	DAC	Comparators						Digital Communication	CAN					System Mgmt. Features	
18-Pin	dsPIC33FJ06GS001	R	13	dsPIC®	6	256	AN1095[1]	–	3V–3.6V	40	7.37 MHz, 32 kHz	1 ADC, 6 ch 10-bit, 200 ksps	2 × 10-bit	2	–	–	4	–	2	1 UART, 1 SPI, 1 I²C	–	–	–	✓	$1.61	BOR, POR, WDT	PDIP (P), SOIC (SO), SSOP (SS)
	dsPIC33FJ06GS101A	R	13	dsPIC	6	256	AN1095[1]	–	3V–3.6V	40	7.37 MHz, 32 kHz	1 ADC, 6 ch 10-bit, 200 ksps	–	–	1	–	4	–	2	1 UART, 1 SPI, 1 I²C	–	–	–	✓	$1.75	BOR, POR, WDT	PDIP (P), SOIC (SO), SSOP (SS)
28-Pin	dsPIC33EP16GS202*	R	21	dsPIC	16	2048	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	2 ADC, 12 ch 12-/14-bit, 3250/200 ksps	2 × 12-bit	2	1	1	–	–	3	1 UART, 1 SPI, 1 I²C	–	–	–	✓	Call for Pricing	PBOR, POR, WDT, Dual Boot	Call for package information
	dsPIC33EP32GS202*	R	21	dsPIC	32	2048	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	3 ADC, 12 ch 12-/14-bit, 3250/200 ksps	4 × 12-bit	2	1	1	–	–	3	1 UART, 1 SPI, 1 I²C	–	–	–	✓	Call for Pricing	PBOR, POR, WDT, Dual Boot	Call for package information
	dsPIC33FJ06GS102A	R	21	dsPIC	6	256	AN1095[1]	–	3V–3.6V	40	7.37 MHz, 32 kHz	1 ADC, 6 ch 10-bit, 200 ksps	–	–	1	–	4	–	2	1 UART, 1 SPI, 1 I²C	–	–	–	✓	$1.95	BOR, POR, WDT	SDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	dsPIC33FJ06GS202A	R	21	dsPIC	6	1024	AN1095[1]	–	3V–3.6V	40	7.37 MHz, 32 kHz	1 ADC, 6 ch 10-bit, 200 ksps	2 × 10-bit	2	1	1	4	–	2	1 UART, 1 SPI, 1 I²C	–	–	–	✓	$2.06	BOR, POR, WDT	SDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	dsPIC33FJ09GS302	R	21	dsPIC	9	1024	AN1095[1]	–	3V–3.6V	40	7.37 MHz, 32 kHz	1 ADC, 8 ch 10-bit, 200 ksps	2 × 10-bit	2	1	1	6	–	2	1 UART, 1 SPI, 1 I²C	–	–	–	✓	$2.17	BOR, POR, WDT	SDIP (SP), SOIC (SO), SSOP (SS), QFN (MM)
	dsPIC33FJ16GS402*	R	21	dsPIC	16	2048	AN1095[1]	–	3V–3.6V	50	7.37 MHz, 32 kHz	1 ADC, 8 ch 10-bit, 200 ksps	–	–	2	2	6	–	3	1 UART, 1 SPI, 1 I²C	–	–	–	✓	$2.52	BOR, POR, WDT	SPDIP (SP), SOIC (SO), QFN (MM)
	dsPIC33EP16GS502*	R	21	dsPIC	16	2048	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	5 ADC, 12 ch 12-/14-bit, 3250/200 ksps	4 × 12-bit	4	4	4	–	–	5	2 UART, 2 SPI, 2 I²C	–	–	–	✓	$2.58	PBOR, POR, WDT, Dual Boot	SOIC (SO), QFN (MN)
	dsPIC33FJ16GS502*	R	21	dsPIC	16	2048	AN1095[1]	–	3V–3.6V	50	7.37 MHz, 32 kHz	2 ADC, 8 ch 10-bit, 4000 ksps	4 × 10-bit	4	2	2	8	–	3	1 UART, 1 SPI, 1 I²C	–	–	–	✓	$3.04	BOR, POR, WDT	SPDIP (SP), SOIC (SO), QFN (MM)
	dsPIC33EP32GS502*	R	21	dsPIC	32	4096	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	5 ADC, 12 ch 12-/14-bit, 3250/200 ksps	4 × 12-bit	4	4	4	–	–	5	2 UART, 2 SPI, 2 I²C	–	–	–	✓	$3.07	PBOR, POR, WDT, Dual Boot	SOIC (SO), QFN (MN)
	dsPIC33EP64GS502*	R	21	dsPIC	64	8192	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	5 ADC, 12 ch 12-/14-bit, 3250/200 ksps	4 × 12-bit	4	4	4	–	–	5	2 UART, 2 SPI, 2 I²C	–	–	–	✓	$3.57	PBOR, POR, WDT, Dual Boot	SOIC (SO), QFN (MN)
44-Pin	dsPIC33EP16FS504*	R	35	dsPIC	16	2048	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	5 ADC, 12 ch 12-/14-bit, 3250/200 ksps	4 × 12-bit	4	4	4	–	–	5	2 UART, 2 SPI, 2 I²C	–	–	–	✓	$2.77	PBOR, POR, WDT, Dual Boot	TQFP (PT), QFN (ML)
	dsPIC33FJ16GS404*	R	35	dsPIC	16	2048	AN1095[1]	–	3V–3.6V	50	7.37 MHz, 32 kHz	1 ADC, 8 ch 10-bit, 200 ksps	–	–	2	2	6	–	3	1 UART, 1 SPI, 1 I²C	–	–	–	✓	$2.77	BOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP32GS504*	R	35	dsPIC	32	4096	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	5 ADC, 12 ch 12-/14-bit, 3250/200 ksps	4 × 12-bit	4	4	4	–	–	5	2 UART, 2 SPI, 2 I²C	–	–	–	✓	$3.23	PBOR, POR, WDT, Dual Boot	TQFP (PT), QFN (ML)
	dsPIC33FJ16GS504*	R	35	dsPIC	16	2048	AN1095[1]	–	3V–3.6V	50	7.37 MHz, 32 kHz	2 ADC, 12 ch 10-bit, 4000 ksps	4 × 10-bit	4	2	2	8	–	3	1 UART, 1 SPI, 1 I²C	–	–	–	✓	$3.42	BOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP64GS504*	R	35	dsPIC	64	8192	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	5 ADC, 12 ch 12-/14-bit, 3250/200 ksps	4 × 12-bit	4	4	4	–	–	5	2 UART, 2 SPI, 2 I²C	–	–	–	✓	$3.75	PBOR, POR, WDT, Dual Boot	TQFP (PT), QFN (ML)
48-Pin	dsPIC33EP16GS505*	R	35	dsPIC	16	4096	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	5 ADC, 12 ch 12-/14-bit, 3250/200 ksps	4 × 12-bit	4	4	4	–	–	5	2 UART, 2 SPI, 2 I²C	–	–	–	✓	Call for Pricing	PBOR, POR, WDT, Dual Boot	Call for package information
	dsPIC33EP32GS505*	R	35	dsPIC	32	4096	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	5 ADC, 12 ch 12-/14-bit, 3250/200 ksps	4 × 12-bit	4	4	4	–	–	5	2 UART, 2 SPI, 2 I²C	–	–	–	✓	Call for Pricing	PBOR, POR, WDT, Dual Boot	Call for package information
	dsPIC33EP64GS505*	R	35	dsPIC	64	8192	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	5 ADC, 12 ch 12-/14-bit, 3250/200 ksps	4 × 12-bit	4	4	4	–	–	5	2 UART, 2 SPI, 2 I²C	–	–	–	✓	Call for Pricing	PBOR, POR, WDT, Dual Boot	Call for package information
64-Pin	dsPIC33EP16GS506*	R	53	dsPIC	16	2048	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	5 ADC, 12 ch 12-/14-bit, 3250/200 ksps	4 × 12-bit	4	4	4	–	–	5	2 UART, 2 SPI, 2 I²C	–	–	–	✓	$2.97	PBOR, POR, WDT, Dual Boot	TQFP (PT)
	dsPIC33FJ32GS406	R	58	dsPIC	32	4096	AN1095[1]	–	3V–3.6V	50	7.37 MHz, 32 kHz	1 ADC, 16 ch 10-bit, 200 ksps	–	–	4	4	12	1	5	2 UART, 2 SPI, 2 I²C	–	–	–	–	$3.07	BOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33FJ64GS406	R	58	dsPIC	64	8192	AN1095[1]	–	3V–3.6V	50	7.37 MHz, 32 kHz	1 ADC, 16 ch 10-bit, 200 ksps	–	–	4	4	12	1	5	2 UART, 2 SPI, 2 I²C	–	–	–	–	$3.35	BOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33FJ32GS606	R	58	dsPIC	32	4096	AN1095[1]	–	3V–3.6V	50	7.37 MHz, 32 kHz	2 ADC, 16 ch 10-bit, 4000 ksps	4 × 10-bit	4	4	4	12	2	5	2 UART, 2 SPI, 2 I²C	–	–	–	–	$3.36	BOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP32GS506*	R	53	dsPIC	32	4096	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	5 ADC, 12 ch 12-/14-bit, 3250/200 ksps	4 × 12-bit	4	4	4	–	–	5	2 UART, 2 SPI, 2 I²C	–	–	–	✓	$3.39	PBOR, POR, WDT, Dual Boot	TQFP (PT)
	dsPIC33FJ64GS606	R	58	dsPIC	64	9216	AN1095[1]	4	3V–3.6V	50	7.37 MHz, 32 kHz	2 ADC, 16 ch 10-bit, 4000 ksps	4 × 10-bit	4	4	4	12	2	5	2 UART, 2 SPI, 2 I²C	1	–	–	–	$3.81	BOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP64GS506*	R	53	dsPIC	64	8192	AN1095[1]	–	3V–3.6V	70	7.37 MHz, 32 kHz	5 ADC, 12 ch 12-/14-bit, 3250/200 ksps	4 × 12-bit	4	4	4	–	–	5	2 UART, 2 SPI, 2 I²C	–	–	–	✓	$3.93	PBOR, POR, WDT, Dual Boot	TQFP (PT)
80-Pin	dsPIC33FJ32GS608	R	74	dsPIC	32	4096	AN1095[1]	–	3V–3.6V	50	7.37 MHz, 32 kHz	2 ADC, 18 ch 10-bit, 4000 ksps	4 × 10-bit	4	4	4	16	2	5	2 UART, 2 SPI, 2 I²C	–	–	–	–	$3.85	BOR, POR, WDT	TQFP (PT)
	dsPIC33FJ64GS608	R	74	dsPIC	64	9216	AN1095[1]	4	3V–3.6V	50	7.37 MHz, 32 kHz	2 ADC, 18 ch 10-bit, 4000 ksps	4 × 10-bit	4	4	4	16	2	5	2 UART, 2 SPI, 2 I²C	1	–	–	–	$4.34	BOR, POR, WDT	TQFP (PT)
100-Pin	dsPIC33FJ32GS610	R	85	dsPIC	32	4096	AN1095[1]	–	3V–3.6V	50	7.37 MHz, 32 kHz	2 ADC, 24 ch 10-bit, 4000 ksps	4 × 10-bit	4	4	4	18	2	5	2 UART, 2 SPI, 2 I²C	–	–	–	–	$4.41	BOR, POR, WDT	TQFP (PF, PT)
	dsPIC33FJ64GS610	R	85	dsPIC	64	9216	AN1095[1]	4	3V–3.6V	50	7.37 MHz, 32 kHz	2 ADC, 24 ch 10-bit, 4000 ksps	4 × 10-bit	4	4	4	18	2	5	2 UART, 2 SPI, 2 I²C	1	–	–	–	$4.89	BOR, POR, WDT	TQFP (PF, PT)

* Parts available with High Temperature Options (150°C).
† 4 Msps devices with 2 ADCs
Note 1: See Application Note "AN1095: Emulating Data EEPROM".
2: Two 16-bit timers can be concatenated to form a 32-bit timer.
Products sorted by pin count followed by pricing.
† Pricing subject to change; please contact your Microchip representative for most current pricing.

32-BIT PIC32MX MICROCONTROLLERS

	Product	Released (R) Not Released (NR)	I/O Pins	Core	Memory: Flash KB + Boot Flash	Memory: Data RAM (KB)	Memory: EEPROM	DMA Channels General/Dedicated	Voltage Range	Operating Speed: Maximum Speed (MHz)	Operating Speed: Internal Oscillator	Charge Time Measurement Unit	Analog: ADC 10-bit 1,000 ksps	Analog: Comparators	IC/OC/PWM	Timers 16-/32-bit	Communication: SPI/I²S™	Communication: I²C	Communication: UARTs	Communication: FS USB	Communication: Ethernet	Communication: CAN	PMP	RTCC	PPS	5 ku Pricing†	Monitors: System Mgmt. Features	Packages (Designator)
28-Pin	PIC32MX110F016B	R	21	PIC32	16 + 3	4	AN1095[1]	4/0	2.3V–3.6V	40	8 MHz, 32 kHz	✓	10 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$1.40	POR, BOR, LVD, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC32MX210F016B	R	19	PIC32	16 + 3	4	AN1095[1]	4/2	2.3V–3.6V	40	8 MHz, 32 kHz	✓	9 ch	3	5/5/5	5/2	2/2	2	2	Device	–	–	✓	✓	✓	$1.51	POR, BOR, LVD, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC32MX120F032B	R	21	PIC32	32 + 3	8	AN1095[1]	4/0	2.3V–3.6V	50	8 MHz, 32 kHz	✓	10 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$1.60	POR, BOR, LVD, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC32MX220F032B	R	19	PIC32	32 + 3	8	AN1095[1]	4/2	2.3V–3.6V	50	8 MHz, 32 kHz	✓	9 ch	3	5/5/5	5/2	2/2	2	2	Device	–	–	✓	✓	✓	$1.71	POR, BOR, LVD, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC32MX130F064B	R	21	PIC32	64 + 3	16	AN1095[1]	4/0	2.3V–3.6V	40	8 MHz, 32 kHz	✓	10 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$1.81	POR, BOR, LVD, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC32MX130F256B	R	21	PIC32	256 + 3	16	AN1095[1]	4/0	2.3V–3.6V	50	8 MHz, 32 kHz	✓	10 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$2.00	POR, BOR, LVD, WDT	SPDIP (SP), SSOP (SS), QFN (ML)
	PIC32MX230F064B	R	19	PIC32	64 + 3	16	AN1095[1]	4/2	2.3V–3.6V	40	8 MHz, 32 kHz	✓	9 ch	3	5/5/5	5/2	2/2	2	2	OTG	–	–	✓	✓	✓	$2.02	POR, BOR, LVD, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC32MX230F256B	R	19	PIC32	256 + 3	16	AN1095[1]	4/2	2.3V–3.6V	50	8 MHz, 32 kHz	✓	9 ch	3	5/5/5	5/2	2/2	2	2	OTG	–	–	✓	✓	✓	$2.21	POR, BOR, LVD, WDT	SPDIP (SP), SSOP (ML), VTLA (TL)
	PIC32MX150F128B	R	21	PIC32	128 + 3	32	AN1095[1]	4/0	2.3V–3.6V	50	8 MHz, 32 kHz	✓	10 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$2.31	POR, BOR, LVD, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC32MX170F256B	R	21	PIC32	256 + 3	64	AN1095[1]	4/0	2.3V–3.6V	50	8 MHz, 32 kHz	✓	10 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$2.55	POR, BOR, LVD, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC32MX250F128B	R	19	PIC32	128 + 3	32	AN1095[1]	4/2	2.3V–3.6V	50	8 MHz, 32 kHz	✓	9 ch	3	5/5/5	5/2	2/2	2	2	OTG	–	–	✓	✓	✓	$2.59	POR, BOR, LVD, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
	PIC32MX270F256B	R	21	PIC32	256 + 3	64	AN1095[1]	4/2	2.3V–3.6V	50	8 MHz, 32 kHz	✓	10 ch	3	5/5/5	5/2	2/2	2	2	OTG	–	–	✓	✓	✓	$2.76	POR, BOR, LVD, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
36-Pin	PIC32MX110F016C	R	25	PIC32	16 + 3	4	AN1095[1]	4/0	2.3V–3.6V	40	8 MHz, 32 kHz	✓	12 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$1.54	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MX210F016C	R	25	PIC32	16 + 3	4	AN1095[1]	4/2	2.3V–3.6V	40	8 MHz, 32 kHz	✓	12 ch	3	5/5/5	5/2	2/2	2	2	Device	–	–	✓	✓	✓	$1.65	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MX120F032C	R	25	PIC32	32 + 3	8	AN1095[1]	4/0	2.3V–3.6V	50	8 MHz, 32 kHz	✓	12 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$1.74	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MX220F032C	R	25	PIC32	32 + 3	8	AN1095[1]	4/2	2.3V–3.6V	50	8 MHz, 32 kHz	✓	12 ch	3	5/5/5	5/2	2/2	2	2	Device	–	–	✓	✓	✓	$1.85	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MX130F064C	R	25	PIC32	64 + 3	16	AN1095[1]	4/0	2.3V–3.6V	40	8 MHz, 32 kHz	✓	12 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$1.97	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MX230F064C	R	25	PIC32	64 + 3	16	AN1095[1]	4/2	2.3V–3.6V	40	8 MHz, 32 kHz	✓	12 ch	3	5/5/5	5/2	2/2	2	2	OTG	–	–	✓	✓	✓	$2.18	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MX150F128C	R	25	PIC32	128 + 3	32	AN1095[1]	4/0	2.3V–3.6V	50	8 MHz, 32 kHz	✓	12 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$2.45	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MX250F128C	R	25	PIC32	128 + 3	32	AN1095[1]	4/2	2.3V–3.6V	50	8 MHz, 32 kHz	✓	12 ch	3	5/5/5	5/2	2/2	2	2	OTG	–	–	✓	✓	✓	$2.73	POR, BOR, LVD, WDT	VTLA (TL)
44-Pin	PIC32MX110F016D	R	35	PIC32	16 + 3	4	AN1095[1]	4/0	2.3V–3.6V	40	8 MHz, 32 kHz	✓	13 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$1.64	POR, BOR, LVD, WDT	TQFP (PT), QFN (ML), VTLA (TL)
	PIC32MX210F016D	R	33	PIC32	16 + 3	4	AN1095[1]	4/2	2.3V–3.6V	40	8 MHz, 32 kHz	✓	13 ch	3	5/5/5	5/2	2/2	2	2	Device	–	–	✓	✓	✓	$1.74	POR, BOR, LVD, WDT	TQFP (PT), QFN (ML), VTLA (TL)
	PIC32MX120F032D	R	35	PIC32	32 + 3	8	AN1095[1]	4/0	2.3V–3.6V	50	8 MHz, 32 kHz	✓	13 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$1.83	POR, BOR, LVD, WDT	TQFP (PT), QFN (ML), VTLA (TL)
	PIC32MX220F032D	R	33	PIC32	32 + 3	8	AN1095[1]	4/2	2.3V–3.6V	50	8 MHz, 32 kHz	✓	13 ch	3	5/5/5	5/2	2/2	2	2	Device	–	–	✓	✓	✓	$1.93	POR, BOR, LVD, WDT	TQFP (PT), QFN (ML), VTLA (TL)
	PIC32MX130F064D	R	35	PIC32	64 + 3	16	AN1095[1]	4/0	2.3V–3.6V	40	8 MHz, 32 kHz	✓	13 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$2.02	POR, BOR, LVD, WDT	TQFP (PT), QFN (ML), VTLA (TL)
	PIC32MX130F256D	R	35	PIC32	256 + 3	16	AN1095[1]	4/0	2.3V–3.6V	50	8 MHz, 32 kHz	✓	13 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$2.18	POR, BOR, LVD, WDT	TQFP (PT), QFN (ML), VTLA (TL)
	PIC32MX230F064D	R	33	PIC32	64 + 3	16	AN1095[1]	4/2	2.3V–3.6V	40	8 MHz, 32 kHz	✓	13 ch	3	5/5/5	5/2	2/2	2	2	OTG	–	–	✓	✓	✓	$2.23	POR, BOR, LVD, WDT	TQFP (PT), QFN (ML), VTLA (TL)
	PIC32MX230F256D	R	33	PIC32	256 + 3	16	AN1095[1]	4/2	2.3V–3.6V	50	8 MHz, 32 kHz	✓	13 ch	3	5/5/5	5/2	2/2	2	2	OTC	–	–	✓	✓	✓	$2.39	POR, BOR, LVD, WDT	TQFP (PT), QFN (ML), VTLA (TL)
	PIC32MX150F128D	R	35	PIC32	128 + 3	32	AN1095[1]	4/0	2.3V–3.6V	50	8 MHz, 32 kHz	✓	13 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$2.52	POR, BOR, LVD, WDT	TQFP (PT), QFN (ML), VTLA (TL)
	PIC32MX170F256D	R	35	PIC32	256 + 3	64	AN1095[1]	4/0	2.3V–3.6V	50	8 MHz, 32 kHz	✓	13 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$2.76	POR, BOR, LVD, WDT	TQFP (PT), QFN (ML), VTLA (TL)
	PIC32MX250F128D	R	33	PIC32	128 + 3	32	AN1095[1]	4/2	2.3V–3.6V	50	8 MHz, 32 kHz	✓	13 ch	3	5/5/5	5/2	2/2	2	2	OTG	–	–	✓	✓	✓	$2.80	POR, BOR, LVD, WDT	TQFP (PT), QFN (ML), VTLA (TL)
	PIC32MX270F256D	R	33	PIC32	256 + 3	64	AN1095[1]	4/2	2.3V–3.6V	50	8 MHz, 32 kHz	✓	13 ch	3	5/5/5	5/2	2/2	2	2	OTG	–	–	✓	✓	✓	$2.97	POR, BOR, LVD, WDT	TQFP (PT), QFN (ML), VTLA (TL)
64-Pin	PIC32MX120F064H	R	53	PIC32	64 + 3	8	AN1095[1]	4/0	2.3V–3.6V	50	8 MHz, 32 kHz	✓	28 ch	3	5/5/5	5/2	3/3	2	4	–	–	–	✓	✓	✓	$2.16	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX130F128H	R	53	PIC32	128 + 3	16	AN1095[1]	4/0	2.3V–3.6V	50	8 MHz, 32 kHz	✓	28 ch	3	5/5/5	5/2	3/3	2	4	–	–	–	✓	✓	✓	$2.20	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX230F128H	R	49	PIC32	128 + 3	16	AN1095[1]	4/2	2.3V–3.6V	50	8 MHz, 32 kHz	✓	28 ch	3	5/5/5	5/2	3/3	2	4	OTG	–	–	✓	✓	✓	$2.34	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX330F064H	R	53	PIC32	64 + 12	16	AN1095[1]	4/0	2.3V–3.6V	80	8 MHz, 32 kHz	✓	28 ch	2	5/5/5	5/2	2/2	2	4	–	–	–	✓	✓	✓	$2.45	POR, BOR, LVD, WDT	TQFP (PT), QFN (RG)
	PIC32MX530F128H	R	49	PIC32	128 + 3	16	AN1095[1]	4/4	2.3V–3.6V	50	8 MHz, 32 kHz	✓	28 ch	3	5/5/5	5/2	3/3	2	4	OTG	–	1	✓	✓	✓	$2.48	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX150F256H	R	53	PIC32	256 + 3	32	AN1095[1]	4/0	2.3V–3.6V	50	8 MHz, 32 kHz	✓	28 ch	3	5/5/5	5/2	3/3	2	4	–	–	–	✓	✓	✓	$2.56	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX430F064H	R	49	PIC32	64 + 12	16	AN1095[1]	4/2	2.3V–3.6V	80	8 MHz, 32 kHz	✓	28 ch	2	5/5/5	5/2	2/2	2	4	OTG	–	–	✓	✓	✓	$2.59	POR, BOR, LVD, WDT	TQFP (PT), QFN (RG)
	PIC32MX250F256H	R	49	PIC32	256 + 3	32	AN1095[1]	4/2	2.3V–3.6V	50	8 MHz, 32 kHz	✓	28 ch	3	5/5/5	5/2	3/3	2	4	OTG	–	–	✓	✓	✓	$2.70	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX350F128H	R	53	PIC32	128 + 12	32	AN1095[1]	4/0	2.3V–3.6V	80	8 MHz, 32 kHz	✓	28 ch	2	5/5/5	5/2	2/2	2	4	–	–	–	✓	✓	✓	$2.77	POR, BOR, LVD, WDT	TQFP (PT), QFN (RG)
	PIC32MX550F256H	R	49	PIC32	256 + 3	32	AN1095[1]	4/4	2.3V–3.6V	50	8 MHz, 32 kHz	✓	28 ch	3	5/5/5	5/2	3/3	2	4	OTG	–	1	✓	✓	✓	$2.84	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX450F128H	R	49	PIC32	128 + 12	32	AN1095[1]	4/2	2.3V–3.6V	80	8 MHz, 32 kHz	✓	28 ch	2	5/5/5	5/2	2/2	2	4	OTG	–	–	✓	✓	✓	$2.91	POR, BOR, LVD, WDT	TQFP (PT), QFN (RG)
	PIC32MX534F064H	R	51	PIC32	64 + 12	16	AN1095[1]	4/4	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	3/0	4	6	OTG	–	1	✓	✓	–	$2.94	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX320F032H	R	51	PIC32	32 + 12	8	AN1095[1]	0/0	2.3V–3.6V	40	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	2/0	2	2	–	–	–	✓	✓	–	$3.09	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX564F064H	R	51	PIC32	64 + 12	32	AN1095[1]	4/4	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	3/0	4	6	OTG	–	1	✓	✓	–	$3.11	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX564F128H	R	51	PIC32	128 + 12	32	AN1095[1]	4/4	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	3/0	4	6	OTG	–	1	✓	✓	–	$3.30	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX664F064H	R	51	PIC32	64 + 12	32	AN1095[1]	4/4	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	3/0	4	6	OTG	10/100	–	✓	✓	–	$3.30	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX320F064H	R	51	PIC32	64 + 12	16	AN1095[1]	0/0	2.3V–3.6V	40	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	2/0	2	2	–	–	–	✓	✓	–	$3.36	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX420F032H	R	51	PIC32	32 + 12	8	AN1095[1]	0/2	2.3V–3.6V	40	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	2/0	2	2	OTG	–	–	✓	✓	–	$3.36	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX664F128H	R	51	PIC32	128 + 12	32	AN1095[1]	4/4	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	3/0	4	6	OTG	10/100	–	✓	✓	–	$3.47	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX350F256H	R	53	PIC32	256 + 12	64	AN1095[1]	4/0	2.3V–3.6V	80	8 MHz, 32 kHz	✓	28 ch	2	5/5/5	5/2	2/2	2	4	–	–	–	✓	✓	✓	$3.51	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)

Note 1: See Application Note "AN1095: Emulating Data EEPROM".

Products sorted by pin count followed by pricing.
† Pricing subject to change; please contact your Microchip representative for most current pricing.

32-BIT PIC32MX MICROCONTROLLERS

	Product	Released (R) Not Released (NR)	I/O Pins	Core	Memory: Flash KB + Boot Flash	Memory: Data RAM (KB)	Memory: EEPROM	DMA Channels General/Dedicated	Voltage Range	Operating Speed: Maximum Speed (MHz)	Operating Speed: Internal Oscillator	Charge Time Measurement Unit	Analog: ADC 10-bit 1,000 ksps	Analog: Comparators	IC/OC/PWM	Timers 16-/32-bit	Communication: SPI/I²S	Communication: I²C	Communication: UARTs	Communication: FS USB	Communication: Ethernet	Communication: CAN	PMP	RTCC	PPS	5 ku Pricing†	Monitors: System Mgmt. Features	Packages (Designator)
64-Pin (Cont.)	PIC32MX170F512H	R	53	PIC32	512 + 3	64	AN1095(1)	4/0	2.3V–3.6V	50	8 MHz, 32 kHz	✓	28 ch	3	5/5/5	5/2	3/3	2	4	–	–	–	✓	✓	✓	$3.51	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX320F128H	R	51	PIC32	128 + 12	16	AN1095(1)	0/0	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	2/0	2	2	–	–	–	✓	✓	–	$3.57	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX764F128H	R	51	PIC32	128 + 12	32	AN1095(1)	4/6	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	3/0	4	6	OTG	10/100	1	✓	✓	–	$3.57	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX450F256H	R	49	PIC32	256 + 12	64	AN1095(1)	4/2	2.3V–3.6V	120	8 MHz, 32 kHz	✓	28 ch	2	5/5/5	5/2	2/2	2	4	OTG	–	–	✓	✓	✓	$3.65	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX270F512H	R	49	PIC32	512 + 3	64	AN1095(1)	4/2	2.3V–3.6V	50	8 MHz, 32 kHz	✓	28 ch	3	5/5/5	5/2	3/3	2	4	OTG	–	–	✓	✓	✓	$3.65	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX340F128H	R	51	PIC32	128 + 12	32	AN1095(1)	4/0	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	2/0	2	2	–	–	–	✓	✓	–	$3.77	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX570F512H	R	49	PIC32	512 + 3	64	AN1095(1)	4/4	2.3V–3.6V	50	8 MHz, 32 kHz	✓	28 ch	3	5/5/5	5/2	3/3	2	4	OTG	–	1	✓	✓	✓	$3.79	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX340F256H	R	51	PIC32	256 + 12	32	AN1095(1)	4/0	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	2/0	2	2	–	–	–	✓	✓	–	$3.88	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX440F128H	R	51	PIC32	128 + 12	32	AN1095(1)	4/2	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	2/0	2	2	OTG	–	–	✓	✓	–	$4.02	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX340F512H	R	51	PIC32	512 + 12	32	AN1095(1)	4/0	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	2/0	2	2	–	–	–	✓	✓	–	$4.06	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX440F256H	R	51	PIC32	256 + 12	32	AN1095(1)	4/2	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	2/0	2	2	OTG	–	–	✓	✓	–	$4.12	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX440F512H	R	51	PIC32	512 + 12	32	AN1095(1)	4/2	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	2/0	2	2	OTG	–	–	✓	✓	–	$4.28	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX370F512H	R	51	PIC32	512 + 12	128	AN1095(1)	4/0	2.3V–3.6V	80	8 MHz, 32 kHz	✓	28 ch	2	5/5/5	5/2	2/2	2	4	–	–	–	✓	✓	✓	$4.33	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX470F512H	R	49	PIC32	512 + 12	128	AN1095(1)	4/2	2.3V–3.6V	120	8 MHz, 32 kHz	✓	28 ch	2	5/5/5	5/2	2/2	2	4	OTG	–	–	✓	✓	✓	$4.47	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX575F256H	R	51	PIC32	256 + 12	64	AN1095(1)	8/4	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	3/0	4	6	OTG	–	1	✓	✓	–	$4.96	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX675F256H	R	51	PIC32	256 + 12	64	AN1095(1)	8/4	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	3/0	4	6	OTG	10/100	–	✓	✓	–	$5.19	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX575F512H	R	51	PIC32	512 + 12	64	AN1095(1)	8/4	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	3/0	4	6	OTG	–	1	✓	✓	–	$5.42	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX775F256H	R	51	PIC32	256 + 12	64	AN1095(1)	8/8	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	3/0	4	6	OTG	10/100	2	✓	✓	–	$5.42	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX675F512H	R	51	PIC32	512 + 12	64	AN1095(1)	8/4	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	3/0	4	6	OTG	10/100	–	✓	✓	–	$5.66	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX775F512H	R	51	PIC32	512 + 12	64	AN1095(1)	8/8	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	3/0	4	6	OTG	10/100	2	✓	✓	–	$5.88	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX695F512H	R	51	PIC32	512 + 12	128	AN1095(1)	8/4	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	3/0	4	6	OTG	10/100	–	✓	✓	–	$6.13	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX795F512H	R	51	PIC32	512 + 12	128	AN1095(1)	8/8	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	3/0	4	6	OTG	10/100	2	✓	✓	–	$6.36	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
100-Pin	PIC32MX130F128L	R	85	PIC32	128 + 3	16	AN1095(1)	4/0	2.3V–3.6V	50	8 MHz, 32 kHz	✓	48 ch	3	5/5/5	5/2	4/4	2	5	–	–	–	✓	✓	✓	$2.65	POR, BOR, LVD, WDT	TQFP (PT), TQFP (PF)
	PIC32MX230F128L	R	81	PIC32	128 + 3	16	AN1095(1)	4/2	2.3V–3.6V	50	8 MHz, 32 kHz	✓	48 ch	3	5/5/5	5/2	4/4	2	5	OTG	–	–	✓	✓	✓	$2.79	POR, BOR, LVD, WDT	TQFP (PT), TQFP (PF)
	PIC32MX330F064L	R	85	PIC32	64 + 12	16	AN1095(1)	4/0	2.3V–3.6V	80	8 MHz, 32 kHz	✓	28	2	5/5/5	5/2	2/2	2	5	–	–	–	✓	✓	–	$2.85	POR, BOR, LVD, WDT	TQFP (PT, PF), VTLA (TL)
	PIC32MX530F128L	R	81	PIC32	128 + 3	16	AN1095(1)	4/4	2.3V–3.6V	50	8 MHz, 32 kHz	✓	48 ch	3	5/5/5	5/2	4/4	2	5	OTG	–	1	✓	✓	✓	$2.93	POR, BOR, LVD, WDT	TQFP (PT), TQFP (PF)
	PIC32MX430F064L	R	81	PIC32	64 + 12	16	AN1095(1)	4/2	2.3V–3.6V	80	8 MHz, 32 kHz	✓	28	2	5/5/5	5/2	2/2	2	5	OTG	–	–	✓	✓	–	$2.98	POR, BOR, LVD, WDT	TQFP (PT, PF), VTLA (TL)
	PIC32MX150F256L	R	85	PIC32	256 + 3	32	AN1095(1)	4/0	2.3V–3.6V	50	8 MHz, 32 kHz	✓	48 ch	3	5/5/5	5/2	4/4	2	5	–	–	–	✓	✓	✓	$3.01	POR, BOR, LVD, WDT	TQFP (PT), TQFP (PF)
	PIC32MX250F256L	R	81	PIC32	256 + 3	32	AN1095(1)	4/2	2.3V–3.6V	50	8 MHz, 32 kHz	✓	48 ch	3	5/5/5	5/2	4/4	2	5	OTG	–	–	✓	✓	✓	$3.15	POR, BOR, LVD, WDT	TQFP (PT), TQFP (PF)
	PIC32MX350F128L	R	85	PIC32	128 + 12	32	AN1095(1)	4/0	2.3V–3.6V	80	8 MHz, 32 kHz	✓	28 ch	2	5/5/5	5/2	2/2	2	5	–	–	–	✓	✓	✓	$3.22	POR, BOR, LVD, WDT	TQFP (PT, PF), VTLA (TL)
	PIC32MX550F256L	R	81	PIC32	256 + 3	32	AN1095(1)	4/4	2.3V–3.6V	50	8 MHz, 32 kHz	✓	48 ch	3	5/5/5	5/2	4/4	2	5	OTG	–	1	✓	✓	✓	$3.29	POR, BOR, LVD, WDT	TQFP (PT), TQFP (PF)
	PIC32MX534F064L	R	85	PIC32	64 + 12	16	AN1095(1)	4/4	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	4/0	5	6	OTG	–	1	✓	✓	–	$3.35	POR, BOR, LVD, WDT	TQFP (PT, PF), XBGA (BG)
	PIC32MX450F128L	R	81	PIC32	128 + 12	32	AN1095(1)	4/2	2.3V–3.6V	80	8 MHz, 32 kHz	✓	28 ch	2	5/5/5	5/2	2/2	2	5	OTG	–	–	✓	✓	✓	$3.36	POR, BOR, LVD, WDT	TQFP (PT, PF), VTLA (TL)
	PIC32MX564F064L	R	85	PIC32	64 + 12	32	AN1095(1)	4/4	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	4/0	5	6	OTG	–	1	✓	✓	–	$3.50	POR, BOR, LVD, WDT	TQFP (PT, PF), XBGA (BG)
	PIC32MX564F128L	R	85	PIC32	128 + 12	32	AN1095(1)	4/4	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	4/0	5	6	OTG	–	1	✓	✓	–	$3.68	POR, BOR, LVD, WDT	TQFP (PT, PF), XBGA (BG)
	PIC32MX664F064L	R	85	PIC32	64 + 12	32	AN1095(1)	4/4	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	4/0	5	6	OTG	10/100	–	✓	✓	–	$3.68	POR, BOR, LVD, WDT	TQFP (PT, PF), XBGA (BG)
	PIC32MX664F128L	R	85	PIC32	128 + 12	32	AN1095(1)	4/4	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	4/0	5	6	OTG	10/100	–	✓	✓	–	$3.86	POR, BOR, LVD, WDT	TQFP (PT, PF), XBGA (BG)
	PIC32MX350F256L	R	85	PIC32	256 + 12	64	AN1095(1)	4/0	2.3V–3.6V	80	8 MHz, 32 kHz	✓	28 ch	2	5/5/5	5/2	2/2	2	5	–	–	–	✓	✓	✓	$3.93	POR, BOR, LVD, WDT	TQFP (PT, PF), VTLA (TL)
	PIC32MX764F128L	R	85	PIC32	128 + 12	32	AN1095(1)	4/6	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	4/0	5	6	OTG	10/100	1	✓	✓	–	$3.96	POR, BOR, LVD, WDT	TQFP (PT, PF), XBGA (BG)
	PIC32MX170F512L	R	85	PIC32	512 + 3	64	AN1095(1)	4/0	2.3V–3.6V	50	8 MHz, 32 kHz	✓	48 ch	3	5/5/5	5/2	4/4	2	5	–	–	–	✓	✓	✓	$3.96	POR, BOR, LVD, WDT	TQFP (PT), TQFP (PF)
	PIC32MX450F256L	R	81	PIC32	256 + 12	64	AN1095(1)	4/2	2.3V–3.6V	120	8 MHz, 32 kHz	✓	28 ch	2	5/5/5	5/2	2/2	2	5	OTG	–	–	✓	✓	✓	$4.07	POR, BOR, LVD, WDT	TQFP (PT, PF), VTLA (TL)
	PIC32MX270F512L	R	81	PIC32	512 + 3	64	AN1095(1)	4/2	2.3V–3.6V	50	8 MHz, 32 kHz	✓	48 ch	3	5/5/5	5/2	4/4	2	5	OTG	–	–	✓	✓	✓	$4.10	POR, BOR, LVD, WDT	TQFP (PT), TQFP (PF)
	PIC32MX320F128L	R	85	PIC32	128 + 12	16	AN1095(1)	0/0	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	2/0	2	2	–	–	–	✓	✓	–	$4.21	POR, BOR, LVD, WDT	TQFP (PT), XBGA (BG)
	PIC32MX340F128L	R	85	PIC32	128 + 12	32	AN1095(1)	4/0	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	2/0	2	2	–	–	–	✓	✓	–	$4.21	POR, BOR, LVD, WDT	TQFP (PT), XBGA (BG)
	PIC32MX570F512L	R	81	PIC32	512 + 3	64	AN1095(1)	4/4	2.3V–3.6V	50	8 MHz, 32 kHz	✓	48 ch	3	5/5/5	5/2	4/4	2	5	OTG	–	1	✓	✓	✓	$4.24	POR, BOR, LVD, WDT	TQFP (PT), TQFP (PF)
	PIC32MX360F256L	R	85	PIC32	256 + 12	32	AN1095(1)	4/0	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	2/0	2	2	–	–	–	✓	✓	–	$4.31	POR, BOR, LVD, WDT	TQFP (PT), XBGA (BG)
	PIC32MX360F512L	R	85	PIC32	512 + 12	32	AN1095(1)	4/0	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	2/0	2	2	–	–	–	✓	✓	–	$4.47	POR, BOR, LVD, WDT	TQFP (PT), XBGA (BG)

Note 1: See Application Note "AN1095: Emulating Data EEPROM".

Products sorted by pin count followed by pricing.
† Pricing subject to change; please contact your Microchip representative for most current pricing.

32-BIT PIC32MX MICROCONTROLLERS

	Product	Released (R) Not Released (NR)	I/O Pins	Core	Memory: Flash KB + Boot Flash	Memory: Data RAM (KB)	Memory: EEPROM	DMA Channels General/Dedicated	Voltage Range	Operating Speed: Maximum Speed (MHz)	Operating Speed: Internal Oscillator	Charge Time Measurement Unit	Analog: ADC 10-bit 1,000 ksps	Analog: Comparators	IC/OC/PWM	Timers 16-/32-bit	Communication: SPI/I²S	Communication: I²C	Communication: UARTs	Communication: FS USB	Communication: Ethernet	Communication: CAN	PMP	RTCC	PPS	5 ku Pricing†	Monitors: System Mgmt. Features	Packages (Designator)
100-Pin (Cont.)	PIC32MX440F128L	R	85	PIC32	128 + 12	32	AN1095(1)	4/2	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	2/0	2	2	OTG	–	–	✓	✓	–	$4.47	POR, BOR, LVD, WDT	TQFP (PT), XBGA (BG)
	PIC32MX460F256L	R	85	PIC32	256 + 12	32	AN1095(1)	4/2	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	2/0	2	2	OTG	–	–	✓	✓	–	$4.55	POR, BOR, LVD, WDT	TQFP (PT), XBGA (BG)
	PIC32MX460F512L	R	85	PIC32	512 + 12	32	AN1095(1)	4/2	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	2/0	2	2	OTG	–	–	✓	✓	–	$4.69	POR, BOR, LVD, WDT	TQFP (PT), XBGA (BG)
	PIC32MX370F512L	R	83	PIC32	512 + 12	128	AN1095(1)	4/0	2.3V–3.6V	80	8 MHz, 32 kHz	✓	28 ch	2	5/5/5	5/2	2/2	2	5	–	–	–	✓	✓	✓	$4.75	POR, BOR, LVD, WDT	TQFP (PT, PF), VTLA (TL)
	PIC32MX470F512L	R	81	PIC32	512 + 12	128	AN1095(1)	4/2	2.3V–3.6V	120	8 MHz, 32 kHz	✓	28 ch	2	5/5/5	5/2	2/2	2	5	OTG	–	–	✓	✓	✓	$4.89	POR, BOR, LVD, WDT	TQFP (PT, PF), VTLA (TL)
	PIC32MX575F256L	R	85	PIC32	256 + 12	64	AN1095(1)	8/4	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	4/0	5	6	OTG	–	1	✓	✓	–	$5.43	POR, BOR, LVD, WDT	TQFP (PT, PF), XBGA (BG)
	PIC32MX675F256L	R	85	PIC32	256 + 12	64	AN1095(1)	8/4	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	4/0	5	6	OTG	10/100	–	✓	✓	–	$5.67	POR, BOR, LVD, WDT	TQFP (PT, PF), XBGA (BG)
	PIC32MX575F512L	R	85	PIC32	512 + 12	64	AN1095(1)	8/4	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	4/0	5	6	OTG	–	1	✓	✓	–	$5.89	POR, BOR, LVD, WDT	TQFP (PT, PF), XBGA (BG)
	PIC32MX775F256L	R	85	PIC32	256 + 12	64	AN1095(1)	8/8	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	4/0	5	6	OTG	10/100	2	✓	✓	–	$5.89	POR, BOR, LVD, WDT	TQFP (PT, PF), XBGA (BG)
	PIC32MX675F512L	R	85	PIC32	512 + 12	64	AN1095(1)	8/4	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	4/0	5	6	OTG	10/100	–	✓	✓	–	$6.13	POR, BOR, LVD, WDT	TQFP (PT, PF), XBGA (BG)
	PIC32MX775F512L	R	85	PIC32	512 + 12	64	AN1095(1)	8/8	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	4/0	5	6	OTG	10/100	2	✓	✓	–	$6.36	POR, BOR, LVD, WDT	TQFP (PT, PF), XBGA (BG)
	PIC32MX695F512L	R	85	PIC32	512 + 12	128	AN1095(1)	8/4	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	4/0	5	6	OTG	10/100	–	✓	✓	–	$6.61	POR, BOR, LVD, WDT	TQFP (PT, PF), XBGA (BG)
	PIC32MX795F512L	R	85	PIC32	512 + 12	128	AN1095(1)	8/8	2.3V–3.6V	80	8 MHz, 32 kHz	–	16 ch	2	5/5/5	5/1	4/0	5	6	OTG	10/100	2	✓	✓	–	$6.83	POR, BOR, LVD, WDT	TQFP (PT, PF), XBGA (BG), VTLA (TL)

Note 1: See Application Note "AN1095: Emulating Data EEPROM".

32-BIT PIC32MZ WITH FLOATING POINT UNIT (FPU) MICROCONTROLLERS

	Product	Released (R) Not Released (NR)	I/O Pins	Core	Memory: Flash KB + Boot Flash	Memory: Data RAM (KB)	Memory: EEPROM	DMA Channels General/Dedicated	Voltage Range	Operating Speed: Maximum Speed (MHz)	Operating Speed: Internal Oscillator	Analog: ADC 10-bit	Analog: Comparators	IC/OC/PWM	Timers 16-/32-bit	Communication: SPI/I²S	Communication: I²C	Communication: UARTs	Communication: HS USB	Communication: Ethernet	Communication: CAN	Communication: SQI	Crypto Engine	EBI	PMP	RTCC	PPS	5 ku Pricing†	Monitors: System Mgmt. Features	Packages (Designator)
64-Pin	PIC32MZ0512EFE064	R	46	PIC32	512 + 160	128	AN1095(1)	8/12	2.1–3.6V	200	8 MHz, 32 kHz	24	2	9/9/9	9/4	4	4	6	OTG	10/100	–	✓	–	–	✓	✓	✓	$5.74	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MZ0512EFF064	R	46	PIC32	512 + 160	128	AN1095(1)	8/16	2.1–3.6V	200	8 MHz, 32 kHz	24	2	9/9/9	9/4	4	4	6	OTG	10/100	2	✓	–	–	✓	✓	✓	$5.88	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MZ0512EFK064	R	46	PIC32	512 + 160	128	AN1095(1)	8/18	2.1–3.6V	200	8 MHz, 32 kHz	24	2	9/9/9	9/4	4	4	6	OTG	10/100	2	✓	✓	–	✓	✓	✓	$6.02	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MZ1024EFE064	R	46	PIC32	1024 + 160	256	AN1095(1)	8/12	2.1–3.6V	200	8 MHz, 32 kHz	24	2	9/9/9	9/4	4	4	6	OTG	10/100	–	✓	–	–	✓	✓	✓	$6.16	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MZ1024EFF064	R	46	PIC32	1024 + 160	256	AN1095(1)	8/16	2.1–3.6V	200	8 MHz, 32 kHz	24	2	9/9/9	9/4	4	4	6	OTG	10/100	2	✓	–	–	✓	✓	✓	$6.30	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MZ1024EFG064	R	46	PIC32	1024 + 160	512	AN1095(1)	8/12	2.1–3.6V	200	8 MHz, 32 kHz	24	2	9/9/9	9/4	4	4	6	OTG	10/100	–	✓	–	–	✓	✓	✓	$6.86	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MZ1024EFH064	R	46	PIC32	1024 + 160	512	AN1095(1)	8/16	2.1–3.6V	200	8 MHz, 32 kHz	24	2	9/9/9	9/4	4	4	6	OTG	10/100	2	✓	–	–	✓	✓	✓	$7.00	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MZ1024EFK064	R	46	PIC32	1024 + 160	256	AN1095(1)	8/18	2.1–3.6V	200	8 MHz, 32 kHz	24	2	9/9/9	9/4	4	4	6	OTG	10/100	2	✓	✓	–	✓	✓	✓	$6.44	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MZ1024EFM064	R	46	PIC32	1024 + 160	512	AN1095(1)	8/18	2.1–3.6V	200	8 MHz, 32 kHz	24	2	9/9/9	9/4	4	4	6	OTG	10/100	2	✓	✓	✓	✓	✓	✓	$7.14	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MZ2048EFG064	R	46	PIC32	2048 + 160	512	AN1095(1)	8/12	2.1–3.6V	200	8 MHz, 32 kHz	24	2	9/9/9	9/4	4	4	6	OTG	10/100	–	✓	–	–	✓	✓	✓	$7.70	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MZ2048EFH064	R	46	PIC32	2048 + 160	512	AN1095(1)	8/16	2.1–3.6V	200	8 MHz, 32 kHz	24	2	9/9/9	9/4	4	4	6	OTG	10/100	2	✓	–	–	✓	✓	✓	$7.84	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MZ2048EFM064	R	46	PIC32	2048 + 160	512	AN1095(1)	8/18	2.1–3.6V	200	8 MHz, 32 kHz	24	2	9/9/9	9/4	4	4	6	OTG	10/100	2	✓	✓	✓	✓	✓	✓	$7.98	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
100-Pin	PIC32MZ0512EFE100	R	78	PIC32	512 + 160	128	AN1095(1)	8/12	2.1–3.6V	200	8 MHz, 32 kHz	40	2	9/9/9	9/4	6	5	6	OTG	10/100	–	✓	–	✓	✓	✓	✓	$6.16	POR, BOR, LVD, WDT	TQFP (PT, PF)
	PIC32MZ0512EFF100	R	78	PIC32	512 + 160	128	AN1095(1)	8/16	2.1–3.6V	200	8 MHz, 32 kHz	40	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	–	✓	✓	✓	✓	$6.30	POR, BOR, LVD, WDT	TQFP (PT, PF)
	PIC32MZ0512EFK100	R	78	PIC32	512 + 160	128	AN1095(1)	8/18	2.1–3.6V	200	8 MHz, 32 kHz	40	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	✓	✓	✓	✓	✓	$6.44	POR, BOR, LVD, WDT	TQFP (PT, PF)
	PIC32MZ1024EFE100	R	78	PIC32	1024 + 160	256	AN1095(1)	8/12	2.1–3.6V	200	8 MHz, 32 kHz	40	2	9/9/9	9/4	6	5	6	OTG	10/100	–	✓	–	✓	✓	✓	✓	$6.58	POR, BOR, LVD, WDT	TQFP (PT, PF)
	PIC32MZ1024EFF100	R	78	PIC32	1024 + 160	256	AN1095(1)	8/16	2.1–3.6V	200	8 MHz, 32 kHz	40	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	–	✓	✓	✓	✓	$6.72	POR, BOR, LVD, WDT	TQFP (PT, PF)
	PIC32MZ1024EFG100	R	78	PIC32	1024 + 160	512	AN1095(1)	8/12	2.1–3.6V	200	8 MHz, 32 kHz	40	2	9/9/9	9/4	6	5	6	OTG	10/100	–	✓	–	✓	✓	✓	✓	$7.28	POR, BOR, LVD, WDT	TQFP (PT, PF)
	PIC32MZ1024EFH100	R	78	PIC32	1024 + 160	512	AN1095(1)	8/16	2.1–3.6V	200	8 MHz, 32 kHz	40	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	–	✓	✓	✓	✓	$7.42	POR, BOR, LVD, WDT	TQFP (PT, PF)
	PIC32MZ1024EFK100	R	78	PIC32	1024 + 160	256	AN1095(1)	8/18	2.1–3.6V	200	8 MHz, 32 kHz	40	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	✓	✓	✓	✓	✓	$6.86	POR, BOR, LVD, WDT	TQFP (PT, PF)

Note 1: See Application Note "AN1095: Emulating Data EEPROM".

Products sorted by pin count followed by pricing.
† Pricing subject to change; please contact your Microchip representative for most current pricing.

32-BIT PIC32MZ WITH FLOATING POINT UNIT (FPU) MICROCONTROLLERS

	Product	Released (R) Not Released (NR)	I/O Pins	Core	Memory			DMA Channels General/Dedicated	Voltage Range	Operating Speed		Analog		IC/OC/PWM	Timers 16-/32-bit	Communication							Crypto Engine	EBI	PMP	RTCC	PPS	5 ku Pricing†	Monitors	Packages (Designator)
					Flash KB + Boot Flash	Data RAM (KB)	EEPROM			Maximum Speed (MHz)	Internal Oscillator	ADC 10-bit	Comparators			SPI/I²S	I²C	UARTs	HS USB	Ethernet	CAN	SQI							System Mgmt. Features	
100-Pin	PIC32MZ1024EFM100	R	78	PIC32	1024 + 160	512	AN1095(1)	8/18	2.1–3.6V	200	8 MHz, 32 kHz	40	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	✓	✓	✓	✓	✓	✓	$7.56	POR, BOR, LVD, WDT	TQFP (PT, PF)
	PIC32MZ2048EFG100	R	78	PIC32	2048 + 160	512	AN1095(1)	8/12	2.1–3.6V	200	8 MHz, 32 kHz	40	2	9/9/9	9/4	6	5	6	OTG	10/100	–	✓	–	✓	✓	✓	✓	✓	$8.12	POR, BOR, LVD, WDT	TQFP (PT, PF)
	PIC32MZ2048EFH100	R	78	PIC32	2048 + 160	512	AN1095(1)	8/16	2.1–3.6V	200	8 MHz, 32 kHz	40	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	–	✓	✓	✓	✓	✓	$8.26	POR, BOR, LVD, WDT	TQFP (PT, PF)
	PIC32MZ2048EFM100	R	78	PIC32	2048 + 160	512	AN1095(1)	8/18	2.1–3.6V	200	8 MHz, 32 kHz	40	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	✓	✓	✓	✓	✓	✓	$8.40	POR, BOR, LVD, WDT	TQFP (PT, PF)
124-Pin	PIC32MZ0512EFE124	R	97	PIC32	512 + 160	128	AN1095(1)	8/12	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	–	✓	–	✓	✓	✓	✓	✓	$6.58	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MZ0512EFF124	R	97	PIC32	512 + 160	128	AN1095(1)	8/16	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	–	✓	✓	✓	✓	✓	$6.72	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MZ0512EFK124	R	97	PIC32	512 + 160	128	AN1095(1)	8/18	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	✓	✓	✓	✓	✓	✓	$6.86	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MZ1024EFE124	R	97	PIC32	1024 + 160	256	AN1095(1)	8/12	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	–	✓	–	✓	✓	✓	✓	✓	$7.00	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MZ1024EFF124	R	97	PIC32	1024 + 160	256	AN1095(1)	8/16	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	–	✓	✓	✓	✓	✓	$7.14	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MZ1024EFG124	R	97	PIC32	1024 + 160	512	AN1095(1)	8/12	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	–	✓	–	✓	✓	✓	✓	✓	$7.70	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MZ1024EFH124	R	97	PIC32	1024 + 160	512	AN1095(1)	8/16	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	–	✓	✓	✓	✓	✓	$7.84	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MZ1024EFK124	R	97	PIC32	1024 + 160	256	AN1095(1)	8/18	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	✓	✓	✓	✓	✓	✓	$7.28	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MZ1024EFM124	R	97	PIC32	1024 + 160	512	AN1095(1)	8/18	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	✓	✓	✓	✓	✓	✓	$7.98	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MZ2048EFG124	R	97	PIC32	2048 + 160	512	AN1095(1)	8/12	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	–	✓	–	✓	✓	✓	✓	✓	$8.54	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MZ2048EFH124	R	97	PIC32	2048 + 160	512	AN1095(1)	8/16	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	–	✓	✓	✓	✓	✓	$8.68	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MZ2048EFM124	R	97	PIC32	2048 + 160	512	AN1095(1)	8/18	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	✓	✓	✓	✓	✓	✓	$8.82	POR, BOR, LVD, WDT	VTLA (TL)
144-Pin	PIC32MZ0512EFE144	R	120	PIC32	512 + 160	128	AN1095(1)	8/12	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	–	✓	–	✓	✓	✓	✓	✓	$7.07	POR, BOR, LVD, WDT	TQFP (PH), LQFP (PL)
	PIC32MZ0512EFF144	R	120	PIC32	512 + 160	128	AN1095(1)	8/16	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	–	✓	✓	✓	✓	✓	$7.21	POR, BOR, LVD, WDT	TQFP (PH), LQFP (PL)
	PIC32MZ0512EFK144	R	120	PIC32	512 + 160	128	AN1095(1)	8/18	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	✓	✓	✓	✓	✓	✓	$7.35	POR, BOR, LVD, WDT	TQFP (PH), LQFP (PL)
	PIC32MZ1024EFE144	R	120	PIC32	1024 + 160	256	AN1095(1)	8/12	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	–	✓	–	✓	✓	✓	✓	✓	$7.49	POR, BOR, LVD, WDT	TQFP (PH), LQFP (PL)
	PIC32MZ1024EFF144	R	120	PIC32	1024 + 160	256	AN1095(1)	8/16	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	–	✓	✓	✓	✓	✓	$7.63	POR, BOR, LVD, WDT	TQFP (PH), LQFP (PL)
	PIC32MZ1024EFG144	R	120	PIC32	1024 + 160	512	AN1095(1)	8/12	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	–	✓	–	✓	✓	✓	✓	✓	$8.19	POR, BOR, LVD, WDT	TQFP (PH), LQFP (PL)
	PIC32MZ1024EFH144	R	120	PIC32	1024 + 160	512	AN1095(1)	8/16	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	–	✓	✓	✓	✓	✓	$8.33	POR, BOR, LVD, WDT	TQFP (PH), LQFP (PL)
	PIC32MZ1024EFK144	R	120	PIC32	1024 + 160	256	AN1095(1)	8/18	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	✓	✓	✓	✓	✓	✓	$7.77	POR, BOR, LVD, WDT	TQFP (PH), LQFP (PL)
	PIC32MZ1024EFM144	R	120	PIC32	1024 + 160	512	AN1095(1)	8/18	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	✓	✓	✓	✓	✓	✓	$8.47	POR, BOR, LVD, WDT	TQFP (PH), LQFP (PL)
	PIC32MZ2048EFG144	R	120	PIC32	2048 + 160	512	AN1095(1)	8/12	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	–	✓	–	✓	✓	✓	✓	✓	$9.03	POR, BOR, LVD, WDT	TQFP (PH), LQFP (PL)
	PIC32MZ2048EFH144	R	120	PIC32	2048 + 160	512	AN1095(1)	8/16	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	–	✓	✓	✓	✓	✓	$9.17	POR, BOR, LVD, WDT	TQFP (PH), LQFP (PL)
	PIC32MZ2048EFM144	R	120	PIC32	2048 + 160	512	AN1095(1)	8/18	2.1–3.6V	200	8 MHz, 32 kHz	48	2	9/9/9	9/4	6	5	6	OTG	10/100	2	✓	✓	✓	✓	✓	✓	✓	$9.31	POR, BOR, LVD, WDT	TQFP (PH), LQFP (PL)

Note 1: See Application Note "AN1095: Emulating Data EEPROM".

Products sorted by pin count followed by pricing.
† Pricing subject to change; please contact your Microchip representative for most current pricing.

THERMAL MANAGEMENT: Temperature Sensors

Product	Description	# Temps. Monitored	Typical/Max Accuracy (°C)	Temp. Range (°C)	VCC Range (V)	Typical Supply Current (µA)	Alerts	Resistance Error Correction	Beta Compensation	Packages
MCP9501/2/3/4	Temperature Switch replacing MAX6501/2/3/4	1	1.0/3.0	–40 to +125	+2.7 to +5.5	25	–	–	–	5-pin SOT-23
MCP9509/10	Resistor-Programmable Temperature Switch	1	0.5/3.5	–40 to +125	+2.7 to +5.5	30	–	–	–	5-pin SOT-23
MCP9800/1/2/3	SMBus/I²C Temperature Sensor	1	0.5/1.0	–55 to +125	+2.7 to +5.5	200	1	–	–	5-pin SOT-23
MCP9804	SMBus/I²C Temperature Sensor	1	0.25/1.0	–40 to +125	+2.7 to +5.5	200	1	–	–	8-pin DFN, 8-pin MSOP
MCP9808	SMBus/I²C Temperature Sensor	1	0.25/0.5	–40 to +125	+2.7 to +5.5	200	1	–	–	8-pin DFN, 8-pin MSOP
MCP98244	SMBus/I²C Temperature Sensor with EEPROM	1	0.5/3.0	–40 to +125	+2.2 to +3.6	100	1	–	–	8-pin TDFN
MCP9902/3/4	Lower Temperature Multi Temperature Sensors	2/3/4	0.25/1.0	–40 to +125	+3.0 to +3.6	200	1	✓	Automatic	8-pin WDFN, 10-pin VDFN
TCN75A	SMBus/I²C Temperature Sensor	1	0.5/3.0	–40 to +125	+2.7 to +5.5	200	1	–	–	8-pin MSOP, 8-pin SOIC 150mil
MCP9700/01	Linear Active Thermistor IC	1	1.0/4.0	–40 to +150	+2.3 to +5.5	6	–	–	–	3-pin SOT-23, 3-pin TO-92, 5-pin SC-70
MCP9700/01A	Linear Active Thermistor IC	1	1.0/2.0	–40 to +150	+2.3 to +5.5	6	–	–	–	3-pin SOT-23, 3-pin TO-92, 5-pin SC-70
EMC1033	SMBus/I²C Multi Temperature Sensor	3	1.0/3.0	–40 to +125	+3.0 to +3.6	50	2	✓	–	8-pin MSOP
EMC1043	SMBus/I²C Multi Temperature Sensor	3	0.5/1.0	–40 to +125	+3.0 to +3.6	105	–	✓	Configurable	8-pin MSOP
EMC1046	SMBus/I²C Multi Temp Sensor with Hottest of Zones	6	0.25/1.0	–40 to +125	+3.0 to +3.6	395	–	✓	Automatic	10-pin MSOP
EMC1047	SMBus/I²C Multi Temp Sensor with Hottest of Zones	7	0.25/1.0	–40 to +125	+3.0 to +3.6	395	–	✓	Automatic	10-pin MSOP
EMC1182/3/4	1.8V SMBus/I²C Multi Temp Sensor	2/3/4	0.25/1.0	–40 to +125	+3.0 to +3.6	–	2	✓	Automatic	8-pin TDFN, 8-pin DFN, 10-pin DFN
EMC1186/7/8	1.8V SMBus/I²C Multi Temp Sensor with Shutdown	2/3/4	0.25/1.0	–40 to +125	+3.0 to +3.6	–	1	✓	Automatic	8-pin TDFN, 10-pin DFN
EMC1412/3/4	SMBus/I²C Multi Temperature Sensor	2/3/4	0.25/1.0	–40 to +125	+3.0 to +3.6	430	2	✓	Automatic	8-pin TDFN, 8-pin MSOP, 10-pin DFN, 10-pin MSOP
EMC1422/3/4	SMBus/I²C Multi Temp Sensor with Shutdown	2/3/4	0.25/1.0	–40 to +125	+3.0 to +3.6	430	1	✓	Automatic	8-pin MSOP, 10-pin MSOP
EMC1428	SMBus/I²C Multi Temp Sensor with Hottest of Zones	8	0.25/1.0	–40 to +125	+3.0 to +3.6	450	1	✓	Automatic	16-pin QFN

THERMAL MANAGEMENT: Sensor Conditioning ICs

Product	Typical TC Accuracy (%)	Typical TH Accuracy (%)	Operating Temp. Range (°C)	VCC Range Max (V)	Max Supply Current (µA)	Features	Packages
MCP9600	1	1	–40 to +125	2.7 to 5.5	500	Full integrated thermcouple EMF to temperature converter. Supports thermocouple types K, J, T, N, S, E B and R.	5 x 5 MQFN

THERMAL MANAGEMENT: Fan Controllers

Product	Description	# Fan Drivers	PWM/Linear Control	# External Temp. Inputs	Typical Accuracy	Max. Accuracy	VCC Range (V)	Interface	Alerts	Fan Speed Lookup Table	Packages
EMC2101	Programmable Fan Controller with Thermal Mgt	1	PWM	2	0.5	1.0	+3.0 to +3.6	SMBus/I²C	✓	✓	8-pin MSOP, 8-pin SOIC
EMC2300	Programmable Multi-Fan Controller with Thermal Mgt	3	PWM	3	0.25	3.0	+3.0 to +3.6	SMBus/I²C	✓	✓	16-pin SSOP
EMC2112	Programmable Fan Controller with Thermal Mgt	1	Linear	3	0.25	1.0	+3.3 and +5	SMBus/I²C	✓	✓	20-pin QFN
EMC2103-1	Programmable Fan Controller with Thermal Mgt	1	PWM	1	0.5	1.0	+3.0 to +3.6	SMBus/I²C	✓	✓	12-pin QFN
EMC2103-4	Programmable Fan Controller with EEPROM Load	1	PWM	3	0.5	1.0	+3.0 to +3.6	SMBus/I²C	✓	✓	16-pin QFN
EMC2104	Programmable Multi-Fan Controller with Thermal Mgt	2	PWM	4	0.25	1.0	+3.0 to +3.6	SMBus/I²C	✓	✓	20-pin QFN
EMC2105	Programmable Fan Controller with Thermal Mgt	1	Linear	4	0.25	1.0	+3.3 and +5	SMBus/I²C	✓	✓	20-pin QFN
EMC2113	Programmable Fan Controller with Thermal Mgt	1	PWM	3	0.5	1.0	+3.0 to +3.6	SMBus/I²C	✓	✓	16-pin QFN
EMC2301/2/3/5	Programmable Fan Controller	1 /2/3/5	PWM	–	–	–	+3.0 to +3.6	SMBus/I²C	✓	–	8-pin MSOP, 10-pin MSOP, 12-pin QFN, 16-pin QFN

POWER MANAGEMENT: Switching Regulators

Product	Input Voltage Range (V)	Output Voltage (V)	Operating Temp. Range (°C)	Switching Frequency (kHz)	Output Current (mA)	Features	Packages
Single Output Switching Regulator – Step Down Regulators							
MCP1601/3	2.7 to 5.5	0.9V to VIN	–40 to +85	750	500	UVLO, Auto-Switching, LDO/Overtemperature and Overcurrent Protection	8-pin MSOP
MCP1612	2.7 to 5.5	0.8 to 5.5	–40 to +85	1400	1000	Overall Efficiency > 94%, Soft Start, Overtemperature and Overcurrent Protection	8-pin MSOP, 8-pin (3 x 3) DFN
MCP16311/12	4.4 to 30.0	2.0 to 24.0	–40 to +125	500	1000	PFM/PWM Operation, Enable Function	8-pin MSOP, 8-pin (2 x 3) TDFN
MCP16301	4.0 to 30	2.0 to 15	–40 to +85	500	600	Integrated N-channel, UVLO, Soft Start, Overtemperature Protection	6-pin SOT-23
MIC24046	4.5 to 19	0.7 to 3.3	–40 to +125	400–790	5000	Internal Soft-Start and Thermal Shutdown Protection	20-pin (3 x 3) QFN
MIC24051/53/55	4.5 to 19	Adj.	–40 to +125	600	600/9000/1200	Power Good, Soft Start, Architecture Regulation Scheme	28-pin (5 x 6) QFN
MIC24052/54/56	4.5 to 19	Adj.	–40 to +125	600	600/9000/1200	Power Good, Soft Start, HyperLight Load® mode	28-pin (5 x 6) QFN
MIC26601/MIC26901/MIC26950	4.5 to 28	Adj.	–40 to +125	600	6000/9000/12000	Power Good, Soft Start, Hyper Speed Control® architecture	28-pin (5 x 6) QFN
MIC26603/MIC26903	4.5 to 28	Adj.	–40 to +125	600	6000	Power Good, Soft Start, HyperLight Load mode	28-pin (5 x 6) QFN
MIC27600	4.5 to 36	Adj.	–40 to +125	300	7000	Soft Start, Architecture Regulation Scheme - Hyper Speed Control architecture, Thermal Shutdown	28-pin (5 x 6) QFN
MIC28510	4.5 to 75	Adj.	–40 to +125	100–500	4000	Soft Start, Architecture Regulation Scheme - Hyper Speed Control architecture, Thermal Shutdown	28-pin (5 x 6) QFN
MIC28511/12/13-1	4.6 to 60/70/45	Adj.	–40 to +125	200–680	3000/2000/4000	Power Good, Soft Start, HyperLight Load mode	24-pin (3 x 4) FCQFN
MIC28511/12/13-2	4.6 to 60/70/45	Adj.	–40 to +125	200–680	3000/2000/4000	Power Good, Soft Start, Hyper Speed Control architecture	24-pin (3 x 4) FCQFN
MIC4930	2.7 to 5.5	Adj.	–40 to +125	3300	3000	Power Good, Safe Start, Thermal Shutdown and Current Limit	10-pin (3 x 4) DFN
MIC4950	2.7 to 5.5	Adj.	–40 to +125	3300	5000	Power Good, Safe Start, Thermal Shutdown and Current Limit	8-pin SOIC, 10-pin (3 x 4) DFN

POWER MANAGEMENT: Switching Regulators

Product	Input Voltage Range (V)	Output Voltage (V)	Operating Temp. Range (°C)	Switching Frequency (kHz)	Output Current (mA)	Features	Packages
Single Output Switching Regulator – Step Up Regulators							
MCP1623/4	0.65 to 6.0	2.0 to 5.5	–40 to +85	500	175	Integrated synchronous boost regulator, 0.65V start-up voltage, soft start, true load disconnect	6-pin SOT-23, 8-pin (2 x 3) DFN
MCP1642B/D	0.65 to 6.0	1.8 to 5.5	–40 to +85	1000	>800	Integrated synchronous boost regulator, 0.65V start-up voltage, soft start, enable, power good output, true load disconnect or input-to-output bypass option	8-pin MSOP, 8-pin (2 x 3) DFN
MCP16251/2	0.82 to 5.5	1.8 to 5.5	–40 to +85	500	250	True load disconnect shutdown (MCP16251)/Input to output bypass shutdown (MCP16252)	6-pin SOT-23, 8-pin (2 x 3) DFN
MCP1640/B/C/D	0.65 to 6	2.0 to 5.5	–40 to +85	500	350	Integrated synchronous boost regulator, 0.65V start-up voltage, soft start, true load disconnect or input-to-output bypass option	6-pin SOT-23, 8-pin (2 x 3) DFN
MCP1643	0.5	0.6 to 5.0	–40 to +85	1000	550	True load disconnect, shutdown	8-pin MSOP, 8-pin (2 x 3) DFN
MCP1663/4	2.4 to 5.5	Up to 32	–40 to +85	500	>375	High-efficiency (up to 92%), fixed-frequency, non-synchronous, 300 mV feedback for LED driving (MCP1664)	5-pin SOT-23, 8-pin (2 x 3) TDFN
MCP1661/2	2.4 to 5.5	5.5 to 32	–40 to +85	500	>200	Non-synchronous, soft start, Enable, 300 mV feedback for LED driving (MCP1662)	6-pin SOT-23, 8-pin (3 x 3) TDFN
MIC2141	2.5 to 14	Up to 22	–40 to +85	330	1000	Micropower Boost Converter with control signal input to proportionally adjust output voltage	5-pin SOT23
MIC2619	2.8 to 6.5	Up to 35	–40 to +125	1200	350	1.2 MHz PWM Boost Converter with OVP	6-pin Thin SOT23
MIC2290	2.5 to 10	Up to 34	–40 to +125	1200	750	2 x 2 mm PWM Boost Regulator with Internal Schottky Diode	8-pin 2 x 2 MLF®
MIC2605/06	4.5 to 20	Up to 40	–40 to +125	1200/2000	800	0.5A, 1.2 MHz/2 MHz Wide Input Range Boost with Integrated Switch and Schottky Diode	8-pin 2 x 2 MLF
MIC2145	2.4 to 16	Up to 16	–40 to +85	450	900	High-Efficiency 2.5W Boost Converter	8-pin MSOP, 3 x 3 MLF
MIC2570/1	1.3 to 15	Up to 36	–40 to +85	20	1100	Two-Cell/Single-Cell Switching Regulator	8-pin SOIC, 8-pin MSOP
MIC2288	2.5 to 10	Up to 34	–40 to +125	1200	1200	1A 1.2 MHz PWM Boost Converter in Thin SOT-23 and 2 x 2 mm MLF	5-pin SOT23, 2 x 2 MLF
MIC3172	3 to 40	Up to 65	–40 to +85	100	1250	100 kHz, 1.25A Switching Regulators	8-pin SOIC, 8-pin DIP
MIC2295/96	2.5 to 10	Up to 34	–40 to +125	1200/600	1700	High Power Density 1.2A Boost Regulator	5-pin SOT23, 2 x 2 MLF
MIC2601/02	4.5 to 20	Up to 40	–40 to +125	1200/2000	1700	1.2A, 1.2 MHz/2 MHz Wide Input Range Integrated Switch Boost Regulator	8-pin 2 x 2 MLF
MIC2250/51	2.5 to 5.5	Up to 32/27	–40 to +125	Variable	2000	High-Efficiency Low EMI Boost Regulator	5-pin SOT23, 2 x 2 MLF
MIC2172	3 to 40	Up to 65	–40 to +85	100	2000	100 kHz 1.25A Switching Regulator	8-pin DIP, 8-pin SOIC
MIC2253	2.5 to 10	Up to 30	–40 to +125	1000	3500	3.5A 1 MHz High-Efficiency Boost Regulator with OVP and Softstart	12-pin 3 x 3 MLF
MIC2171	3 to 40	Up to 65	–40 to +85	100	4000	100 kHz 2.5A Switching Regulator	5-pin TO220, TO263
MIC2875/76	2.5 to 6	Up to 6	–40 to +125	2000	4800	4.8A ISW, Synchronous Boost Regulator with Bi-Directional Load Disconnect	8-pin TDFN
Multiple Output Switching Regulators							
MIC4742	2.9 to 5.5	Adj./Adj.	–40 to +125	2.0 MHz	2	Micro Power Shutdown, Ultra-Fast Transient Response	16-pin TSSOP, 16-pin (3 x 3) MLF
MIC4744	2.9 to 5.5	Adj./Adj.	–40 to +125	4.0 MHz	2	Micro Power Shutdown, Ultra-Fast Transient Response	16-pin TSSOP, 16-pin (3 x 3) MLF
MIC4782	3 to 6	Adj./Adj.	–20 to +125	1.8 MHz	2	Micro Power Shutdown, Ultra-Fast Transient Response	16-pin (3 x 3) MLF
MIC2238	2.5 to 5.5	1.28/1.28, 1.8/1.2, 1.8/1.545, 1.8/1.575, 1.8/3.3, 1.8/1.6, 2.5/1.2, 3.3/1.2, 3.3/3.3, Adj./Adj.	–40 to +125	2.5 MHz	0.8/0.8	Power Good, Soft Start, Current Limit Protection, Dual Output Voltages	12-pin (3 x 3) MLF
MIC23250	2.7 to 5.5	0.9/1.1, 1.2/1.0, 1.2/1.6, 1.2/1.8, 1.2/2.8, 1.2/3.3, 1.575/1.8, 2.6/3.3, Adj./Adj.	–40 to +125	4.0 MHz	0.4/0.4	20mVpp in HyperLight Load® mode, Soft Start, Ultra-Fast Transient Response	10-pin (2 x 2) MLF, 12-pin (2.5 x 2.5) MLF
MIC23254	2.5 to 5.5	1.0/1.8	–40 to +125	4.0 MHz	0.4/0.4	20mVpp in HyperLight Load mode, Soft Start, Ultra-Fast Transient Response	10-pin (2 x 2) Thin MLF
MIC23450	2.7 to 5.5	Adj./Adj./Adj.	–40 to +125	3.0 MHz	2/2/02	Power Good, Soft Start, HyperLight Load mode	32-pin (5 x 5) QFN
MIC24420	4.5 to 15	Adj./Adj.	–40 to +125	1 MHz	2.5/2.5	Power Good, Soft Start	24-pin (4 x 4) MLF
MIC24421	4.5 to 15	Adj./Adj.	–40 to +125	500	2.5/2.5	Power Good, Soft Start	24-pin (4 x 4) MLF
MIC23158	2.7 to 5.5	Adj./Adj.	–40 to +125	3.0 MHz	2/2	Power Good, Soft Start, HyperLight Load mode	20-pin (3 x 4) MLF
MIC23159	2.7 to 5.5	Adj./Adj.	–40 to +125	3.0 MHz	2/2	Power Good, Soft Start, HyperLight Load mode	20-pin (3 x 4) MLF
MIC23451	2.7 to 5.5	Adj./Adj./Adj.	–40 to +125	3.0 MHz	1/1/1	Power Good, Soft Start, HyperLight Load mode	26-pin (4 x 4) QFN
MIC2230	2.5 to 5.5	1.28/1.65, 1.8/1.2, 1.8/1.545, 1.8/1.575, 1.8/3.3, 1.8/1.6, 2.5/1.2, 3.3/1.2, 3.3/3.3, Adj./Adj.	–40 to +125	2.5 MHz	0.8/0.8	Power Good, Soft Start, Synchronous	12-pin (3 x 3) MLF
MIC7400	2.4 to 5.5	1.8V, 1.1V, 1.8V, 1.05V, 1.25V, 12V or Configurable	–40 to +125	2 MHz Boost, 1.3 MHz Bucks	DC to DC Bucks: 3,000, DC/DC Boost 200	Highly integrated configurable, featuring five buck regulators, one boost regulator, and global Power Good indicator	36-pin 4.5 x 4.5 QFN
MIC7401	2.4 to 5.5	1.8V, 1.1V, 1.8V, 1.05V, 1.25V, 12V or Configurable	–40 to +125	2 MHz Boost, 1.3 MHz Bucks	DC to DC Bucks: 3,000, DC/DC Boost 200	Highly integrated configurable, featuring five buck regulators, one boost regulator, global Power Good indicator and enable pin	36-pin 4.5 x 4.5 QFN
Combination Switching Regulators							
TC1303	2.7 to 5.5	DC/DC: 0.8 to 4.5 LDO: 1.5 to 3.3	–40 to +85	2000	DC/DC: 500 mA LDO: 300 mA	PFM/PWM auto-switching, Power good output	10-pin MSOP, 10-pin (3 x 3) DFN
TC1304	2.7 to 5.5	DC/DC: 0.8 to 4.5 LDO: 1.5 to 3.3	–40 to +85	2000	DC/DC: 500 mA LDO: 300 mA	PFM/PWM auto-switching, Power sequencing	10-pin MSOP, 10-pin (3 x 3) DFN
TC1313	2.7 to 5.5	DC/DC: 0.8 to 4.5 LDO: 1.5 to 3.3	–40 to +85	2000	DC/DC: 500 mA LDO: 300 mA	PFM/PWM auto-switching	10-pin MSOP, 10-pin (3 x 3) DFN

POWER MANAGEMENT: Inductorless Offline Switchers

Product	V_{IN} (V_{AC})	Adjustable V_{OUT} (V)	Fixed V_{OUT} (V)	I_{OUT} Max. (mA)	Load Regulation (%/mA)	Packages
SR086	80–285	9.0–50	3.3	100	0.025	8-Lead SOIC with Heat Slug
SR087	80–285	9.0–50	5	100	0.017	8-Lead SOIC with Heat Slug
SR10	80–285	6.0–28	6.0, 12, 24	60	–	8-Lead SOIC

POWER MANAGEMENT: PWM Controllers

Product	Supported Topologies	Supported Outputs	Input Voltage Range (V)	Output Voltage (V)	Operating Frequency (Hz)	Operating Temperature Range (°C)	Features	Packages
MIC2103/4	Sync. Buck	1	4.5 to 75	0.8 to 24	200k to 600k	–40 to +125	HyperLight Load® Mode, External Clock Sync, Power Good, Soft Start, Internal Compensation and Voltage Bias	16-pin 3 × 3 MLF®
MIC2124	Sync. Buck	1	3.0 to 18	0.8 to 12	300k	–40 to +125	Soft Start, Internal Voltage Bias	10-pin MSOP
MIC2130/1	Sync. Buck	1	8.0 to 40	0.7 to 24	150k or 400k	–40 to +125	Power Good, Soft Start, Internal Voltage Bias	16-pin e-TSSOP, 16-pin 4 × 4 MLF
MIC2150/1	Sync. Buck	2	4.5 to 14.5	0.7 to 5.5	500k	–40 to +125	Power Good, Soft Start, Internal Voltage Bias	24-pin 4 × 4 MLF
MIC2169A/B	Sync. Buck	1	3.0 to 14.5	0.8 to 5.5	500k	–40 to +125	Soft Start, Internal Voltage Bias	10-pin MSOP
MIC2183	Sync. Buck	1	2.9 to 14	1.3 to 12	200k/400k	–40 to +125	External Clock Sync, Soft Start, Internal Voltage Bias	16-pin SOP, 16-pin QSOP
MIC2184	Async. Buck	1	2.9 to 14	1.3 to 12	200k/400k	–40 to +125	External Clock Sync, Soft Start, Internal Voltage Bias	16-pin SOP, 16-pin QSOP
MIC2185	Boost, SEPIC, Ćuk	1	2.9 to 14	3.3 to 5.5	200k/400k	–40 to +125	Skip Mode, External Clock Sync, Soft Start, Internal Voltage Bias	16-pin SOIC, 16-pin QSOP
MIC2186	Boost, SEPIC, Flyback	1	2.9 to 14	3.3 to 5.5	100/200/400k	–40 to +85	Skip Mode, External Clock Sync, Soft Start, Internal Voltage Bias	16-pin SOP, 16-pin QSOP
MIC2193	Sync. Buck	1	2.9 to 14	3.3 to 5.5	400k	–40 to +125	Internal Voltage Bias, UVLO	8-pin SOIC
MIC2194	Async. Buck	1	2.9 to 14	3.3 to 5.5	400k	–40 to +125	Internal voltage Bias, UVLO, Current Limit/Short Circuit Protection	8-pin SOIC
MIC2196	Boost, SEPIC	1	2.9 to 14	3.3 to 5.5	400k	–40 to +125	Internal voltage Bias, UVLO, Current Limit/Short Circuit Protection	8-pin SOIC
MIC38HC42/3/4/5	Forward,Flyback	1	9.0 up to 20	–	Adj. to 500 kHz	–40 to +85	Forward,Flyback Supported Topologies	8-pin PDIP, 14-pin PDIP, 8-pin SOIC, 14-pin SOIC
MIC9130/1	Forward,Flyback	1	9.0 to 180	–	Adj. up to 1.5 MHz	–40 to +125	Forward,Flyback Supported Topologies, External Clock Sync	16-pin SOIC, 16-pin QSOP
MCP1630/1/2	Flyback, Boost, SEPIC, Ćuk	1	3.0 to 5.5	–	Sync. up to 2 MHz	–40 to +125	External Clock Sync, Current Limit/Short Circuit Protection, Soft Start, Internal Voltage Bias, UVLO, Current	20-pin TSSOP, 20-pin SSOP, 20 pin 4 × 4 QFN
MCP1631HV	Flyback, Boost, SEPIC, Ćuk	1	3.5 to 16	–	Sync. to 2 MHz	–40 to +125	External Clock Sync, Current Limit/Short Circuit Protection	20-pin TSSOP, 20-SSOP
MCP19035	Sync. Buck	1	4.5 to 30	–	300k/600k	–40 to +125	Power Good, Soft Start, Internal Voltage Bias, UVLO, Current Limit/Short Circuit Protection	10-pin 3 × 3 DFN

POWER MANAGEMENT: Hybrid PWM Controllers

Product	Input Voltage Range (V)	Output Voltage (V)	Operating Temp. Range (°C)	Topologies Supported	Integrated MCU	Program Memory Size (kWords)	RAM (bytes)	Features	Packages
MCP19110	4.5 to 32	90% of V_{IN}	–40 to +125	Buck	✓	4	256	Synchronous buck controller, Integrated MCU, LDO, and synchronous MOSFET driver. User configurable/programmable including MOSFET dead time, Switching frequency, Analog loop compensation, and protection thresholds	4 x 4 QFN
MCP19111	4.5 to 32	90% of V_{IN}	–40 to +125	Buck	✓	4	256	Contains all features of the MCP19110, with four additional GPIO pins and a debug interface.	5 x 5 QFN
MCP19114	4.5 to 42	0.5 of V_{IN} (dependent on topology)	–40 to +125	Boost, Flyback, SEPIC, Ćuk	✓	4	256	Dual synchronous low side switch topology support, with excellent current regulation for constant current applications. Integrated MCU, LDO, A/D, MOSFET drivers. Completely configurable operation, including output voltage, current, switching frequency, dead time, transient response, and protection thresholds.	4 x 4 QFN
MCP19115	4.5 to 42	0.5 of V_{IN} (dependent on topology)	–40 to +125	Boost, Flyback, SEPIC, Ćuk	✓	4	256	Contains all features of the MCP19114, with four additional GPIO pins and a debug interface.	5 x 5 QFN
MCP19116	4.5 to 42	0.5 of V_{IN} (dependent on topology)	–40 to +125	Boost, Flyback, SEPIC, Ćuk	✓	8	336	Contains all features of MCP19114, with improved current control accuracy, additional code space, and other added benefits.	24-pin 4 x 4 QFN
MCP19117	4.5 to 42	0.5 of V_{IN} (dependent on topology)	–40 to +125	Boost, Flyback, SEPIC, Ćuk	✓	8	336	Contains all features of the MCP19116, with four additional GPIO pins and a debug interface.	28-pin 5 x 5 QFN
MCP19118	4.5 to 40	0.5 to 90% of V_{IN}	–40 to +125	Buck	✓	4	256	40V DC operation, 48V transient capability. Synchronous buck controller with integrated MCU, LDO, MOSFET drivers. User configurable/programmable, including MOSFET dead time, switching frequency, analog loop compensation and protection tresholds.	24-pin 4 x 4 QFN
MCP19119	4.5 to 40	0.5 to 90% of V_{IN}	–40 to +125	Buck	✓	4	256	Contains all features of the MCP19119, with four additional GPIO pins and a debug interface.	28-pin 5 x 5 QFN

POWER MANAGEMENT: Power Modules

Product	Input Voltage Range (V)	Output Voltage (V)	Operating Temp. Range (°C)	Control Scheme	Switching Frequency (kHz)	VOUT Ma × . (V)	Output Current (A)	Features	Packages
MIC28304-1/-2	4.5 to 70	Adj.	–40 to +125	COT	600	24	3	HyperLight Load® mode, Hyper Speed Control® architecture, Power Good, Soft Start	64-pin (12 × 12) QFN
MIC45205-1/-2	4.5 to 26	Adj.	–40 to +125	COT	200–600	5.5	6	HyperLight Load mode, Hyper Speed Control architecture, Power Good, Soft Start	52-pin (8 × 8) QFN
MIC45208-1/-2	4.5 to 26	Adj.	–40 to +125	COT	200–600	5.5	10	HyperLight Load mode, Hyper Speed Control architecture, Power Good, Soft Start	52-pin (10 × 10) QFN
MIC45212-1/-2	4.5 to 26	Adj.	–40 to +125	COT	200–600	5.5	14	HyperLight Load mode, Hyper Speed Control architecture, Power Good, Soft Start	64-pin (12 × 12) QFN
MIC33030	2.7 to 5.5	1.2, 1.8, Adj.	–40 to +125	PWM	8,000	3.6	0.4	HyperLight Load mode	10-pin (2.5 × 2.0) MLF®
MIC33050	2.7 to 5.5	1.0, 1.2, 1.8, 3.3, Adj.	–40 to +125	PWM	4,000	3.3	0.6	HyperLight Load mode	12-pin (3 × 3) MLF
MIC33153	2.7 to 5.5	1.2, Adj.	–40 to +125	PWM	4,000	3.6	1.2	HyperLight Load mode, Power Good, Soft Start	14-pin (3 × 3.5) MLF
MIC3385	2.7 to 5.5	1.5, Adj.	–40 to +125	PWM	8,000	5.5	0.6	LowQ	14-pin (3 × 3.5) MLF
MIC28303-1/-2	4.5 to 50	Adj.	–40 to +125	COT	600	24	3	HyperLight Load mode, Hyper Speed Control architecture, Power Good, Soft Start	64-pin (12 × 12) QFN
MIC45116-1/-2	4.5 to 20	Adj.	–40 to +125	COT	600	17	6	HyperLight Load mode, Hyper Speed Control architecture, Power Good, Soft Start	52-pin (8 × 8) QFN
MIC45404	4.5 to 19	Selectable	–40 to +125	Fi × ed	400–790	3.3	5	Power Good, Soft Start	64-pin (6 × 10) QFN

POWER MANAGEMENT: Linear Regulators

Product	Output Current (mA)	VIN Min. (V)	VIN Max. (V)	VOUT (V)	Voltage Drop Typ. (mV)	IGND Typ. (µA)	Output Accuracy (%)	PSRR 1 kHz (dB)	Features	Packages
Single Output Linear Regulators										
MIC5231	10	3.5	12	2.75, 3.0, 3.3, 5.0	150	650 nA	±2	50	High Input Voltage, Small Package	5-pin SOT-23
MIC5280/1/2/3	25/50/100/150	4.5	120	3.3, 5.0, Adj.	1100	31 µA/6 µA	±2/±3	80/90	High Input Voltage, Load Dump, Reverse Battery Protection	8-pin SOIC
MCP1790/1	70	6	30	3.0 3.3 5.0	700	70 µA	±0.2	90	High Input	3-pin SOT-223, 3-pin DDPAK, 5-pin DDPAK, 5-pin SOT-223
MIC5233	100	2.3	36	1.8, 2.5, 3.0, 3.3, 5.0, Adj	270	18 µA	±1	50	High Input Voltage, Reverse Battery and Current Protection	3-pin SOT-223, 5-pin SOT-23
MIC5270/1	100	–2	–16	(–)3.0, (–)4.1, (–)5.0, Adj.	500	35 µA	±2	50	Negative LDO	5-pin SOT-23
MIC5205/6	150	2.5	16	2.5, 2.7, 2.8, 2.85, 2.9, 3.0, 3.1, 3.2, 3.3, 3.6, 3.8, 4.0, 5.0, Adj.	165	80 µA/130 µA	±1	75	High Input Voltage, Small Package	5-pin SOT-23
MIC5234	150	2.3	30	Adj.	320	20 µA	±1	–	High Input Voltage, Load Dump, Reverse Battery and Current Protection	8-pin SOIC
MIC5308	150	1.6	5.5	1.2, 1.5, 1.8, Adj.	45	23 µA	±2	90	Ultra Low Dropout, Ultra High PSRR	6-pin TSOT, 6-pin UDFN
MIC5365	150	2.5	5.5	1.5, 1.8, 2.0, 2.5, 2.6, 2.7, 2.8, 2.85, 2.9, 3.0, 3.3	155	32 µA	±2	80	High PSRR	5-pin SC70, 5-pin TSOT, 4-pin UDFN
MCP1711	150	1.4	6	1.1 - 5.0	500	0.6 µA	±1	20	Ultra Low Iq, Capless	4-pin UQFN, 5-pin SOT-23
MCP1703A	250	2.7	16	1.2 - 5.5	625	2 µA	±0.4	35	High Input, Low Iq	3-pin SOT-89, 3-pin SOT-23A, 3-pin SOT-223, 8-pin DFN
MIC5501/2/3/4	300	2.5	5.5	1.2, 1.8, 2.8, 3.0, 3.3	160	38 µA	±2	60	Low Dropout	4-pin UDFN, 5-pin SOT-23
MIC47050	500	1	3.6	1.2, 1.8, Adj.	44	6 µA	±0.5	50	Ultra Low Dropout	6-pin UDFN, 6-pin VDFN
MIC5209	500	2.5	16	1.8, 2.5, 3.0, 3.3, 3.6, 4.2, 5.0, Adj	350	8 mA	±1	75	High Input Voltage, Small Package	8-pin SOIC, 3-pin SOT-223, 8-pin VDFN, 5-pin DDPAK
MIC5239	500	2.3	30	1.5, 1.8, 2.5, 3.0, 3.3, 5.0, Adj	350	23 µA	±1	50	Reverse Battery and Current Protection	8-pin MSOP, 8-pin SOIC, 3-pin SOT-223
MIC5524	500	2.5	5.5	1.2, 1.8, 2.8,3.0, 3.3	260	38 µA	±2	65	Low Noise	4-pin UDFN
MIC39100	1000	2.25	16	1.8, 2.5, 3.3, 5.0	410	6.5 mA	±1	55	Reverse Battery and Current Protection	3-pin SOT-223
MIC47100	1000	1	3.6	0.8, 1.0, 1.2, Adj	80	350 µA	±0.5	80	Ultra Low Dropout	8-pin MSOP, 8-pin VDFN
MIC29151	1500	2.25	26	3.3, 5.0, 12	350	22 mA	±1		Load Dump, Reverse Current Protection	5-pin TO-220, 5-pin DDPAK
MIC39151	1500	2.25	16	1.65, 1.8, 2.5	375	17 mA	±1	53	Reverse Battery and Current Protection	5-pin TO-220, 5-pin DDPAK
MIC29301	3000	2.25	26	3.3, 5.0, 12	370	37 mA	±1	–	Load Dump, Reverse Current Protection	5-pin TO-220, 5-pin DDPAK
MIC29501	5000	2.25	26	3.3, 5.0, 12	370	70 mA	±1	–	Load Dump, Reverse Current Protection	5-pin TO-220, 5-pin DDPAK
MIC29751	7500	2.5	26	3.3, 5.0	425	120 mA	±1	–	Load Dump, Reverse Current Protection	5-pin TO-247

Dual Output Linear Regulators

Product	Product Type	IOUT #1	IOUT #2	IOUT #3	IOUT #4	VIN Min. (V)	VIN Max. (V)	VOUT (V)	Voltage Drop Typical (mV)	IGND Typ. (µA)	PSRR 1 kHz (dB)	Packages
MIC5370	Dual LDOs	150 mA	150 mA	–	–	2.3	5.5	Please Refer to Datasheet	155	32 µA	60	6-pin UDFN
MIC68220	Dual LDOs	2.0A	2.0A	–	–	1.65	5.5	Please Refer to Datasheet	300	15 mA	40	20-pin VDFN

POWER MANAGEMENT: DDR Termination Regulators

Product	IOUT	VIN Min. (V)	VIN Max. (V)	VOUT (V)	PWR Good	VTT Accuracy	External Transistor	Sync Buck	Frequency	Features	Packages
MIC5162/4	±7A	1.35	6	1/2 of VIN	N	±5 mV	✓	–	–		10-pin MSOP
MIC5163/5	±7A	0.75	6	1/2 of VIN	N	±5 mV	✓	–	–	Low Voltage	10-pin MSOP
MIC5166	±3A	0.9	3.6	1/2 of VIN	Y	±40 mV	–	–	–	Integrated FETs	3 × 3 DFN
MIC5167	±6A	2.6	5.5	Adj. down to 0.35V	Y	±12 mV	–	✓	1 MHz	Integrated Sync Buck	4 × 4 DFN

POWER MANAGEMENT: Charge Pump DC-to-DC Converters

Product	Configuration	Input Voltage Range (V)	Output Voltage (V)	Typical Output Current (mA)	Switching Frequency (kHz)	Supply Current (Is, floating output, µA, 25°C)	Output Resistance (Ω, at typical output current, 25°C)	Power Conversion Efficiency (%)	Features	Packages
Inverting or Doubling Charge Pumps										
TC682	Inverted doubling	2.4 to 5.5	$-2*V_{IN}$	10	12	185	140	92% at 2.5 mA	–	8-pin SOIC and 8-pin PDIP
TC1240A	Doubling	2.5 to 5	$2*V_{IN}$	20	80	550	12	94% at 5 mA	Shutdown	6-pin SOT-23
TC7660S/H	Inverting or doubling	1.5 to 12	$-V_{IN}$ or $2*V_{IN}$	20	10, 45, or 120	80 or 1000	55 or 60	98% at 1 mA, 85% at 10mA	Boost pin increases switching frequency, high-voltage oscillator	8-pin SOIC and 8-pin PDIP
TC7662A/B	Inverting or doubling	1.5 to 15	$-V_{IN}$ or $2*V_{IN}$	20 or 40	10, 12 or 35	80 or 190	50 or 65	96% at 1 mA, 97% at 7.5mA	Boost pin increases switching frequency, no low-voltage terminal required	8-pin SOIC and 8-pin PDIP
TC962	Inverting or doubling	3 to 18	$-V_{IN}$ or $2*V_{IN}$	80	12 or 24	190	35	97% at 7.5 mA	Boost pin increases switching frequency	16-pin SOIC, 8-pin PDIP
Regulated Charge Pumps										
MCP1256/7/8/9	Regulated	1.8 to 3.6	3.3	100	650	2300	N/A	85% at 50 mA	Soft start, shutdown, low battery warning signal, power good signal and sleep mode, bypass mode	10-pin MSOP and 10-pin 3 × 3 DFN
MCP1252/3	Regulated	2.0 to 5.5	3.3, 5.0, or adjustable	150	650, 1000	60	N/A	81% at 10 mA	Shutdown, power good, regulated output, adjustable version	8-pin MSOP

POWER MANAGEMENT: CPU/System Supervisors

Product	Type	Watchdog Timer	Manual Reset	Power Fail	Operating Temperature Range (°C)	V_{CC} Range (V)	Nominal Reset Voltage (V)	Reset Type	Output	Typical Reset Pulse Width (ms)	Typical Supply Current (µA)	Packages
MCP111/112, TC54	Voltage Dectector (No Reset Delay)	No	No	No	–40 to +125	1.0–5.5	Various	Active Low	Open-Drain or Push-Pull	0	1	3-pin SC-70, 3-pin SOT-89, 3-pin SOT-23, 3-pin TO-92
MCP10X, MCP13XX, MIC(7/8)XX, MIC27(7X/8X)	Supervisor (Reselt Delay)	Optional	Optional	Optional	–40 to +85 and –40 to +125	1.0–5.5	Various	Active Low or Active High	Open-Drain or Push-Pull	Various	Various	Various 3-Lead up to 8-Lead padckages
MIC277(2/4/7)	Dual	No	Yes	No	–40 to +85	1.0–5.5	Various	Active Low or Active High	Open-Drain or Push-Pull	20, 140, 1100	3.5, 10	2 × 2, 5-pin SOT23
MIC27(82/90/91/93)	Push Button	No	Yes	No	–40 to +125	1.0–5.5	Various	Active Low/High or High/Low	Dual Output Open-Drain and/or Push-Pull	1.05, 500, 1000, 2000	2.2, 40	0.8 × 1.2 CSP, 5-pin TSOT23, 2 × 2, 1.6 × 1.6, 2 × 2

POWER MANAGEMENT: Power MOSFET Drivers

Product	Drivers	Configuration	Peak Output Current (source/sink, A)	Max Supply Voltage (V)	Output Resistance (source/sink, Ω)	Propagation Delay (T_{D1}/T_{D2}, ns)	Rise/Fall Time (T_R, T_F, ns)	Packages
Low Side Power MOSFET Drivers								
MCP14A0051/2	Single	Inverting/Non-inverting	0.5/0.5	18	6.5/4.5	40/31	51/39	6-pin SOT-23, 6-pin 2 × 2 DFN
MIC4416/7	Single	Non-Inverting/Inverting/Complimentary	1.2/1.2	18	3.5/3.5	42/42	3.5/3.5	SOT-143
TC1426/7/8	Dual	Inverting/Non-inverting	1.2/1.2	16	12/8	75/75	25/35	8-pin SOIC, 8-pin PDIP
MIC4467/8/9	Quad	Inverting/Non-inverting/Complimentary	1.2/1.2	18	5/5	35/55	5/5	16-pin WSOIC, 14-pin PDIP
MCP14A0151/2	Single	Inverting/Non-Inverting	1.5/1.5	18	17/10	41/32	18.5/17	6-pin SOT-23, 6-pin 2 × 2 DFN
MCP14A0153/4/5	Dual	Inverting/Non-inverting/Complimentary	1.5/1.5	18	4.5/3	32/24	11/10	8-pin SOIC, 8-pin MSOP, 8-pin 2 × 3 DFN
MCP14E6/7/8	Dual	Inverting/Non-inverting/Complimentary	2.0/2.0	18	5/5	45/45	12/15	8-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN
TC1412/2N	Single	Inverting/Non-Inverting	2.0/2.0	16	4/4	35/35	18/18	8-pin SOIC, 8-pin MSOP, 8-pin PDIP
MIC4478/9/80	Dual	Non-Inverting/Inverting/Complimentary	2.5/2.5	32	6/3	160/70	120/45	8-pin SOIC, 8-pin ePAD SOIC
MCP14E9/10/11	Dual	Inverting/Non-inverting/Complimentary	3.0/3.0	18	4/4	45/45	14/17	8-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN
TC1413N	Single	Non-inverting	3.0/3.0	16	2.7/2.7	35/35	20/20	8-pin SOIC, 8-pin MSOP, 8-pin PDIP
MAQ4123/4/5	Dual	Inverting/Non-inverting/Complimentary	3.0/3.0	20	5/5	40/60	11/11	8-pin ePAD SOIC
MIC4123/4/5	Dual	Inverting/Non-inverting/Complimentary	3.0/3.0	20	5/5	44/59	11/11	8-pin ePAD SOIC
MIC4423/4/5	Dual	Inverting/Non-inverting/Complimentary	3.0/3.0	18	5/5	33/38	23/25	8-pin SOIC, 8-pin WSOIC, 16-pin PDIP
MCP14E3/4/5	Dual	Inverting/Non-inverting/Complimentary	4.0/4.0	18	2.5/2.5	46/50	15/18	8-pin SOIC, 8-pin PDIP, 8-pin 6 × 5 DFN
MIC4120/29	Single	Non-Inverting/Inverting	6.0/6.0	20	5/5	45/50	12/13	8-pin ePAD SOIC, 8-pin 3 × 3 MLF®
MIC4421A/22A	Single	Inverting/Non-Inverting	9.0 / 9.0	18	0.8/0.6	15/35	20/24	8-pin PDIP, 8-pin SOIC, 5-pin TO-220
MIC4451/2	Single	Inverting/Non-Inverting	12.0/12.0	18	0.8/0.6	25/40	20/24	8-pin SOIC, 8-pin PDIP, 5-pin TO-220
High Side Power MOSFET Drivers								
TC4431/2	High-Side Single	Inverting/Non-Inverting	3.0/1.5	30	7/7	62/78	25/33	8-pin SOIC, 8-pin PDIP
TC4403	Floating Load Driver	Non-inverting	1.5/1.5	18	2.8/3.5	33/38	23/25	8-pin PDIP
MIC5011/13	High-Side or Low-Side Single	Non-Inverting	950 µA*/225 µA*	32	N/A	N/A	25 µs/4 µs	8-pin SOIC, 8-pin PDIP
MIC5014/15	High-Side or Low-Side Single	Non-Inverting/Inverting	800 µA*	30	N/A	N/A	90 µs/6 µs	8-pin SOIC, 8-pin PDIP
MIC5018/19	High-Side or Low-Side Single	Non-Inverting	10 µA*	9	N/A	N/A	750 µs/10 µs	4-pin SOT-143
MIC5021	High-Side or Low-Side Single	Non-Inverting	5600 µA*	36	N/A	500/800	400 ns/400 ns	8-pin SOIC, 8-pin PDIP
MIC5060	High-Side or Low-Side Single	Non-Inverting	800 µA*	30	N/A	N/A	90 µs/6 µs	8-pin 3 × 3 MLF®

POWER MANAGEMENT: Power MOSFET Drivers

Product	Drivers	Configuration	Peak Output Current (source/sink, A)	Max Supply Voltage (V)	Output Resistance (source/sink, Ω)	Propagation Delay (T_{D1}/T_{D2}, ns)	Rise/Fall Time (T_R, T_F, ns)	Packages
Synchronous Drivers								
MCP14628/MCP14700	Half Bridge Driver	Dual Inputs	2.0/3.5	5.5 (36V Boot Pin)	1/1 (0.5 on low side)	15/22	10/10	8-pin SOIC, 8-pin 3 x 3 DFN
MIC4100/1	Half Bridge Driver	Dual Inputs	2.0/2.0	16 (100V Boot Pin)	2.5/2.0	27/27	10/10	8-pin SOIC
MIC4102	Half Bridge Driver	Signle PWN	3.0/2.0	16 (100V Boot Pin)	1.5/2.0	60/75	10/6	8-pin SOIC
MIC4103/4	Half Bridge Driver	Dual Inputs	3.0/2.0	16 (100V Boot Pin)	1.5/2.0	24/24	10/6	8-pin SOIC
MIC4600	Half Bridge Driver	Dual Inputs, Single PWM	1.0/1.0	28V	2.0/1.5	26/55	15/13.5	16-pin 3 x 3 QFN
MIC4604	Half Bridge Driver	Dual Inputs	1.0/1.0	16V (85V Boot Pin)	4.4/4.0	33/34	20/20	8-pin SOIC, 10-pin 2.5 x 2.5 TDFN
MIC4605	Half Bridge Driver	Dual Inputs, Single PWM	1.0/1.0	16V (85V Boot Pin)	10/6	35/35	20/20	8-pin SOIC, 10-pin 2.5 x 2.5 TDFN
MIC4606	Full Bridge Driver	Dual Inputs, Single PWM	1.0/1.0	16V (85V Boot Pin)	10/6	35/35	20/20	16-pin 4 x 4 QFN
MIC4607	3 Phase Driver	Dual Inputs, Single PWM	1.0/1.0	16V (85V Boot Pin)	10/6	35/35	20/20	28-pin TSSOP, 28-pin 4 x 5 QFN
MIC4608	Half Bridge Driver	Dual Inputs, Single PWM	1.0/1.0	20V (600V Boot Pin)	8/9.2	450/450	31/31	14-pin SOIC

*Charge pump current

POWER MANAGEMENT: Power MOSFETs

Product	V_{DS} (V)	Configuration	Polarity	R_{DS} (on) @ 4.5V (mΩ, Max.)	R_{DS} (on) @ 10V (mΩ, Max.)	Q_G @ 4.5V (nC, Max.)	I_D (A, Max. @ 25°C, Tcase)	V_{GS} (th) (V, Min.)	Q_{GD} (nC, Typ.)	R_G (Ω Typ.)	Package
MCP87018	25	Single	N-Channel	2.2	1.9	37	100	1	13	1.5	5 x 6 PDFN
MCP87022	25	Single	N-Channel	2.6	2.3	29	100	1	9	1.3	5 x 6 PDFN
MCP87030	25	Single	N-Channel	4	3.5	22	100	1	6.7	1.2	5 x 6 PDFN
MCP87050	25	Single	N-Channel	6	5	15	100	1	4.7	1.1	5 x 6 PDFN
MCP87055	25	Single	N-Channel	7	6	14	60	1	4.5	2.1	3.3 x 3.3 PDFN
MCP87090	25	Single	N-Channel	12	10.5	10	64	1.1	2.8	1.8	5 x 6 PDFN, 3.3 x 3.3 PDFN
MCP87130	25	Single	N-Channel	16.5	13.5	8	54	1.1	2.6	1.7	5 x 6 PDFN, 3.3 x 3.3 PDFN

POWER MANAGEMENT: Battery Chargers

Product	Mode	Cell Type	# of Cells	V_{CC} Range (V)	Cell Voltage (V)	Max. Charging Current (mA)	Max. Voltage Regulation (%)	Int/Ext FET	Features	Packages
MCP73113/14/23	Linear	Li-ion/Li-Polymer and LiFePO4	1	4 to 16	3.6, 4.1, 4.2, 4.35, 4.4	1100	±0.5	Int	6.5/5.8V overvoltage protection, UVLO, thermal regulation	10-pin 3 x 3 DFN
MCP73213/23	Linear	Li-ion/Li-Polymer and LiFePO4	2	4 to 16	7.2, 8.2, 8.4, 8.7, 8.8	1100	±0.6	Int	13V overvoltage protection	10-pin 3 x 3 DFN
MCP73830/L	Linear	Li-ion/Li-Polymer	1	3.75 to 6	4.2	1000/200	±0.75	Int	Soft-start, charge enable pin	6-pin 2 x 2 TDFN
MCP73831/2	Linear	Li-Ion/Li-Polymer	1	3.7 to 6.0	4.2, 4.35, 4.4, 4.5	500	±0.75	Int	UVLO, thermal regulation, programmable charge current, tri-state or open-drain STAT pin	8-pin 2 x 3 DFN, 5-pin SOT-23
MCP73837/8	Linear	Li-Ion/Li-Polymer	1	3.7 to 6.0	4.2, 4.35, 4.4, 4.5	1000	±0.75	Int	Dual input (USB/DC) auto-switching, thermistor input, power good output or timer enable input	10-pin MSOP, 10-pin 3 x 3 DFN
MCP73871	Linear	Li-Ion/Li-Polymer	1	3.75 to 6.0	4.1, 4.2, 4.35, 4.4	1500 (A/C Adapter) 500 (USB)	±0.5	Int	Simultaneous charging of load and battery, load-dependent charging, multiple programmable charge currents	20-pin 4 x 4 QFN

POWER MANAGEMENT: Power Switches

Part #	Description	USB Port Power Switch (55 mΩ)	High-Speed USB 2.0 Switch	Battery Charger Emulation Profiles	8 Resistor Set Current Limits	Charging Indicator Output	Attach Detection Output	Current Measurement	Power Allocation	Interface	Packages
USB Port Power Controllers											
UCS1001-1	USB Port Power Controller with Charger Emulation	1	1	9	Up to 2.4A	✓	–	–	–	Discrete I/O	20-pin 4 x 4 QFN
UCS1001-2	USB Port Power Controller with Charger Emulation	1	1	9	Up to 2.4A	–	✓	–	–	Discrete I/O	20-pin 4 x 4 QFN
UCS1001-3	USB Port Power Controller with Charger Emulation	1	1	9	Up to 2.4A	✓	–	–	–	Discrete I/O	20-pin 4 x 4 QFN
UCS1001-4	USB Port Power Controller with Charger Emulation	1	1	9	Up to 2.4A	–	✓	–	–	Discrete I/O	20-pin 4 x 4 QFN
UCS1002-1	Programmable USB Port Power Controller with Charger Emulation	1	1	9 + 1 programmable	Up to 2.4A	✓	–	✓	✓	I²C/SMBus	20-pin 4 x 4 QFN
UCS1002-2	Programmable USB Port Power Controller with Charger Emulation	1	1	9 + 1 programmable	Up to 2.4A	✓	–	✓	✓	I²C/SMBus	20-pin 4 x 4 QFN
UCS1003-1	Programmable USB Port Power Controller with Charger Emulation	1	1	9 + 1 programmable	Up to 3A	–	✓	✓	✓	I²C/SMBus	20-pin 4 x 4 QFN
UCS1003-2	Programmable USB Port Power Controller with Charger Emulation	1	1	9	Up to 3A	✓	–	–	–	Discrete I/O	20-pin 4 x 4 QFN
UCS1003-3	Programmable USB Port Power Controller with Charger Emulation	1	1	9	Up to 3A	–	✓	–	–	Discrete I/O	20-pin 4 x 4 QFN
UCS81003	Programmable USB Port Power Controller Automotive	1	1	9 + 1 programmable	Up to 3A	✓	✓	✓	✓	I²C/SMBus	28-pin 5 x 5 QFN

POWER MANAGEMENT: Power Switches

Part #	Channels	V_{IN} Range (V)	Fixed Current Limit Min.	Adj. Current Limit Max.	$R_{DS(ON)}$ (mΩ)	Reverse Blocking	Enable Logic	UVLO	Thermal Protection	Fault Flag	Current Measurement	Packages
Current Limit USB Protection Switches												
MIC200x/201x	Single	2.5–5.5	500 mA, 800 mA, 1.2A	Up to 2A	70/100/170	–	Active Low, Active High	✓	✓	–/✓	–	5-pin SOT23, 6-pin SOT23, 2 × 2
MIC2025/75	Single	2.7–5.5	500 mA	–	140	✓	Active Low, Active High	✓	✓	✓	–	8-pin SOIC, 8-pin MSOP
MIC2033	Single	2.5 - 5.5	475 mA, 517 mA, 760 mA, 950 mA, 1.14A	–	125	–	Active Low, Active High	✓	✓	✓	–	6-pin SOT-23, 6-pin DFN*
MIC2039	Single	2.5–5.5	–	2.5A	75	–	Active Low, Active High	✓	✓	✓	–	6-pin SOT-23, 2 × 2*
MIC2040/1	Single	0.8–5.5	–	1.5A	75	✓	Active Low, Active High	✓	✓	✓	–	10-pin MSOP
MIC2042/43	Single	0.8–5.5	–	3.0A	60	✓	Active Low, Active High	✓	✓	✓	–	8-pin SOIC, 14-pin TSSOP
MIC2044/45	Single	0.8–5.5	–	6.0A	30	✓	Active Low, Active High	✓	✓	✓	–	16-pin TSSOP
MIC2095/98	Single	2.5–5.5	500 mA/900 mA	–	170	✓	Active Low, Active High	✓	✓	✓	–	1.6 x 1.6*
MIC2097/99	Single	2.5–5.5	–	1.1A	170	✓	Active Low, Active High	✓	✓	✓	–	1.6 x 1.6*
MIC2505	Single	2.7–7.5	2.0A	–	30	✓	Active Low, Active High	–	✓	✓	–	8-pin SOIC, 8-pin PDIP
MIC2544/48	Single	2.7–5.5	–	1.5A	80	✓	Active Low, Active High	–	✓	✓	–	8-pin SOIC, 8-pin MSOP
MIC2545A/49A	Single	2.7–5.5	–	3.0A	35	✓	Active Low, Active High	–	✓	✓	–	8-pin SOIC, 8-pin PDIP , 14-pin TSSOP
MIC2026/76	Dual	2.7–5.5	500 mA	–	90	✓	Active Low, Active High	✓	✓	✓	–	8-pin SOIC, 8-pin PDIP
MIC2506	Dual	2.7–7.5	1.0A	–	75	✓	Active Low, Active High	–	✓	✓	–	8-pin SOIC, 8-pin PDIP
MIC2546/47	Dual	2.7–5.5	–	1.5A	80	✓	Active Low, Active High	–	✓	✓	–	16-pin SOIC, 16-pin TSSOP
UCS2112	Dual	2.9–5.5	–	3.4A	40	✓	Active Low, Active High	✓	✓	✓	✓	20-pin 4 x 4 QFN

*Reduced Height Package

Load Switches

Part #	Channels	V_{IN} Range (V)	Max. Switch Current	$R_{DS(ON)}$ (mΩ)	Soft Start (µs)	Load Discharge (Ω)	Enable Logic	Reverse Blocking	Packages
MIC94030/1	Single	2.7–13.5	1.0	750	–	–	Active Low	✓	4-pin SOT143
MIC94040/1/2/3/4/5	Single	1.7–5.5	3.0	28	100(94042), 900(94044/5)	250(94041/3), 200(94045)	Active High	–	1.2 x 1.2
MIC94050/1	Single	1.8–5.5	1.8	125	–	–	Active Low	✓	4-pin SOT143
MIC94052/3	Single	1.8–5.5	2.0	70	–	–	Active Low	–	6-pin SC70
MIC94060/1/2/3/4/5	Single	1.7–5.5	2.0	77	800(94062/3), 115(94064/5)	200(94061/3/5)	Active High	–	6-pin SC70, 1.2 x 1.6*
MIC94070/1/2/3	Single	1.7–5.5	1.2	120	800(94072/3)	200(94071/3)	Active High	–	6-pin SC70, 1.2 x 1.6*
MIC94080/1/2/3/4/5	Single	1.7–5.5	2.0	67	800(94082/3), 120(94084/5)	250(94081/3/5)	Active High	–	0.85 x 0.85*
MIC94090/1/2/3/4/5	Single	1.7–5.5	1.2	130	790(94092/3), 120(94094/5)	250(94091/3/5)	Active High	–	6-pin SC70, 1.2 x 1.2*
MIC94161/2/3/4/5	Single	1.7–5.5	3.0	15.5	2700(94161/4/5), 60(94162/3)	200(94162/4)	Active High	✓	1.5 x 1 WLCSP
MIC95410	Single	0.5–5.5	7.0	6.6	1100	2300	Active High	–	1.2 x 2
MIC94066/7/8/9	Dual	1.7–5.5	2	85	800(94068/9)	200(94067/9)	Active High	–	2 x 2

*Reduced Height Package

POWER MANAGEMENT: High-Voltage Linear Regulator ICs

Part #	$+V_{IN}$ Min (V)	$+V_{IN}$ Max (V)	Output Voltage (V)	Max Output Current (mA)	Typical Line Regulation (%/V)	Typical Load Regulation (%/mA)	Packages
LR8	12	450	1.2–440	10	0.003	0.15	3-Lead TO-252, 3-Lead TO-92, 3-Lead SOT-89
LR12	12	100	1.2–88	50	0.003	0.06	3-Lead TO-252, 8-Lead SOIC, 3-Lead TO-92
LR645	15	450	10	3.0	0.0001	0.5	8-Lead SOIC, 3-Lead TO-92, 3-Lead TO-220, 3-Lead SOT-89
LR745	25	450	20	2.0	0.0001	0.5	3-Lead TO-92 , 3Lead SOT-89

POWER MANAGEMENT: High-Voltage PWM Controllers

Part #	HVR (V_{IN})	Max Duty Cycle	Accuracy (V_{REF})	Packages
HV9120	10 to 450V	49%	2%	16-pin SOIC, 16-pin DIP, 20-pin PLCC
HV9123	10 to 450V	99%	2%	16-pin SOIC, 16-pin DIP, 20-pin PLCC

DISPLAY AND LED DRIVERS: Electroluminescent Backlight Drivers

Part #	Type	Input Voltage Min. (V)	Input Voltage Max. (V)	Nominal Output Voltage (V)	Max. Switch Resistance (Ω)	Output Regulation	Max. Lamp Size per Device (in²)	Packages
16-Segment Drivers								
HV509	16-Segment Drivers	2	5.5	±50 to ±200	–	–	6.5	32-pin VQFN
Offline Driver								
HV809	Offline Driver	50	200	±50 to ±200	–	–	100	8-pin SOIC, 8-pin SOIC 150 mil
Single Lamp Drivers								
HV816	Single Lamp Driver	2.7	5.5	±180	–	✓	42	16-pin QFN
HV823	Single Lamp Driver	2	9.5	±90	6	✓	23	8-pin SOIC 150 mil
HV833	Single Lamp Driver	1.8	6.5	±90	4	✓	12	8-pin MSOP
HV850	Single Inductorless Lamp Driver	3	4.2	±70	–	✓	1.5	8-pin MSOP
HV852	Single Inductorless Lamp Driver	2.4	5	±80	–	✓	1.5	10-pin WDFN, 8-pin MSOP
HV857L	Single Lamp Driver	1.8	5	±95	6	✓	5	8-pin WDFN, 8-pin MSOP
HV859	Single Lamp Driver	1.8	5	±105	6	✓	5	8-pin WDFN, 8-pin MSOP
Dual Lamp Drivers								
HV861	Dual Lamp Drivers	2.5	4.5	±90	7	✓	5	16-pin WQFN
MIC4833	Dual Lamp Drivers	2.3	5.8	±110	12	✓	4	12-pin VDFN

DISPLAY AND LED DRIVERS: LED Drivers

Part #	Topology	Input Voltage (V)	Dimming	I_Q Typ. (mA)	Switching Frequency (Hz)	Switching MOSFET	Dithered	ILED Accuracy	V_{FB} (V)	Packages
General Purpose LED Drivers										
HV9801A	Buck	15–450	4-Level Switch	1.0	100K	External FET	–	N/A	0.25	16-pin SOIC 150 mil, 8-pin SOIC 150 mil
HV9803B	Buck	7–13.2	PWM/Linear	1.5	100K	External FET	–	±2%	0.28	8-pin SOIC 150 mil
HV9805	2-Stage	102–265	–	2.5	370K	0.7A FET	–	N/A	1.25	10-pin MSOP
HV9861A	Buck	15–450	PWM/Linear	1.5	100K	External FET	–	±3%	0.27	16-pin SOIC 150 mil, 8-pin SOIC 150 mil
HV9910B	Buck	8–450	PWM/Linear	1.0	100K	External FET	–	±5%	0.25	16-pin SOIC 150 mil, 8-pin SOIC 150 mil
HV9918	Buck	4.5–40	PWM	1.5	2M	0.7A FET	–	±5%	0.23	8-pin WDFN
HV9930	Ćuk	8–200	PWM	1.0	Variable	External FET	–	N/A	0.12	8-pin SOIC 150 mil
MIC3202	Buck	6–37	PWM	1.2	Hyst to 1.0M	1A FET	✓	±5%	2	8-pin SOIC

Linear Regulators

Part #	V_{IN} (V)	V_{OUT} (V)	Ouput Current (mA)	Dimming	Parallelable	Packages	Features
CL2	5.0–90	5.0–90	20	External FET	Yes	TO-252-3, TO-92-3, SOT-89-3	–
CL220	5.0–220	5.0–220	20	External FET	Yes	TO-252-3, TO-220-3	–
CL320	6.5–90	4.0–90	20	PWM	Yes	SOIC-8 with Heat Slug	OTP, separate ENABLE pin

Backlight LED Drivers

Part #	Topology	Input Voltage (V)	Dimming	I_Q Typ. (mA)	Output Current	Int Diode	V_{FB} (V)	Frequency (Hz)	Packages
HV9911	Boost, SEPIC, Buck-Boost	9–250	PWM/Linear	n/a	External FET	–	0.45	100k	16-pin SOIC 150 mil
MIC2289	Boost	2.5–10	PWM/Linear	2.5	2A BJT	✓	0.095	1.2M	6-pin TSOT, 8-pin VDFN
MIC2292	Boost	2.5–10	PWM/Linear	2.5	2A BJT	✓	0.095	1.6M	8-pin VDFN
MIC2293	Boost	2.5–10	PWM/Linear	2.5	2A BJT	✓	0.095	2.0M	8-pin VDFN
MIC2297	Boost	2.5–10	PWM/Linear	4	3A BJT	–	0.2	600k	10-pin VDFN
MIC2299	Boost	2.5–10	PWM/Linear	15	8A BJT	–	0.2	2.0M	12-pin VDFN
MIC3223	Boost	4.5–20	PWM	2.1	10A FET	–	0.2	1.0M	16-pin TSSOP
MIC3263	Boost	6–40	PWM	6.5	2A BJT	–	2.36	400k–1.8M	24-pin VQFN

DISPLAY AND LED DRIVERS: LED Drivers

Part #	V_{IN} (V)	# of White LEDs	Dimming	I_Q (mA)	$V_{DROPOUTLED}$ @ 20 mA	ILED Matching	Ext LDOs	$V_{DROPOUT}$	IQLDO	Comments	Packages
Linear LED Drivers											
MIC2860-2D	3-5.5	2 @ 30.2 mA	1-Wire, 32-Steps	0.7	52 mV	±0.5%	–	–	–		6-pin SC70, 6-pin SOT-23
MIC2860-2P	3-5.5	2 @ 30.2 mA	PWM down to 250 Hz	0.7	52 mV	±0.5%	–	–	–		6-pin SC70, 6-pin SOT-23
MIC4811	3-5.5	6 @ 50 mA	PWM (200 Hz–500 kHz)	1.7	100 mV @ 50 mA	±1.0%	–	–	–	DAM™	10-pin MSOP
MIC4812	3-5.5	6 @ 100 mA	PWM (200 Hz–500 kHz)	3.2	190 mV @ 100 mA	±1.0%	–	–	–	DAM™	10-pin eMSOP

Sequential Linear LED Drivers

Part #	V_{IN} (VAC)	V_{OUT} (V)	Ouput Current (peak mA)	Dimming	Parallelable	Packages	Features
CL8800	90–275	70–350	115	External Dimmer	Yes	QFN-33	6-Stage
CL8801	90–275	70–350	200	External Dimmer	Yes	QFN-33	4-Stage

Camera Flash LED Drivers

Part #	V_{IN} (V)	# of LED Channels	Max. LED Current (mA)	Standby Current (mA)	Switching Frequency (MHz)	Peak Efficiency (%)	Current Accuracy (%)	Interface	Packages
MIC2873	2.7-5.5	1	1200	0.17	2	92	±8	Single-Wire	9-pin 1.3 x 1.3 WLCSP
MIC2874	2.7-5.5	1	1200	0.17	4	92	±8	Single-Wire	9-pin 1.3 x 1.3 WLCSP

HIGH-VOLTAGE INTERFACE: Driver Arrays

Part #	Output Channels	V_{OUT} Operating (V) - Transient	V_{OUT} Operating (V) - Sustained	Input Structure	Output Structure	I_{OUT} per Channel (mA)	Min. Data Clock (MHz)	Packages
Source								
HV57009	64	95	85	Serial	P-Ch Open Drain	–2 (Programmable)	16	80-pin PQFP
MIC2981/82	8	50	50	Parallel	Darlington Open Emitter	-500	–	18-pin PDIP, 18-pin SOIC 300 mil
MIC5891	8	35	35	Serial	Darlington Open Emitter	-500	5	16-pin PDIP, 16-pin SOIC 300 mil
Sink								
HV5222	32	250	225	Serial	N-Ch Open Drain	100	8	44-pin CERQUAD, 44-pin PLCC, 44-pin PQFP
HV5523	32	230	220	Serial	N-Ch Open Drain	100	16	44-pin WQFN
HV5623	32	250	220	Serial	N-Ch Open Drain	100	16	44-pin WQFN
HV5630	32	315	300	Serial	N-Ch Open Drain	100	8	44-pin PLCC
MIC5800	4	50	50	Parallel	Darlington Open Collector	400	–	14-pin PDIP, 14-pin SOIC 150 mil
MIC58P01	8	80	80	Parallel	Darlington Open Collector	400	–	24-pin SOIC 300 mil, 28-pin PLCC
MIC59P60	8	80	50	Serial	Darlington Open Collector	400	3.3	20-pin PDIP, 20-pin SOIC 300 mil
Source-Sink								
HV507	64	320	300	Serial	Half-Bridge	±1.0	8	80-pin PQFP
HV508	2	60	45	Parallel	Half-Bridge	–2.8, +0.38	–	8-pin SOIC 150 mil
HV513	8	275	250	Serial	Half-Bridge	±20	8	24-pin SOIC 300mil, 32-pin WQFN
HV518	32	90	80	Serial	Half-Bridge	–12.5	6	40-pin PDIP, 44-pin PLCC
HV57908	64	90	80	Serial	Half-Bridge	–1.25	8	80-pin PQFP
HV5812	20	90	80	Serial	Half-Bridge	–12.5	5	28-pin PDIP, 28-pni PLCC, 28-pin SOIC 300 mil
HV582	96	85	80	Serial	Half-Bridge	± 75	30	169-pin TFBGA
HV583	128	90	80	Serial	Half-Bridge	±30	40	169-pin TFBGA
HV6810	10	90	80	Serial	Half-Bridge	–250	5	20-pin SOIC 300 mil
HV7224	40	260	240	Serial	Half-Bridge	±70	3	64-pin PQFP
HV7620	32	225	200	Serial	Half-Bridge	±50	10	64-pin PQFP
HV9308	32	90	80	Serial	Half-Bridge	–4	8	44-pin PLCC, 44-pin PQFP

HIGH-VOLTAGE INTERFACE: Amplifiers and MEMS Drivers

Part #	Output Channels	Slew Rate (V/µs)	Closed Loop Gain (V/V)	Feedback Resistance (MΩ)	Source Current Max. (µA)	Sink Current Max. (µA)	Output Capacitive Load Max. (pF)	Packages
HV254	32	3	50	12	300	300	100	100-pin MQFP
HV256	32	2	72	12	715	715	3000	100-pin MQFP
HV257	32	2	72	12	500	500	3000	100-pin MQFP
HV264	4	9	66.7	5.3	3000	3000	15	24-pin TSSOP

HIGH-VOLTAGE INTERFACE: MOSFETs - Interface

Part #	BV_{DSX} Min. (V)	$R_{DS(ON)}$ Max. (Ω)	$V_{GS(OFF)}$ Min. (V)	$V_{GS(OFF)}$ Max. (V)	Packages
Depletion-Mode N-Channel					
LND01	9	1.4	–0.8	–3	5-pin SOT-23
DN1509	90	6	–1.8	–3.5	3-pin SOT-89, 5-pin SOT-23
DN2625	250	3.5	–1.5	–2.1	8-pin VDFN, 3-pin DPAK
DN2530	300	12	–1	–3.5	3-pin TO-92, 3-pin SOT-89
DN2535	350	25	–1.5	–3.5	3-pin TO-92, 3-pin TO-220
DN2540	400	25	–1.5	–3.5	3-pin TO-92, 3-pin SOT-89, 3-pin TO-220
DN3545	450	20	–1.5	–3.5	3-pin TO-92, 3-pin SOT-89
DN2450	500	10	–1.5	–3.5	3-pin DPAK, 3-pin SOT-89
LND150	500	1000	–1	–3	3-pin TO-92, 3-pin SOT-89, 3-pin SOT-23
DN3765	650	8	–1.5	–3.5	3-pin DPAK
DN2470	700	42	–1.5	–3.5	3-pin DPAK

Part #	BV_{DSS} Min. (V)	$R_{DS(ON)}$ Max. (Ω)	C_{ISS} Max. (pF)	$V_{GS(TH)}$ Max. (V)	Packages
Enhancement-Mode N-Channel					
TN0702	20	1.3	200	1.0	3-pin TO-92
VN0300	30	1.2	190	2.5	3-pin TO-92
TN0104	40	2.0	70	1.6	3-pin TO-92, 3-pin SOT-89
VN3205	50	0.3	300	2.4	3-pin TO-92, 3-pin SOT-89
TN2106	60	2.5	50	2.0	3-pin TO-92, 3-pin SOT-23
2N6660	60	3.0	50	2.0	3-pin TO-39
2N7000	60	5.0	60	3.0	3-pin TO-92
VN0808	80	4.0	50	2.0	3-pin TO-92
VN2210	100	0.4	500	2.4	3-pin TO-92, 3-pin TO-39
TN0620	200	6.0	150	1.6	3-pin TO-92
TN5325	250	7.0	110	2.0	3-pin TO-92, 3-pin SOT-89, 3-pin SOT-23
TN2130	300	25.0	50	2.4	3-pin SOT-23
TN2435	350	6.0	200	0.8 (min)	3-pin SOT-89
TN2640	400	5.0	225	2.0	3-pin DPAK, 3-pin TO-92, 8-pin SOIC 150mil
VN2450	500	13.0	150	4.0	3-pin TO-92, 3-pin SOT-89
VN2460	600	20.0	150	4.0	3-pin TO-92, 3-pin SOT-89
Enhancement-Mode P-Channel					
TP2502	–20	2.0	125	–2.4	3-pin SOT-89
TP0604	–40	2.0	150	–2.4	3-pin TO-92
VP2206	–60	0.9	450	–3.5	3-pin TO-92, 3-pin TO-39
VP0808	–80	5.0	150	–4.5	3-pin TO-92
TP2510	–100	3.5	125	–2.4	3-pin SOT-89
TP2520	–200	12.0	125	–2.0	3-pin SOT-89
TP2424	–240	8.0	200	–2.4	3-pin SOT-89
TP2435	–350	15.0	200	–2.4	3-pin SOT-89
TP5335	–350	30.0	110	–2.4	3-pin SOT-23
TP2640	–400	15.0	300	–2.0	3-pin TO-92, 8-pin SOIC 150 mil
VP2450	–500	30.0	190	–3.5	3-pin TO-92, 3-pin SOT-89
N-Channel (Enhancement-Mode MOSFET Arrays)					
TD9944	240	6	65	2	8-pin SOIC

Complimentary (Enhancement-Mode MOSFET Arrays)							
Part #	BV_{DSS} N-Channel (V)	BV_{DSS} P-Channel (V)	$R_{DS(ON)}$ N-Channel Max. (Ω)	$R_{DS(ON)}$ P-Channel Max. (Ω)	$V_{GS(TH)}$ Max. (V)	Details	Packages
TC6320	200	–200	7.0	8.0	2.0	N- and P-Channel Pair	8-pin SOIC, 8-pin VDFN
TC8020	200	–200	8.0	9.5	3.0	6 N- and P-Channel Pairs	56-pin VQFN
TC8220	200	–200	5.3	6.5	2.0	2 N- and P-Channel Pairs	12-pin VDFN

HIGH-VOLTAGE INTERFACE: Applications Specific

Part #	DC/DC	Input Voltage Min. (V)	Input Voltage Max. (V)	Output Voltage Min. (V_{RMS})	Output Voltage Max. (V_{RMS})	Load Min. (pF)	Load Max. (pF)	Packages
Liquid Lens Driver								
HV892	Internal Charge Pump	2.65	5.5	10	60	100	200	10-pin WDFN

Complimentary MOSFET Level Translator and Driver

Part #	# of Channels	Input Voltage Min. (V)	Input Voltage Max. (V)	Output Voltage Min. (V)	Output Voltage Max. (V)	Input to Output Isolation (V)	Packages
HT0440	2	3.15	5.5	6	10	±400	10-pin VDFN, 8-pin SOIC 150 mil
HT0740	1	3.15	5.5	4.5	8.5	±400	8-pin SOIC 150 mil

High-Side Current Mointor

Part #	V_{IN} (V)	Gain	Rise and Fall Time (µs)	V_{SENSE} Max. (mV)	Quiescent Current Max. (µA)	Packages
HV7800	8.0–450	Fixed, 1	0.7–2.0	500	50	5-pin SOT-23
HV7801	8.0–450	Fixed, 5	0.7–2.0	500	50	5-pin SOT-23
HV7802	8.0–450	Adjustable	0.7–1.4	500	50	8-pin MSOP

Fault Protection

Part #	Voltage (V)	# of Channels	R_{ON} (Ω)	V_{OFF} (V)	Packages
FP0100	100	1	4.5	4.5	3-pin SOT-89

Relay Driver and Controller

Part #	V_{IN} Min. (V)	V_{IN} Max. (V)	I_{IN} Max. (mA)	Oscillator Frequency Min. (kHz)	Oscillator Frequency Max. (kHz)	Oscillator Frequency F_{SYNC} Max. (kHz)	Max. Output Duty Cycle (%)	Typical Current Sense Pull-In (V)	Typical Current Sense Hold	External Adjustable Regulator Output Voltage (V)	External Adjustable Regulator Output Current (mA)	Packages
HV9901	10	450	2	20	140	150	99.5	0.883	Adjustable	2.0–5.5	0–1.0	14-pin SOIC

LINEAR: Op Amps

Product	# per Package	GBWP (MHz)	I_Q Typical (µA)	V_{OS} Max (mV)	Operating Voltage (V)	Packages
MCP661/2/3/4/5/9	1/2/1/4/2/4	60	6000	8	2.5 to 5.5	SOIC, MSOP, DFN, TSSOP, QFN, SOT
MCP651/1S/2/3/4/5/9	1/1/2/1/4/2/4	50	6000	0.2	2.5 to 5.5	SOIC, MSOP, DFN, TSSOP, QFN, SOT
MCP631/2/3/4/5/9	1/2/1/4/2/4	24	2500	8	2.5 to 5.5	SOIC, MSOP, DFN, TSSOP, QFN, SOT
MCP621/1S/2/3/4/5/9	1/1/2/1/4/2/4	20	2500	0.2	2.5 to 5.5	SOIC, MSOP, DFN, TSSOP, QFN, SOT
MCP6H91/2/4	1/2/4	10	2000	4	3.5 to 12.0	DFN, SOIC, TSSOP
MCP6V91/2/4	1/2/4	10	1100	0.009	2.4 to 5.5	TSSOP, MSOP, TDFN, SOT, SC70
MCP6021/2/3/4	1/2/1/4	10	1000	0.5	2.5 to 5.5	PDIP, SOIC, MSOP, TSSOP, SOT
MCP6291/2/3/4/5	1/2/1/4/2	10	1000	3	2.4 to 6.0	PDIP, SOIC, MSOP, TSSOP, SOT
MCP6491/2/4	1/2/4	7.5	530	1.5	2.4 to 5.5	SOT, SC70, MSOP, TDFN, SOIC, TSSOP
MCP6H81/2/4	1/2/4	5.5	700	4	3.5 to 12.0	DFN, SOIC, TSSOP
MCP6V81/2/4	1/2/4	5	500	0.009	2.2 to 5.5	TSSOP, MSOP, TDFN, SOT, SC70
MCP6281/2/3/4/5	1/2/1/4/2	5	445	3	2.2 to 6.0	PDIP, SOIC, MSOP, TSSOP, SOT
MCP6481/2/4	1/2/4	4	240	1.5	2.2 to 5.5	SOT, SC70, MSOP, TDFN, SOIC, TSSOP
MCP6286	1	3.5	540	1.5	2.2 to 5.5	SOT
MCP601/2/3/4	1/2/1/4	2.8	230	2	2.7 to 6.0	PDIP, SOIC, TSSOP, SOT
MCP6H71/2/4	1/2/4	2.7	480	4	3.5 to 12.0	DFN, SOIC, TSSOP
MCP6271/2/3/4/5	1/2/1/4/2	2	170	3	2.0 to 6.0	PDIP, SOIC, MSOP, TSSOP, SOT
MCP6471/2/4	1/2/4	2	100	1.5	2 to 5.5	SOT, SC70, MSOP, TDFN, SOIC, TSSOP
MCP6V26/7/8	1/2/1	2	620	0.002	2.3 to 5.5	SOIC, MSOP, DFN
MCP6V71/2/4	1/2/4	2	170	0.008	2.0 to 5.5	TSSOP, MSOP, TDFN, SOT, SC70

Product	# per Package	GBWP (MHz)	I_Q Typical (µA)	V_{OS} Max (mV)	Operating Voltage (V)	Packages
MCP6V01/2/3	1/2/1	1.3	300	0.002	1.8 to 5.5	SOIC, DFN, TDFN
MCP6V06/7/8	1/2/1	1.3	300	0.003	1.8 to 5.5	SOIC, DFN, TDFN
MCP6071/2/4	1/2/4	1.2	110	0.15	1.8 to 6.0	SOIC, TSSOP, DFN, SOT
MCP6H01/2/4	1/2/4	1.2	135	4.5	3.5 to 16	SOIC, TSSOP, TDFN, SOT, SC70
MCP6001/2/4	1/2/4	1	100	4.5	1.8 to 6.0	PDIP, SOIC, MSOP, TSSOP, TDFN, SOT, SC70
MCP6401/2/4	1/2/4	1	45	4.5	1.8 to 6.0	SOIC, TSSOP, TDFN, SOT, SC70
MCP6V61/2/4	1/2/4	1	80	0.008	1.8 to 5.5	TSSOP, MSOP, TDFN, SOT, SC70
MCP6061/2/4	1/2/4	0.73	60	0.15	1.8 to 6.0	SOIC, TSSOP, DFN, SOT
MCP6241/2/4	1/2/4	0.55	50	5	1.8 to 5.5	PDIP, SOIC, MSOP, TSSOP, TDFN, SOT, SC70
MCP6051/2/4	1/2/4	0.385	30	0.15	1.8 to 6.0	SOIC, TSSOP, DFN, SOT
MCP6V31/2/4	1/2/4	0.3	23	0.008	1.8 to 5.5	TSSOP, MSOP, TDFN, SOT, SC70
MCP6231/2/4	1/2/4	0.3	20	5	1.8 to 6.0	PDIP, SOIC, MSOP, TSSOP, TDFN, SOT, SC70
MCP616/7/8/9	1/2/1/4	0.19	19	0.15	2.3 to 5.5	PDIP, SOIC, MSOP, TSSOP
MCP606/7/8/9	1/2/1/4	0.155	19	0.25	2.5 to 6.0	PDIP, SOIC, TSSOP, SOT
MCP6141/2/3/4	1/2/1/4	0.1	0.6	3	1.4 to 6.0	PDIP, SOIC, MSOP, TSSOP, SOT
MCP6421/2/4	1/2/4	0.09	4.4	1	1.8 to 5.5	SOT, SC70, MSOP, SOIC, TSSOP
MCP6V11/2/4	1/2/4	0.08	7.5	0.008	1.6 to 5.5	TSSOP, MSOP, TDFN, SOT, SC70
MCP6041/2/3/4	1/2/1/4	0.014	0.6	3	1.4 to 6.0	PDIP, SOIC, MSOP, TSSOP, SOT
MCP6031/2/3/4	1/2/1/4	0.01	0.9	0.15	1.8 to 5.5	SOIC, MSOP, TSSOP, DFN, SOT
MCP6441/2/4	1/2/4	0.009	0.45	4.5	1.4 to 6.0	SOIC, MSOP, TSSOP, SOT, SC70

LINEAR: Instrumentation Amps

Product	Bandwidth (kHz)	I_Q Typical (µA)	V_{OS} Max (µV)	Operating Voltage (V)	Features	Packages
MCP6N11	500	800	350	1.8 to 5.5	Rail-to-rail input/output, enable pin, mCal technology	SOIC, TDFN
MCP6N16	500	1100	17	1.8 to 5.5	Rail-to-rail input/output, enable pin, enhanced EMI rejection	MSOP, DFN

LINEAR: Comparators

Product	# Per Package	Typical Propagation Delay (µs)	I_Q Typical (µA)	V_{OS} Max (mV)	Operating Voltage (V)	Temperature Range (°C)	Features	Packages
MCP6541/2/3/4	1/2/1/4	4	1	5	1.6 to 5.5	–40 to +125	Push-Pull, Rail-to-Rail Input/Output	PDIP, SOIC, MSOP, TSSOP, SOT, SC70
MCP6546/7/8/9	1/2/1/4	4	1	5	1.6 to 5.5	–40 to +125	Open-Drain, 9V, Rail-to-Rail Input/Output	PDIP, SOIC, MSOP, TSSOP, SOT, SC70
MCP65R41/6	1	4	2.5	10	1.8 to 5.5	–40 to +125	Integrated V_{REF} (1.21V or 2.4V)	SOT-23
MCP6561/2/4	1/2/4	0.047	100	10	1.8 to 5.5	–40 to +125	Push-Pull, Rail-to-Rail Input/Output	SOIC, MSOP, TSSOP, SOT, SC70
MCP6566/7/9	1/2/4	0.047	100	10	1.8 to 5.5	–40 to +125	Open-Drain, Rail-to-Rail Input/Output	SOIC, MSOP, TSSOP, SOT, SC70
MIC6270	1	0.6	300	5	2.0 to 36	–40 to +85	Open Collector Output, High-Voltage	SOT
MIC7211/21	1	4	5	10	2.2 to 5.0	–40 to +85	Rail-to-Rail Input, Push-Pull/Open-Drain Output	SOT
MIC833	1	5	1	–	1.5 to 5.5	–40 to +85	Windowed Comparator with Adjustable Hystersis	SOT
MIC834	1	5	1.5	–	1.5 to 5.5	–40 to +85	Windowed Comparator with Hystersis	SOT
MIC841	1	12	1.5	–	1.5 to 5.5	–40 to +85	Windowed Comparator with Adjustable Hystersis, Push-Pull and Open-Drain Output Options	SC70, DFN
MIC842	1	12	1.5	–	1.5 to 5.5	–40 to +85	Windowed Comparator with Hystersis, Push-Pull and Open-Drain Output Options	SC70, DFN
MIC845	1	12	1	–	2.75 to 5.5	–40 to +85	Push-Pull and Open-Drain Output Options	SC70

MIXED SIGNAL: Successive Approximation Register (SAR) Analog-to-Digital Converters

Product	Resolution (bits)	Maximum Sampling Rate (ksamples/sec)	# of Input Channels	Input Type	Interface	Max. Supply Current (µA)	Temperature Range (°C)	Packages
MCP3021/3221	10/12	22	1	Single-ended	I^2C	250	–40 to +125	SOT-23A
MCP3001/2/4/8	10	200	1/2/4/8	Single-ended	SPI	500-550	–40 to +85	PDIP, SOIC, MSOP, TSSOP
MCP3201/2/4/8	12	100	1/2/4/8	Single-ended	SPI	400-550	–40 to +85	PDIP, SOIC, MSOP, TSSOP
MCP3301/2/4	13	100	1/2/4	Differential	SPI	450	–40 to +85	PDIP, SOIC, MSOP, TSSOP

MIXED SIGNAL: Digital-to-Analog Converters

Product	Resolution (Bits)	DAC Channels	Interface	Memory	Voltage Reference	Output Settling Time (µs)	DNL (±LSB)	INL (±LSB)	Typical Operating Current (µA)	Temperature Range (°C)	Packages
MCP48FEB01/11/21	8/10/12	1	SPI	EEPROM	V_{DD}, V_{REF}, VBG	7.8	0.25/0.5/1	0.5/1.5/6	180 (max)	–40 to +125	MSOP-8
MCP48FEB02/12/22	8/10/12	2	SPI	EEPROM	V_{DD}, V_{REF}, VBG	7.8	0.25/0.5/1	0.5/1.5/6	380 (max)	–40 to +125	MSOP-8
MCP48FVB01/11/21	8/10/12	1	SPI	Volatile	V_{DD}, V_{REF}, VBG	7.8	0.25/0.5/1	0.5/1.5/6	180 (max)	–40 to +125	MSOP-8
MCP48FVB02/12/22	8/10/12	2	SPI	Volatile	V_{DD}, V_{REF}, VBG	7.8	0.25/0.5/1	0.5/1.5/6	380 (max)	–40 to +125	MSOP-8
MCP47FEB01/11/21	8/10/12	1	I^2C	EEPROM	V_{DD}, V_{REF}, VBG	6	0.25/0.5/1	0.5/1.5/6	180 (max)	–40 to +125	MSOP-8
MCP47FEB02/12/22	8/10/12	2	I^2C	EEPROM	V_{DD}, V_{REF}, VBG	6	0.25/0.5/1	0.5/1.5/6	380 (max)	–40 to +125	MSOP-8
MCP47FVB01/11/21	8/10/12	1	I^2C	Volatile	V_{DD}, V_{REF}, VBG	6	0.25/0.5/1	0.5/1.5/6	180 (max)	–40 to +125	MSOP-8
MCP47FVB02/12/22	8/10/12	2	I^2C	Volatile	V_{DD}, V_{REF}, VBG	6	0.25/0.5/1	0.5/1.5/6	380 (max)	–40 to +125	MSOP-8
MCP47DA1	6	1	I^2C	Volatile	V_{REF}	6	0.35	0.7	160 (max)	–40 to +125	SOT23-6, SC70-6
MCP4706/16/26	8/10/12	1	I^2C	EEPROM	V_{DD}, V_{REF}	6	0.05/0.188/0.75	0.907/3.625/14.5	400(max)	–40 to +125	SOT23-6, 2 × 2 DFN-6
MCP4725	12	1	I^2C	EEPROM	V_{DD}	6	0.75	14.5	400 (max)	–40 to +125	SOT23-6
MCP4728	12	4	I^2C	EEPROM	V_{DD}, V_{GB}	6	0.75	13	1400 (max)	–40 to +125	MSOP-10
MCP4801/11/21	8/10/12	1	SPI	Volatile	V_{BG}	4.5	0.5/0.5/0.75	1/3.5/12	400 (max)	–40 to +125	MSOP-8, 2 × 3 DFN-8, SOIC-8, PDIP-8
MCP4802/12/22	8/10/12	2	SPI	Volatile	V_{BG}	4.5	0.5/0.5/0.75	1/3.5/12	400 (max)	–40 to +125	MSOP-8, 2 × 3 DFN-8, SOIC-8, PDIP-8
MCP4901/11/21	8/10/12	1	SPI	Volatile	V_{REF}	4.5	0.5/0.5/0.75	1/3.5/12	350 (max)	–40 to +125	MSOP-8, 2 × 3 DFN-8, SOIC-8, PDIP-8
MCP4902/12/22	8/10/12	2	SPI	Volatile	V_{REF}	4.5	0.5/0.5/0.75	1/3.5/12	350 (max)	–40 to +125	MSOP-8, 2 × 3 DFN-8, SOIC-8, PDIP-8

MIXED SIGNAL: Energy Meter and Power Monitoring ICs

Product	Dynamic Range	Typical Accuracy	Input Channels	ADC Resolution	Gain Selection	Event Monitoring	Zero-Cross Detection Pin	Output Type	VDD (V)	Temperature Range (°C)	Features	Packages
MCP39F511	4000:1	0.1%	I, V, Temp.	24-bit	Up to 32	5	Yes	UART/Single-wire	2.7 to 3.6	-40 to +125	Power monitoring IC with active, reactive and apparent power, active and reactive energy, PF, RMS current/voltage, frequency, event notifications, EEPROM, PWM output	QFN
MCP39F521	4000:1	0.1%	I, V, Temp.	24-bit	Up to 32	4	Yes	I2C	2.7 to 3.6	-40 to +125	Power monitoring IC with active, reactive and apparent power, active and reactive energy, PF, RMS current/voltage, frequency, event notifications, EEPROM	QFN
MCP39F511N	4000:1	0.5%	I1, I2, V	24-bit	Up to 32	6	Yes	UART	2.7 to 3.6	-40 to +125	Dual-channel power monitoring IC with active, reactive and apparent power, active and reactive energy, PF, RMS current/voltage, frequency, event notifications, EEPROM, PWM output	QFN
MCP3905A/06A	500:1/1000:1	0.10%	I, V	16-bit	Up to 32	–	–	Active Power Pulse	4.5 to 5.5	-40 to +125	Active power calculation	SSOP

MIXED SIGNAL: Energy Measurement AFEs

Product	Dynamic Range	Typical Accuracy	ADC Channels	ADC Resolution	SINAD	Gain Selection	Output Type	VDD (V)	Temperature Range (°C)	Features	Packages
MCP3918/10	10000:1	0.1%	1/2	24-bit	93.5	Up to 32	SPI/2-wire	2.7 to 3.6	–40 to +125	AFE with phase correction, programmable data rate, 16-bit CRC, register map lock, 2-wire interface	SSOP, QFN
MCP3919	10000:1	0.1%	3	24-bit	93.5	Up to 32	SPI/2-wire	2.7 to 3.6	–40 to +125	AFE with phase correction, programmable data rate, 16-bit CRC, register map lock, 2-wire interface	SSOP, QFN
MCP3912	10000:1	0.1%	4	24-bit	93.5	Up to 32	SPI	2.7 to 3.6	–40 to +125	AFE with phase correction, programmable data rate, 16-bit CRC, register map lock	SSOP, QFN
MCP3913/14	10000:1	0.1%	6/8	24-bit	94.5	Up to 32	SPI	2.7 to 3.6	–40 to +125	AFE with phase correction, programmable data rate, 16-bit CRC, register map lock	SSOP, UQFN

MIXED SIGNAL: Current/DC Power Measurement ICs

Product	# Current Sensors	Description	Full Scale Range (mV)	Current Measurement Max. Accr. (%)	Effective Sampling Interval Min. to Max. (msec)	Bus Voltage Range (V)	# Temp. Monitors (ambient, remote)	Temp. Accuracy Typ./Max. (°C)	Alert/ Therm.	Peak Detection	Interface	Packages
PAC1710	1	Current/DC Power Sensor	10, 20, 40, 80	±1	2.5 to 2600	0 to +40	N/A	N/A	1	–	SMBus/I²C	10-pin DFN
PAC1720	2	Dual Current/ DC Power Sensor	10, 20, 40, 80	±1	2.5 to 2600	0 to +40	N/A	N/A	1	–	SMBus/I²C	10-pin DFN
PAC1921	1	SMBus/I²C Current/Power Sensor with Analog Output	100	±1	2.5 to 2900	0 to +32	N/A	N/A	–	–	SMBus/I²C	10-pin DFN
EMC1701/2/4	1	Current/DC Power Sensor with Temperature Monitoring	10, 20, 40, 80	±1	2.5 to 2600	+3 to +24	1, 0/1/3	±0.25/±1.0	2	✓	SMBus/I²C	12-pin QFN, 10-pin MSOP, 16-pin QFN, 14-pin SOIC

MIXED SIGNAL: Digital Potentiometers

Product	# of Taps	Memory	Channels	Interface	Resistance (kΩ)	Temperature Range (°C)	Packages
MCP4011/12/13/14	64	Volatile	1	Up/Down	2.1, 5, 10, 50	–40 to +125	DFN, SOT-23
MCP4017/18/19	128	Volatile	1	I²C	5, 10, 50, 100	–40 to +125	SC70
MCP40D17/D18/D19	128	Volatile	1	I²C	5, 10, 50, 100	–40 to +125	SC70
MCP4021/22/23/24	64	Nonvolatile	1	Up/Down	2.1, 5, 10, 50	–40 to +125	DFN, SOT-23
MCP4141/42	128	Nonvolatile	1	SPI	5, 10, 50, 100	–40 to +125	MSOP, QFN, DFN
MCP4241/42	128	Nonvolatile	2	SPI	5, 10, 50, 100	–40 to +125	MSOP, QFN, DFN
MCP4131/32	128	Volatile	1	SPI	5, 10, 50, 100	–40 to +125	QFN, DFN
MCP4231/32	128	Volatile	2	SPI	5, 10, 50, 100	–40 to +125	MSOP, QFN, DFN
MCP4151/52	256	Volatile	1	SPI	5, 10, 50, 100	–40 to +125	MSOP, QFN, DFN
MCP41HV31	128	Volatile	1	SPI	5, 10, 50, 100	–40 to +125	TSSOP, QFN
MCP41HV51	256	Volatile	1	SPI	5, 10, 50, 100	–40 to +125	TSSOP, QFN
MCP4161/62	256	Nonvolatile	1	SPI	5, 10, 50, 100	–40 to +125	MSOP, QFN, DFN
MCP4251/52	256	Volatile	2	SPI	5, 10, 50, 100	–40 to +125	MSOP, QFN, DFN
MCP4261/62	256	Nonvolatile	2	SPI	5, 10, 50, 100	–40 to +125	MSOP, QFN, DFN
MCP4341/42	129	Nonvolatile	4	SPI	5, 10, 50, 100	–40 to +125	TSSOP, QFN
MCP4361/62	257	Nonvolatile	4	SPI	5, 10, 50, 100	–40 to +125	TSSOP, QFN

Product	# of Taps	Memory	Channels	Interface	Resistance (kΩ)	Temperature Range (°C)	Packages
MCP4331/32	129	Volatile	4	SPI	5,10,50,100	–40 to +125	TSSOP, QFN
MCP4351/52	257	Volatile	4	SPI	5,10,50,100	–40 to +125	TSSOP, QFN
MCP4431/32	129	Volatile	4	I²C	5, 10, 50, 100	–40 to +125	TSSOP, QFN
MCP4441/42	129	Nonvolatile	4	I²C	5, 10, 50, 100	–40 to +125	TSSOP, QFN
MCP4451/52	257	Volatile	4	I²C	5, 10, 50, 100	–40 to +125	TSSOP, QFN
MCP4461/62	257	Nonvolatile	4	I²C	5, 10, 50, 102	–40 to +125	TSSOP, QFN
MCP4531/32	128	Volatile	1	I²C	5, 10, 50, 100	–40 to +125	MSOP, DFN
MCP4631/32	128	Volatile	2	I²C	5, 10, 50, 100	–40 to +125	MSOP, DFN
MCP4541/42	128	Nonvolatile	1	I²C	5, 10, 50, 100	–40 to +125	MSOP, DFN
MCP56HV31	128	Volatile	1	I²C	5, 10, 50, 100	–40 to +125	TSSOP, QFN
MCP45HV51	256	Volatile	1	I²C	5, 10, 50, 100	–40 to +125	TSSOP, QFN
MCP4641/42	128	Nonvolatile	2	I²C	5, 10, 50, 100	–40 to +125	MSOP, DFN
MCP4551/52	256	Volatile	1	I²C	5, 10, 50, 100	–40 to +125	MSOP, DFN
MCP4651/52	256	Volatile	2	I²C	5, 10, 50, 100	–40 to +125	MSOP, DFN
MCP4561/62	256	Nonvolatile	1	I²C	5, 10, 50, 100	–40 to +125	MSOP, DFN
MCP4661/62	256	Nonvolatile	2	I²C	5, 10, 50, 100	–40 to +125	MSOP, DFN

MIXED SIGNAL: Delta-Sigma Analog-to-Digital Converters

Product	Resolution (bits)	Maximum Sampling Rate (samples/sec)	# of Input Channels	Interface	Typical Supply Current (µA)	Temperature Range (°C)	Features	Packages
MCP3421/2/3/4	18 to 12	4 to 240	1/2/2/4 Diff	I²C	155	–40 to +125	PGA, V_{REF}	SOIC, TSSOP, MSOP, DFN, SOT
MCP3425/6/7/8	16 to 12	15 to 240	1/2/2/4 Diff	I²C	155	–40 to +125	PGA, V_{REF}	SOIC, TSSOP, MSOP, DFN, SOT
MCP3550/1/3	22	13/14/60	1 Diff	SPI	120	–40 to +125	50 & 60 Hz Rejection	SOIC, MSOP

MIXED SIGNAL: Pipelined Analog-to-Digital Converters

Product	Resolution (bits)	Maximum Sampling Rate (Msamples/sec)	# of Input Channels	Power Dissipation (mW)	Interface	Input Channel BW (MHz)	SNR (dB)	SFDR (dB)	Temperature Range (°C)	Features	Packages
MCP37D10-200	12	200	1	338	Serial DDR LVDS or Parallel CMOS	650	67	96	–40 to +85	Digital down-converter, decimation filters, noise-shaping requantizer	124 -pin VTLA
MCP37210-200	12	200	1	338	Serial DDR LVDS or Parallel CMOS	650	67	96	–40 to +85	Decimation filters, noise-shaping requantizer	124 -pin VTLA
MCP37D11-200	12	200	8-mux, Diff	468	Serial DDR LVDS or Parallel CMOS	1.2, 1.8	71.3	90	–40 to +85	Decimation filters, digital down-converter, noise-shaping requantizer	124 -pin VTLA
MCP37211-200	12	200	8-mux, Diff	468	Serial DDR LVDS or Parallel CMOS	1.2, 1.8	71.3	90	–40 to +85	Decimation filters, noise-shaping requantizer	124 -pin VTLA
MCP37D20-200	14	200	1	348	Serial DDR LVDS or Parallel CMOS	650	67.8	96	–40 to +85	Digital down-converter, decimation filters	124 -pin VTLA
MCP37220-200	14	200	1	348	Serial DDR LVDS or Parallel CMOS	650	67.8	96	–40 to +85	Decimation filters, noise-shaping requanizer	124 -pin VTLA
MCP37D21-200	14	200	8-mux, Diff	490	Serial DDR LVDS or Parallel CMOS	1.2, 1.8	74.2	90	–40 to +85	Decimation filters, digital down-converter	124 -pin VTLA
MCP37221-200	14	200	8-mux, Diff	490	Serial DDR LVDS or Parallel CMOS	1.2, 1.8	74.2	90	–40 to +85	Decimation filters	124 -pin VTLA
MCP37D31-200	16	200	8-mux, Diff	490	Serial DDR LVDS or Parallel CMOS	500	74	90	–40 to +85	Decimation filters	124 -pin VTLA
MCP37231-200	16	200	8-mux, Diff	490	Serial DDR LVDS or Parallel CMOS	500	74	90	–40 to +85	Digital down-conterter, decimation filters	124 -pin VTLA

MIXED SIGNAL: Voltage References

Product	Type	V_{IN} Max. (V)	Output Voltage (V)	Max. Load Current (mA)	Initial Accuracy (Max. %)	Temperature Coefficient (ppm/°C)	Max. Supply Current (µA @ 25°C)	Packages
MCP1501	Series	5.5	1.024V, 1.250V, 1.800V, 2.048V, 2.500V, 3.000V, 3.300V, 4.096V	20	±0.08	50	350	2 x 2 WDFN, SOT-23, SOIC
LM4040C/D	Shunt	15	2.5, 4.096, 5.0	15	±0.5/±1	100/150	65/85	SOT-23
LM4041C/D	Shunt	15	1.225, Adj. (1.24–10V)	12	±0.5/±1	100/150	70	SOT-23

INTERFACE: Controller Area Network (CAN) Products

Product	Description and Features	Operating Voltage (V)	Operating Temperature Range (°C)	Tx Buffers	Rx Buffers	Filters	Masks	Interrupt Output	Packages
MCP2515	MCP2510 pin-compatible upgrade with enhanced features including higher throughput and data byte filtering	2.7 to 5.5	–40 to +125	3	2	6	2	Yes	18-pin PDIP, 18-pin SOIC, 20-pin TSSOP
MCP2561/2	High-Speed CAN Transceiver; MCP2561 = SPLIT Option for common mode stabilization, MCP2562 = V_{IO} Option for digital I/O level shifting from 1.8V to 5.5V	4.5 to 5.5	–40 to +150	–	–	–	–	–	8-pin PDIP, 8-pin SOIC, 8-pin 3 x 3 DFN
MCP25625	Integrated High-Speed CAN Transceiver and CAN 2.0B Controller	2.7 to 5.5	–40 to +125	3	2	6	2	1	28-pin SSOP, 28-pin 6 x 6 QFN
MCP256(1/2)FD	CAN Flexible Data Rate Transceiver MCP2561FD = SPLIT Option for common mode stabilization, MCP2562FD = V_{IO} Option for digital I/O level shifting from 1.8V to 5.5V	4.5 to 5.5	–40 to +150	–	–	–	–	–	8-pin PDIP, 8-pin SOIC, 8-pin 3 x 3 DFN
MCP254(2/4)FD	CAN Flexible Data Rate Transceiver, Wake-up Pattern, MCP2544FD pin 5 = No Connect, MCP2542FD = V_{IO} digital level shifting from 1.7V to 5.5V	4.5 to 5.5	–40 to +150	–	–	–	–	–	8-pin PDIP, 8-pin SOIC, 8-pin 3 x 3 DFN
MCP25612FD	Dual CAN FD Transceiver capable of both Classic CAN and CAN FD applications, optimized for up to 8 Mbps operation, standby current of 5 µA, typ. per transceiver	4.5 to 5.5	–40 to +150	–	–	–	–	–	14-pin SOIC

INTERFACE: LIN Transceiver Products

Product	Description	V_{REG} Output Voltage (V)	Operating Temperature Range (°C)	V_{REG} Output Current (mA)	V_{CC} Range (V)	Max. Baud Rate	LIN Specification Supported	Packages
MCP2003B	Stand-alone LIN Transceiver (industry-standard pinout)	None	–40 to +150	None	6 to 30	20 Kbaud	Revision 1.3, 2.0, 2.1, 2.2, SAE J2602	8-pin SOIC, 8-pin 2 x 3 DFN, 8-pin 3 x 3 DFN
MCP2021A, MCP2025	LIN Transceiver with integrated V_{REG}	5.0 ±3%, 3.3 ±3%	–40 to +125	70	6 to 18	20 Kbaud	Revision 1.3, 2.0, 2.1, SAE J2602	8-pin PDIP, 8-pin SOIC, 8-pin 4 x 4 DFN
MCP2050	LIN Transceiver with integrated V_{REG}, WWDT	5.0 ±3%, 3.3 ±3%	–40 to +125	70	6 to 18	20 Kbaud	Revision 1.3, 2.0, 2.1, SAE J2602	14-pin PDIP, 14-pin SOIC, 20-pin QFN

INTERFACE: Infrared Products

Product	Operating Voltage (V)	Operating Temperature Range (°C)	Max. Baud Rate (Kbaud)	Unique Features	Packages
MCP21(20/22)	2.5 to 5.5	–40 to +85	325	UART to IR encoder/decoder with both hardware and software baud rate selection	14-pin PDIP, 14-pin SOIC
MCP2140A	2.0 to 5.5	–40 to +85	9.6	IrDA® Standard protocol handler plus bit encoder/decoder, fixed baud rate, low cost	18-pin PDIP, 18-pin SOIC, 20-pin SSOP
MCP2150/5	3.0 to 5.5	–40 to +85	115.2	IrDA Standard protocol handler plus bit encoder/decoder on one chip for DTE applications, programmable ID	18-pin PDIP, 18-pin SOIC, 20-pin SSOP

INTERFACE: Serial Peripherals

Product	Description	Operating Voltage (V)	Operating Temperature Range (°C)	Bus Type	Max. Bus Frequency (kHz)	Unique Features	Packages
MCP23008, MCP23017, MCP23009, MCP23018	8-bit or 16-bit I/O Port Expander	1.8 to 5.5	–40 to +85	I²C	1700	Three HW address pins, HW interrupt, 25 mA source/sink capability per I/O	18-pin PDIP, 18-pin SOIC, 20-pin SSOP, 20-pin 4 × 4 QFN
MCP23S08, MCP23S17, MCP23S09, MCP23S18	8-bit or 16-bit I/O Port Expander	1.8 to 5.5	–40 to +85	SPI	10000	Three HW address pins, 25 mA sink/source per I/O, Interrupt output	18-pin PDIP, 18-pin SOIC, 20-pin SSOP, 20-pin 4 × 4 QFN

INTERFACE: USB Bridge Devices

Product	USB SPeed	USB Compliant	PHY	MCU Interface	Tx/Rx Buffer Size (bytes)	Number of GPIO	Operating Voltage (V)	Packages
MCP2200, MCP2210, MCP2221	Full-Speed USB (12 Mbps), Low-Speed USB (1.5 Mbps)	Yes	Yes	UART, SPI, I²C	up to 128/128	up to 9	2.7 to 5.5	14- and 20-pin SOIC, TSSOP, QFN

INTERFACE: mTouch® AR1000 Resistive Touch Screen Controllers

Product	Type	Communication	Touch Screens Supported	A/D	Resolution	Power	Points Per Second	Operating Temp. Range (°C)	Static Protection	5 ku Pricing†	Special Features	Packages
AR1021	Analog Resistive	SPI, I²C	All Manufacturers 4, 5 and 8 wire	Internal 10-bit Ratiometric	1024 × 1024	2.5V DC ±5% 5.5V DC ±5%	140 pps	–40 to +85	Per schematic	$1.32	Controller driven calibration & Universal for all touch screens	20-pin SSOP (SS), SOIC (SO), QFN (ML)
AR1011	Analog Resistive	UART	All Manufacturers 4, 5 and 8 wire	Internal 10-bit Ratiometric	1024 × 1024	2.5V DC ±5% 5.5V DC ±5%	140 pps	–40 to +85	Per schematic	$1.39	Controller driven calibration & Universal for all touch screens	20-pin SSOP (SS), SOIC (SO), QFN (ML)
AR1100	Analog Resistive	USB, UART	All Manufacturers 4, 5 and 8 wire	Internal 10-bit Ratiometric	1024 × 1024	3.3V DC ±5% 5.5V DC ±5%	150 pps	–40 to +85	Per schematic	$1.61	Controller driven calibration & Universal for all touch screens	20-pin SSOP (SS), SOIC (SO), QFN (ML)
AR1100BRD	Analog Resistie	USB, RS-232	All Manufacturers 4, 5 and 8 wire	Internal 10-bit Ratiometric	1024 × 1024	3.3V DC ±5% 5.5V DC ±5%	150 pps	–40 to +85	Per schematic	$12.78	Controller driven calibration & Universal for all touch screens	Board Module

ULTRASOUND: High-Voltage Analog Switch Products

Product	Number of Switches
HV20220, HV20320, HV232, HV219, HV2201, HV2301, HV2221, HV2321	8
HV2601, HV2701, HV2605, HV2705, HV2631, HV2731, HV2733	16
HV2661, HV2761, HV2662, HV2762	24
HV2808, HV2809, HV2801, HV2901, HV2802, HV2902	32

ULTRASOUND: Ultrasound FET Driver Products

Product	Number of Drivers
MD1210, MD1211, MD1213	2
MD1810, MD1811, MD1820, MD1821, MD1822	4
MD1812, MD1813	5
MD1711, MD1712, MD1715, MD1716	12

ULTRASOUND: Integrated Ultrasound Transmitter

Product	Number of Channels
HV7360, HV7361	1 or 2
HV748	4
HV7355, HV7350, HV7351	8

ULTRASOUND: Ultrasound T/R Switch

Product	Number of Channels
MD0100	1 or 2
MD101, MD0105	4

ULTRASOUND: Arbitrary Waveform Generator

Product	Features
MD2131	8-bit DAC, 48-step phase, PWM, 8-bit Apodization DAC
MD2134	8-bit DAC, 7-bit PAM, 16-Level

SAFETY AND SECURITY: Smoke Detector and Horn Driver ICs

Product	Horn Driver	Detection Method	Low Battery Detection	Alarm Memory	Alarm Interconnect	Hush/Sensitivity Timer	Operating Temperature Range (°C)	Packages
RE46C140/1/3/4/5	Yes	Photo	Yes	No	Yes	140/4/5	–25 to +75	PDIP, SOIC
RE46C12X & 152	Yes	Ion	Yes	No	Not 120	122/7152	–10 to +60	PDIP
RE46C10X & 11X	Yes	Just Driver	5/7/9/19	NA	9/19	None	See Datasheet	See Datasheet
RE46C162/3, 5/6/7/8	Yes	Ion/Photo	Yes	Yes	Yes	Yes	–25 to +75	PDIP, SOIC
RE46C180	Yes	Ion	Yes	Yes	Yes	Yes	–10 to +60	PDIP, SOIC
RE46C190	Yes	Photo	Yes	Yes	Yes	Yes	–10 to +60	SOIC
RE46C317/8	Yes	Just Driver	No	No	No	No	–10 to +60	PDIP, SOIC

MOTOR DRIVERS: Stepper Motors, DC Motors and 3-Phase BLDC Fan Controllers

Product	Motor Type	Input Voltage Range (V)	Internal/External FETs	Output Current (mA)	Control Scheme	Motor Speed Output	Protections	Operating Temp. Range (°C)	Features	Packages
MCP8024/6	3-Phase Brushless Motors	6.0 to 28.0	External	500	Direct PWM	N/A	Overcurrent, Overvoltage, Undervoltage, Overtemperature, 48V Load Dump Protection, Short Circuit, Shoot Through	–40 to +150	Three Op Amps, Adj. Buck Regulator, 5V LDO, 12V LDO, Thermal Warning, Dead Time, Blanking Time, Level Translator, Motor Enable, Sleep Mode (MCP8026)	40-pin 5 × 5 QFN, 48-pin 7 × 7 TQFP
MCP8025	3-Phase Brushless Motor	6.0 to 19.0	External	500	Direct PWM	N/A	Overcurrent, Overvoltage, Undervoltage, Overtemperature, 48V Load Dump Protection, Short Circuit, Shoot Through	–40 to +150	Sleep Mode, LIN Transceiver, AZ Output, Adj. Buck Regulator, LOD, Op Amp, Overcurrent Comparator, Fault Output, Thermal Warning, Selectable Dead Time and Blanking Time	40-pin 5 × 5 QFN, 48-pin 7 × 7 TQFP
MCP8063	3-Phase Brushless Motor	2.0 to 14.0	Internal	750	Sensorless Sinusoidal	Frequency Generator	Overtemperature, Motor Lock-up, Overcurrent, Overvoltage	–40 to +125	3-Phase BLDC 180° Sinusoidal Sensorless Fan Motor Driver, Overcurrent limitation, Output Switching Frequency at 23 kHz	Thermally Enhanced 8-pin 4 × 4 DFN
MTS62C19A/ MTS2916A	One Bipolar Stepper Motor or Two DC Motors	10.0 to 40.0	Internal	750	Direct PWM Input, Current Limit Control, Microstepping	No	Overtemperature, Under Voltage	–40 to +105	Dual Full-Bridge Motor Driver for Stepper Motors, Pin Compatible with Allegro 6219	24-pin SOIC
MTD6501C/G	3-Phase Brushless Motor	2.0 to 14.0	Internal	800	Sensorless Sinusoidal	Frequency Generator	Overtemperature, Motor Lock-up, Overcurrent, Overvoltage	–30 to +95	3-Phase BLDC 180° Sinusoidal Sensorless Fan Motor Driver, Overcurrent limitation, Output Switching Frequency at 20 kHz (MTD6501C) and 23 kHz (MTD6501G)	Thermally Enhanced 8-pin SOP
MTD6501D	3-Phase Brushless Motor	2.0 to 14.0	Internal	500	Sensorless Sinusoidal	Frequency Generator	Overtemperature, Motor Lock-up, Overcurrent, Overvoltage	–30 to +95	3-Phase BLDC 180° Sinusoidal Sensorless Fan Motor Driver, Boost Mode, Overcurrent limitation, Output Switching Frequency at 20 kHz	10-pin MSOP
MTD6502B	3-Phase Brushless Motor	2.0 to 5.5	Internal	750	Sensorless Sinusoidal	Frequency Generator	Overtemperature, Motor Lock-up, Overcurrent, Overvoltage	–40 to +125	3-Phase BLDC 180° Sinusoidal Sensorless Fan Motor Driver, Direction control, Overcurrent limitation, Output Switching Frequency at 30 kHz	10-pin 3 × 3 TDFN
MTD6505/8	3-Phase Brushless Motor	2.0 to 5.5	Internal	750	Sensorless Sinusoidal	Frequency Generator	Overcurrent, Overvoltage, Overtemperature, Motor Lock-up	–40 to +125	3-Phase BLDC 180° Sinusoidal Sensorless Drive, Direction Control, Programmable BEMF Coefficient Range, Output Switching Frequency at 30 kHz, [Programmable Start-up RPM and Slew Rate, Selectable Start-up Strength and Phase Target Regulation (MTD6508)]	10-pin 3 × 3 UDFN, 16-pin 4 × 4 UQFN (adj version)

CLOCK GENERATORS: 555 Timers

Product	Description	Min Voltage (V)	Max Voltage (V)	Current (µA)	Timing Accuracy	Max. Frequency	Packages
MIC1555	RC Timer/Oscillator "555 Timer"	2.7	18	240	0.02	5 MHz	SOT23-5, 2 x 2
MIC1557	RC Timer/Oscillator with Shutdown	2.7	18	240	0.02	5 MHz	SOT23-5

CLOCK GENERATORS: ClockWorks® FUSION Family, Ultra-Low Jitter

Product	Description	Supply Voltage (V)	Output Type	Output(s) (MHz)	Typical Jitter (12 kHz–20 MHz)	FSEL	OE	Applications	Packages
MX85XXX	Multiple Output, Ultra-Low Jitter	2.5/3.3	PECL, LVDS, HCSL, CMOS	<840	180 fs	✓	✓	1/10/40/100 GbE, PCIe, SONET, SAS/SATA	5 x 7

CLOCK GENERATORS: FLEX Ultra-Low Jitter

Product	Description	Supply Voltage (V)	Icc (mA)	Crystal Input (MHz)	REF_{IN} (MHz)	Output Type	Output(s) (MHz)	Typical Jitter (12 kHz–20 MHz)	FSEL	PLL Bypass	NSEL	OE	Applications	Packages
SM803XXX	12 Output, Ultra-Low Jitter	2.5/3.3	140	12–55	12–850	12-Diff/SE	12–850	180 fs	✓	✓	–	✓	GbE, 100 GbE, PCIe, SONET, SAS/SATA	7 x 7 QFN
SM802XXX	8 Output, Ultra-Low Jitter	2.5/3.3	150	11–30	11–80	8-Diff/16-SE	11–840	240 fs	✓	✓	–	✓	GbE, 100 GbE, PCIe, SONET, SAS/SATA	7 x 7 QFN
SM813XXX	8 Output, Ultra-Low Jitter	2.5/3.3V	140	12–55	–	8-Diff/SE	12–850	120 fs	✓	✓	–	✓	GbE, 100 GbE, PCIe, SONET, SAS/SATA	7 x 7 QFN

CLOCK GENERATORS: General-Purpose Programmable Clock Generators

Product	Description	# of PLLs	Crystal Input (MHz)	Input Reference (MHz)	Output Frequency Min. (MHz)	Output Frequency Max. (MHz)	# of Outputs	Voltage (V)	Programmable Pin(s) (PDB)	OE	FSEL	CLK	Ultra-Low Power	Packages
PL610-01	PicoPLL Clock Generator	0	10–130	1–130	0.16	130	≤2	1.8–3.3	✓	✓	–	✓	✓	6-pin DFN, 6-pin SOT23
PL610-01/02/03	PicoPLL Clock Generator	0	10–130	1–130	0.16	130	≤2	1.8–3.3	✓	✓	–	✓	✓	Die
PL610-06	PicoPLL Clock Generator	0	10–60	–	0.16	60	≤2	1.8–3.3	✓	✓	–	✓	✓	Die
PL611-01	PicoPLL Clock Generator	1	10–30	1–130	1	200	≤3	2.5–3.3	✓	✓	✓	✓	–	8-pin SOP, 6-pin SOT23
PL611-30	PicoPLL Clock Generator	1	10–30	1–200	5	400	≤3	2.5–3.3	–	✓	✓	✓	–	8-pin SOP, 6-pin SOT23
PL611S-02	PicoPLL Clock Generator	1	10–50	1–200	2	200	≤2	1.8–3.3	✓	✓	✓	✓	–	6-pin DFN, 6-pin SOT23
PL611S-02/03	PicoPLL Clock Generator	1	10–50	–	2	200	≤2	1.8–3.3	✓	✓	✓	✓	–	Die
PL611S-04	PicoPLL Clock Generator	1	10–50	–	2	200	≤2	1.8–3.3	✓	✓	✓	✓	–	Die
PL611S-18	PicoPLL Clock Generator	1	10–50	1–200	0.5	125	2	1.8–3.3	✓	✓	✓	✓	✓	6-pin DFN, 6-pin SOT23
PL611S-19	PicoPLL Clock Generator	1	–	0.01–200	0.5	125	2	1.8–3.3	✓	✓	✓	✓	✓	6-pin DFN, 6-pin SOT23
PL611S-27	PicoPLL Clock Generator	1	–	1–200	1	125	≤2	1.8–3.3	✓	✓	✓	✓	✓	6-pin DFN, 6-pin SOT23
PL613-01	PicoPLL Clock Generator	3	10–40	10–200	1	200	≤8	1.8–3.3	✓	✓	✓	✓	✓	16-pin QFN, 16-pin TSSOP
PL613-05	PicoPLL Clock Generator	3	10–40	10–200	1	200	≤3	1.8–3.3	✓	✓	✓	✓	✓	8-pin SOP
PL613-21	PicoPLL Clock Generator	3	10–40	10–200	0.004	125	≤4	1.8–3.3	✓	✓	✓	✓	✓	16-pin QFN, 16-pin TSSOP

CLOCK GENERATORS: JitterBlocker™ Family

Product	Description	Input Frequency Min. (MHz)	Input Frequency Max. (MHz)	Output Frequency Min. (MHz)	Output Frequency Max. (MHz)	# of Outputs	Voltage (V)	Programmable Pin(s) (PDB)	OE	FSEL	CLK	Ultra-Low Power	Packages
PL902	Low Power, Clock Conditioner	1	200	1.25	200	3 SE	2.5, 3.3	✓	✓	✓	✓	✓	6-pin SOT23
PL903	Low Power, Clock Conditioner	12	200	12	840	1 Diff	2.5, 3.3	–	✓	–	✓	–	24-pin QFN
PL904	Low Power, Clock Conditioner	12	250	12	850	2 Diff	2.5, 3.3	–	✓	–	✓	–	32-pin QFN

CLOCK GENERATORS: Programmable EMI Reduction Clock

Product	Description	# of PLLs	Crystal Input (MHz)	Input Reference (MHz)	Output Frequency Min. (MHz)	Output Frequency Max. (MHz)	# of Outputs	Voltage (V)	Programmable Pin(s) (PDB)	CSEL	CLK	Packages
PL671-01	Programmable EMI Reduction Clock	1	10–40	1–200	1	200	≤3	2.5, 3.3	✓	✓	✓	8-pin SOP, 6-pin SOT23
PL671-02	Programmable EMI Reduction Clock	1	–	1–200	1	200	≤3	2.5, 3.3	✓	✓	✓	6-pin SOT23
PL671-25	Programmable EMI Reduction Clock	1	10–40	1–200	1	200	2	2.5, 3.3	✓	✓	✓	8-pin SOP
PL671-29	Programmable EMI Reduction Clock	1	10–40	1–200	1	200	1	2.5, 3.3	✓	✓	✓	8-pin SOP
PL671-30	Programmable EMI Reduction Clock	1	–	1–200	1	200	1	2.5, 3.3	✓	✓	✓	8-pin SOP
PL671-33	Programmable EMI Reduction Clock	1	10–40	1–200	1	200	≤2	2.5, 3.3	✓	✓	✓	8-pin SOP

Products sorted by pin count followed by pricing.
† Pricing subject to change; please contact your Microchip representative for most current pricing.

CLOCK GENERATORS: Crystal-Less MEMS

Product	Description	Supply Voltage (V)	Output Type	Output(s) (MHz)	Freq. Stability (ppm)	Operating Temp. Range (°C)	Jitter (12k–20 MHz)	Programmability	Applications	Packages
DSC400	4 Output Crystal-less MEMS Clock Generator	2.25–3.6	2-4 CMOS, HCSL, LVPECL, LVDS	2.3–460	25–50	–40 to +85	1.7 ps (RMS)	Factory	Computing, networking, storage, industrial, consumer electronics, video	20-pin QFN (5.0 × 3.2)
DSC2010	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	1-CMOS	2.3–170	10–50	–55 to +125	1.7 ps (RMS)	Pin-Configurable	Consumer electronics	14-pin QFN (3.2 × 2.5)
DSC2011	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	2-CMOS	2.3–170	25–50	–55 to +125	1.7 ps (RMS)	Pin-Configurable	Consumer electronics	14-pin QFN (3.2 × 2.5)
DSC2020	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	1-LVPECL	2.3–460	10–50	–40 to +85	1.7 ps (RMS)	Pin-Configurable	Computing, networking, storage, industrial	14-pin QFN (3.2 × 2.5)
DSC2021	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	1-LVPECL, 1-CMOS	2.3–460	25–50	–40 to +85	1.7 ps (RMS)	Pin-Configurable	Computing, networking, storage, industrial	14-pin QFN (3.2 × 2.5)
DSC2022	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	2-LVPECL	2.3–460	25–50	–40 to +85	1.7 ps (RMS)	Pin-Configurable	Computing, networking, storage, industrial	14-pin QFN (3.2 × 2.5)
DSC2030	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	1-LVDS	2.3–460	10–50	–40 to +85	1.7 ps (RMS)	Pin-Configurable	Video	14-pin QFN (3.2 × 2.5)
DSC2031	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	1-LVDS, 1-CMOS	2.3–460	25–50	–40 to +85	1.7 ps (RMS)	Pin-Configurable	Video	14-pin QFN (3.2 × 2.5)
DSC2032	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	1-LVDS, 1-LVPECL	2.3–460	25–50	–40 to +85	1.7 ps (RMS)	Pin-Configurable	Video	14-pin QFN (3.2 × 2.5)
DSC2033	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	2-LVDS	2.3–460	25–50	–40 to +85	1.7 ps (RMS)	Pin-Configurable	Video	14-pin QFN (3.2 × 2.5)
DSC2040	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	1-HCSL	2.3–460	10–50	–40 to +85	1.7 ps (RMS)	Pin-Configurable	Computing, networking, storage, industrial	14-pin QFN (3.2 × 2.5)
DSC2041	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	1-HCSL, 1-CMOS	2.3–460	25–50	–40 to +85	1.7 ps (RMS)	Pin-Configurable	Computing, networking, storage, industrial	14-pin QFN (3.2 × 2.5)
DSC2042	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	1-HCSL, 1-LVPECL	2.3–460	25–50	–40 to +85	1.7 ps (RMS)	Pin-Configurable	Computing, networking, storage, industrial	14-pin QFN (3.2 × 2.5)
DSC2043	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	1-HCSL, 1-LVDS	2.3–460	25–50	–40 to +85	1.7 ps (RMS)	Pin-Configurable	Computing, networking, storage, industrial	14-pin QFN (3.2 × 2.5)
DSC2044	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	2-HCSL	2.3–460	25–50	–40 to +85	1.7 ps (RMS)	Pin-Configurable	Computing, networking, storage, industrial	14-pin QFN (3.2 × 2.5)
DSC2210	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	1-CMOS	2.3–170	10–50	–55 to +125	1.7 ps (RMS)	SPI/I²C	Computing, Consumer electronics, storage	14-pin QFN (3.2 × 2.5)
DSC2211	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	2-CMOS	2.3–170	25–50	–55 to +125	1.7 ps (RMS)	SPI/I²C	Computing, Consumer electronics, storage	14-pin QFN (3.2 × 2.5)
DSC2220	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	1-LVPECL	2.3–460	10–50	–40 to +85	1.7 ps (RMS)	SPI/I²C	Computing, networking, storage, industrial	14-pin QFN (3.2 × 2.5)
DSC2221	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	1-LVPECL, 1-CMOS	2.3–460	25–50	–40 to +85	1.7 ps (RMS)	SPI/I²C	Computing, networking, storage, industrial	14-pin QFN (3.2 × 2.5)
DSC2222	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	2-LVPECL	2.3–460	25–50	–40 to +85	1.7 ps (RMS)	SPI/I²C	Computing, networking, storage, industrial	14-pin QFN (3.2 × 2.5)
DSC2230	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	1-LVDS	2.3–460	10–50	–40 to +85	1.7 ps (RMS)	SPI/I²C	Video	14-pin QFN (3.2 × 2.5)
DSC2231	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	1-LVDS, 1-CMOS	2.3–460	25–50	–40 to +85	1.7 ps (RMS)	SPI/I²C	Video	14-pin QFN (3.2 × 2.5)
DSC2232	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	1-LVDS, 1-LVPECL	2.3–460	25–50	–40 to +85	1.7 ps (RMS)	SPI/I²C	Video	14-pin QFN (3.2 × 2.5)
DSC2233	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	2-LVDS	2.3–460	25–50	–40 to +85	1.7 ps (RMS)	SPI/I²C	Video	14-pin QFN (3.2 × 2.5)
DSC2240	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	1-HCSL	2.3–460	10–50	–40 to +85	1.7 ps (RMS)	SPI/I²C	Computing, networking, storage, industrial	14-pin QFN (3.2 × 2.5)
DSC2241	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	1-HCSL, 1-CMOS	2.3–460	25–50	–40 to +85	1.7 ps (RMS)	SPI/I²C	Computing, networking, storage, industrial	14-pin QFN (3.2 × 2.5)
DSC2242	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	1-HCSL, 1-LVPECL	2.3–460	25–50	–40 to +85	1.7 ps (RMS)	SPI/I²C	Computing, networking, storage, industrial	14-pin QFN (3.2 × 2.5)
DSC2243	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	1-HCSL, 1-LVDS	2.3–460	25–50	–40 to +85	1.7 ps (RMS)	SPI/I²C	Computing, networking, storage, industrial	14-pin QFN (3.2 × 2.5)
DSC2244	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	2-HCSL	2.3–460	25–50	–40 to +85	1.7 ps (RMS)	SPI/I²C	Computing, networking, storage, industrial	14-pin QFN (3.2 × 2.5)
DSC2311	2 Output Crystal-less MEMS Clock Generator	2.25–3.6	2-CMOS	2.3–170	25–50	–55 to +125	1.7 ps (RMS)	Factory	Consumer electronics	6-pin QFN (2.5 × 2.0)

CLOCK GENERATORS Application-Specific Crystal-Less MEMS

Product	Description	Supply Voltage (V)	Output Type	Output(s) (MHz)	Freq. Stability (ppm)	Operating Temp. Range (°C)	Jitter (12k–20 MHz)	Programmability	Applications	Packages
DSC501-05	1-4 Output Crystal-less MEMS Clock Generator	2.25–3.6	3-CMOS, 1-HCSL	60, 66.6667, 100	50–100	–40 to +105	1.7 ps (RMS)	Pin-Configurable	Printers	20-pin QFN (5.0 × 3.2)
DSC510-05	1-4 Output Crystal-less MEMS Clock Generator	2.25–3.6	4- Any Differential	25	50–100	–40 to +105	1.7 ps (RMS)	Pin-Configurable	Networking	20-pin QFN (5.0 × 3.2)
DSC511-03	1-4 Output Crystal-less MEMS Clock Generator	2.25–3.6	2-CMOS	2.3-170	10–50	–55 to +125	1.7 ps (RMS)	Factory	Consumer Electronics	6-pin QFN (2.5 × 2.0)
DSC511-05	1-4 Output Crystal-less MEMS Clock Generator	2.25–3.6	4- Any Differential	56.6	50–100	–40 to +105	1.7 ps (RMS)	Pin-Configurable	Networking	20-pin QFN (5.0 × 3.2)
DSC512-05	1-4 Output Crystal-less MEMS Clock Generator	2.25–3.6	2-CMOS, 2-LVDS	14, 16, 50	50–100	–40 to +105	1.7 ps (RMS)	Pin-Configurable	Networking	20-pin QFN (5.0 × 3.2)
DSC513-05	1-4 Output Crystal-less MEMS Clock Generator	2.25–3.6	4- Any Differential	200	50–100	–40 to +105	1.7 ps (RMS)	Pin-Configurable	Networking	20-pin QFN (5.0 × 3.2)
DSC520-03	1-4 Output Crystal-less MEMS Clock Generator	2.25–3.6	2-CMOS	25, 27	25–50	–55 to +125	1.7 ps (RMS)	Factory	VoIP	6-pin QFN (2.5 × 2.0)
DSC520-04	1-4 Output Crystal-less MEMS Clock Generator	2.25–3.6	3-CMOS	24, 25, 27	25–50	–55 to +125	1.7 ps (RMS)	Factory	VoIP	20-pin QFN (5.0 × 3.2)
DSC520-05	1-4 Output Crystal-less MEMS Clock Generator	2.25–3.6	4-CMOS	24, 25, 27	25–50	–55 to +125	1.7 ps (RMS)	Factory	VoIP	20-pin QFN (5.0 × 3.2)
DSC521-04	1-4 Output Crystal-less MEMS Clock Generator	2.25–3.6	3-CMOS	20, 25, 27	25–50	–55 to +125	1.7 ps (RMS)	Factory	VoIP	20-pin QFN (5.0 × 3.2)
DSC531-03	1-4 Output Crystal-less MEMS Clock Generator	2.25–3.6	1-CMOS, 1-LVPECL	100, 150	10–50	–40 to +85	1.7 ps (RMS)	Factory	SAS, SATA	20-pin QFN (5.0 × 3.2)
DSC533-05	1-4 Output Crystal-less MEMS Clock Generator	2.25–3.6	4-LVPECL	25, 100, 125, 133.333	50–100	–40 to +85	1.7 ps (RMS)	Factory	SAS	20-pin QFN (5.0 × 3.2)
DSC557-03	1-4 Output Crystal-less MEMS Clock Generator	2.25–3.6	2-HCSL	100	50–100	–40 to +105	1.7 ps (RMS)	Fixed	PCI Express	14-pin QFN (3.2 × 2.5), 16-pin TSSOP
DSC557-04	1-4 Output Crystal-less MEMS Clock Generator	2.25–3.6	3-HCSL	100	50–100	–40 to +105	1.7 ps (RMS)	Fixed	PCI Express	20-pin QFN (5.0 × 3.2)
DSC557-05	1-4 Output Crystal-less MEMS Clock Generator	2.25–3.6	4-HCSL	100	50–100	–40 to +105	1.7 ps (RMS)	Fixed	PCI Express	20-pin QFN (5.0 × 3.2)
DSC558-03	1-4 Output Crystal-less MEMS Clock Generator	2.25–3.6	2-HCSL	100	50–100	–40 to +105	1.7 ps (RMS)	Fixed	PCI Express	14-pin QFN (3.2 × 2.5), 16-pin TSSOP
DSC558-05	1-4 Output Crystal-less MEMS Clock Generator	2.25–3.6	4-HCSL	100	50–100	–40 to +105	1.7 ps (RMS)	Fixed	PCI Express	20-pin QFN (5.0 × 3.2)
DSC570-05	1-4 Output Crystal-less MEMS Clock Generator	2.25–3.6	4- Any Differential	156.25	50–100	–40 to +105	1.7 ps (RMS)	Pin-Configurable	xAUI	20-pin QFN (5.0 × 3.2)
DSC571-04	1-4 Output Crystal-less MEMS Clock Generator	2.25–3.6	3- Any Differential	100, 125, 156.25	50–100	–40 to +85	1.7 ps (RMS)	Pin-Configurable	xAUI, SGMI, SRIO	20-pin QFN (5.0 × 3.2)
DSC572-05	1-4 Output Crystal-less MEMS Clock Generator	2.25–3.6	4-LVPECL	155.25, 156.25	50–100	–40 to +105	1.7 ps (RMS)	Pin-Configurable	xAUI, GPON	20-pin QFN (5.0 × 3.2)
DSC591-03	1-4 Output Crystal-less MEMS Clock Generator	2.25–3.6	2-CMOS	25, 50	25–50	–55 to +125	1.7 ps (RMS)	Pin-Configurable	BMC - Server	14-pin QFN (3.2 × 2.5)
DSC592-03	1-4 Output Crystal-less MEMS Clock Generator	2.25–3.6	2-CMOS	50	25–50	–55 to +125	1.7 ps (RMS)	Pin-Configurable	BMC - Server	14-pin QFN (3.2 × 2.5)

CLOCK GENERATORS: PCIe Clock Generators

Product	Description	Input Frequency (MHz)	Multiplier	Output Frequency (MHz)	# of Channels	Voltage (V)	With Spread Spectrum (EMI Reduction)	Packages
PL602-21	Fund Xtal or Single-Ended Clk	25	4	100	1	2.5, 3.3	–	8-pin SOP, 6-pin SOT23
PL602-22	Fund Xtal or Single-Ended Clk	25	5	125	1	2.5, 3.3	–	8-pin SOP, 6-pin SOT23
PL602-23	Fund Xtal or Single-Ended Clk	25	8	200	1	2.5, 3.3	–	8-pin SOP, 6-pin SOT23
PL602-26	Fund Xtal or Single-Ended Clk	25	1	25	1	2.5, 3.3	–	8-pin SOP, 6-pin SOT23
PL602-27	Fund Xtal or Single-Ended Clk	25	10	250	1	2.5, 3.3	–	8-pin SOP, 6-pin SOT23
PL602-15	Fund Xtal or Single-Ended Clk	25	6.25	156.25	1	2.5, 3.3	–	8-pin SOP, 6-pin SOT23
PL602031	Fund Xtal or Single-Ended Clk	25	1	25	2	2.5, 3.3	–	16-pin QFN 3 × 3
PL602032	Fund Xtal or Single-Ended Clk	25	4	100	2	2.5, 3.3	–	16-pin QFN 3 × 3
PL602033	Fund Xtal or Single-Ended Clk	25	5	125	2	2.5, 3.3	–	16-pin QFN 3 × 3
PL602034	Fund Xtal or Single-Ended Clk	25	8	200	2	2.5, 3.3	–	16-pin QFN 3 × 3
PL602041	Fund Xtal or Single-Ended Clk	25	1, 4, 5, 8	25, 100, 125, 200	4	2.5, 3.3	–	24-pin QFN 4 × 4
PL607041	Fund Xtal or Single-Ended Clk	25	1, 4, 5, 8	25, 100, 125, 200	4	2.5, 3.3	✓	24-pin QFN 4 × 4
PL602081	Fund Xtal or Single-Ended Clk	25	1, 4, 8	25, 100, 200	8	2.5, 3.3	–	44-pin QFN 7 × 7
PL602082	Fund Xtal or Single-Ended Clk	25	1, 5, 10	25, 125, 250	8	2.5, 3.3	–	44-pin QFN 7 × 7
PL607081	Fund Xtal or Single-Ended Clk	25	1, 4, 8	25, 100, 200	8	2.5, 3.3	✓	44-pin QFN 7 × 7
PL607082	Fund Xtal or Single-Ended Clk	25	1, 5, 10	25, 125, 250	8	2.5, 3.3	✓	44-pin QFN 7 × 7

OSCILLATORS: Pure Silicon MEMS Oscillators

Product	Description	Typ. RMS Jitter	Supply Voltage (V)	Output Type	Frequency Range (MHz)	Frequency Stability (PPM)	Supply Current (mA)	Temperature Range (°C)	Packages
DSC1001	Ultra Low Power	10 ps	1.7–3.6	CMOS	1–150	10/25/50	5	–40 to +105	2.5 × 2.0 to 5.0 × 7.0
DSC1003	Ultra Low Power	10 ps	1.7–3.6	CMOS	1–150	10/25/50	5	–40 to +105	2.5 × 2.0 to 5.0 × 7.0
DSC1004	Ultra Low Power	10 ps	1.7–3.6	CMOS	1–150	10/25/50	5	–40 to +105	2.5 × 2.0 to 5.0 × 7.0
DSC1018	Ultra Low Power (3 mA)	20 ps	1.65–1.95	CMOS	1–150	25/50	3	–40 to +105	2.5 × 2.0 to 5.0 × 7.0
DSC1025	Ultra Low Power (3 mA)	20 ps	2.3–3.7	CMOS	1–150	25/50	3	–40 to +105	2.5 × 2.0 to 5.0 × 7.0
DSC1028	Ultra Low Power (3 mA)	20 ps	2.6–3.0	CMOS	1–150	25/50	3	–40 to +105	2.5 × 2.0 to 5.0 × 7.0
DSC1030	Ultra Low Power (3 mA)	20 ps	2.7–3.3	CMOS	1–150	25/50	3	–40 to +105	2.5 × 2.0 to 5.0 × 7.0
DSC1033	Ultra Low Power (3 mA)	20 ps	3.0–3.6	CMOS	1–150	25/50	3	–40 to +105	2.5 × 2.0 to 5.0 × 7.0
DSC1101/DSC1121	Low Jitter (0.5 ps RMS)	1.7 ps	2.25–3.6	CMOS	2.3–170	10/25/50	25	–50 to +125	2.5 × 2.0 to 5.0 × 7.0
DSC1102/DSC1122	Low Jitter (0.5 ps RMS)	1.7 ps	2.25–3.6	LVPECL	2.3–425	10/25/50	40	–50 to +125	2.5 × 2.0 to 5.0 × 7.0
DSC1103/DSC1123	Low Jitter (0.5 ps RMS)	1.7 ps	2.25–3.6	LVDS	2.3–425	10/25/50	25	–50 to +125	2.5 × 2.0 to 5.0 × 7.0
DSC1104/DSC1124	Low Jitter (0.5 ps RMS)	1.7 ps	2.25–3.6	HCSL	2.3–425	10/25/50	30	–50 to +125	2.5 × 2.0 to 5.0 × 7.0

OSCILLATORS: ClockWorks® FUSION Family, Programmable Ultra-Low Jitter Oscillators

Product	Description	Output Type	Output(s) (MHz)	Typical Jitter (12 kHz–20 MHz)	OE Pin	OE Active	Stability (ppm)	Applications	Packages
MX55XXX	Ultra-low Jitter Oscillator	LVDS, LVPECL, LVCMOS, HCSL	Up to 850	160 fs	Sel	Sel	±50	Communications, Servers, Data Centers	5 × 3.2
MX57XXX	Ultra-low Jitter Oscillator	LVDS, LVPECL, LVCMOS, HCSL	Up to 850	160 fs	Sel	Sel	±50	Communications, Servers, Data Centers	7 × 5
MX553ABB212M500	Ultra-low Jitter Oscillator	LVDS	212.5	175 fs	1	High	±50	Fibre Channel 10G/12G SERDES	5 × 3.2
MX553BBA156M250	Ultra-low Jitter Oscillator	LVPECL	156.25	175 fs	1	High	±50	10/40/400 Gigabit Ethernet, Fibre Channel 10G/12G SERDES	5 × 3.2
MX555ABA25M0000	Ultra-low Jitter Oscillator	LVPECL	25	220 fs	1	High	±50	Router, Switch	5 × 3.2
MX573ABA212M500	Ultra-low Jitter Oscillator	LVPECL	212.5	175 fs	1	High	±50	Fibre Channel 10G/12G SERDES	7 × 5
MX573BBA156M250	Ultra-low Jitter Oscillator	LVPECL	156.25	175 fs	1	High	±50	10/40/400 Gigabit Ethernet, Fibre Channel 10G/12G SERDES	7 × 5
MX573BBA312M500	Ultra-low Jitter Oscillator	LVPECL	312.5	175 fs	1	High	±50	10/40/400 Gigabit Ethernet, Fibre Channel 10G/12G SERDES	7 × 5
MX573BBB156M250	Ultra-low Jitter Oscillator	LVDS	156.25	175 fs	1	High	±50	10/40/400 Gigabit Ethernet, Fibre Channel 10G/12G SERDES	7 × 5
MX575ABA100M000	Ultra-low Jitter Oscillator	LVPECL	100	220 fs	1	High	±50	PCI-Express, Storage	7 × 5
MX555ABH25M0000	Ultra-low Jitter Oscillator	LVCMOS	25	220 fs	1	Low	±50	Router, Switch	5 × 3.2
MX681EBA156M250	Ultra-low Jitter Oscillator	LVPECL	156.25	47fs	1	High	±50	10/40/400 Gigabit Ethernet, Telecom, NAS, Networking, Storage	5 × 7

CLOCK AND DATA DISTRIBUTION: Fanout

Product	Fanout	Input	Output	Supply Voltage (V)	Output Voltage (V)	Max. Frequency (GHz)	Max. Data Rate (Gbps)	Max. Prop Delay (ps)	Icc (mA)	Max. Within Device Skew (ps)	Typical Jitter (fs) (12 kHz–20 MHz) @156.25 MHz	Typical Jitter (fs) (12 kHz–20 MHz) @156.25 MHz	OE	RPE	FSI	Input Mux	Input EQ	Packages
SY75578L	1:8	HCSL/LVDS	HCSL/LVDS	3.3	3.3	0.3	–	3000	140	<50	145	–	✓	–	–	✓	–	5 x 5mm 32-pin QFN
SY75576L	1:4	HCSL/LVDS	HCSL/LVDS	3.3	3.3	0.3	–	–	90	<50	153	–	✓	–	–	✓	–	20-pin TSSOP
SY75572L	1:2	HCSL/LVDS	HCSL	3.3	3.3	0.3	–	3000	60	<50	153	–	✓	–	–	✓	–	16-pin QFN
PL123-02N	1:2	LVCMOS	LVCMOS	1.8–3.3	1.8/2.5/3.3	0.2	–	–	1	<500	–	–	✓	–	–	–	–	6-pin DFN
PL123-05N	1:5	LVCMOS	LVCMOS	2.5, 3.3	2.5/3.3	0.13	–	–	30	<250	–	–	–	–	–	–	–	8-pin SOP
PL123-09N	1:9	LVCMOS	LVCMOS	2.5, 3.3	2.5/3.3	0.13	–	–	30	<250	–	–	–	–	–	–	–	16-pin TSSOP
PL133-27	1:2	Multiple	LVCMOS	1.8–3.3	1.8/2.5/3.3	0.15	–	–	1	<500	–	–	✓	–	–	–	–	6-pin DFN
PL133-37	1:3	Multiple	LVCMOS	1.8–3.3	1.8/2.5/3.3	0.15	–	–	1	<250	–	–	–	–	–	–	–	6-pin SOT23
PL133-47	1:4	LVCMOS	LVCMOS	2.5, 3.3	2.5/3.3	0.15	–	<9200	30	<250	–	–	–	–	–	–	–	8-pin SOP
PL133-67	1:6	LVCMOS	LVCMOS	2.5, 3.3	2.5/3.3	0.15	–	<9200	30	<250	–	–	✓	–	–	–	–	16-pin TSSOP
PL133-97	1:9	LVCMOS	LVCMOS	2.5, 3.3	2.5/3.3	0.15	–	<9200	30	<250	–	–	✓	–	–	–	–	16-pin QFN
PL135-27	1:2	XTAL	LVCMOS	1.8–3.3	1.8/2.5/3.3	0.04	–	–	1	<500	–	–	–	–	–	–	–	6-pin DFN
PL135-37	1:3	XTAL	LVCMOS	1.8–3.3	1.8/2.5/3.3	0.04	–	–	2	<250	–	–	✓	–	–	–	–	8-pin SOP
PL135-47	1:4	XTAL	LVCMOS	1.8–3.3	1.8/2.5/3.3	0.04	–	–	3	<250	–	–	✓	–	–	–	–	16-pin QFN
PL135-67	1:6	XTAL	LVCMOS	1.8–3.3	1.8/2.5/3.3	0.04	–	–	4	<250	–	–	✓	–	–	–	–	16-pin QFN
PL138-18	2:10	LVDS/LVPECL/ LVHSTL/SSTL/HCSL	LVPECL	2.5, 3.3	2.5/3.3	0.7	–	<890	340	25	–	–	–	–	–	✓	–	32-pin LQFP
PL138-28	1:2	LVDS/LVPECL/ LVHSTL/SSTL/HCSL	LVPECL	2.5, 3.3	2.5/3.3	1	–	<890	95	25	–	–	–	–	–	–	–	8-pin SOP
PL138-48	2:4	LVDS/LVPECL/ LVHSTL/SSTL/HCSL	LVPECL	2.5, 3.3	2.5/3.3	1	–	<890	145	25	–	–	✓	–	–	✓	–	20-pin TSSOP
PL138-58	2:4	LVCMOS	LVPECL	2.5, 3.3	2.5/3.3	0.26	–	<890	165	25	–	–	✓	–	–	✓	–	3 x 3.5
PL138-98	2:9	LVDS/LVPECL/ LVHSTL/SSTL/HCSL	LVPECL	2.5, 3.3	2.5/3.3	0.7	–	<890	310	25	–	–	✓	–	–	✓	–	32-pin LQFP
SY58608U	1:2	ANY	LVDS	2.5	2.5	2	3.2	<420	55	<20	–	–	–	–	✓	–	–	3 x 3
SY58606U	1:2	ANY	CML	2.5/3.3	2.5/3.3	2.5	4.25	<400	60	15	–	–	–	–	✓	–	–	3 x 3
SY58607U	1:2	ANY	LVPECL	2.5/3.3	2.5/3.3	2.5	3.2	<450	40	<20	–	–	–	–	✓	–	–	3 x 3
SY89311U	1:2	ECL/PECL/LVPECL/ LVECL	ECL/PECL/ LVPECL/LVECL	2.5/3.3/5	2.5/3.3/5	3	–	<300	–	<20	–	–	–	–	–	–	–	3 x 2
SY89851U	1:2	ANY	LVPECL	2.5/3.3	2.5/3.3	3	2.5	<340	32	<20	–	–	–	–	–	–	–	3 x 3
SY54011R	1:2	ANY	CML	2.5	1.2/1.8	3.2	3.2	<300	32	15	–	–	–	–	✓	–	–	3 x 3
SY54020AR	1:4	ANY	CML	2.5	1.2/1.8	3.2	3.2	<400	104	20	–	–	✓	–	–	–	–	3 x 3
SY54020R	1:4	ANY	CML	2.5	1.2/1.8	2.5	3.2	<320	106	20	–	–	✓	–	✓	–	–	3 x 3
SY56011R	1:2	ANY	CML	2.5	1.2/1.8/2.5	4.5	6.4	<280	54	15	–	–	–	–	–	–	✓	3 x 3
SY58012U	1:2	ANY	LVPECL	2.5/3.3	2.5/3.3	5	5	<260	55	15	–	–	–	–	–	–	–	3 x 3
SY58013U	1:2	ANY	RS-LVPECL	2.5/3.3	2.5/3.3	6	10.7	<250	75	15	–	–	–	–	–	–	–	3 x 3
SY58011U	1:2	ANY	CML	2.5/3.3	2.5/3.3	7	10.7	<250	75	15	–	–	–	–	–	–	✓	3 x 3
SY89844U	2:2	ANY	LVDS	2.5	2.5	1.5	–	<900	105	<20	–	–	–	✓	✓	✓	–	4 x 4
SY89473U	2:2	ANY	LVPECL	2.5/3.3	2.5/3.3	3	2.5	<600	45	<20	–	–	–	–	–	✓	–	4 x 4
SY89474U	2:2	ANY	LVDS	2.5	2.5	2.5		<550	80	<20	–	–	–	–	–	✓	–	4 x 4
SY89645L	1:4	LVCMOS/LVTTL	LVDS	3.3	3.3	0.65	–	<3000	43	<40	–	–	–	–	–	–	–	16-pin TSSOP
SY89831U	1:4	ANY	LVPECL	2.5/3.3	2.5/3.3	2	–	<390	47	<20	–	62	–	–	–	–	–	3 x 3
SY89832U	1:4	ANY	LVDS	2.5	2.5	2	–	<570	75	<20	–	–	–	–	–	–	–	3 x 3
SY89833AL	1:4	ANY	LVDS	3.3	3.3	2	–	<600	75	<20	–	–	–	–	–	–	–	3 x 3
SY89833L	1:4	ANY	LVDS	3.3	3.3	2	–	<600	75	<20	–	–	–	–	–	–	–	3 x 3
SY89854U	1:4	ANY	LVPECL	2.5/3.3	2.5/3.3	3.5	–	<340	55	<20	–	–	–	–	–	–	–	3 x 3
SY58021U	1:4	ANY	LVPECL	2.5/3.3	2.5/3.3	4	5	<300	125	15	–	–	–	–	–	–	–	3 x 3
SY56020R	1:4	ANY	CML	2.5	1.2/1.8/2.5	4.5	6.4	<280	60	15	–	–	✓	–	–	–	✓	3 x 3
SY58022U	1:4	ANY	RS-LVPECL	2.5/3.3	2.5/3.3	5.5	10	<250	125	15	–	–	–	–	–	–	–	3 x 3
SY58020U	1:4	ANY	CML	2.5/3.3	2.5/3.3	6		<250	150	15	–	–	–	–	–	–	–	3 x 3
SY898535XL	2:4	XTAL/LVCMOS	LVPECL	3.3	3.3	0.24	–	<1750	60	30	–	–	–	–	–	✓	–	20-pin TSSOP
SY898533L	2:4	Multiple	LVPECL	3.3	3.3	0.65	–	<1400	50	<30	–	–	–	–	–	✓	–	20-pin TSSOP
SY89834U	2:4	LVTTL	LVPECL	2.5/3.3	2.5/3.3	1	–	<500	50	<20	–	–	–	–	–	✓	–	3 x 3
SY89830U	2:4	ECL/PECL/LVPECL/ LVECL	ECL/PECL/ LVPECL/LVECL	2.5/3.3/5	2.5/3.3/5	2.5	–	<450	50	<25	–	–	–	–	–	✓	–	16-pin TSSOP

CLOCK AND DATA DISTRIBUTION: Fanout (Continued)

Product	Fanout	Input	Output	Supply Voltage (V)	Output Voltage (V)	Max. Frequency (GHz)	Max. Data Rate (Gbps)	Max. Prop Delay (ps)	Icc (mA)	Max. Within Device Skew (ps)	Typical Jitter (fs) (12 kHz–20 MHz) @156.25 MHz	Typical Jitter (fs) (12 kHz–20 MHz) @156.25 MHz	OE	RPE	FSI	Input Mux	Input EQ	Packages
SY89846U	2:5	ANY	LVPECL	2.5/3.3	2.5/3.3	1.5	–	<900	60	<20	–	–	✓	–	✓	✓	–	5 x 5
SY89847U	2:5	ANY	LVDS	2.5	2.5	1.5	–	<1000	90	<20	–	–	✓	–	✓	✓	–	5 x 5
SY89856U	2:6	ANY	LVPECL	2.5/3.3	2.5/3.3	3	–	<460	90	<30	–	–	–	–	–	✓	–	5 x 5
SY58035U	2:6	ANY	LVPECL	2.5/3.3	2.5/3.3	4.5	–	<230	185	<20	–	–	–	–	–	✓	–	5 x 5
SY58034U	2:6	ANY	CML	2.5/3.3	2.5/3.3	6	–	<290	245	<20	–	–	–	–	–	✓	–	5 x 5
SY58036U	2:6	ANY	RS-LVPECL	2.5/3.3	2.5/3.3	6	–	<300	180	<20	–	–	–	–	–	✓	–	5 x 5
SY56034AR	2:6	ANY	CML	2.5	1.2/1.8/2.5	5	6.4	–	100	25	–	–	–	–	–	✓	–	5 x 5
SY89200U	1:8	ANY	LVDS	2.5	2.5	1.5	–	<900	350	<25	–	–	–	–	–	–	–	5 x 5
SY89202U	1:8	ANY	LVPECL	2.5/3.3	2.5/3.3	1.5	–	<930	125	<25	–	–	–	–	–	–	–	5 x 5
SY89858U	1:8	ANY	LVPECL	2.5/3.3	2.5/3.3	3	–	<380	95	<30	–	–	–	–	–	–	–	5 x 5
SY58032U	1:8	ANY	LVPECL	2.5/3.3	2.5/3.3	4	–	<330	190	<20	–	–	–	–	–	–	–	5 x 5
SY58031U	1:8	ANY	CML	2.5/3.3	2.5/3.3	5	–	<270	265	<20	–	–	–	–	–	–	–	5 x 5
SY58033U	1:8	ANY	RS-LVPECL	2.5/3.3	2.5/3.3	5.5	–	<280	180	<20	–	–	–	–	–	–	–	5 x 5
SY89837U	2:8	ANY	LVPECL	2.5/3.3	2.5/3.3	1.5	–	<975	115	<40	–	–	–	✓	✓	✓	–	5 x 5
SY89838U	2:8	ANY	LVDS	2.5	2.5	1.5	–	<950	250	<40	–	–	–	✓	✓	✓	–	5 x 5
SY89809AL	2:9	LVPECL/HSTL	HSTL	1.8/3.3	1.8/3.3	0.75	–	<1070	65	15	–	–	✓	–	–	✓	–	32-pin TQFP
SY89828L	Dual 1:10	LVPECL/LVDS	LVDS	3.3	3.3	1	–	<1300	160	<50	–	–	✓	–	–	✓	–	64-pin TQFP
SY89829U	Dual 1:10	LVPECL/LVDS	LVPECL	2.5/3.3	2.5/3.3	1	–	<1500	100	<50	–	–	✓	–	–	✓	–	64-pin TQFP
SY89464U	2:10 RPE	ANY	LVPECL	2.5/3.3	2.5/3.3	2	–	<1150	120	<25	–	–	–	✓	✓	✓	–	7 x 7
SY89465U	2:10 RPE	ANY	LVDS	2.5	2.5	2	–	<1200	250	<25	–	–	–	✓	✓	✓	–	7 x 7
SY89112U	2:12	ANY	LVPECL	2.5/3.3	2.5/3.3	3	–	<550	95	<25	–	–	–	–	–	✓	–	7 x 7
SY89113U	2:12	ANY	LVDS	2.5	2.5	1	–	<975	240	<25	–	–	–	–	–	✓	–	7 x 7
SY898530U	1:16	LVDS/LVPECL/ LVHSTL/SSTL/HCSL	LVPECL	3.3	3.3	0.5	–	<2000	125	<50	–	–	–	–	–	–	–	48-pin TQFP
SY89467U	2:20	ANY	LVPECL	2.5/3.3	2.5/3.3	1.5	–	<1200	120	<20	–	–	–	–	✓	✓	–	64-pin TQFP
SY89468U	2:20	ANY	LVDS	2.5	2.5	1.5	–	<1200	260	<25	–	–	–	–	✓	✓	–	64-pin TQFP
SY89825U	2:22	LVPECL/LVDS	LVPECL	2.5/3.3	2.5/3.3	1	–	<1200	100	<20	–	–	✓	–	–	✓	–	64-pin TQFP
SY89826L	2:22	LVPECL/LVDS	LVDS	3.3	3.3	1	–	<1250	175	<50	–	–	✓	–	–	✓	–	64-pin TQFP
SY10/100EL11V	1:2	PECL	PECL	3.3/5	3.3/5	0.75	–	<265	–	<20	–	–	–	–	–	–	–	8-pin SOIC
SY100EP14U	2:5	LVPECL	LVPECL	2.5/3.3	2.5/3.3	2	–	<600	75	<25	–	–	✓	–	–	✓	–	20-pin TSSOP
SY100EL14V	2:5	PECL	PECL	3.3/5	3.3/5	0.75	–	<880	32	<50	–	–	✓	–	–	✓	–	20-pin TSSOP
SY100EP15V	2:5	LVPECL/CMOS	LVPECL	2.5/3.3/5	2.5/3.3/5	2.5	–	<425	75	<25	–	–	✓	–	–	✓	–	16-pin TSSOP
SY100EL15L	2:4	PECL	PECL	3.3	3.3	0.75	–	<750	25	<50	–	–	✓	–	–	✓	–	16-pin SOIC
SY100EP111U	2:10	LVPECL/LVECL/HSTL	PECL	2.5/3.3	2.5/3.3	3	–	<400	120	<25	–	–	–	–	–	✓	–	32-pin TQFP
SY10EP11U	1:2	LVPECL/PECL/ECL	PECL	2.5/3.3/5	2.5/3.3/5	3	–	<300	25	<20	–	–	–	–	–	–	–	8-pin SOIC
SY100EP11U	1:2	LVPECL/PECL/ECL	PECL	2.5/3.3/5	2.5/3.3/5	3	–	<300	30	<20	–	–	–	–	–	–	–	8-pin SOIC
SY100E310L	2:8	ECL	PECL	3.3	3.3	–	–	725	55	50	–	–	–	–	–	–	–	28-pin PLCC

CLOCK AND DATA DISTRIBUTION: Zero Delay Buffers

Product	# of Outputs	Fanout	ZDB	Input (MHz)	Output Type	Voltage (V)	Packages
PL102-10	3	✓	✓	15–170	LVCMOS	2.5, 3.3	8-pin SOP, 6-pin SOT23
PL123-05	5	✓	✓	10–134	LVCMOS	3.3	8-pin SOP
PL123-09	9	✓	✓	10–134	LVCMOS	3.3	16-pin TSSOP, 16-pin SOP
PL123E-05	5	✓	✓	10–220	LVCMOS	2.5, 3.3	8-pin SOP
PL123E-09	9	✓	✓	10–220	LVCMOS	2.5, 3.3	16-pin TSSOP, 16-pin SOP
PL123S-05	5	✓	✓	10–134	LVCMOS	3.3	8-pin SOP
PL123S-09	9	✓	✓	10–134	LVCMOS	3.3	16-pin TSSOP, 16-pin SSOP
MDB1900ZB	19	✓	✓	100, 133	HCSL	2.5, 3.3	72-pin QFN
MDB1900ZC	19	✓	✓	100, 133	HCSL	2.5, 3.3	72-pin QFN

CLOCK AND DATA DISTRIBUTION: Clock Dividers

Product	Description	Legacy Part	Fanout Buffer (Y/N)	Input	Output	# of Outputs	Supply Voltage (V)	Max. Frequency (GHz)	Icc (mA)	Max. Prop Delay (ps)	Max. Within Device Skew (ps)	OE	FSI	Input Mux	Packages
SY89218U	4 Banks (÷1, ÷2, ÷4) 15 Total	–	Y	ANY	LVDS	15	2.5	1.5	325	1600	<35	–	✓	✓	64-pin TQFP
SY89228U	÷3, ÷5	–	N	ANY	LVPECL	1	2.5/3.3	1	40	1500	450	–	✓	–	3 × 3
SY89231U	÷3, ÷5	–	N	ANY	LVDS	1	2.5	3.2	71	810	300	–	✓	–	3 × 3
SY89312V	÷2, 2 × 2 ver of SY100EP32	–	N	ECL/PECL	ECL/PECL	1	3.3/5	4	–	440	–	–	✓	–	2 × 2
SY89313V	÷4, 2 × 2 ver of SY100EP33	–	N	ECL/PECL	ECL/PECL	1	3.3/5	4	–	500	–	–	–	–	2 × 2
SY89871U	2 Banks (÷1, ÷2, ÷4, ÷8, ÷16)	–	Y	ANY	LVPECL	2	2.5/3.3	2.5	50	710	<15	✓	–	–	3 × 3
SY89872U	2 Banks (÷1, ÷2, ÷4, ÷8, ÷16)	–	Y	ANY	LVDS	2	2.5	2	75	750	<15	✓	–	–	3 × 3
SY89873L	2 Banks (÷1, ÷2, ÷4, ÷8, ÷16)	–	Y	ANY	LVDS	2	3.3	2	85	800	<15	✓	–	–	3 × 3
SY89874U	÷1, ÷2, ÷4, ÷8, ÷16	–	Y	ANY	LVPECL	2	2.5/3.3	2.5	50	790	<15	✓	–	–	3 × 3
SY89874AU	÷1, ÷2, ÷4, ÷8, ÷16	–	Y	ANY	LVPECL	2	2.5/3.3	2.5	50	570	<15	✓	–	–	3 × 3
SY89875U	÷1, ÷2, ÷4, ÷8, ÷16	–	Y	ANY	LVDS	2	2.5	2	70	870	<15	✓	–	–	3 × 3
SY89876L	÷1, ÷2, ÷4, ÷8, ÷16	–	Y	ANY	LVDS	2	3.3	2	75	870	<15	✓	–	–	3 × 3
SY100S834L	(÷1, 2, 4) or (÷2, 4, 8)	✓	N	ECL/PECL/LVPECL	ECL/PECL	3	3.3/5	–	–	1200	50	✓	–	–	16-pin SOIC
SY10/100EL32V	÷2	✓	N	ECL	ECL	1	3.3/5	3	–	510	–	✓	–	–	8-pin SOI
SY10/100EL33/L	÷4	✓	N	ECL	ECL	1	3.3/5	4	–	650	–	✓	–	–	8-pin SOI
SY10/100EL34/L	3 Outputs ÷2, 4, or 8	✓	Y	ECL	ECL	3	3.3/5	–	–	1200	–	✓	–	–	16-pin SOIC
SY100E222L	÷1/÷2 Differential LVECL/LVPECL Programmable Clock Generator and 1:15 Fanout Buffer	–	Y	LVECL/LVPECL	LVPECL	15	3.3	1.5	122	1570	50	–	–	–	52-pin LQFP

CLOCK AND DATA DISTRIBUTION: Translators

Product	Description	Channels	Input	Output	Supply Voltage (V)	Output Voltage (V)	Max. Frequency (MHz)	Icc (mA)	Max. Prop Delay (ps)	Max. Within Device Skew (ps)	Packages
PL130-05		Single	Multiple	LVPECL	2.5/3.3	2.5/3.3	1	–	–	–	3 × 3
PL130-07		Single	Multiple	LVCMOS	2.5/3.3	2.5/3.3	0.2	–	–	–	3 × 3
PL130-09		Single	Multiple	LVDS	2.5/3.3	2.5/3.3	1	–	–	–	8-pin SOP
PL130-58		Single	Multiple	LVPECL	2.5/3.3	2.5/3.3	0.26	70	–	–	8-pin SOP
SY55851/A		Single	PECL/LVPECL/CML	CML	2.5/3.3	2.5/3.3	3	46	350	–	10-pin MSOP
SY55855V		Dual	PECL/LVPECL/CML	LVDS	3.3/5	3.3/5	0.75	80	700	50	10-pin MSOP
SY55857L		Dual	ANY	LVPECL	3.3	3.3	2.5	45	400	50	10-pin MSOP
SY54016AR		Single	ANY	CML	2.5	1.2/1.8/2.5	2.5	40	420	–	2 × 2
SY89222L	2 × 2 version of SY100ELT22	Dual	TTL	PECL	3.3	3.3	0.4	25	600	100	2 × 2
SY89321L	2 × 2 version of SY100EPT21	Single	LVPECL	LVTTL	3.3	3.3	0.275	20	250	–	2 × 2
SY89322V	2 × 2 version of SY100EPT22	Dual	LVTTL	LVPECL	3.3/5	3.3/5	0.8	25	600	100	2 × 2
SY89323L	2 × 2 version of SY100EPT23	Dual	LVPECL	LVTTL	3.3	3.3	0.275	30	250	50	2 × 2
SY89327L		Single	ANY	LVPECL	3.3	3.3	2.5	45	400	–	2 × 2
SY89328L		Single	LVPECL/LVTTL	LVTTL/LVPECL	3.3	3.3	0.275	40	600	–	2 × 2
SY89329V	2 × 2 version of SY100EPT20	Single	LVTTL	LVPECL	3.3/5	3.3/5	0.8	20	600	–	2 × 2

CLOCK AND DATA DISTRIBUTION: CrossPoint Switches

Product	Input	Output	Supply Voltage (V)	Output Voltage (V)	Max. Data (Gbps)	Icc (mA)	Max. Within Device Skew (ps)	Input Mux	Input EQ	Packages
SY56023R	ANY	CML	2.5	1.2/1.8/2.5	6.4	80	15	✓	✓	3 × 3
SY58023U	ANY	CML	2.5/3.3	2.5/3.3	10.7	100	20	✓	–	3 × 3
SY55859L	CML	CML	3.3	3.3	2.7	160	15	✓	–	5 × 5
SY55858U	CML/PECL/LVPECL	CML	2.5/3.3	2.5/3.3	3	150	25	✓	–	32-pin TQFP
SY58024U	ANY	CML	2.5/3.3	2.5/3.3	10.7	200	20	✓	–	5 × 5
SY89540U	ANY	LVDS	2.5	2.5	3.2	200	30	✓	–	6 × 6
SY58040U	ANY	CML	2.5/3.3	2.5/3.3	5	225	25	✓	–	6 × 6

CLOCK AND DATA DISTRIBUTION: Multiplexers

Product	Fanout	Input	Output	Supply Voltage (V)	Output Voltage (V)	Max. Frequency (GHz)	Max. Data Rate (Gbps)	Max. Prop Delay (ps)	Max Within Device Skew (ps)	Icc (mA)	OE	RPE	FSI	EQ	Packages
SY89841U	2:1	ANY	LVDS	2.5	2.5	1.5	–	870	–	85	–	✓	–	–	3 x 3
SY89840U	2:1	ANY	LVPECL	2.5/3.3	2.5/3.3	2	–	880	–	65	–	–	✓	–	3 x 3
SY58609U	2:1	ANY	CML	2.5/3.3	2.5/3.3	2.5	4.25	450	20	50	–	–	✓	–	3 x 3
SY58610U	2:1	ANY	LVPECL	2.5/3.3	2.5/3.3	2.5	3.2	470	20	40	–	–	✓	–	3 x 3
SY58611U	2:1	ANY	LVDS	2.5	2.5	2.5	3.2	470	20	40	–	–	✓	–	3 x 3
SY56017R	2:1	ANY	CML	2.5	1.2/1.8/2.5	3.2	6.4	280	20	55	–	–	–	✓	5 x 5
SY58018U	2:1	ANY	LVPECL	2.5/3.3	2.5/3.3	4	5	260	15	50	–	–	–	–	3 x 3
SY58017U	2:1	ANY	CML	2.5/3.3	2.5/3.3	7	10.7	240	15	55	–	–	–	–	3 x 3
SY58019U	2:1	ANY	RS-LVPECL	2.5/3.3	2.5/3.3	7	10.7	240	15	55	–	–	–	–	3 x 3
SY89843U	2:2	ANY	LVPECL	2.5/3.3	2.5/3.3	2	–	880	20	70	–	✓	✓	–	4 x 4
SY89852U	2:2	ANY	LVPECL	2.5/3.3	2.5/3.3	2.5	2.5	340	-	23	–	–	–	–	3 x 3
SY89853U	Dual 2:1	ANY	LVPECL	2.5/3.3	2.5/3.3	2.5	2.5	360	20	65	–	–	–	–	5 x 5
SY89543L	Dual 2:1	ANY	LVDS	3.3	3.3	3	3.2	510	25	66	–	–	–	–	5 x 5
SY58026U	Dual 2:1	ANY	LVPECL	2.5/3.3	2.5/3.3	6	5	310	15	100	–	–	–	–	5 x 5
SY89545L	4:1	ANY	LVDS	3.3	3.3	3	3.2	600	25	44	–	–	–	–	5 x 5
SY89544U	4:1	ANY	LVDS	2.5	2.5	4	3.2	510	20	50	–	–	–	–	5 x 5
SY56028XR	4:1	ANY	CML	2.5	1.2/1.8/2.5	4.5	6.4	360	15	110	–	–	–	✓	5 x 5
SY56572XR	4:1	ANY	CML	2.5	1.2/1.8/2.5	4.5	6.4	360	15	110	–	–	–	✓	5 x 5
SY89855U	4:2	ANY	LVPECL	2.5/3.3	2.5/3.3	2.5	2.5	410	20	65	–	–	–	–	5 x 5
SY58029U	4:2	ANY	LVPECL	2.5/3.3	2.5/3.3	4	5	500	15	110	–	–	–	–	5 x 5
SY89547L	4:2	ANY	LVDS	3.3	3.3	4	3.2	540	20	68	–	–	–	–	5 x 5
SY58028U	4:2	ANY	CML	2.5/3.3	2.5/3.3	7	10.7	340	20	120	–	–	–	–	5 x 5
SY58030U	4:2	ANY	RS-LVPECL	2.5/3.3	2.5/3.3	7	10.7	340	20	120	–	–	–	–	5 x 5
SY89859U	8:2	ANY	LVPECL	2.5/3.3	2.5/3.3	2.5	2.5	640	20	60	–	–	–	–	7 x 7
SY58037U	8:2	ANY	CML	2.5/3.3	2.5/3.3	4	5	450	15	145	–	–	–	–	7 x 7
SY58038U	8:2	ANY	LVPECL	2.5/3.3	2.5/3.3	5	4.5	500	15	120	–	–	–	–	7 x 7
SY10/100EL57	4:1	ECL	ECL	5	5	–	–	580	50	–	–	–	–	–	16-pin SOIC
SY100EL56V	Dual 2:1	ECL	ECL	3.3/5	3.3/5	–	–	440	80	–	–	–	–	–	20-pin SOIC
SY100EL57L	4:1	ECL	ECL	3.3	3.3	–	–	580	50	–	–	–	–	–	16-pin SOIC
SY100EP56V	2:1	PECL/ECL	PECL/ECL	3.3/5	3.3/5	3	–	500	100	50	–	–	–	–	20-pin TSSOP
SY100EP57V	4:1	PECL/ECL	PECL/ECL	3.3/5	3.3/5	3	–	520	–	50	–	–	–	–	20-pin TSSOP

CLOCK AND DATA DISTRIBUTION: Receivers/Buffers/Drivers

Product	Description	Input	Output	Supply Voltage (V)	Output Voltage (V)	Max. Data Rate (Gbps)	Max. Frequency (GHz)	Icc (mA)	OE	RPE	FSI	Input Mux	Input EQ	Pre-Emph	Packages
SY89250V	Enhanced Diff Receiver	ECL/PECL	ECL/PECL	3.3/5	3.3/5	–	–	46	–	–	–	–	–	–	2 x 2
SY58605U	Line Driver/Receiver	ANY	LVDS	2.5	2.5	3.2	2	50	–	–	✓	–	–	–	2 x 2
SY89835U	Buffer	LVDS	LVDS	2.5	2.5	3.2	2	70	–	–	✓	–	–	–	2 x 2
SY54016R	Low Voltage CML Translator	ANY	CML	2.5	1.2/1.8	3.2	2.5	19	–	–	✓	–	–	–	2 x 2
SY58604U	Line/Driver Receiver	ANY	LVPECL	2.5/3.3	2.5/3.3	3.2	2.5	45	–	–	✓	–	–	–	2 x 2
SY89850U	Low Power	CML/PECL/LVDS	LVPECL	2.5/3.3	2.5/3.3	3.2	4	30	–	–	–	–	–	–	2 x 2
SY58603U	Line Driver/Receiver	ANY	CML	2.5/3.3	2.5/3.3	4.25	2.5	50	–	–	✓	–	–	–	2 x 2
SY58601U	Line Driver/Receiver	ANY	LVPECL	2.5/3.3	2.5/3.3	5	5	60	–	–	–	–	–	–	2 x 2
SY58016L	Line Driver/Receiver	CML/PECL	CML	3.3	3.3	10.7	7	75	–	–	–	–	–	–	3 x 3
SY58600U	Line Driver/Receiver	ANY	CML	2.5/3.3	2.5/3.3	10.7	7	65	–	–	–	–	–	–	2 x 2
SY89251V	Equivalent to SY100EL16VC	ECL/LVPECL	ECL/LVPECL	3.3/5	3.3/5	–	–	26	–	–	–	–	–	–	2 x 2
SY10/100EL16V	Differential Receiver	ECL/LVPECL	ECL/LVPECL	3.3/5	3.3/5	–	–	26	–	–	–	–	–	–	8-pin SOIC, 8-pin MSOP
SY10/100EL16VS	Variable Output Swing Receiver	ECL/LVPECL	ECL/LVPECL	3.3/5	3.3/5	–	–	26	–	–	–	–	–	–	8-pin SOIC, 8-pin MSOP
SY10/100EL16VA-VF	Enhanced Differential Receiver	ECL/LVPECL	ECL/LVPECL	3.3/5	3.3/5	–	–	46	–	–	–	–	–	–	8-pin SOIC, 8-pin MSOP
SY100EL17V	Quad Differential Receiver	ECL/LVPECL	ECL/LVPECL	3.3/5	3.3/5	–	–	26	–	–	–	–	–	–	20-pin SOIC
SY10EP89V	3 GHz Coaxial Cable Driver	ECL	ECL	3.3/5	3.3/5	–	3	39	–	–	–	–	–	–	8-pin SOIC, 8-pin MSOP
SY10EP16V	High Speed Differential Receiver	ECL/LVPECL	ECL/LVPECL	3.3/5	3.3/5	–	3	42	–	–	–	–	–	–	8-pin SOIC, 8-pin MSOP

CLOCK AND DATA DISTRIBUTION: Backplane Cable Management

Product	Description	Input	Output	Supply Voltage (V)	Output Voltage (V)	Icc (mA)	OE	EQ	Pre-Emph	Packages
SY58620L	Integrated Loopback	ANY	CML	3.3	3.3	4.25	–	–	–	4 × 4
SY58626L	Integrated Loopback	ANY	CML	3.3	3.3	6.4	–	–	✓	5 × 5

CLOCK AND DATA DISTRIBUTION: Skew Management

Product	Description	Input	Output	Supply Voltage (V)	Output Voltage (V)	Max. Frequency (GHz)	Max. Data Rate (Gbps)	Delay Resolution (ps/step)	Icc (mA)	Max. Within Device Skew (ps)	Packages
SY89295U	Programmable Delay.	LVPECL/LVTTL	LVPECL	2.5/3.3	2.5/3.3	1.5	–	10	220	25	32-pin TQFP, 5 × 5
SY89296U	Delay with Fine Tune Control.	LVPECL/LVTTL	LVPECL	2.5/3.3	2.5/3.3	1.5	–	10	220	25	32-pin TQFP, 5 × 5
SY89297U	Dual Channel Programmable Delay	ANY	CML	2.5	2.5	1.6	3.2	5	250	55	24-pin QFN 4 × 4
SY55856U	Dual Channel Programmable Delay	CML	CML	2.5/3.3	2.5/3.3	2.5	5	10	140	50	32-pin eTQFP
SY100EP196V	Programmable Delay with Fine Tune Control	ANY	ECL	3.3/5	3.3/5	2.5	–	–	150	25	32-pin TQFP, 5 × 5

CLOCK AND DATA DISTRIBUTION: Registers and Flip Flops

Product	Description	Channel	Supply Voltage (V)	Max. Frequency (GHz)	Packages
SY100EL29V	Data and Clock D Flip-Flop with Set and Reset	Dual	3.3/5	1.1	20-pin SOIC
SY55852U	D Flip-Flop	Single	2.5/3.3/5	2.5	10-pin MSOP
SY10EP52V	Differential Data and Clock D Flip-Flop	Single	3.3/5	4	8-pin SOIC
SY10EP51V	D Flip-Flop with Reset and Differential Clock	Single	3.3/5	3	8-pin SOIC

REAL-TIME CLOCK/CALENDAR (RTCC)

Bus	Product	Pins	Timing Features				Memory(1)			Power		Unique Features(2)	5 ku Pricing†	Packages
			Digital Trimming (Adj./Range)	Alarm Settings	WDT	Outputs	SRAM (Bytes)	EERPOM (Kbits)	Protected EEPROM (bits)	Min Vcc	Min IBAT			
I²C	MCP7940M	8	±127 ppm	1 sec.	–	IRQ/CLK	64	0	0	1.8	–	–	$0.46	SOIC (SN), TSSOP (ST), MSOP (MS), TDFN (MNY), PDIP (P)
	MCP7940N	8	±127 ppm	1 sec.	–	IRQ/CLK	64	0	0	1.8	1.3	Power Fail Timestamp	$0.59	SOIC (SN), TSSOP (ST), MSOP (MS), TDFN (MNY), PDIP (P)
	MCP7940X	8	±127 ppm	1 sec.	–	IRQ/CLK	64	0	64	1.8	1.3	Power Fail Timestamp	$0.66	SOIC (SN), TSSOP (ST), MSOP (MS), TDFN (MNY)
	MCP7941X	8	±127 ppm	1 sec.	–	IRQ/CLK	64	1	64	1.8	1.3	Power Fail Timestamp	$0.72	SOIC (SN), TSSOP (ST), MSOP (MS), TDFN (MNY)
SPI	MCP7951X	10	±255 ppm	0.01 sec.	–	IRQ/CLK	64	1	128	1.8	1.3	Power Fail Timestamp	$0.90	SOIC (SL), TSSOP (ST)
	MCP7952X	10	±255 ppm	0.01 sec.	–	IRQ/CLK	64	2	128	1.8	1.3	Power Fail Timestamp	$0.96	MSOP (MS), TDFN (MN)
	MCP795W1X	14	±255 ppm	0.01 sec.	✓	1. CLK 2. IRQ 3. WDT RST	64	1	128	1.8	1.3	Power Fail Timestamp, Event Detects (× 2)	$1.22	SOIC (SL), TSSOP (ST)
	MCP795W2X	14	±255 ppm	0.01 sec.	✓	1. CLK 2. IRQ 3. WDT RST	64	2	128	1.8	1.3	Power Fail Timestamp, Event Detects (× 2)	$1.28	SOIC (SL), TSSOP (ST)

Note 1: All part numbers with an "X" have three protected EEPROM programming options: [0 = Blank ID], [1 = EUI-48™ MAC Address], [2 =EUI-64™ MAC Address]
2: The Power Fail Timestamp in all RTCCs occur at Battery Switchover.

SERIAL MEMORY PRODUCTS

Bus	Product	Released (R) Not Released (NR)	Density	Organization	Max. Clock Frequency	Operating Voltage	Temperature Range	E/W Endurance (Minimum)	Data Retention (Minimum)	Max. Write Speeds	Max. Standby Current (@ 5.5V, 85°C)	Write Protect		Protected Array Size	5 ku Pricing†	Special/Unique Features	Packages
												Hardware	Software				
Serial SRAM																	
SPI	23X640	R	64 Kb	× 8	20 MHz	1.5V–1.95V, 2.7V–3.6V	–40°C to +125°C	∞	Volatile	0 ms	4 µA	–	–	–	$0.51	Zero write cycle time, Infinite endurance, Volatile RAM, Byte/page/sequential read-write modes	PDIP (P), SOIC (SN), TSSOP (ST)
	23X256	R	256 Kb	× 8	20 MHz	1.5V–1.95V, 2.7V–3.6V	–40°C to +125°C	∞	Volatile	0 ms	4 µA	–	–	–	$0.87	Zero write cycle time, Infinite endurance, Volatile RAM, Byte/page/sequential read-write modes	PDIP (P), SOIC (SN), TSSOP (ST)
	23XX512	R	512 Kb	× 8	20 × 4 MHz	1.7V–2.2V, 2.5V–5.5V	–40°C to +125°C	∞	Volatile	0 ms	4 µA	–	–	–	$1.24	Fast Speed: Quad SPI available (80 MHz); Infinite endurance; Zero write times, 5V capable	SOIC (SN), PDIP (P), TSSOP (ST)
	23XX1024	R	1024 Kb	× 8	20 × 4 MHz	1.7V–2.2V, 2.5V–5.5V	–40°C to +125°C	∞	Volatile	0 ms	4 µA	–	–	–	$1.73	Fast Speed: Quad SPI available (80 MHz); Infinite endurance; Zero write times, 5V capable	SOIC (SN), PDIP (P), TSSOP (ST)

1: All devices are Pb-Free and RoHS compliant.
2: ESD protection > 4kV (HBM); > 400V (MM) on all pins.
3: Write Protect (WP); W = Whole Array, ½ = Half Array, ¼ Quarter Array.
4: Factory program and unique ID options available.
5: Die and wafer options available on all devices.

SERIAL MEMORY PRODUCTS

Bus	Product	Released (R) Not Released (NR)	Density	Organization	Max. Clock Frequency	Operating Voltage	Temperature Range	E/W Endurance (Minimum)	Data Retention (Minimum)	Max. Write Speeds	Max. Standby Current (@ 5.5V, 85°C)	Write Protect: Hardware	Write Protect: Software	Protected Array Size	5 ku Pricing†	Special/Unique Features	Packages
Serial NVSRAM																	
SPI	23LCV512	R	512 Kb	× 8	20 × 2 MHz	–	–40°C to +125°C	∞	20 Years via battery	0 ms	4 µA	–	–	–	$1.40	Battery-backed non-volatile SRAM; Infinite endurance; Zero write times	SOIC (SN), PDIP (P), TSSOP (ST)
	23LCV1024	R	1024 Kb	× 8	20 × 2 MHz	–	–40°C to +125°C	∞	20 Years via battery	0 ms	4 µA	–	–	–	$1.98	Battery backed non-volatile SRAM; Infinite endurance; Zero write times	SOIC (SN), PDIP (P), TSSOP (ST)
Serial EEPROM																	
UNI/O® Bus	11XX010	R	1 Kb	× 8	100 kHz	1.8V–5.5V	–40°C to +125°C	1M	200 Years	5 ms	1 µA	–	✓	W, ½, ¼	$0.23	Single I/O for all clock, data, control and write protection	PDIP (P), SOIC (SN), MSOP (MS), DFN (MNY), TO-92 (TO), 3-SOT-23 (TT), WLCSP (CS)
	11XX020/E48/ E64/UID	R	2 Kb	× 8	100 kHz	1.8V–5.5V	–40°C to +125°C	1M	200 Years	5 ms	1 µA	–	✓	W, ½, ¼	$0.25	Single I/O for all clock, data, control and write protection, Unique EUI-48™/EUI-64™ MAC address and unique ID options available	PDIP (P), SOIC (SN), MSOP (MS), DFN (MNY), TO-92 (TO), 3-SOT-23 (TT), WLCSP (CS)
	11XX040	R	4 Kb	× 8	100 kHz	1.8V–5.5V	–40°C to +125°C	1M	200 Years	5 ms	1 µA	–	✓	W, ½, ¼	$0.26	Single I/O for all clock, data, control and write protection	PDIP (P), SOIC (SN), MSOP (MS), DFN (MNY), TO-92 (TO), 3-SOT-23 (TT), WLCSP (CS)
	11XX080	R	8 Kb	× 8	100 kHz	1.8V–5.5V	–40°C to +125°C	1M	200 Years	5 ms	1 µA	–	✓	W, ½, ¼	$0.30	Single I/O for all clock, data, control and write protection	PDIP (P), SOIC (SN), MSOP (MS), DFN (MNY), TO-92 (TO), 3-SOT-23 (TT), WLCSP (CS)
	11XX160	R	16 Kb	× 8	100 kHz	1.8V–5.5V	–40°C to +125°C	1M	200 Years	5 ms	1 µA	–	✓	W, ½, ¼	$0.33	Single I/O for all clock, data, control and write protection	PDIP (P), SOIC (SN), MSOP (MS), DFN (MNY), TO-92 (TO), 3-SOT-23 (TT), WLCSP (CS)
I²C	24XX00	R	128 b	× 8	400 kHz	1.7V–5.5V	–40°C to +125°C	1M	200 Years	4 ms	1 µA	–	–	–	$0.17	100 kHz operation from 1.7V to 4.5V	PDIP (P), SOIC (SN), TSSOP (ST), DFN (MNY), 5-SOT-23 (OT)
	24XX01/014	R	1 Kb	× 8	400 kHz	1.7V–5.5V 1.5V–3.6V	–40°C to +150°C	1M	200 Years	5 ms	1 µA	✓	–	W, ½	$0.18	Address pin option: connect up to 8 devices on bus, Very low voltage option	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY), 5-SOT-23 (OT), SC70 (LT)
	24XX02/024/ E48/E64/UID	R	2 Kb	× 8	400 kHz	1.7V–5.5V 1.5V–3.6V	–40°C to +125°C	1M	200 Years	5 ms	1 µA	✓	–	W, ½	$0.20	Address pin option: connect up to 8 devices on bus, Very low voltage option, Unique EUI-48/EUI-64 MAC address and unique ID options available	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY), 5-SOT-23 (OT), SC70 (LT)
	34XX02	R	2 Kb	× 8	1 MHz	1.7V–5.5V 1.5V–3.6V	–40°C to +125°C	1M	200 Years	5 ms	1 µA	✓	✓	W, ½	$0.18	1 MHz @ 2.5V, Permanent and resettable software WP – DIMM-DDR2/3	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY), 6-SOT-23 (OT)
	34XX04	R	4 Kb	× 8	1 MHz	1.7V–5.5V	–40°C to +125°C	1M	200 Years	5 ms	1 µA	✓	✓	W, ½	$0.21	SPD for DRAM (DDR4) modules, SMBus compatible bus time out	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MUY, MNY)
	24XX04/44	R	4 Kb	× 8	400 kHz	1.7V–5.5V	–40°C to +125°C	1M	200 Years	5 ms	1 µA	✓	–	W, ½	$0.21	400 kHz @ 2.5V, 16 byte page write buffer, No address pins	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY), 5-SOT-23 (OT), WLCSP (CS)
	24XX08	R	8 Kb	× 8	400 kHz	1.7V–5.5V	–40°C to +125°C	1M	200 Years	5 ms	1 µA	✓	–	W, ½	$0.23	400 kHz @ 2.5V, 16 byte page write buffer, No address pins	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY), 5-SOT-23 (OT),
	24XX16	R	16 Kb	× 8	400 kHz	1.7V–5.5V	–40°C to +125°C	1M	200 Years	5 ms	1 µA	✓	–	W, ½	$0.25	400 kHz @ 2.5V, 16 byte page write buffer, No address pins	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY), 5-SOT-23 (OT), WLCSP (CS)
	24XX32A	R	32 Kb	× 8	400 kHz	1.7V–5.5V	–40°C to +125°C	1M	200 Years	5 ms	1 µA	✓	–	W, ¼	$0.31	400 kHz @ 2.5V, 32 byte page write buffer, connect up to 8 devices on bus	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY), 5-SOT-23 (OT), WLCSP (CS)
	24XX64/65	R	64 Kb	× 8	1 MHz	1.7V–5.5V	–40°C to +125°C	1M, 10M	200 Years	5 ms	1 µA	✓	–	W, ¼	$0.38	1 MHz @ 2.5V, 32/64 byte page, Relocatable 4 Kb block with 10M cycles endurance	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY), 5-SOT-23 (OT), WLCSP (CS)
	24XX128	R	128 Kb	× 8	1 MHz	1.7V–5.5V	–40°C to +125°C	1M	200 Years	5 ms	1 µA	✓	–	W	$0.54	1 MHz @ 2.5V, 64 byte page, Connect up to 8 devices on bus	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY), WLCSP (CS)
	24XX256/UID	R	256 Kb	× 8	1 MHz	1.7V–5.5V	–40°C to +125°C	1M	200 Years	5 ms	1 µA	✓	–	W	$0.83	1 MHz @ 2.5V, 64 byte page, Connect up to 8 devices on bus, EUI-48, EUI-64 and unique ID options available	PDIP (P), SOIC (SN), TSSOP (ST), SOIJ (SM), MSOP (MS), DFN (MF), WLCSP (CS), TDFN (MNY)
	24XX512	R	512 Kb	× 8	1 MHz	1.7V–5.5V	–40°C to +125°C	1M	200 Years	5 ms	1 µA	✓	–	W	$1.50	1 MHz @ 2.5V, 128 byte page, Connect up to 8 devices on bus	PDIP (P), SOIC (SN), TSSOP (ST), DFN (MF), SOIJ (SM), WLCSP (CS)
	24XX1025/26	R	1 Mb	× 8	1 MHz	1.7V–5.5V	–40°C to +125°C	1M	200 Years	5 ms	5 µA	✓	–	W	$3.14	1 MHz @ 2.5V, 128 byte page, Connect up to 4 devices on bus	PDIP (P), SOIC (SN), SOIJ (SM)
	24XX1024	R	1 Mb	× 8	1 MHz	2.5V–5.5V	–40°C to +125°C	1M	200 Years	5 ms	5 µA	✓	–	W	–	1 MHz @ 2.5V, 256 byte page, Connect up to 4 devices on bus	PDIP (P), SOIC (SN), TSSOP (ST), DFN (MF), SOIJ (SM)
Microwire	93XX46A/B/C/ E48	R	1 Kb	× 8/× 16	3 MHz	1.8V–5.5V	–40°C to +125°C	1M	200 Years	6 ms	1 µA	–	–	–	$0.18	ORG pin to select word size on 46C version; EUI-48 option available	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY), 6-SOT-23 (OT)
	93XX56A/B/C	R	2 Kb	× 8/× 16	3 MHz	1.8V–5.5V	–40°C to +125°C	1M	200 Years	6 ms	1 µA	–	–	–	$0.20	ORG pin to select word size in 56C version	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY), 6-SOT-23 (OT)
	93XX66A/B/C	R	4 Kb	× 8/× 16	3 MHz	1.8V–5.5V	–40°C to +125°C	1M	200 Years	6 ms	1 µA	–	–	–	$0.21	ORG pin to select word size in 66C version	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY), 6-SOT-23 (OT)
	93XX76A/B/C	R	8 Kb	× 8/× 16	3 MHz	1.8V–5.5V	–40°C to +125°C	1M	200 Years	6 ms	1 µA	✓	–	W	$0.30	ORG pin to select word size in 76C version	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY), 6-SOT-23 (OT)
	93XX86A/B/C	R	16 Kb	× 8/× 16	3 MHz	1.8V–5.5V	–40°C to +125°C	1M	200 Years	6 ms	1 µA	✓	–	W	$0.33	ORG pin to select word size in 86C version	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY), 6-SOT-23 (OT)

1: All devices are Pb-Free and RoHS compliant.
2: ESD protection > 4kV (HBM); > 400V (MM) on all pins.
3: Write Protect (WP); W = Whole Array, ½ = Half Array, ¼ Quarter Array.
4: Factory program and unique ID options available.
5: Die and wafer options available on all devices.
† Pricing subject to change; please contact your Microchip representative for most current pricing.

SERIAL MEMORY PRODUCTS

Bus	Product	Released (R) Not Released (NR)	Density	Organization	Max. Clock Frequency	Operating Voltage	Temperature Range	E/W Endurance (Minimum)	Data Retention (Minimum)	Max. Write Speeds	Max. Standby Current (@ 5.5V, 85°C)	Write Protect: Hardware	Write Protect: Software	Protected Array Size	5 ku Pricing†	Special/Unique Features	Packages
Serial EERPOM (Cont.)																	
SPI	25XX010A	R	1 Kb	× 8	10 MHz	1.8V–5.5V	–40°C to +150°C	1M	200 Years	5 ms	1 µA	✓	✓	W, ½, ¼	$0.30	5 MHz @ 2.5V, Status register, 16 byte page	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY), 6-SOT-23 (OT)
SPI	25XX020A/ E48/E64/UID	R	2 Kb	× 8	10 MHz	1.8V–5.5V	–40°C to +150°C	1M	200 Years	5 ms	1 µA	✓	✓	W, ½, ¼	$0.31	5 MHz @ 2.5V, Status register, 16 byte page, Unique EUI-48™/EUI-64™ MAC address and unique ID options available	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY), 6-SOT-23 (OT)
SPI	25XX040A	R	4 Kb	× 8	10 MHz	1.8V–5.5V	–40°C to +150°C	1M	200 Years	5 ms	1 µA	✓	✓	W, ½, ¼	$0.33	5 MHz @ 2.5V, Status register, 16 byte page	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY), 6-SOT-23 (OT)
SPI	25XX080C/D	R	8 Kb	× 8	10 MHz	1.8V–5.5V	–40°C to +150°C	1M	200 Years	5 ms	1 µA	✓	✓	W, ½, ¼	$0.40	16/32 byte page, 5 MHz @ 2.5V, Status register	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY)
SPI	25XX160C/D	R	16 Kb	× 8	10 MHz	1.8V–5.5V	–40°C to +150°C	1M	200 Years	5 ms	1 µA	✓	✓	W, ½, ¼	$0.41	16/32 byte page, 5 MHz @ 2.5V, Status register	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY)
SPI	25XX320A	R	32 Kb	× 8	10 MHz	1.8V–5.5V	–40°C to +150°C	1M	200 Years	5 ms	1 µA	✓	✓	W, ½, ¼	$0.45	5 MHz @ 2.5V, Status register, 32 byte page	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY)
SPI	25XX640A	R	64 Kb	× 8	10 MHz	1.8V–5.5V	–40°C to +150°C	1M	200 Years	5 ms	1 µA	✓	✓	W, ½, ¼	$0.46	5 MHz @ 2.5V, Status register, 32 byte page	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY, MF)
SPI	25XX128	R	128 Kb	× 8	10 MHz	1.8V–5.5V	–40°C to +150°C	1M	200 Years	5 ms	1 µA	✓	✓	W, ½, ¼	$0.74	5 MHz @ 2.5V, Status register, 64 byte page	PDIP (P), SOIC (SN), TSSOP (ST), DFN (MF)
SPI	25XX256	R	256 Kb	× 8	10 MHz	1.8V–5.5V	–40°C to +150°C	1M	200 Years	5 ms	1 µA	✓	✓	W, ½, ¼	$1.01	5 MHz @ 2.5V, Status register, 64 byte page	PDIP (P), SOIC (SN), TSSOP (ST), DFN (MF), SOIJ (SM)
SPI	25XX512	R	512 Kb	× 8	20 MHz	1.8V–5.5V	–40°C to +125°C	1M	200 Years	5 ms	10 µA	✓	✓	W, ½, ¼	$1.53	10 MHz @ 2.5V, Deep power down, Status register, Page/sector/chip erase	PDIP (P), SOIC (SN), DFN (MF), SOIJ (SM)
SPI	25XX1024	R	1 Mb	× 8	20 MHz	1.8V–5.5V	–40°C to +125°C	1M	200 Years	6 ms	12 µA	✓	✓	W, ½, ¼	$2.59	10 MHz @ 2.5V, Deep power down, Status register, Page/sector/chip erase	PDIP (P), DFN (MF), SOIJ (SM)
EERAM																	
I²C	47X04	NR	4 Kb	× 8	1 MHz	2.7–3.6V, 4.5–5.5V	–40°C to +125°C	∞	200 Years	0 ms	40 µA	–	✓	W to 1/64	$0.47	Unlimited endurance to SRAM, Data automatically backed up to EEPROM and power down (with small external capacitor)	SOIC (SN), PDIP (P), TSSOP (ST)
I²C	47X16	NR	16 Kb	× 8	1 MHz	2.7–3.6V, 4.5–5.5V	–40°C to +125°C	∞	200 Years	0 ms	40 µA	–	✓	W to 1/64	$0.54	Unlimited endurance to SRAM, Data automatically backed up to EEPROM and at power down (with small extenal capacitor)	SOIC (SN), PDIP (P), TSSOP (ST)

1: All devices are Pb-Free and RoHS compliant.
2: ESD protection > 4kV (HBM); > 400V (MM) on all pins.
3: Write Protect (WP); W = Whole Array, ½ = Half Array, ¼ Quarter Array.
4: Factory program and unique ID options available.
5: Die and wafer options available on all devices.
† Pricing subject to change; please contact your Microchip representative for most current pricing.

SERIAL FLASH MEMORY

Bus	Product	Released (R) Not Released (NR)	Density	Organization	Max. Clock Frequency	Operating Voltage	Temperature Range	E/W Endurance (Minimum)	Data Retention (Minimum)	Write Speed (Typical)	Max. Standby Current	Write Protect: Hardware	Write Protect: Software	Write Protect: Protected Array Size	Special/Unique Features	Packages*
×1	SST25VF512A	R	512 Kb	64K × 8	33 MHz	2.7–3.6V	0°C to 70°C –40°C to +85°C –20 to +85°C	100,000 cycles (typical)	100 years	14 µs (Byte Program)	8 µA	✓	✓	Various	Auto address increment programming, Fast read, program and erase	8L-SOIC, 8C-WSON
×1	SST25VF010A	R	1 Mb	128K × 8	33 MHz	2.7–3.6V	0°C to 70°C –40°C to +85°C –20 to +85°C	100,000 cycles (typical)	100 years	14 µs (Byte Program)	8 µA	✓	✓	Various	Auto address increment programming, Fast read, program and erase	8L-SOIC, 8C-WSON, 8B-XFBGA
×1	SST25VF020B	R	2 Mb	256K × 8	80 MHz	2.7–3.6V	0°C to 70°C –40°C to +85°C	100,000 cycles (typical)	100 years	7 µs (Word Program)	5 µA	✓	✓	Various	Auto address increment programming, Fast read, program and erase	8L-SOIC, 8C-WSON
×1	SST25WF020A	R	2 Mb	256K × 8	40 MHz	1.65–1.95V	0°C to 70°C –40°C to +85°C	100,000 cycles (typical)	20 years	3 ms (Page Program)	10 µA	✓	✓	Various	Single-input page program, Fast read, program and erase	8L-SOIC, 8C-WSON
×1	SST25VF040B	R	4 Mb	512K × 8	40 MHz	2.7–3.6V	–40°C to +85°C	100,000 cycles (typical)	100 years	7 µs (Word Program)	5 µA	✓	✓	Various	Auto address increment programming, Fast read, program and erase	8L-SOIC, 8C-WSON, 8B-XFBGA
×1	SST25VF080B	R	8 Mb	1M × 8	40 MHz	2.7–3.6V	–40°C to +85°C	100,000 cycles (typical)	100 years	7 µs (Word Program)	5 µA	✓	✓	Various	Auto address increment programming, Fast read, program and erase	8L-SOIC, 8C-WSON, 8B-XFBGA
×1	SST25VF016B	R	16 Mb	2M × 8	50 MHz	2.7–3.6V	–40°C to +85°C	100,000 cycles (typical)	100 years	7 µs (Word Program)	5 µA	✓	✓	Various	Auto address increment programming, Fast read, program and erase	8L-SOIC, 8C-WSON
×1, ×2	SST25WF040B	R	4 Mb	512K × 8	40 MHz	1.65–1.95V	0°C to 70°C –40°C to +85°C	100,000 cycles (typical)	20 years	1 ms (Page Program)	10 µA	✓	✓	Various	Dual output and dual I/O read, Single- and dual-input page program, Fast read, program and erase	8L-SOIC, 8C-WSON
×1, ×2	SST25WF080B	R	8 Mb	1M × 8	40 MHz	1.65–1.95V	0°C to 70°C –40°C to +85°C	100,000 cycles (typical)	20 years	1 ms (Page Program)	10 µA	✓	✓	Various	Dual output and dual I/O read, Single- and dual-input page program, Fast read, program and erase	8L-SOIC, 8C-WSON

*Only standard packages are listed here. Please inquire with your local sales office for devices in die form or in chip-scale packages.

SERIAL FLASH MEMORY

Bus	Product	Released (R) Not Released (NR)	Density	Organization	Max. Clock Frequency	Operating Voltage	Temperature Range	E/W Endurance (Minimum)	Data Retention (Minimum)	Write Speed (Typical)	Max. Standby Current	Write Protect: Hardware	Write Protect: Software	Write Protect: Protected Array Size	Special/Unique Features	Packages*
×4	SST26VF016	R	16 Mb	2M × 8	80 MHz	2.7–3.6V	–40°C to +85°C	100,000 cycles (minimum)	100 years	1 ms (Page Program)	15 µA	✓	✓	Various	Serial Quad I/O™ (SQI™) read/program/erase, Burst read, Index jump feature, Individual block read and write protection. Fast read, program and erase	8L-SOIC, 8C-WSON
×4	SST26VF032	R	32 Mb	4M × 8	80 MHz	2.7–3.6V	–40°C to +85°C	100,000 cycles (minimum)	100 years	1 ms (Page Program)	15 µA	✓	✓	Various	Serial Quad I/O™ (SQI™) read/program/erase, Burst read, Index jump feature, Individual block read and write protection. Fast read, program and erase	8L-SOIC, 8C-WSON
×1, ×2, ×4	SST26WF080B/BA	R	8 Mb	1M × 8	104 MHz	1.65–1.95V	–40°C to +85°C	100,000 cycles (minimum)	100 years	1 ms (Page Program)	40 µA	✓	✓	Various	×1, ×2, ×4 read, Single-and quad-input page program, Burst read, Write suspend, Individual block read and write protection, Fast read, program and erase	8L-SOIC, 8C-WSON
×1, ×2, ×4	SST26WF016B/BA	R	16 Mb	2M × 8	104 MHz	1.65–1.95V	–40°C to +85°C	100,000 cycles (minimum)	100 years	1 ms (Page Program)	40 µA	✓	✓	Various	×1, ×2, ×4 read, Single-and quad-input page program, Burst read, Write suspend, Individual block read and write protection, Fast read, program and erase	8L-SOIC, 8C-WSON
×1, ×2, ×4	SST26VF016B	R	16 Mb	2M × 8	104 MHz	2.3–3.6V	–40°C to +105°C	100,000 cycles (minimum)	100 years	1 ms (Page Program)	45 µA	✓	✓	Various	×1, ×2, ×4 read, Single-and quad-input page program, Burst read, Write suspend, Individual block read and write protection, Fast read, program and erase	8L-SOIC, 8C-WSON
×1, ×2, ×4	SST26VF032B/BA	R	32 Mb	4M × 8	104 MHz	2.3–3.6V	–40°C to +105°C	100,000 cycles (minimum)	100 years	1 ms (Page Program)	45 µA	✓	✓	Various	×1, ×2, ×4 read, Single-and quad-input page program, Burst read, Write suspend, Individual block read and write protection, Fast read, program and erase	8L-SOIC, 8C-WSON
×1, ×2, ×4	SST26VF064B/BA	R	64 Mb	8M × 8	104 MHz	2.3–3.6V	–40°C to +105°C	100,000 cycles (minimum)	100 years	1 ms (Page Program)	45 µA	✓	✓	Various	×1, ×2, ×4 read, Single-and quad-input page program, Burst read, Write suspend, Individual block read and write protection, Fast read, program and erase	8L-SOIC, 8C-WSON

*Only standard packages are listed here. Please inquire with your local sales office for devices in die form or in chip-scale packages.

LPC FIRMWARE FLASH/FIRMWARE HUB FLASH MEMORY

Bus	Product	Released (R) Not Released (NR)	Density	Organization	Max. Clock Frequency	Operating Voltage	Temperature Range	E/W Endurance (Minimum)	Data Retention (Minimum)	Write Spped (Typical)	Max. Standby Current	Write Protect: Hardware	Write Protect: Software	Write Protect: Protected Array Size	Special/Unique Features	Packages
×4	SST49LF008A	R	8 Mb	1M × 8	33 MHz	3.0–3.6V	0°C to 70°C	100,000 cycles (minimum)	100 years	14 µs (Byte Program)	14 µA	✓	✓	Various	Firmware Hub (FWH) device for PC-BIOS application, provide protection for the storage and update of code and data	32L-PLCC, 32L-TSOP
×4	SST49LF016C	R	16 Mb	2M × 8	33 MHz	3.0–3.6V	0°C to 70°C	100,000 cycles (minimum)	100 years	14 µs (Byte Program)	14 µA	✓	✓	Various	Firmware Hub (FWH) device for PC-BIOS application, provide protection for the storage and update of code and data	32L-PLCC, 32L-TSOP
×4	SST49LF080A	R	8 Mb	1M × 8	33 MHz	3.0–3.6V	0°C to 70°C	100,000 cycles (minimum)	100 years	14 µs (Byte Program)	14 µA	✓	✓	Various	LPC Flash devices comply with the standard Intel Low Pin Count (LPC) Interface Specification 1.1, provide protection for the storage and update of code and data	32L-PLCC, 32L-TSOP
×4	SST49LF160C	R	16 Mb	2M × 8	33 MHz	3.0–3.6V	0°C to 70°C	100,000 cycles (minimum)	100 years	14 µs (Byte Program)	14 µA	✓	✓	Various	LPC Flash devices comply with the standard Intel Low Pin Count (LPC) Interface Specification 1.1, provide protection for the storage and update of code and data	32L-PLCC

PARALLEL FLASH MEMORY

Bus	Product*	Released (R) Not Released (NR)	Density	Organization	Access Time	Operating Voltage	Temperature Range	E/W Endurance (Minimum)	Data Retention (Minimum)	Write Spped (Typical)	Typ. Standby Current	Write Protect: Hardware	Write Protect: Software	Write Protect: Protected Array Size	Special/Unique Features	Packages**
×8	SST39SF010A	R	1 Mb	128K × 8	70 ns	4.5–5.5V	0°C to 70°C –40°C to +85°C	100,000 cycles	100 years	14 µs (Byte Program)	30 µA	–	–	N/A	Fast read, program and erase; Low power; Small erase sector	32L-PLCC, 32L-PDIP, 32L-TSOP
×8	SST39LF010	R	1 Mb	512K × 8	55 ns	3.0–3.6V	0°C to 70°C	100,000 cycles	100 years	14 µs (Byte Program)	1 µA	–	–	N/A	Fast read, program and erase; Low power; Small erase sector	48B-TFBGA, 32L-TSOP, 32L-PLCC
×8	SST39VF010	R	1 Mb	512K × 8	70 ns	2.7–3.6V	0°C to 70°C –40°C to +85°C	100,000 cycles	100 years	14 µs (Byte Program)	1 µA	–	–	N/A	Fast read, program and erase; Low power; Small erase sector	48B-TFBGA, 32L-TSOP, 32L-PLCC
×8	SST39LF020	R	2 Mb	512K × 8	55 ns	3.0–3.6V	0°C to 70°C	100,000 cycles	100 years	14 µs (Byte Program)	1 µA	–	–	N/A	Fast read, program and erase; Low power; Small erase sector	48B-TFBGA, 32L-TSOP, 32L-PLCC
×8	SST39SF020A	R	2 Mb	256K × 8	55/70 ns	4.5–5.5V	0°C to 70°C –40°C to +85°C	100,000 cycles	100 years	14 µs (Byte Program)	30 µA	–	–	N/A	Fast read, program and erase; Low power; Small erase sector	32L-PLCC, 32L-PDIP, 32L-TSOP
×8	SST39VF020	R	2 Mb	512K × 8	70 ns	2.7–3.6V	0°C to 70°C –40°C to +85°C	100,000 cycles	100 years	14 µs (Byte Program)	1 µA	–	–	N/A	Fast read, program and erase; Low power; Small erase sector	48B-TFBGA, 32L-TSOP, 32L-PLCC
×8	SST39SF040	R	4 Mb	512K × 8	70 ns	4.5–5.5V	0°C to 70°C –40°C to +85°C	100,000 cycles	100 years	14 µs (Byte Program)	30 µA	–	–	N/A	Fast read, program and erase; Low power; Small erase sector	32L-PLCC, 32L-PDIP, 32L-TSOP
×8	SST39LF040	R	4 Mb	512K × 8	55 ns	3.0–3.6V	0°C to 70°C	100,000 cycles	100 years	14 µs (Byte Program)	1 µA	–	–	N/A	Fast read, program and erase; Low power; Small erase sector	48B-TFBGA, 32L-TSOP, 32L-PLCC
×8	SST39VF040	R	4 Mb	512K × 8	70 ns	2.7–3.6V	0°C to 70°C –40°C to +85°C	100,000 cycles	100 years	14 µs (Byte Program)	1 µA	–	–	N/A	Fast read, program and erase; Low power; Small erase sector	48B-TFBGA, 32L-TSOP, 32L-PLCC
×8	SST39VF168X	R	16 Mb	2M × 8	70 ns	2.7–3.6V	0°C to 70°C –40°C to +85°C	100,000 cycles	100 years	7 µs (Byte Program)	3 µA	✓	–	64 KB	Fast read, program and erase; Low power; Small erase sector	48B-TFBGA, 48L-TSOP

*X is a wildcard to indicate "top" or "bottom" boot block support. Please refer to the respective datasheets for more details.
**Only standard packages are listed here. Please inquire with your local sales office for devices in die form or in chip-scale packages.

PARALLEL FLASH MEMORY

Bus	Product*	Released (R) Not Released (NR)	Density	Organization	Access Time	Operating Voltage	Temperature Range	E/W Endurance (Minimum)	Data Retention (Minimum)	Write Speed (Typical)	Typ. Standby Current	Write Protect			Special/Unique Features	Packages**
												Hardware	Software	Protected Array Size		
x16	SST39LF200A	R	2 Mb	128K × 16	55 ns	3.0–3.6V	0°C to 70°C	100,000 cycles (typical)	100 years	14 µs (Word Program)	3 µA	–	–	N/A	Fast read, program and erase; Low power; Small erase sector	48B-TFBGA, 48L-TSOP
	SST39VF200A	R	2 Mb	128K × 16	70 ns	2.7–3.6V	0°C to 70°C –40°C to +85°C	100,000 cycles (typical)	100 years	14 µs (Word Program)	3 µA	–	–	N/A	Fast read, program and erase; Low power; Small erase sector	48B-TFBGA, 48L-TSOP, 48B-WFBGA
	SST39LF40XC	R	4 Mb	256K × 16	55 ns	3.0–3.6V	0°C to 70°C	100,000 cycles	100 years	7 µs (Word Program)	3 µA	✓	–	8 KB	Fast read, program and erase; Low power; Small erase sector; Industry standard command set and boot block structure	48B-TFBGA, 48L-TSOP, 48B-WFBGA
	SST39WF400B	R	4 Mb	256K × 16	70 ns	1.65–1.95V	0°C to 70°C –40°C to +85°C	100,000 cycles (typical)	100 years	28 µs (Word Program)	40 µA	–	–	N/A	Fast read, program and erase; Low power; Small erase sector	48B-TFBGA, 48B-WFBGA, 48B-XFBGA
	SST39VF40XC	R	4 Mb	256K × 16	70 ns	2.7–3.6V	0°C to 70°C –40°C to +85°C	100,000 cycles	100 years	7 µs (Word Program)	3 µA	✓	–	8 KB	Fast read, program and erase; Low power; Small erase sector; Industry standard command set and boot block structure	48B-TFBGA, 48L-TSOP, 48B-WFBGA
	SST39WF800B	R	8 Mb	512K × 16	70 ns	1.65–1.95V	0°C to 70°C –40°C to +85°C	100,000 cycles (typical)	100 years	28 µs (Word Program)	40 µA	–	–	N/A	Fast read, program and erase; Low power; Small erase sector	48B-TFBGA, 48B-WFBGA, 48B-XFBGA
	SST39LF80XC	R	8 Mb	512K × 16	55 ns	3.0–3.6V	0°C to 70°C	100,000 cycles	100 years	7 µs (Word Program)	3 µA	✓	–	N/A	Fast read, program and erase; Low power; Small erase sector; Industry standard command set and boot block structure	48B-TFBGA, 48L-TSOP, 48B-WFBGA
	SST39VF80XC	R	8 Mb	512K × 16	70 ns	2.7–3.6V	0°C to 70°C –40°C to +85°C	100,000 cycles	100 years	7 µs (Word Program)	3 µA	✓	–	N/A	Fast read, program and erase; Low power; Small erase sector; Industry standard command set and boot block structure	48B-TFBGA, 48L-TSOP, 48B-WFBGA
	SST39WF160X	R	16 Mb	1M × 16	70 ns	1.65–1.95V	0°C to 70°C –40°C to +85°C	100,000 cycles (typical)	100 years	28 µs (Word Program)	40 µA	✓	–	64 KB	Fast read, program and erase; Low power; Small erase sector	48B-TFBGA, 48B-WFBGA, 48B-XFBGA
	SST39VF160XC	R	16 Mb	1M × 16	70 ns	2.7–3.6V	0°C to 70°C –40°C to +85°C	100,000 cycles	100 years	7 µs (Word Program)	3 µA	✓	–	8 KB	Fast read, program and erase; Low power; Small erase sector; Industry standard command set and boot block structure	48B-TFBGA, 48L-TSOP, 48B-WFBGA
	SST39VF160X	R	16 Mb	2M × 8	70 ns	2.7–3.6V	0°C to 70°C –40°C to +85°C	100,000 cycles	100 years	7 µs (Byte Program)	3 µA	✓	–	64 KB	Fast read, program and erase; Low power; Small erase sector	48B-TFBGA, 48L-TSOP
	SST39VF320XB	R	32 Mb	2M × 16	70 ns	2.7–3.6V	0°C to 70°C –40°C to +85°C	100,000 cycles	100 years	7 µs (Word Program)	4 µA	✓	–	32 KB	Fast read, program and erase; Low power; Small erase sector	48B-TFBGA, 48L-TSOP
	SST39VF320XC	R	32 Mb	2M × 16	70 ns	2.7–3.6V	0°C to 70°C –40°C to +85°C	100,000 cycles	100 years	7 µs (Word Program)	4 µA	✓	–	8 KB	Fast read, program and erase; Low power; Small erase sector; Industry standard command set and boot block structure	48B-TFBGA, 48L-TSOP
	SST38VF640X	R	64 Mb	4M × 16	70 ns	2.7–3.6V	0°C to 70°C –40°C to +85°C	100,000 cycles	100 years	7 µs/1.75 µs (Write Buffer Program)	3 µA	✓	✓	32 KB/ 8 KB	Fast read, program and erase; Low power; Small erase sector Industry standard command set and boot block structure, Security features	48B-TFBGA, 48L-TSOP
	SST38VF640XB	R	64 Mb	4M × 16	70 ns	2.7–3.6V	0°C to 70°C –40°C to +85°C	100,000 cycles	100 years	7 µs/1.75 µs (Write Buffer Program)	3 µA	✓	✓	32 KB/ 8 KB	Fast read, program and erase; Low power; Industry standard command set and boot block structure, Security features	48B-TFBGA, 48L-TSOP

*X is a wildcard to indicate "top" or "bottom" boot block support. Please refer to the respective datasheets for more details.
**Only standard packages are listed here. Please inquire with your local sales office for devices in die form or in chip-scale packages.

WIRELESS PRODUCTS

Product	Radio	Pin Count	Antenna	Frequency Range (GHz)	Sensitivity (dBm)	Power Output (dBm)	Tx Power Consumption (mA)	Rx Power Consumption (mA)	Sleep	MAC	MAC Features	Protocols	Encryption	Interface	Volume Pricing†	Packages (Dimensions)
Wi-Fi® Modules																
RN1810	802.11 b/g/n	37	PCB, W.FL	2.412–2.472	–94	0 to +20	246 (+18 dBm)	64	40 µA	Yes	802.11b/g/n, SoftAP, WPS	IPv4/IPv6, TCP, UDP, DHCP, DNS, ICMP, ARP, HTTP, FTP, SNTP, SSL/TLS	WEP, WPA-PSK, WPA2-PSK	UART	$14.53	37/Module (26.7 × 17.8 mm)
RN1723	802.11 b/g	49	RF PAD	2.412–2.484	–83	0 to +12	120 (0 dBm)	40	4 µA	Yes	802.11b/g, SoftAP, WPS, Webscan	DHCP, DNS, ARP, ICMP, FTP client, HTTP client, TCP, UDP	WEP, WPA, WPA2, EAP	UART	$13.49	49/Module (26.7 × 17.8 mm)
RN171	802.11 b/g	49	RF PAD	2.412–2.484	–83	0 to +12	190 (+12 dBm)	38	4 µA	Yes	802.11b/g, SoftAP, WPS, Webscan	DHCP, DNS, ARP, ICMP, FTP client, HTTP client, TCP, UDP	WEP, WPA, WPA2, EAP	UART	$25.33	49/Module (26.7 × 17.8 mm)
RN131	802.11 b/g	44	Chip, U.FL	2.412–2.484	–85	+18	210 (+18 dBm)	40	4 µA	Yes	802.11b/g, SoftAP, WPS, Webscan	DHCP, DNS, ARP, ICMP, FTP client, HTTP client, TCP, UDP	WEP, WPA, WPA2, EAP	UART	$30.55	44/Module (37.0 × 20.0 mm)
RN171XV	802.11 b/g	49	Wire, U.FL, SMA	2.412–2.484	–83	0 to +12	190 (+12 dBm)	38	4 µA	Yes	802.11b/g, SoftAP, WPS, Webscan	DHCP, DNS, ARP, ICMP, FTP client, HTTP client, TCP, UDP	WEP, WPA, WPA2, EAP	UART	$25.33	2 × 10/Through hole module (24.4 × 34.3 mm)
MRF24WN0MA	802.11 b/g/n	37	PCB	2.412–2.484	–94	+18	115 (0 dBm)	60	5 µA	Yes	802.11b/g/n, SoftAP, WPS	Wi-Fi Connection Manager, Announce, DNS, DDNS, DHCP, FTP, HTTP, NBNS, SNMP, SNTP, SSL, TCP, UDP, ZeroConf[2]	WPA2-PSK, WPA-PSK, WEP	4-wire SPI	$14.53	37/Module (26.7 × 17.8 mm)
MRF24WN0MB	802.11 b/g/n	37	W.FL	2.412–2.484	–94	+18	115 (0 dBm)	60	5 µA	Yes	802.11b/g/n, SoftAP, WPS	Wi-Fi Connection Manager, Announce, DNS, DDNS, DHCP, FTP, HTTP, NBNS, SNMP, SNTP, SSL, TCP, UDP, ZeroConf[2]	WPA2-PSK, WPA-PSK, WEP	4-wire SPI	$14.53	37/Module (26.7 × 17.8 mm)
MRF24WG0MA	802.11 b/g	36	PCB	2.412–2.484	–95	+18	240	156	0.1 mA[1]	Yes	802.11b/g, Wi-Fi Direct, SoftAP, WPS	Wi-Fi Connection Manager, Announce, DNS, DDNS, DHCP, FTP, HTTP, NBNS, SNMP, SNTP, SSL, TCP, UDP, ZeroConf[2]	WPA2-PSK, WPA-PSK, WEP, WPA-2-ENTERPRISE	4-wire SPI	$26.90	36/Module (21.0 × 31.0 mm)
MRF24WG0MB	802.11 b/g	36	U.FL	2.412–2.484	–95	+18	240	156	0.1 mA[1]	Yes	802.11b/g, Wi-Fi Direct, SoftAP, WPS	Wi-Fi Connection Manager, Announce, DNS, DDNS, DHCP, FTP, HTTP, NBNS, SNMP, SNTP, SSL, TCP, UDP, ZeroConf[2]	WPA2-PSK, WPA-PSK, WEP, WPA2-ENTERPRISE	4-wire SPI	$26.90	36/Module (21.0 × 31.0 mm)

1. Indicates "off" current for sleep column.
2. Supported in the provided stack.

WIRELESS PRODUCTS

Product	Pin Count	Antenna	Frequency Range (GHz)	Sensitivity (dBm)	Power Output (dBm)	RSSI	Tx Power Consumption (mA)	Rx Power Consumption (mA)	Clock (MHz)	Sleep	MAC	MAC Features	Protocols	Encryption	Interface	Volume Pricing†	Packages (Dimensions)
IEEE 802.15.4 Transceivers/Modules																	
MRF24J40	40	–	2.405–2.48	–95	0	Yes	23	19	20	2 µA	Yes	CSMA-CA	ZigBee®, MiWi™ wireless networking protocol	AES128	4-wire SPI	$2.36	40/QFN
MRF24J40MA	12	PCB	2.405–2.48	–94	0	Yes	23	19	20	2 µA	Yes	CSMA-CA	ZigBee, MiWi wireless networking protocol	AES128	4-wire SPI	$6.09	12/Module (17.8 × 27.9 mm)
MRF24J40MD	12	PCB	2.405–2.48	–104	+19	Yes	140	32	20	10 µA	Yes	CSMA-CA	ZigBee, MiWi wireless networking protocol	AES128	4-wire SPI	$13.12	12/Module (17.8 × 27.9 mm)
MRF24J40ME	12	U.FL	2.405–2.48	–104	+19	Yes	140	32	20	10 µA	Yes	CSMA-CA	ZigBee, MiWi wireless networking protocol	AES128	4-wire SPI	$13.12	12/Module (17.8 × 27.9 mm)

1. Indicates "off" current for sleep column.
2. Supported in the provided stack.

WIRELESS PRODUCTS

Product	Bluetooth® Spec	Module Type	No Shield Option	Rx Sensitivity (dBm)	Power Output (dBm) (typ.)	Power Consumption	Sleep	Profiles	Interface	Pin Count	Packages (Dimensions)
Bluetooth											
BM20	4.1	Audio	Yes	–91	4	Standby 0.8 mA, SCO Link 7.8 mA, A2DP Link 10.7 mA	System Off 2 µA	HFP, HSP, A2DP, AVRCP, SPP, PCAP	Analog audio out, mic in, line in, UART	40	29 × 15 × 2.5 mm
BM23	4.1	Audio	Yes	–91	4	Standby 0.4 mA, SCO Link 9.3 mA, A2DP Link 11.7 mA	System Off 2 µA	HFP, HSP, A2DP, AVRCP, SPP, PCAP	I²S™ Digital audio out, mic in, line in, UART	43	29 × 15 × 2.5 mm
RN52	3.0	Audio	No	–85	4	Idle 12 mA, Connected A2DP 26 mA, HFP/HSP 23.5 mA	N/A	A2DP, AVRCP, SPP, HFP/HSP, iAP	(Audio) Analog speaker, microphone, I²S master mode, S/PDIF, (Data) UART, USB, GPIO	50	13.5 × 26.0 mm
BM70	4.2	Data, Single-Mode BLE	Yes	–90	0	Standby 1.9 µA, Link Static 60 µA, Tx peak = 13 mA at 0 dBm	Power saving 1 µA	GAP, GATT, SM, L2CAP, Integrated public profiles	UART, I²C, SPI, ADC, PWM, GPIOs	33	22 × 12 × 2.4 mm 15 × 12 × 1.8 mm
BM71	4.2	Data, Single-Mode BLE	Yes	–90	0	Standby 1.9 µA, Link Static 60 µA, Tx peak = 13 mA at 0 dBm	Power saving 1 µA	GAP, GATT, SM, L2CAP, Integrated public profiles	UART, I²C, SPI, ADC, PWM, GPIOs	17	9 × 11.5 × 2.1 mm 6 × 8 × 1.6 mm
RN4020	4.1	Data, Single-Mode BLE	No	–92.5	7	Idle < 1.5 mA, Tx/Rx active 16 mA at 0 dBm	Dormant < 700 nA, deep sleep < 5.0 µA	GAP, GATT, SM, L2CAP, integrated public profiles	UART, PIO, AIO, SPI	24	11.5 × 19.5 mm
BM77	4.0	Data, Dual-Mode	Yes	–80 Classic –92 LE	2	Idle 1.2 mA, Connected (transfer data) 18.6 mA (BTLE), Idle 2.5 mA, Connected (transfer data) 23 mA (Classic)	Deep Power Down 343 µA	GAP, SDP, SPP, GATT	UART, I²C, GPIOs	33	22 × 12 × 2.4 mm 15 × 12 × 1.8 mm
RN4677	4.0	Data, Dual-Mode	Yes	–80 Classic –92 LE	2	Idle 1.2 mA, Connected (transfer data) 18.6 mA (BTLE), Idle 2.5 mA, Connected (transfer data) 23 mA (Classic)	Deep Power Down 343 µA	GAP, SDP, SPP, GATT	UART, I²C, GPIOs	33	22 × 12 × 2.4 mm 15 × 12 × 1.8 mm
BM78	4.2	Data, Dual-Mode	Yes	–90 (BR/EDR) –92 LE	2	LE Fast Advertising (int. 160 ms), Connected (transfer data) 7.0 mA (BTLE), Standby 2.5 mA, Connected (transfer data) 10.67 mA (Classic)	Deep Power Down 130 µA	BT3.0: GAP, SPP, SDP, RFCOMM, L2CAP BT4.2: GAP, GATT, ATT, SMP, L2CAP	UART, I²C, GPIOs	33	22 × 12 × 2.4 mm 15 × 12 × 1.8 mm
RN41	2.1	Data	No	–80	15	Standby/Idle 25 mA, Connected (normal mode) 30 mA, Connected (low power sniff) 8 mA	Standby/Idle (deep sleep enabled) 250 µA	SPP, DUN, HID, iAP, HCI, RFCOMM, L2CAP, SDP	UART, USB	35	13.4 × 25.8 mm
RN41XV	2.1	Data	No	–80	15	Standby/Idle 25 mA, Connected (normal mode) 30 mA, Connected (low power sniff) 8 mA	Standby/Idle (deep sleep enabled) 250 µA	SPP, DUN, HID, iAP, HCI, RFCOMM, L2CAP, SDP	UART, USB	35	24.4 × 29.2 mm
RN42	2.1	Data	No	–80	4	Standby/Idle 25 mA, Connected (normal mode) 3 mA, Connected (low power sniff) 8 mA	Standby/Idle (deep sleep enabled) 26 µA	SPP, DUN, HID, iAP, HCI, RFCOMM, L2CAP, SDP	UART, USB	35	13.4 × 25.8 mm
RN42XV	2.1	Data	No	–80	4	Standby/Idle 25 mA, Connected (normal mode) 3 mA, Connected (low power sniff) 8 mA	Standby/Idle (deep sleep enabled) 26 µA	SPP, DUN, HID, iAP, HCI, RFCOMM, L2CAP, SDP	UART, USB	35	24.4 × 29.2 mm

Sub-GHz Transceivers/Modules

Product	Pin Count	Frequency Range (MHz)	Sensitivity (dBm)	Power Output (dBm)	RSSI	TX Power Consumption (mA)	RX Power Consumption (mA)	Clock	Sleep	Interface	Volume Pricing†	Packages
MRF89XAM8A	12	868	–113	12.5	Yes	25 mA @ +10 dBm	3	12.8 MHz	0.1 µA	4-wire SPI	$5.20	12/Module (17.8 × 27.9 mm)
MRF89XAM9A	12	915	–113	12.5	Yes	25 mA @ +10 dBm	3	12.8 MHz	0.1 µA	4-wire SPI	$5.20	12/Module (17.8 × 27.9 mm)
MRF49XA	16	433/868/915	–110	7	Yes	15 mA @ 0 dBm	11	10 MHz	0.3 µA	4-wire SPI	$1.71	16/TSSOP
MRF89XA	32	868/915/950	–113	12.5	Yes	25 mA @ +10 dBm	3	12.8 MHz	0.1 µA	4-wire SPI	$1.76	32/TQFN

Sub-GHz Transmitters

Product	Pin Count	Frequency Range (MHz)	Modulation	Data Rate (Kbps)	Tx Power (dBm)	Operating Voltage (V)	Volume Pricing†	Packages
MICRF114	6	285–445	OOK	115.2 (NRZ), 57.6 (Manchester Encoded)	10	1.8–3.6	0.49	6-Pin SOT-23
MICRF113	6	300–450	ASK	20	10	1.8–3.6	0.57	6-Pin SOT-23
MICRF112	10	300–450	ASK/FSK	50 (ASK), 10 (FSK)	10	1.8–3.6	0.49	10-pin MSOP, 10-pin DFN

† Pricing subject to change; please contact your Microchip representative for most current pricing.

WIRELESS PRODUCTS

Product	Pin Count	Frequency Range (MHz)	Sensitivity (dBm)	Power Output (dBm)	RSSI	Modulation	RX Power Consumption (mA)	Sleep	Interface	Volume Pricing†	Packages
Sub-GHz Receivers											
MRF39RA	24	433/868/915	–120	6	Yes	–	16	100 nA	4-wire SPI	$1.10	24-pin QFN
MICRF219A	16	300–450	–110	–	Yes	ASK/OOK	4.3	–	–	$1.78	16-pin QSOP
MICRF220	16	300–450	–110	–	Yes	ASK/OOK	4.3	–	–	$1.43	16-pin QSOP
MICRF221	16	850–950	–109	–	Yes	ASK/OOK	9	–	–	$1.72	16-pin QSOP
MICRF229	16	400–450	–112	–	Yes	ASK/OOK	6	–	–	Call for Pricing	16-pin QSOP
MICRF230	16	400–450	–112	–	Yes	ASK/OOK	6	–	–	Call for Pricing	16-pin QSOP

LoRa® Technology Modem												
Product	**Pin Count**	**Frequency Range (MHz)**	**Sensitivity (dBm)**	**Power Output (dBm)**	**RSSI**	**TX Power Consumption (mA)**	**RX Power Consumption (mA)**	**Clock**	**Sleep**	**Interface**	**Volume Pricing†**	**Packages**
RN2483	47	433/868	–148	14	N/A	40 mA @ +14 dBm (868 MHz)	14.2	N/A	1 µA	UART	Call for pricing	47/Module (17.8 × 26.7 × 3 mm)
RN2903	47	915	–146	18.5	N/A	124 mA @ +18.5 dBm	13.5	N/A	0.002 mA	UART	Call for pricing	47/Module (17.8 × 26.7 × 3 mm)

† Pricing subject to change; please contact your Microchip representative for most current pricing.

WIRELESS PRODUCTS

Product	I/O Pins	Frequency Range (MHz)	Program Memory (Bytes)	EEPROM (bytes)	RAM (bytes)	Digital Timer	Watch Dog Timer	Max. Speed (MHz)	ICSP™	Modulation	Data Rate (kbps)	Output Power (dBm)	Operating Voltage	Volume Pricing†	Packages
rfPIC® Transmitters + PIC® MCUs															
PIC12F529T39A	6	310–928	2.3K	64	201	1	1	8	Yes	OOK/FSK	100	10	2.0–3.7	$0.95	14/TSSOP
PIC12LF1840T39A	6	310–928	7.1K	256	256	2	1	32	Yes	OOK/FSK	100	10	1.8–3.6	$1.27	14/TSSOP
PIC16LF1824T39A	20	310–928	4K	256	256	1	1	32	Yes	OOK/FSK	100	10	1.8–3.6	$1.41	20/TSSOP
rfPIC12F675F	6	380–450	1.7K	128	64	1	1	20	Yes	ASK/FSK	40	10	2.0–5.5	$2.11	20/SSOP
rfPIC12F675H	6	850–930	1.7K	128	64	1	1	20	Yes	ASK/FSK	40	10	2.0–5.5	$2.11	20/SSOP
rfPIC12F675K	6	290–350	1.7K	128	64	1	1	20	Yes	ASK/FSK	40	10	2.0–5.5	$2.11	20/SSOP

† Pricing subject to change; please contact your Microchip representative for most current pricing.

WIRELESS AUDIO: Highly Integrated Wireless Audio Baseband Processors

Product	Additional Features	Frequency	Interface	Pin	Packages
DARR83	Supports streaming of four wireless uncompressed stereo audio channels simutaneously or complete wireless 7.1 channel surround sound system, latency < 20 ms, point-to-multi-point transmission in home audio networking, SD and HD audio, excellent Wi-Fi® and Bluetooth® coexistence, bi-directional audio support, control data channel up to 100 kbps, integrated MCU and SRC, integrated audio-class USB	Tri-band 2.4/5.2/5.8 GHz	I²S, S/PDIF, I²C, SPI, USB 2.0	129	FBGA
DM920	Networked media processor, highly flexible interface processor well-suited for secure, real-time encoding/decoding and processing of multi-channel media content, offering industry-standard networking and I/O interfaces, enables rapid product development by OEMs and ODMs, API structure on the software packages allows for easy product customization resulting in faster time to market.	2.4/5 GHz, 802.11a/b/g/n	I²S, S/PDIF, I²C, USB, Ethernet, SPI, CCIR 656 Out, CEA861 for HDMI	323	LFBGA

WIRELESS AUDIO: Highly Integrated Wireless Audio Modules

Product	Additional Features	Frequency	Interface	Pin	Module Dimension
DWAM83	Uncompressed wireless digital audio transceiver OEM module based on the DARR83, supports up to four stereo audio streams, data encryption, bi-directional control messaging, automatic pairing, WLAN detection, automatic frequency allocation	Tri-band, 2.4/5.2/5.8 GHz	I²S, S/PDIF, I²C, SPI	26-pin FFC Connector	35 × 35 mm Square PCB
DWHP83	Uncompressed digital audio transceiver OWM module based on the DARR83, supports up to four stereo audio streams, data encrpytion, bi-directional control messaging, automatic pairing, WLAN detection, automatic frequency allocation	Dual-band 5.2/5.8 GHz	I²S, S/PDIF, I²C, SPI	26-pin PIN Header Connector	40 × 20 mm
DWLC84	Uncompressed wireless digital audio transceiver OEM module based on the DARR84, supports up to two stereo audio streams, data encryption, bi-directional control messaging, automatic pairing, WLAN detection, excellent Wi-Fi® and Bluetooth® coexistence using Wireless DNA architecture, well-suited for applications such as speakers and soundbars with subwoofers	Single-band 2.4 GHz	I²S, S/PDIF, I²C, SPI	–	30 × 42 mm
DWUSB83	Uncompressed wireless digital audio transceiver OEM modules based on the DARR83, supports up to four stereo audio streams, data encryption, bi-directional control messaging, automatic pairing, WLAN detection, automatic frequency allocation	Tri-band, 2.4/5.2/5.8 GHz	USB	–	49 × 18 mm
CX870	Single-board, networked, media player module based on the DM870A media processors, enables fast product developments with Ethernet, USB and Wi-Fi connectivity, connects to standard legacy components in various audio, video/LCD and control formats	2.4 GHz, 802.11 b/g	I²S, S/PDIF, I²C, USB, SD/SDIO, Ethernet, TFT for Display, SPI, CCIR 656 out	64-pin PCB Low Density Connector	46 × 85.8 mm
CY920	Single-board network media module based on DM920 network media processor with built-in dual-core DSP, enables faster product development with Ethernet, USB, Wi-Fi and Bluetooth connectivity	2.4/5 GHz, 802.11b/g/n	I²S, SPDIF, I²C, USB 2.0 OTG, SPI, UART, Ethernet, HDMI	2x 64-pin B2B Connector	40 × 60 mm

WIRELESS AUDIO: Radio Frequency Digital Audio Transceivers

Product	Features	Typical Sink Mode Power Consumption	PA Output Power	Audio	Qualification
KLR3012	Wirelessly streams uncompressed lossless audio up to 25m over robust 2.4 GHz radio link, multi-point to multi-point connectivity, strong Wi-Fi® coexistence, data channel for audio playback control, very low power consumption	20 mW	1.5 dBm	16 bit, 44.1 Ks/s stereo	JEDEC

USB PRODUCTS

Part #	Description	Processor Interface	# of Downstream Ports	Card Formats	Industrial Version	Packages
USB Hub Controllers						
USB2412	Hi-Speed USB 2.0 2-Port Hub	USB 2.0	2	–	–	28-pin QFN
USB2422	Small-footprint, 2-Port Value Hub, Commercial and Industrial Temperature with USB Battery Charging 1.1	USB 2.0	2	–	✓	24-pin QFN
USB251XB/USB2517	Hi-Speed USB 2.0 Hub with Battery Charger Detection	USB 2.0	2, 3, 4, 7 port options	–	✓ Automotive	36 or 64-pin QFN
USB2524	4-Port Hi-Speed USB 2.0 Multi-Switch Hub	USB 2.0 × 2	4	–	–	56-pin QFN
USB3503	3-Port Hi-Speed USB 2.0 HSIC Hub for Mobile Applications	HSIC	3	–	✓	25-ball WLCSP
USB3803	3-Port Hi-Speed USB 2.0 Hub for Mobile Applications	USB 2.0	3	–	✓	25-ball WLCSP
USB3X13	3-Port Hi-Speed USB 2.0 Smart Hub for Mobile Applications	USB 2.0 or HSIC	3 (USB 2.0 ×2/HSIC ×1)	–	✓	30-ball WLCSP
USB253X	Hi-Speed USB 2.0 Controller Hub with Battery Charger Detection	USB 2.0	2, 3, 4 port options	–	✓	36-pin QFN
USB46X4	Hi-Speed USB 2.0 Controller Hub with USB and HSIC Interfaces	USB 2.0 or HSIC	4 (USB 2.0 ×4 or USB 2.0 ×2/HSIC ×2)	–	✓ Automotive	48-pin QFN
USB553XB	SuperSpeed USB 3.0 Hub with Battery Charger Detection	USB 3.0	2, 3, 4 or 7 port options	–	✓	64 or 72-pin QFN
USB5734	SuperSpeed USB 3.1 Gen1 Smart Hub Controller with I/O Bridging and FlexConnect	USB 3.1 Gen1	4	–	✓ Automotive	64-pin QFN
USB5744	SuperSpeed USB 3.1 Gen1 Small Form Factor Hub Controller	USB 3.1 Gen1	4	–	✓	56-pin QFN

USB PRODUCTS

Part #	Description	Processor Interface	# of Downstream Ports	Card Formats	Industrial Version	Packages
USB-C™ Power and Charging						
UTC200X	USB-C Controller	I/O	1 DFP or 1 UFP	–	✓ Automotive	16-pin QFN
USB Transceivers/Switches						
USB333X	Mobile Hi-Speed USB 2.0 Transceiver with Multi-frequency Support	ULPI	–	–	✓	25-ball WLCSP
USB334X	Hi-Speed USB 2.0 Transceiver with Multi-frequency Support	ULPI	–	–	Automotive	24 or 32-pin QFN
USB3300	Hi-Speed USB 2.0 Transceiver (24 MHz reference clock support)	ULPI	–	–	✓	32-pin QFN
USB3740B	Hi-Speed USB 2.0 Switch with Extremely Low Power	USB 2.0	–	–	✓	10-pin QFN
USB375XA-X	Hi-Speed USB 2.0 Port Protection with Switch and Charger Detection	USB 2.0	–	–	✓	16-pin QFN
USB Flash Media Controllers						
USB224X	Hi-Speed USB 2.0 Multi-Format Flash Media Controller	USB 2.0	–	SD™/MMC/eMMC™/MS/xD	✓	36-pin QFN
USB225X	Hi-Speed USB 2.0 Multi-Format Flash Media Controller	USB 2.0	–	SD/MMC/eMMC/MS/xD/CF	✓	128-pin VTQFP
USB264X	Hi-Speed USB 2.0 Multi-Format Flash Media Hub Controller	USB 2.0	2	SD/MMC/eMMC/MS/xD	✓ Automotive	48-pin QFN
USB2660	Hi-Speed USB 2.0 Multi-Format Flash Media Hub Controller	USB 2.0	2	SD/MMC/eMMC/MS/xD (×2)	✓	64-pin QFN
USB4640	Hi-Speed USB 2.0 Multi-Format Flash Media HSIC Hub Controller	HSIC	2	SD/MMC/eMMC/MS/xD	✓	48-pin QFN

ETHERNET PRODUCTS

Part #	Description	Interface (Upstream)	Wake-On-LAN	EEE	Industrial Version	Packages
Ethernet Controllers						
ENC28J60	10Base-T Ethernet Controller	SPI	–	–	✓	28-pin SPDIP, SSOP, SOIC, QFN
ENC624J600	10Base-T/100Base-TX Ethernet Controller with Security	SPI/Parallel	–	–	✓	24-pin TQFN, QFN, 64-pin TQFN
LAN9217	10Base-T/100Base-TX Ethernet Controller with 16-bit/MII interface	16-bit Host Bus/MII	–	–	–	100-pin TQFP
LAN9218	10Base-T/100Base-TX Ethernet Controller with 32-bit interface	32-bit Host Bus	–	–	✓	100-pin TQFP
LAN9220	10Base-T/100Base-TX Ethernet Controller with 16-bit interface	16-bit Host Bus	–	–	–	56-pin QFN
LAN9221	10Base-T/100Base-TX Ethernet Controller with 16-bit interface	16-bit Host Bus	–	–	✓	56-pin QFN
LAN9420	10Base-T/100Base-TX Ethernet Controller with 32-bit PCI interface	32-bit PCI 3.0	–	–	✓	128-pin VTQFP
LAN89218	TrueAuto, 10Base-T/100Base-TX Ethernet Controller with 32-bit interface	32-bit Host Bus	–	–	Automotive	100-pin TQFP
KSZ8851	10/100Base-TX Ethernet Controller	8-/16-/32-bit or SPI	✓	–	Automotive	32-pin QFN, 48-pin LQFP, 128-pin PQFP
KSZ8852	2-Port 10/100Base-TX Ethernet Controller	8-/16-/32-bit	✓	✓	✓	64-pin LQFP
KSZ8441	10/100Base-TX/FX Ethernet Controller with 1588v2 PTP and Clock Synchronization	8-/16-/32-bit or PCI	✓	✓	✓	64-pin LQFP

*Note: All products above are supported with 3.3V operating voltage

ETHERNET PRODUCTS

Part #	Description	Interface (Upstream)	Wake-On-LAN	EEE	Industrial Version	Packages
USB to Ethernet						
LAN9500A	USB 2.0 to 10/100 Ethernet Controllers	USB 2.0	✓	–	✓	56-pin QFN
LAN9730	USB HSIC 2.0 to 10/100 Ethernet Controllers	USB 2.0 (HSIC), MII	–	–	✓	56-pin QFN
LAN7500	USB 2.0 to 10/100/1000 Ethernet Controllers	USB 2.0	✓	–	✓	56-pin QFN
LAN7800	USB 3.1 Gen1 to 10/100/1000 Ethernet Controllers	USB 3.1	✓	✓	✓	48-pin SQFN
LAN9512	USB 2.0 to 10/100 Ethernet Controllers with 2-Port USB 2.0 Hub	USB 2.0	–	–	✓	64-pin QFN
LAN9513	USB 2.0 to 10/100 Ethernet Controllers with 3-Port USB 2.0 Hub	USB 2.0	–	–	✓	64-pin QFN
LAN9514	USB 2.0 to 10/100 Ethernet Controllers with 4-Port USB 2.0 Hub	USB 2.0	–	–	✓	64-pin QFN
LAN89530	TrueAuto, USB 2.0 to 10/100 Ethernet Controllers	USB 2.0	✓	–	Automotive	56-pin QFN
Ethernet Transceivers						
LAN8710A	Small-Footprint, Low Power Consumption, Full-Featured 10/100 Ethernet Transceivers	MII/RMII	–	–	✓	32-pin QFN
LAN8720A	Small-Footprint, Low Power Consumption, Full-Featured 10/100 Ethernet Transceivers	RMII	–	–	✓	24-pin QFN
LAN8740A	Small-Footprint, 10/100 PHY Family Featuring Energy Efficient Ethernet and Wake-On-LAN	MII/RMII	✓	✓	✓	32-pin QFN
LAN8741A	Small-Footprint, 10/100 PHY Family Featuring Energy Efficient Ethernet	MII/RMII	–	✓	✓	32-pin QFN
LAN8742A	Small-Footprint, 10/100 PHY Family Featuring Wake-On-LAN	RMII	✓	–	✓	24-pin QFN
KSZ8051	Small footprint, 10/100 PHY Family Featuring Wake-on-LAN	MII/RMII	–	–	✓ Automotive	32-pin QFN
KSZ8061	Small footprint, 10/100 PHY Family Ultra Deep Sleep Standby and Quiet-WIRE® Technology	MII/RMII	–	–	✓ Automotive	32-/48-pin QFN
KSZ8081	Small footprint, 10/100 PHY Family Featuring Wake-on-LAN and Low-Power Voltage Drive	MII/RMII	–	–	✓	24-/32-pin QFN, 48-pin LQFP
KSZ8091	Small footprint, 10/100 PHY Family Featuring Energy Efficient Ethernet, Wake-on-LAN and Low-Power Voltage Drive	MII/RMII	✓	✓	✓	24-/32-pin QFN, 48-pin LQFP
KSZ9031	MII/GMII/RGMII 10/100/1000 Ethernet Transceiver Family Featuring Energy Efficient Ethernet and Wake-On-LAN	MII/RMII/RGMII	✓	✓	✓ Automotive	48-/64-pin QFN
LAN88730	TrueAuto, Small Footprint, Full-Featured 10/100 Ethernet Transceivers	MII/RMII	–	–	Automotive	32-pin QFN

*Note: All products above are supported with 3.3V operating voltage

ETHERNET PRODUCTS

Part #	Description	Interface (Upstream)	1588-2008	Cable Diagnostics	100 FX (Fiber Support)	Packages
EtherCAT® Controllers						
LAN9252	2/3-Port 100 EtherCAT Slave Controller	SPI/SQI™/8/16/32 Host Bus	Clock Synchronization	✓	✓	64-pin QFN, 64-pin TQFP-EP
Ethernet Switches						
LAN9303	3-Port 10/100 Managed Ethernet Switch	MII/RMII/Turbo MII	–	–	–	56-pin QFN
LAN9303M	3-Port 10/100 Managed Ethernet Switch	MII/RMII/Turbo MII	–	–	–	72-pin QFN
LAN9353	3-Port 10/100 Managed Ethernet Switch with Single MII/RMII/Turbo MII or Dual RMII	MII/RMII/Turbo MII	✓	✓	✓	64-pin QFN, 64-pin TQFP-EP
LAN9354	3-Port 10/100 Managed Ethernet Switch with Single RMII	RMII	✓	✓	✓	56-pin QFN
LAN9355	3-Port 10/100 Managed Ethernet Switch with Dual MII/RMII/Turbo MII	MII/RMII/Turbo MII	✓	✓	✓	88-pin QFN, 80-pin TQFP-EP
KSZ8863	3-Port 10/100Base-TX/FX Switch with MII/RMII Interface	MII/RMII	–	✓	✓	48-pin LQFP
KSZ8873	3-Port 10/100Base-TX/FX Switch with MII/RMII Interface (Automotive Qualified)	MII/RMII	–	✓	✓	64-pin VQFN
KSZ8463	3-Port 10/100Base-TX/FX 1588v2 Switch with MII/RMII Interface	MII/RMII	✓	✓	✓	64-pin LQFP
KSZ8864	4-Port Switch with 2× 10/100Base-TX + 2× MII/RMII Interface (Automotive Qualified)	MII/RMII	–	✓	–	64-pin VQFN
KSZ8794	4-Port Switch with 3× 10/100Base-TX + 1× RGMII/MII/RMII Interface	MII/GMII/RGMII	–	✓	–	64-pin VQFN
KSZ8795	5-Port Switch with 4× 10/100Base-TX + 1× GMII/RGMII/MII/RMII Interface	GMII/RGMII/MII/RMII	–	✓	–	80-pin LQFP
KSZ8775	5-Port Switch with 3× 10/100Base-TX + 2× RGMII/MII/RMII Interface	MII/GMII/RGMII	–	✓	–	80-pin LQFP
KSZ8765	5-Port Switch with 2× 10/100Base-TX + 2× 100Base-FX + 1× GMII/RGMII/MII/RMII Interface	MII/GMII/RGMII	–	✓	✓	64-pin QFN, 80-pin LQFP
KSZ8895	5-Port10/100Base-TX/FX Switch with MII/RMII Interface (Automotive Qualified)	MII/RMII	–	✓	–	128-pin PQFP

MOTION PRODUCTS

Product	Description	Sensors Supported	Operating Temperature (°C)	Supply Current Active (Typ.)	Supply Current Idle (Typ.)	Package
SSC7102	Motion Coprocessor	Bosch BMC150 (A + M) Bosch BMG160 (G)	0 to +70	3.75 mA	1.0 mA	84-pin 6 × 6 TFBGA
SSC7150	Motion Coprocessor	Bosch BMC150 (A + M) Bosch BMG160 (G)	0 to +70	7.65 mA	1.77 mA	28-pin 6 × 6 QFN
MM7150I	Motion Module with SSC7150	Bosch BMC150 (A + M) Bosch BMG160 (G)	–40 to +85	13.25 mA	2.5 mA	16/Module 17 × 17 mm

AUTOMOTIVE: Media Oriented Systems Transport (MOST®) Network Inferface Controllers

Intelligent Network Interface Controller (INIC) for MOST Networks

Product	Features	Interface	Temperature Range (°C)	Pin	Packages
OS81110 INIC	Fully-encapsulated, single-chip, embedded network management, supports MOST embedded Ethernet channel and isochronous channels (MOST150)	MOST150 FOT or MOST150 coax transceiver, I²C, I²S™/SPDIF, TSI, SPI, MediaLB®	–40 to 105	48	QFN
OS81082 INIC	Fully-encapsulated, single-chip, embedded network management (MOST50)	MOST50 electrical (UTP), I²C, I²S, MediaLB	–40 to 95	64	ETQFP
OS81092 INIC	ROM version of OS81082 INIC (MOST50)	MOST50 electrical (UTP), I²C, I²S, MediaLB	–40 to 105	48	QFN
OS81050 INIC	Fully-encapsulated, single-chip with embedded network management (MOST25)	MOST25 FOT, I²C, I²S, MediaLB	Standard range: –40 to 85 Extended range: –40 to 105	44	QFP, ETQFP
OS81060 INIC	ROM version of OS81050 INIC (MOST25)	MOST25 FOT, I²C, I²S, MediaLB	–40 to 105 (targeted)	40	QFN

AUTOMOTIVE: Power Management Companion

For Diagnostics, Status Monitoring and Power Supply

Product	Features	Interface	Temperature Range (°C)	Pin	Packages
MPM85000	Power management companion for diagnostics, status monitoring and power supply	LIN 2.0, I²C	–40 to 105	24	QFN

AUTOMOTIVE: Multimedia I/O Companion

Multimedia I/O Port Expander

Product	Features	Interface	Temperature Range (°C)	Pin	Packages
OS85650	Low-cost multimedia I/O port expander, DTCP co-processor	MediaLB 3-pin and 6-pin, Host Bus Interface (HBI), 2 × multi-channel streaming ports, 2 × TSI, 2 × SPI, I²C	–40 to 105	128	ETQFP
OS85652	Low-cost multimedia I/O port expander	MediaLB 3-pin and 6-pin, Host Bus Interface (HBI), 2 × multi-channel streaming ports, 2 × TSI, 2 × SPI, I²C	–40 to 105	128	ETQFP
OS85656	Low-cost multimedia I/O port expander well-suited for streaming applications	MediaLB 3-pin, streaming port I²S™ (FSYN, FCLK, 4 × IN, 4 × Out, @ 512 Fs), serial transport stream interface (TSI), I²C	–40 to 105	48	QFN
OS85654	Low-cost multimedia I/O port expander well-suited for streaming applications, DTCP co-processor	MediaLB 3-pin, streaming port I²S (FSYN, FCLK, 4 × IN, 4 × Out, @ 512 Fs), serial transport stream interface (TSI), I²C	–40 to 105	48	QFN

AUTOMOTIVE: Ethernet Controllers

10/100 Ethernet Controllers with USB 2.0, HSIC or HBI

Product	Features	Interface	Temperature Range (°C)	Pin	Packages
LAN89218	High-performance, single-chip controller with HP Auto-MDIX support*	MAC/PHY, 10Base-T/100Base-TX, 32- and 16-bit Host Bus Interface (HBI)	–40 to 85	100	TQFP
LAN89530	Hi-Speed USB 2.0 to 10/100 Ethernet controller	USB 2.0	–40 to 85	56	QFN

*HP Auto MDIX eliminates the need for special "crossover" cables when connecting LAN devices together.

AUTOMOTIVE: Ethernet Switch

10/100 Managed Ethernet Switch with HP Auto-MDIX Support

Product	Features	Interface	Temperature Range (°C)	Ports	Pin	Packages
LAN89303	High-performance, small-footprint, full-featured, single MII/RMII/Turbo MII support	MII/RMII, 2 × 10/100 PHYs, 3 × 10/100 MACs	–40 to 85	4	56	QFN

AUTOMOTIVE: Ethernet Transceiver
10/100 Ethernet Transceiver with HP Auto-MDIX Support*, Featuring flexPWR® Technology

Product	Features	Interface	Temperature Range (°C)	Pin	Packages
LAN88730	Small footprint, low-power consumption, full featured	10Base-T/100Base-TX, MII/RMII	LAN88730AM: –40 to 85 LAN88730BM: –40 to 105	32	QFN

*HP Auto MDIX eliminates the need for special "crossover" cables when connecting LAN devices together.

AUTOMOTIVE: Hi-Speed USB 2.0 Hub
USB 2.0 Hub Featuring MultiTRAK™ Technology

Product	Features	Interface	Temperature Range (°C)	Ports	Pin	Packages
USB82512	Versatile, cost effective, energy efficient, incorporating MultiTRAK™, PortMap, PortSwap, PHYBoost technologies	SMBus/I²C	–40 to 85	2	36	QFN
USB82513	Versatile, cost effective, energy efficient, incorporating MultiTRAK, PortMap, PortSwap, PHYBoost technologies	SMBus/I²C	–40 to 85	3	36	QFN
USB82514	Versatile, cost effective, energy efficient, incorporating MultiTRAK, PortMap, PortSwap, PHYBoost technologies	SMBus/I²C	–40 to 85	4	36	QFN

AUTOMOTIVE: Hi-Speed USB 2.0 Hub and Flash Media Card Controllers
USB 2.0 Hub and Card Controller Combos

Product	Features	Socket Type	Supports	Temperature Range (°C)	USB Ports	Pin	Packages
USB82640	Features PortMap, PortSwap and PHYBoost technologies	Single	SD™/SD High Capacity™/MultiMediaCard™/Memory Stick®/MS PRO™, MS PRO-HG™	–40 to 85	2	48	QFN
USB82642	USB bridge/card reader combo with USB to SDIO and USB to I²C bridging functionality and PortMap, PortSwap and PHYBoost technologies	Single	SD/SD High Capacity/MultiMediaCard/Memory Stick/MS PRO, MS PRO-HG	–40 to 85	2	48	QFN

AUTOMOTIVE: Hi-Speed USB 2.0 Transceiver
USB 2.0 Transceiver with 1.8V ULPI Interface

Product	Features	Interface	Temperature Range (°C)	Ports	Pin	Packages
USB83340	Multi-frequency reference clock	1.8V to 3.3V ULPI	–40 to 105	1	32	QFN

AUTOMOTIVE: Hi-Speed USB 2.0 Battery Charger
Standalone USB Battery Charger

Product	Features	Temperature Range (°C)	Supports	Pin	Packages
UCS81001	USB battery charger supporting BC1.2, China charging, Apple® and RIM® charging profiles as well as programmable charging profiles for unforeseen peripherals	–40 to 85	USB, I²C, SMBus	28	QFN
UCS81002	USB battery charger supporting BC1.2, China charging, Apple and RIM charging profiles as well as programmable charging profiles for unforeseen peripherals	–40 to 85	USB, I²C, SMBus	28	QFN

AUTOMOTIVE: Wireless Audio
Radio Frequency Digital Audio Transceiver

Product	Features	Typical Sink Mode Power Consumption	PA Output Power	Audio	Qualification
KLR83012	Wirelessly streams uncompressed lossless audio up to 25m over robust 2.4 GHz radio link, multi-point to multi-point connectivity, strong Wi-Fi® coexistence, data channel for audio playback control, very low power consumption	20 mW	1.5 dBm	16 bit, 44.1 Ks/s stereo	AEC Q100

AUTOMOTIVE: Capacitive Touch Sensors

Product	Features	Input Channels	LED Drivers	Proximity Included	Interface	Pin	Packages
CAP81188	Reset, wake and alert, automatic recalibration, base capacitance compensation	8	8	✓	I²C/SPI/SMSC BC-Link™	24	QFN

EMBEDDED CONTROLLERS AND SUPER I/O: Keyboard Controllers

Product	Description	Operating Temperature (°C)	GPIO	Code Storage	EEPROM	SMBus Ports	Analog-to-Digital Converter	BC-Link	SPI Host	Host Interface	Packages
MEC1322	High-performance 32-bit, 128 KB SRAM, 32 KB Boot ROM embedded microcontroller	0 to 70	116	External SPI Flash	0	5	5 ch	1	2	LPC	132-pin DQFN
MEC1404	Low-power 32-bit mobile embedded controller, LPC, I²C	0 to 70	106	External SPI Flash	0	6	8 ch	2	3	LPC, I²C	128-pin VTQFP
MEC1408	Low-power 32-bit mobile embedded controller, LPC, I²C	0 to 70	106	External SPI Flash	0	6	8 ch	2	3	LPC, I²C	128-pin VTQFP
MEC1418	Low-power 32-bit mobile embedded controller, LPC, I²C, eSPI	0 to 70	106	External SPI Flash	0	6	8 ch	2	3	LPC, I²C, eSPI	128-pin VTQFP
MEC1633	Low-power mobile embedded Flash ARC EC BC-Link with CEC	0 to 70	135	Embedded Flash	2K Bytes	12	16 ch	3	2	LPC	169-pin LFBGA
MEC1641	Low-power 32-bit mobile embedded controller	0 to 70	108	Embedded Flash	2K Bytes	6	16 ch	3	0	LPC	144-pin TFBGA

EMBEDDED CONTROLLERS AND SUPER I/O: Desktop Super I/O

Product	Description	Operating Temperature (°C)	GPIO	Security Key Register	PECI Support	SMBus Interface	Intruder Detection	Resume Reset	Packages
SCH3106	LPC I/O with multiple serial ports, 8042 KBC, reset generation, and HWM	0 to 70	40	32 byte	–	–	–	✓	128-pin VTQFP
SCH3112	LPC I/O with multiple serial ports, 8042 KBC, reset generation, and HWM	–40 to 85	40	32 byte	–	–	–	–	128-pin VTQFP
SCH3114	LPC I/O with multiple serial ports, 8042 KBC, reset generation, and HWM	–40 to 85	40	32 byte	–	–	–	–	128-pin VTQFP
SCH3116	LPC I/O with multiple serial ports, 8042 KBC, reset generation, and HWM	–40 to 85	40	32 byte	–	–	–	–	128-pin VTQFP
SCH5017	Super I/O with temperature sensing, quiet auto fan, glue logic	0 to 70	25	32 byte	–	✓	✓	✓	128-pin QFP
SCH5027	Super I/O with temperature sensing, quiet auto fan, glue logic and PECI	0 to 70	25	32 byte	×1 CPU, ×2 domain, C3/C4	✓ (Slave Only)	✓	✓	128-pin QFP
SCH5127	Super I/O with temperature sensing, quiet auto fan, glue logic	0 to 70	30	–	–	–	✓	✓	128-pin QFP
SCH5627	Desktop embedded controller with fan control, hardware monitoring, and PECI	0 to 70	60	–	PECI 1.1, ×2 CPU, ×4 domain, C3/C4	Y–2 (Master or Slave)	✓	✓	128-pin QFP
SCH5636	Desktop embedded controller with fan control, hardware monitoring, and PECI	0 to 70	60	–	PECI 2.0, ×2 CPU, ×4 domain, C3/C4	Y–2 (Master or Slave)	✓	✓	128-pin QFP

EMBEDDED CONTROLLERS AND SUPER I/O: Expansion and Legacy I/O

Product	Description	Operating Temperature (°C)	Interface	Operating Voltage	GPIO Pins	Keyboard Scan Matrix	PS/2 Ports	Parallel Port	SMBus	BC-Link	Packages
ECE1088	GPIO Expansion via SMBus or BC-Link bus	0 to 70	BC-Link	3.3V	20	–	–	–	✓	✓	28-pin QFN
ECE1099	GPIO Expansion via SMBus or BC-Link bus with Keyscan Matrix	0 to 70	BC-Link	3.3V	32	23 × 8	–	–	✓	✓	40-pin QFN
ECE1105	GPIO Expansion with PS/2 and Keyscan Matrix via SMBus or BC-Link bus	0 to 70	BC-Link	3.3V	40	23 × 8	2	–	✓	✓	48-pin QFN
FDC37C669	Super I/O Floppy Disk Controller with Infrared Support	0 to 70	ISA	5V	48	–	–	✓	–	–	100-pin QFP
FDC37C78	Floppy Disk Controller	0 to 70	ISA	3.3V/5V	0	–	–	✓	–	–	48-pin TQFP
LPC47B272	Super I/O Controller with LPC Interface	0 to 70	LPC	3.3V	37	–	–	✓	–	–	100-pin QFP
LPC47M102	Super I/O Controller with LPC Interface	0 to 70	LPC	3.3V	37	–	–	✓	–	–	100-pin QFP
LPC47M107	I/O Controller Interface IC Enhanced Super I/O Controller	0 to 70	LPC	3.3V	37	–	–	✓	–	–	100-pin QFP
LPC47M112	Enhanced Super I/O Controller with LPC Interface	0 to 70	LPC	3.3V	37	–	–	✓	–	–	100-pin QFP
LPC47M182	Advanced I/O Controller with Motherboard Glue Logic	0 to 70	LPC	3.3V	13	–	–	✓	–	–	128-pin QFP
LPC47N217	Super I/O Controller with LPC Interface	0 to 70	LPC	3.3V	13	–	–	✓	–	–	56-pin QFN
LPC47N267	LPC Super I/O Controller with X-Bus Interface	0 to 70	LPC	3.3V	29	–	–	✓	–	–	100-pin STQFP
SIO1007	LPC Super I/O Controller with UART	0 to 70	LPC	3.3V	16	–	–	–	–	–	64-pin STQFP
SIO1028	LPC I/O Controller with Three Serial Ports	0 to 70	LPC	3.3V	24	–	–	–	–	–	64-pin TQFP
SIO10N268	I/O Controller for ISA or LPC Designs, X-Bus Interface, Memory and FWH Emulation	0 to 70	LPC or ISA	3.3V	33	–	–	✓	–	–	128-pin VTQN

TOUCH AND 3D GESTURE CONTROL: Capacitive Touch Controllers

Product	Input Channels	LED Drivers	Additional Features	Proximity Included	Interface	Voltage	Pin	Packages
CAP1114	14	11	Slider, reset and alert, automatic recalibration, base capacitance compensation	✓	I²C/SMBus	3–3.6V	32	QFN
CAP1188	8	8	Reset, wake and alert, automatic recalibration, base capacitance compensation	✓	I²C/SPI/SMSC BC-Link	3–3.6V	24	QFN
CAP1128	8	2	Reset, wake and alert, automatic recalibration, base capacitance compensation	✓	I²C/SPI/SMSC BC-Link	3–3.6V	20	QFN
CAP1166	6	6	Reset, wake and alert, automatic recalibration, base capacitance compensation	✓	I²C/SPI/SMSC BC-Link	3–3.6V	20	QFN
CAP1126	6	2	Reset, wake and alert, automatic recalibration, base capacitance compensation	✓	I²C/SPI/SMSC BC-Link	3–3.6V	16	QFN
CAP1133	3	3	Alert, automatic recalibration, base capacitance compensation	✓	I²C/SMBus	3–3.6V	10	DFN
CAP1106	6	0	Alert, automatic recalibration, base capacitance compensation	✓	I²C/SMSC BC-Link	3–3.6V	10	DFN
CAP1105	5	0	Automatic recalibration, base capacitance compensation	✓	SPI	3–3.6V	10	DFN
CAP1214	14	11	Slider, reset and alert, automatic recalibration, base capacitance compensation, audio output	✓	I²C/SMBus	3–3.6V	32	QFN
CAP1298	8	–	Alert, automatic calibration, base capacitance compensation	✓	I²C	3.3–5V	16	QFN
CAP1208	8	–	Alert, automatic calibration, base capacitance compensation	–	I²C	3.3–5V	16	QFN
CAP1296	6	–	Alert, automatic calibration, base capacitance compensation	✓	I²C	3.3–5V	10	QFN
CAP1206	6	–	Alert, automatic calibration, base capacitance compensation	–	I²C	3.3–5V	10	QFN
CAP1293	3	–	Alert, automatic calibration, base capacitance compensation	✓	I²C	3.3–5V	8	QFN
CAP1203	3	–	Alert, automatic calibration, base capacitance compensation	–	I²C	3.3–5V	8	QFN
MTCH101	1	–	Optimized for button replacement, adjustable sensitivity, noise rejection filters, low-power mode	–	Digital	2–5.5V	6	SOT-23
MTCH102	2	–	Optimized for button replacement, supports water-resistant designs, noise rejection filters, active guard, low-power mode	✓	GPIO	2.1–3.6V	8	MSOP, UDFN
MTCH105	5	–	Optimized for button replacement, supports water-resistant designs, noise rejection filters, active guard, low-power mode	✓	GPIO	2.1–3.6V	14/16	TSSOP, QFN
MTCH108	8	–	Optimized for button replacement, supports water-resistant designs, noise rejection filters, active guard, low-power mode	✓	GPIO	2.1–3.6V	20	SSOP, UQFN
MTCH112	2	–	Adjustable sensitivity, noide rejection filters, low power mode	–	I²C	1.8–3.3V	8	SOIC, DFN

TOUCH AND 3D GESTURE CONTROL: Capacitive Touchpads and Touch Screen Controllers

Product	Channels	Surface Gestures	Additional Features	Low Power	Interface	Voltage	Pin	Package
MTCH6102	15	✓	Projected capacitive touch controller, single touch and gestures, self capacitance, low power	✓	I²C	1.8–3.6	28	SSOP, UQFN
MTCH6301	13RX/18TX	✓	Projected capacitive touch controller, multi touch and gestures, self and mutual capacitance	–	I²C	2.4–3.6V	44	TQFP, QFN
MTCH6303	27RX/19TX	✓	Projected capacitive touch controller, multi touch and gestures, self and mutual capacitance	–	USB/I²C	2.6–3.6V	64	TQFP, QFN

TOUCH AND 3D GESTURE CONTROL: 3D Gesture Controllers

Product	Channels	Position Tracking	Additional Features	Proximity	Interface	Voltage	Pin	Package
MGC3030	5	–	Gesture port, auto wake/sleep, touch detection	✓	I²C/EOI (Gesture port)	3.3V	28	SSOP
MGC3130	5	✓	Gesture port, auto wake/sleep, touch detection	✓	I²C/EOI (Gesture port)	3.3V	28	QFN

TOUCH AND 3D GESTURE CONTROL: Resistive Touch Controllers

Product	Sensor	Report Rate	Additional Features	Resolution	Interface	Voltage	Pin	Package
AR1011	4, 5 and 8 wire	140 pps	Universal touch controller for analog resistive sensors with on-board calibration	1024 x 1024	UART	2.5–5V	20	QFN, SSOP, SOIC
AR1021	4, 5 and 8 wire	140 pps	Universal touch controller for analog resistive sensors with on-board calibration	1024 x 1024	I²C, SPI	2.5–5V	20	QFN, SSOP, SOIC
AR1100	4, 5 and 8 wire	140 pps	Universal touch controller for analog resistive sensors with on-board calibration	1024 x 1024	USB, RS-232	2.5–5V	20	QFN, SSOP, SOIC
AR1100BRD	4, 5 and 8 wire	140 pps	Production-ready AR1100 controller board with USB and RS-232 communication	1024 x 1024	USB, RS-232	2.5–5V	20	Controller Board

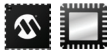
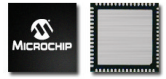
USB SECURITY

Product	Description	Processor Interface	# of Downstream Ports	Card Formats	Industrial Version	Package
SEC1110	Smart Card Controller	USB 2.0	–	Smart Card	✓	16-pin QFN
SEC1210	Smart Card Controller with Multi-Interface Support	USB 2.0	–	Smart Card x2	✓	24-pin QFN

TERMS AND DEFINITIONS

1 KB 1024 bytes
1 Kw 1024 words
18F/PIC18 16-bit instruction word: 75/83 instructions
ADC Analog to Digital Converter
ADC²/ADCC ADC with Computation
AngTMR Angular Timer
AUSART Addressable Universal Synchronous Asynchronous Receiver Transceiver
BL/Baseline 12-bit instruction word: 33 instructions
BOR/PBOR Brown Out Reset/Programmable Brown Out Reset
BTLE Bluetooth® Low Energy
CAN Controller Area Network
CCP/ECCP Capture Compare PWM/Enhanced Capture Compare PWM
CLC Configurable Logic Cell
COG Complementary Output Generator
Comp Capacitive Sensing implemented via Comparator
CRC/SCAN Cyclical Redundancy Check with Memory Scanner
CTMU mTouch®: Charge Time Measurement Unit
CVD Charge Voltage Divide (Capacitive Sensing Implemented via ADC)
CWG Complementary Waveform Generator
DAC Digital-to-Analog Converter
DOZE Low Power Doze Mode
DSM Data Signal Modulator
dsPIC® 16-bit Core with DSP
EBL Enhanced Baseline
EEPROM Electrically Erasable Programmable Read Only Memory
EMR/Enhanced Mid-Range 14-bit instruction word: 49 instructions (denoted as PIC1XF1XXX)
ESD Electrostatic Discharge
EUSART Enhanced Universal Synchronous Asynchronous Receiver Transceiver
EWDT/WDT Extended Watch Dog Timer/Watch Dog Timer
HC I/O High-Current I/O
HEF High-Endurance Flash (128B of non-volatile data storage)
HLT Hardware Limit Timer
HV High Voltage
ICD In-Circuit Debug
ICE In-Circuit Emulation
ICSP™ In-Circuit Serial Programming™
IDE Integrated Development Environment
IDLE Low Power Idle Mode
Inst Amp Instrumentation Amplifier
LCD Liquid Crystal Display
LDO Low Drop-Out voltage regulator
LF Low-Power Flash
LPBOR Low-Power Brown Out Reset
MI²C/I²C Master Inter-Integrated Circuit bus/Inter-Integrated Circuit bus
MathACC Math Accelerator
MIPS Million Instructions Per Second
MR/Mid-Range 14-bit instruction word: 35 instructions
MSSP/SSP Master/Synchronous Serial Port (I²C & SPI Peripheral)
mTouch Proprietary Touch Sensing Technology
NCO Numerically Controlled Oscillator
Op Amp Operational Amplifier
PIC10/12/16/18 8-bit Core
PIC24 16-bit Core
PIC32 32-bit Core
PLVD Programmable Low Voltage Detect
PMD Low Power Peripheral Module Disable
PMP Parallel Master Port
POR/POOR Power ON Reset/Power ON/OFF Reset
PPS Peripheral Pin Select
PRG Programmable Ramp Generator
PSMC Programmable Switch Mode Controller (16-bit PWM)
PWM Pulse Width Modulation
QEI Quadrature Encoder Interface
RAM Random Access Memory
RTCC Real-Time Clock Calendar
SlopeComp Slope Compensation
SMT 24-bit Signal Measurement Timer
Source/Sink Current All Products Support 25 mA per I/O
SR Latch Set Reset Latch
SRAM Static Random Access Memory
SPI Serial Peripheral Interface
TEMP Temperature Indicator
T1G Timer 1 Gate
USART Universal Synchronous Asynchronous Receiver Transceiver
USB Universal Serial Bus
USB (Full Speed) 12 Mb/s Data Rate
USB OTG USB On-The-Go
WWDT Window Watch Dog Timer
XLP nanoWatt XLP eXtreme Low Power Technology
ZCD Zero Cross Detection

Product Packages

Small Outline	Bumped Die (WLCSP) Die/Wafer (WLCSP)  3-lead SC70 (LB) 5-lead SC70 (LT)  3-lead SOT-23 (TT/CB)  5-lead SOT-23 (OT)  6-lead SOT-23 (OT/CH)  3-SOT-223 (DB)  4-lead SOT-143 (RC)  3-lead SOT-89  3-lead DDPAK (EB)  5-lead DDPAK (ET)  3-lead TO-92 (TO/ZB)  5-lead TO-220 (AT)
Dual Flat No Lead (DFN)	 8-lead DFN (MC) 2 × 3 × 0.9 mm  8-lead TDFN (MN) 2 × 3 × 0.75 mm  8-lead UDFN (MU) 2 × 3 × 0.5 mm  8-lead DFN (MF) 3 × 3 × 0.9 mm  8-lead DFN (MD) 4 × 4 × 0.9 mm  8-lead DFN (MF) 6 × 5 × 0.9 mm
Quad Flat No Lead (QFN)	 16-lead QFN (MG) 3 × 3 × 0.9 mm  16-lead QFN (ML) 4 × 4 × 0.9 mm  20-lead QFN (ML) 4 × 4 × 0.9 mm  20-lead QFN (MQ) 5 × 5 × 0.9 mm  28-lead UQFN (MV) 4 × 4 × 0.5 mm  28-lead QFN (MQ) 5 × 5 × 0.9 mm  28-lead QFN (MM & ML) 6 × 6 × 0.9 mm  40-lead UQFN (MV) 5 × 5 × 0.5 mm  44-lead QFN (ML) 8 × 8 × 0.9 mm  48-lead UQFN (MV) 6 × 6 × 0.5 mm  64-lead QFN (MR, RG) 9 × 9 × 0.9 mm
Plastic Shrink Small Outline (SSOP)	 8-lead MSOP (MS)  10-lead MSOP (UN)  16-lead QSOP (QR)  20-lead SSOP (SS)  28-lead SSOP (SS)
Plastic Thin Shrink Small Outline (TSSOP)	 8-lead TSSOP (ST)  14-lead TSSOP (ST)  20-lead TSSOP (ST)
Plastic Small Outline (SOIC)	 8-lead SOIC (SN) 8-lead SOIC (SM) 14-lead SOIC (SL) 16-lead SOIC (SL) 18-lead SOIC (SO) 20-lead SOIC (SO) 28-lead SOIC (SO)
Very Thin Thermal Leadless Array (VTLA)	36-lead VTLA (TL) 5 × 5 × 0.9 mm 44-lead VTLA (TL) 6 × 6 × 0.9 mm 124-lead VTLA (TL) 9 × 9 × 0.9 mm

Packages are shown approximate size.
Additional packages are available: contact your local Microchip sales office for information.
For detailed dimensions, view our Package Drawing and Dimensions Specification at: www.microchip.com/packaging.

Product Packages

Plastic Thin Quad Flatpack (TQFP)


44-lead TQFP (PT)
10 × 10 × 1 mm


64-lead TQFP (PT)
10 × 10 × 1 mm


64-lead TQFP (PF)
14 × 14 × 1 mm


80-lead TQFP (PT)
12 × 12 × 1 mm


80-lead TQFP (PF)
14 × 14 × 1 mm


100-lead TQFP (PT)
12 × 12 × 1 mm


100-lead TQFP (PF)
14 × 14 × 1 mm


144-lead TQFP (PH)
16 × 16 × 1 mm

Plastic Quad Flatpack (QFP)


32-lead LQFP (LQ)
7 × 7 × 1.4 mm


44-lead MQFP (PQ)
10 × 10 × 2 mm

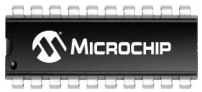

144-lead LQFP (PL)
20 × 20 × 1.4 mm

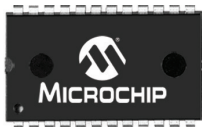
Plastic Dual In-Line (PDIP)


8-lead PDIP (P)

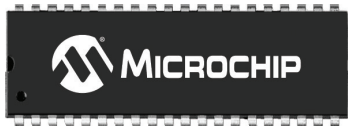

14-lead PDIP (P)


18-lead PDIP (P)

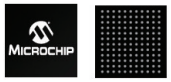

20-lead PDIP (P)

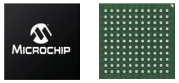

24-lead PDIP (P)

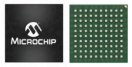

28-lead SPDIP (SP)


40-lead PDIP (P)

Ball Grid Array (BGA)


100-ball BGA (BG)
10 × 10 × 1.1 mm


121-ball BGA (BG)
10 × 10 × 0.8 mm


100-ball TFBGA*
7 × 7 × 1.2 mm

Additional Package Options

NOR Flash Memory

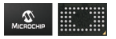

8-lead WSON (A6/QAE)
5 × 6 mm


40-lead TSOP (W8/EIE)
10 × 20 mm


32-lead PDIP (P2/PHE)
600 mil


32-lead PLCC (PE/NHE)
0.452" × 0.552"


48-lead TSOP (W9/EKE)
12 × 20 × 1.2 mm


48-lead WFBGA (3T/MAQE)
4 × 6 × 0.73 mm


48-lead TFBGA (8T/B3KE)
6 × 8 × 1.2 mm

RF Devices

6-lead XSON
(QX/QX6E)
1.5 × 1.5 × 0.5 mm


6-lead UQFN
(QU/QU6E)
3 × 1.6 × 0.5 mm


8-lead XSON
(Q7/QX8E)
2 × 2 × 0.5 mm


16-lead LFLGA
(MF/MLCF)
4 × 4 × 1.4 mm

8051-based Microcontrollers


44-lead PLCC (T2/NJE)
0.652 × 0.652 in

*For availability please contact your local Microchip Sales Office.

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Additional packages are available: contact your local Microchip sales office for information.
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