MICROCHIP

Focus Product Selector Guide

Microcontrollers • Digital Signal Controllers • Analog • Memory • Wireless

www.microchip.com

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

Based on a powerful RISC core, the PIC microcontroller architecture provides users with an easy migration path from 6 to 100 pins among all families, with little or no code change required. Advanced features include sophisticated timing peripherals, integrated analog-to-digital converters and communications peripherals (Ethernet/ I²C™/SPI/USB/CAN ports, LIN USARTs, op amp and digital-to-analog converters). 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 105 DMIPS and offers ample code and data space capabilities with up to 512 KB Flash and 128 KB RAM. 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 & 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.

RF Front End Products

Microchip's selection of RF front end devices enhance the performance and operating range of wireless products at 2.4 and 5 GHz. SST Power amplifier products provide high linear output power as required for 802.11 (Wi-Fi®) and 802.15.4 (ZigBee®) standards with industry leading efficiency and reliability. Our selection of integrated Front End Modules (FEM), combines the function of power amplifier with switches, Low Noise Amplifier (LNA) and filters into a single space saving package. The FEM reduces board complexity and sizes. For more information visit: www.microchip.com/analog.

Wireless Products

Microchip offers radio-frequency products for adding wireless connectivity to embedded PIC microcontroller and dsPIC DSC-based designs for the following technologies: IEEE 802.15.4/ ZigBee, Sub-GHz RF, Bluetooth® and IEEE 802.11/Wi-Fi. For more information visit: www.microchip.com/wireless.

Memory Products

Microchip's broad portfolio of memory devices include 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.

Real-Time Clocks

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

MOST®

Media Oriented Systems Transport (MOST) is the accepted standard in high-bandwidth automotive infotainment systems. MOST 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/automotivesmsc.

PC System & I/O Controllers

Microchip offers a full line of mobile PC solutions including embedded controllers, keyboard controllers (KBC), mobile I/O controllers and docking products. For more information visit: www.microchip.com/pcsystemscontrollerssmsc.

Table of Contents

8-bit PIC Microcontrollers 3
16-bit PIC Microcontrollers 10
dsPIC DSC Families 14
32-bit PIC Microcontrollers 17
Analog and Interface Products 19
Real Time Clock/Calendar (RTCC) 24
Serial Memory Products 25
Serial Flash Memory 27
LPC Firmware Flash/Firmware Hub Flash Memory 27
Parallel Flash Memory 28
Wireless Products 29
USB Products 30
Ethernet and Networking Products 32
Automotive Products 33
PC System & I/O Controllers 35
Capacitive Touch Sensors 36
Wireless Audio 36
Security 37
Terms and Definitions 37
Packaging 38

8-BIT PIC® MICROCONTROLLERS

	Product	Released (R) Not Released (NR)	Pins		Core	Memory				Voltage Range	Operating Speed		LCD Segments	mTouch™ Channels	Analog Sensing & Measurement							Digital									Communication						Monitors		SR-Latch	Timer 1 Gate	5 ku Pricing†	Packages (Designator)	Special Features
			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	Comparators	Charge Time Measurement Unit	Op Amp	DAC (5b/8b/9b)	PWM	CCP	ECCP	CWG/COG	NCO	PSMC	CLC	8-bit Timer	16-bit Timer	AUSART	EUSART	I²C™/SPI	Ethernet (MAC/PHY)	USB 2.0 Device	CAN	BOR/PBOR	PLVD				
6-Pin	PIC10F200	R	6	4	BL	0.375 KB 0.25 Kw	–	16	–	2V–5.5V	4 MHz	4 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	$0.30	PDIP (P), 2 × 3 DFN (MC), SOT-23 (OT)	Smallest form-factor
	PIC10F202	R	6	4	BL	0.75 KB 0.50 Kw	–	24	–	2V–5.5V	4 MHz	4 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	$0.33	PDIP (P), 2 × 3 DFN (MC), SOT-23 (OT)	Smallest form-factor
	PIC10F204	R	6	4	BL	0.375 KB 0.25 Kw	–	16	–	2V–5.5V	4 MHz	4 MHz	–	1	–	–	–	1	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	$0.33	PDIP (P), 2 × 3 DFN (MC), SOT-23 (OT)	Smallest form-factor
	PIC10F206	R	6	4	BL	0.75 KB 0.50 Kw	–	24	–	2V–5.5V	4 MHz	4 MHz	–	1	–	–	–	1	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	$0.36	PDIP (P), 2 × 3 DFN (MC), SOT-23 (OT)	Smallest form-factor
	PIC10F220	R	6	4	BL	0.375 KB 0.25 Kw	–	16	–	2V–5.5V	8 MHz	4 MHz, 8 MHz	–	2	2	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	$0.36	PDIP (P), 2 × 3 DFN (MC), SOT-23 (OT)	Smallest form-factor
	PIC10F222	R	6	4	BL	0.75 KB 0.50 Kw	–	23	–	2V–5.5V	8 MHz	4 MHz, 8 MHz	–	2	2	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	$0.39	PDIP (P), 2 × 3 DFN (MC), SOT-23 (OT)	Smallest form-factor
	PIC10F320	R	6	4	MR	0.4375 KB 0.25 Kw	RW	32	–	1.8V–5.5V	16 MHz	16 MHz	–	3	3	–	–	–	–	–	–	2	–	–	1/0	1	–	1	2	1	–	–	–	–	–	–	–	SW◊	–	–	$0.39	PDIP (P), 2 × 3 DFN (MC), SOT-23 (OT)	Temp*
	PIC10F322	R	6	4	MR	0.875 KB 0.50 Kw	RW	64	–	1.8V–5.5V	16 MHz	16 MHz	–	3	3	–	–	–	–	–	–	2	–	–	1/0	1	–	1	2	1	–	–	–	–	–	–	–	SW◊	–	–	$0.42	PDIP (P), 2 × 3 DFN (MC), SOT-23 (OT)	Temp*
8-Pin	PIC12F508	R	8	6	BL	0.75 KB 0.50 Kw	–	25	–	2V–5.5V	4 MHz	4 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	$0.41	PDIP (P), SOIC (SN), MSOP (MS), 2 × 3 DFN (MC)	
	PIC12F509	R	8	6	BL	1.5 KB 1 Kw	–	41	–	2V–5.5V	4 MHz	4 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	$0.45	PDIP (P), SOIC (SN), MSOP (MS), 2 × 3 DFN (MC)	
	PIC12F510	R	8	6	BL	1.5 KB 1 Kw	–	38	–	2V–5.5V	8 MHz	4 MHz, 8 MHz	–	3	3	–	–	1	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	$0.49	PDIP (P), SOIC (SN), MSOP (MS), 2 × 3 DFN (MC)	
	PIC12F519	R	8	6	BL	1.5 KB 1 Kw	–	41	64	2V–5.5V	8 MHz	4 MHz, 8 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	$0.49	PDIP (P), SOIC (SN), MSOP (MS), 2 × 3 DFN (MC)	Lowest cost Data EE
	PIC12F1501	R	8	6	EMR	1.75 KB 1 Kw	RW	64	–	1.8V–5.5V	20 MHz	16 MHz	–	1	–	4	–	1	–	–	–	4	–	–	1/0	1	–	1	2	1	–	–	–	–	–	–	PBOR	SW◊	–	✓	$0.49	PDIP (P), SOIC (SO), MSOP (MS), 2 × 3 DFN (MC)	Temp*
	PIC12F609	R	8	6	MR	1.75 KB 1 Kw	–	64	–	2V–15V	20 MHz	4 MHz, 8 MHz	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–	BOR	SW◊	–	✓	$0.52	PDIP (P), SOIC (SN), MSOP (MS), 4 × 4 DFN (MD), 3 × 3 DFN (MF)	
	PIC12F615	R	8	6	MR	1.75 KB 1 Kw	–	64	–	2V–15V	20 MHz	4 MHz, 8 MHz	–	4	–	4	–	1	–	–	–	–	–	1	–	–	–	–	2	1	–	–	–	–	–	–	BOR	SW◊	–	✓	$0.55	PDIP (P), SOIC (SN), MSOP (MS), 4 × 4 DFN (MD), 3 × 3 DFN (MF)	
	PIC12F617	R	8	6	MR	3.5 KB 2 Kw	RW	128	–	2V–5.5V	20 MHz	4 MHz, 8 MHz	–	4	–	4	–	1	–	–	–	–	–	1	–	–	–	–	2	1	–	–	–	–	–	–	BOR	SW◊	–	✓	$0.59	PDIP (P), SOIC (SN), MSOP (MS), 3 × 3 DFN (MF)	
	PIC12F752	R	8	6	MR	1.75 KB 1 Kw	RW	64	–	2V–5.5V	20 MHz	4 MHz, 8 MHz	–	4	–	4	–	2	–	–	1/0/0	–	1	–	0/1	–	–	–	3	1	–	–	–	–	–	–	BOR	SW◊	–	✓	$0.59	PDIP (P), SOIC (SN), 3 × 3 DFN (MF)	HV Option
	PIC12LF1552 XLP	R	8	6	EMR	3.5 KB 2 Kw	RW	256	–	1.8V–3.6V	32 MHz	16 MHz	–	5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	1	–	–	–	BOR	–	–	–	$0.66	PDIP (P), MSOP (MS), SOIC (SN), 2 × 3 DFN (MC)	Hardware CVD
	PIC12F629	R	8	6	MR	1.75 KB 1 Kw	–	64	128	2V–5.5V	20 MHz	4 MHz	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–	BOR	SW◊	–	✓	$0.70	PDIP (P), SOIC (SN), 4 × 4 DFN (MD), 6 × 5 DFN (MF)	
	PIC12F1822 XLP	R	8	6	EMR	3.5 KB 2 Kw	RW	128	256	1.8V-5.5V	32 MHz	32 MHz, 31 kHz	–	4	–	4	–	1	–	–	–	–	–	1	–	–	–	–	2	1	–	1	1	–	–	–	BOR	SW◊	–	✓	$0.73	PDIP (P), SOIC (SN), 3 × 3 DFN (MF)	Temp*
	PIC12F675	R	8	6	MR	1.75 KB 1 Kw	–	64	128	2V–5.5V	20 MHz	4 MHz	–	3	–	3	–	1	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–	BOR	SW◊	–	✓	$0.77	PDIP (P), SOIC (SN), 4 × 4 DFN (MD), 6 × 5 DFN (MF)	
	PIC12F1840 XLP	R	8	6	EMR	7 KB 4 Kw	RW	256	256	1.8V-5.5V	32 MHz	32 MHz, 31 KHz	–	–	–	4	–	1	–	–	–	–	–	1	–	–	–	–	2	1	–	1	1	–	–	–	PBOR	SW	✓	✓	$0.78	PDIP (P), SOIC (SN), 6 × 5 DFN (MF)	DSM, Temp*
	PIC12F635	R	8	6	MR	1.75 KB 1 Kw	–	64	128	2V–5.5V	20 MHz	8 MHz, 31 kHz	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–	BOR	✓	–	✓	$0.84	PDIP (P), SOIC (SN), 4 × 4 DFN (MD)	KEELOQ®
	PIC12F683	R	8	6	MR	3.5 KB 2 Kw	–	128	256	2V–5.5V	20 MHz	8 MHz, 31 kHz	–	3	–	3	–	1	–	–	–	–	1	–	–	–	–	–	2	1	–	–	–	–	–	–	PBOR	SW◊	–	✓	$0.91	PDIP (P), SOIC (SN), 4 × 4 DFN (MD)	
14-Pin	PIC16F753	NR	14	12	MR	3.5 KB 2 Kw	RW	128	–	2V–5.5V	20 MHz	4/8 MHz	–	8	–	8	–	2	–	1	0/0/1	–	1	1	0/1	–	–	–	3	1	–	–	–	–	–	–	BOR	SW◊	–	✓	call for pricing	PDIP (P), SOIC (SL), TSSOP (ST), 4 × 4 QFN (ML)	HV Option, Slope compensation
	PIC16F505	R	14	12	BL	1.5 KB 1 Kw	–	72	–	2V–5.5V	20 MHz	4 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	$0.48	PDIP (P), SOIC (SL), TSSOP (ST), 3 × 3 QFN (MG)	
	PIC16F506	R	14	12	BL	1.5 KB 1 Kw	–	67	–	2V–5.5V	20 MHz	4/8 MHz	–	4	4	–	–	2	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	$0.52	PDIP (P), SOIC (SL), TSSOP (ST), 3 × 3 QFN (MG)	
	PIC16F526	R	14	12	BL	1.5 KB 1 Kw	–	67	64	2V–5.5V	20 MHz	4/8 MHz	–	4	4	–	–	2	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	$0.55	PDIP (P), SOIC (SL), TSSOP (ST), 3 × 3 QFN (MG)	Lowest cost Data EE
	PIC16F1503	R	14	12	EMR	3.5 KB 2 Kw	RW	128	–	1.8V–5.5V	20 MHz	16 MHz	–	2	–	8	–	2	–	–	–	4	–	–	1/0	1	–	1	2	1	–	–	1	–	–	–	PBOR	SW◊	–	✓	$0.55	PDIP (P), SOIC (SL), SSOP (SS), 3 × 3 QFN (MG)	Temp*
	PIC16F610	R	14	12	MR	1.75 KB 1 Kw	–	64	–	2V–15V	20 MHz	4/8 MHz	–	–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–	BOR	–	✓	✓	$0.59	PDIP (P), SOIC (SL), TSSOP (ST), 4 × 4 QFN (ML)	
	PIC16F616	R	14	12	MR	3.5 KB 2 Kw	–	128	–	2V–15V	20 MHz	4/8 MHz	–	8	–	8	–	2	–	–	–	–	–	1	–	–	–	–	2	1	–	–	–	–	–	–	BOR	SW◊	✓	✓	$0.69	PDIP (P), SOIC (SL), TSSOP (ST), 4 × 4 QFN (ML)	
	PIC16F1823 XLP	R	14	12	EMR	3.5 KB 2 Kw	RW	128	256	1.8V-5.5V	32 MHz	32 MHz, 31 kHz	–	8	–	8	–	2	–	–	–	–	–	1	–	–	–	–	2	1	–	1	1	–	–	–	BOR	SW◊	✓	✓	$0.78	PDIP (P), SOIC (SL), TSSOP (ST), 4 × 4 QFN (ML)	Temp*

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.

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	LCD Segments	mTouch™ Channels	Analog Sensing & Measurement: 8-bit ADC	10-bit ADC	12-bit ADC	Comparators	Charge Time Measurement Unit	Op Amp	DAC (5b/8b/9b)	Digital: PWM	CCP	ECCP	CWG/COG	NCO	PSMC	CLC	8-bit Timer	16-bit Timer	Communication: AUSART	EUSART	I²C™/SPI	Ethernet (MAC/PHY)	USB 2.0 Device	CAN	Monitors: BOR/PBOR	PLVD	SR-Latch	Timer 1 Gate	5 ku Pricing†	Packages (Designator)	Special Features
14-Pin (Cont.)	PIC16F1824 XLP	R	14	12	EMR	7 KB 4 Kw	RW	256	256	1.8V–5.5V	32 MHz	32 MHz, 31 kHz	–	8	–	8	–	2	–	–	–	–	2	2	–	–	–	–	4	1	–	1	1	–	–	–	BOR	SW◊	✓	✓	$0.84	PDIP (P), SOIC (SL), TSSOP (ST), 4 × 4 QFN (ML)	DSM, Temp*
	PIC16F630	R	14	12	MR	1.75 KB 1 Kw	–	64	128	2V–5.5V	20 MHz	4 MHz	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–	BOR	–	–	✓	$0.91	PDIP (P), SOIC (SL), TSSOP (ST), 4 × 4 QFN (ML)	
	PIC16F1454 XLP	R	14	12	EMR	7 KB 4 Kw	RW	512	–	1.8V–5.5V	48 MHz	48 MHz, 31 KHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1	–	1	1	–	✓	–	PBOR	SW	–	✓	$0.91	PDIP (P), TSSOP (ST), SOIC (SL), 4 × 4 QFN (ML)	Crystal Free USB
	PIC16F636	R	14	12	MR	3.5 KB 2 Kw	–	128	256	2V–5.5V	20 MHz	8 MHz, 31 kHz	–	–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–	BOR	–	–	✓	$0.92	PDIP (P), SOIC (SL), TSSOP (ST), 4 × 4 QFN (ML)	KEELOQ®
	PIC16F1825 XLP	R	14	12	EMR	14 KB 8 Kw	RW	1024	256	1.8V–5.5V	32 MHz	32 MHz, 31 kHz	–	8	–	8	–	2	–	–	–	–	2	2	–	–	–	–	4	1	–	1	1	–	–	–	BOR	SW◊	✓	✓	$0.92	PDIP (P), SOIC (SL), TSSOP (ST), 4 × 4 QFN (ML)	DSM, Temp*
	PIC16F676	R	14	12	MR	1.75 KB 1 Kw	–	64	128	2V–5.5V	20 MHz	4 MHz	–	8	–	8	–	1	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–	BOR	–	–	✓	$0.98	PDIP (P), SOIC (SL), TSSOP (ST), 4 × 4 QFN (ML)	
	PIC16F684	R	14	12	MR	3.5 KB 2 Kw	–	128	256	2V–5.5V	20 MHz	8 MHz, 31 kHz	–	8	–	8	–	2	–	–	–	–	–	1	–	–	–	–	2	1	–	–	–	–	–	–	BOR	–	–	✓	$0.98	PDIP (P), SOIC (SL), TSSOP (ST), 4 × 4 QFN (ML)	
	PIC16F688	R	14	12	MR	7 KB 4 Kw	R	256	256	2V–5.5V	20 MHz	8 MHz, 31 kHz	–	8	–	8	–	2	–	–	–	–	–	–	–	–	–	–	1	1	–	1	–	–	–	–	BOR	–	–	✓	$1.04	PDIP (P), SOIC (SL), TSSOP (ST), 4 × 4 QFN (ML)	
	PIC16F1455 XLP	R	14	12	EMR	14 KB 8 Kw	RW	1024	–	1.8V–5.5V	48 MHz	48 MHz, 31 KHz	–	5	–	5	–	2	–	–	–	2	–	–	–	–	–	–	2	1	–	1	1	–	✓	–	PBOR	SW	–	✓	$1.04	PDIP (P), TSSOP (ST), SOIC (SL), 4 × 4 QFN (ML)	Crystal Free USB
	PIC16F1705 XLP	NR	14	12	EMR	14 KB	RW	1024	–	1.8V–5.5V	32 MHz	32 MHz	–	12	–	12	–	2	–	2	0/1/0	2	2	0	0/1	–	–	4	4	1	–	1	1	–	–	–	BOR	–	–	✓	call for pricing	PDIP (P), SOIC (SL), TSSOP (ST), 4 × 4 QFN (ML)	
18-Pin	PIC16F54	R	18	12	BL	0.75 KB 0.50 Kw	–	25	–	2V–5.5V	20 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	$0.39	PDIP (P), SOIC (SO), SSOP (SS)	
	PIC16F1826 XLP	R	18	16	EMR	3.5 KB 2 Kw	RW	256	256	1.8V–5.5V	32 MHz	32 MHz, 31 kHz	–	12	–	12	–	2	–	–	–	–	–	1	–	–	–	–	2	1	–	1	1	–	–	–	BOR	SW◊	✓	✓	$0.97	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)	DSM, Temp*
	PIC16F1827 XLP	R	18	16	EMR	7 KB 4 Kw	RW	384	256	1.8V–5.5V	32 MHz	32 MHz, 31 kHz	–	12	–	12	–	2	–	–	–	–	2	2	–	–	–	–	4	1	–	1	2	–	–	–	BOR	SW◊	✓	✓	$1.04	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)	DSM, Temp*
	PIC16F1847 XLP	R	18	16	EMR	14 KB 8 Kw	RW	1024	256	1.8V–5.5V	32 MHz	32 MHz, 31 KHz	–	–	–	12	–	2	–	–	–	–	2	2	–	–	–	–	4	1	–	1	2	–	–	–	PBOR	SW	✓	✓	$1.09	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML), UQFN (MV)	DSM, Temp*
20-Pin	PIC16F527	R	20	18	EBL	1.5 KB 1 Kw	RW	68	64	2V–5.5V	20 Mhz	8 MHz	–	–	8	–	–	2	–	2	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	BOR	–	–	–	$0.49	PDIP (P), 4 × 4 QFN (ML), SSOP (SS), SOIC (SO)	
	PIC16F1507	R	20	18	EMR	3.5 KB 2 Kw	RW	128	–	1.8V–5.5V	20 MHz	16 MHz	–	–	–	12	–	–	–	–	–	4	–	–	1/0	1	–	1	2	1	–	–	–	–	–	–	PBOR	SW	–	✓	$0.69	PDIP (P), SOIC (SO), SSOP, 4 × 4 QFN (ML)	Temp*
	PIC16F720	R	20	18	MR	3.5 KB 2 Kw	RW	128	–	1.8V–5.5V	16 MHz	16 MHz, 500 kHz	–	12	12	–	–	–	–	–	–	–	1	–	–	–	–	–	2	1	1	–	1	–	–	–	BOR	SW◊	–	✓	$0.77	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)	Temp*
	PIC16F1508 XLP	R	20	18	EMR	7 KB 4 Kw	RW	256	–	1.8V–5.5V	20 MHz	16 MHz	–	2	–	12	–	2	–	–	–	4	–	–	1/0	1	–	1	2	1	–	1	1	–	–	–	PBOR	SW	–	✓	$0.77	PDIP (P), SOIC (SO), SSOP, 4 × 4 QFN (ML)	Temp*
	PIC16F1509 XLP	R	20	18	EMR	14 KB 8 Kw	RW	512	–	1.8V–5.5V	20 MHz	16 MHz	–	2	–	12	–	2	–	–	–	4	–	–	1/0	1	–	1	2	1	–	1	1	–	–	–	PBOR	SW	–	✓	$0.81	PDIP (P), SOIC (SO), SSOP, 4 × 4 QFN (ML)	Temp*
	PIC16F721	R	20	18	MR	7 KB 4 Kw	RW	256	–	1.8V–5.5V	16 MHz	16 MHz, 500 kHz	–	12	12	–	–	–	–	–	–	–	1	–	–	–	–	–	2	1	1	–	1	–	–	–	BOR	SW◊	–	✓	$0.84	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)	Temp*
	PIC16F631	R	20	18	MR	1.75 KB 1 Kw	R	64	128	2V–5.5V	20 MHz	8 MHz, 31 kHz	–	–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–	BOR	SW◊	✓	✓	$0.91	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)	
	PIC16F677	R	20	18	MR	3.5 KB 2 Kw	R	128	256	2V–5.5V	20 MHz	8 MHz, 31 kHz	–	12	–	12	–	2	–	–	–	–	–	–	–	–	–	–	1	1	–	–	1	–	–	–	BOR	SW◊	✓	✓	$0.99	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)	
	PIC16F1828 XLP	R	20	18	EMR	7 KB 4 Kw	RW	256	256	1.8V–5.5V	32 MHz	32 MHz, 31 kHz	–	12	–	12	–	2	–	–	–	–	2	2	–	–	–	–	4	1	–	1	1	–	–	–	BOR	SW◊	✓	✓	$0.99	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)	DSM, Temp*
	PIC16F1829 XLP	R	20	18	EMR	14 KB 8 Kw	RW	1024	256	1.8V–5.5V	32 MHz	32 MHz, 31 kHz	–	12	–	12	–	2	–	–	–	–	2	2	–	–	–	–	4	1	–	1	2	–	–	–	BOR	SW◊	✓	✓	$1.06	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)	DSM, Temp*
	PIC16F687	R	20	18	MR	3.5 KB 2 Kw	R	128	256	2V–5.5V	20 MHz	8 MHz, 31 kHz	–	12	–	12	–	2	–	–	–	–	–	–	–	–	–	–	1	1	–	1	1	–	–	–	BOR	SW◊	✓	✓	$1.07	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)	
	PIC16F785	R	20	18	MR	3.5 KB 2 Kw	–	128	256	2V–15V	20 MHz	8 MHz, 31 kHz	–	12	–	12	–	2	–	2	–	2	1	–	–	–	–	–	2	1	–	–	–	–	–	–	BOR	SW◊	–	✓	$1.12	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)	
	PIC16F685	R	20	18	MR	7 KB 4 Kw	R	256	256	2V–5.5V	20 MHz	8 MHz, 31 kHz	–	12	–	12	–	2	–	–	–	–	–	1	–	–	–	–	2	1	–	–	–	–	–	–	BOR	SW◊	✓	✓	$1.13	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)	
	PIC16F689	R	20	18	MR	7 KB 4 Kw	R	256	256	2V–5.5V	20 MHz	8 MHz, 31 kHz	–	12	–	12	–	2	–	–	–	–	–	–	–	–	–	–	1	1	–	1	1	–	–	–	BOR	SW◊	✓	✓	$1.13	PDIP (P), 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.
* Integrated Temperature Indicator: Reference Application Note AN1333 for implementation.
XLP eXtreme Low Power variants available.

8-BIT PIC® MICROCONTROLLERS

	Product	Released (R) Not Released (NR)	Pins		Memory				Voltage Range	Operating Speed		LCD Segments	mTouch™ Channels	Analog Sensing & Measurement							Digital									Communication						Monitors		SR-Latch	Timer 1 Gate	5 ku Pricing†	Packages (Designator)	Special Features
			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	Comparators	Charge Time Measurement Unit	Op Amp	DAC (5b/8b/9b)	PWM	CCP	ECCP	CWG/COG	NCO	PSMC	CLC	8-bit Timer	16-bit Timer	AUSART	EUSART	I²C™/SPI	Ethernet (MAC/PHY)	USB 2.0 Device	CAN	BOR/PBOR	PLVD					
20-Pin (Cont.)	PIC16F1459 XLP	R	20	18	14 KB 8 Kw	RW	1024	–	1.8V–5.5V	48 MHz	48 MHz, 31 KHz	–	9	–	9	–	2	–	–	–	2	–	–	–	–	–	–	2	1	–	1	1	–	✓	–	PBOR	SW◊	–	✓	$1.18	PDIP (P), SOIC (SO), SSOP (SS), 4 × 4 QFN (ML)	Crystal Free USB
	PIC16F690	R	20	18	7 KB 4 Kw	R	256	256	2V–5.5V	20 MHz	8 MHz, 31 kHz	–	12	–	12	–	2	–	–	–	–	–	1	–	–	–	–	2	1	–	1	1	–	–	–	BOR	SW◊	✓	✓	$1.20	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)	
	PIC18F13K22 XLP	R	20	18	8 KB 4 Kw	RW	256	256	1.8V–5.5V	64 MHz	64 MHz, 31 kHz	–	12	–	12	–	2	–	–	–	–	–	1	–	–	–	–	1	3	–	1	1	–	–	–	PBOR	SW◊	✓	–	$1.33	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)	Temp*
	PIC18F13K50 XLP	R	20	15	8 KB 4 Kw	RW	512	256	1.8V–5.5V	48 MHz	32 MHz, 31 kHz	–	9	–	9	–	2	–	–	–	–	–	1	–	–	–	–	1	3	–	1	1	–	✓	–	PBOR	SW◊	✓	–	$1.39	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)	Temp*
	PIC18F14K22 XLP	R	20	18	16 KB 8 Kw	RW	512	256	1.8V–5.5V	64 MHz	64 MHz, 31 kHz	–	12	–	12	–	2	–	–	–	–	–	1	–	–	–	–	1	3	–	1	1	–	–	–	PBOR	SW◊	✓	–	$1.47	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)	Temp*
	PIC18F14K50 XLP	R	20	15	16 KB 8 Kw	RW	768	256	1.8V–5.5V	48 MHz	32 MHz, 31 kHz	–	9	–	9	–	2	–	–	–	–	–	1	–	–	–	–	1	3	–	1	1	–	✓	–	PBOR	SW◊	✓	–	$1.53	PDIP (P), SOIC (SO), SSOP (SS), QFN (ML)	Temp*
	PIC16F1709 XLP	NR	20	18	EMR	RW	1024	–	1.8V–5.5V	32 MHz	32 MHz	–	12	–	12	–	2	–	2	0/1/0	2	2	0	0/1	–	–	4	4	1	–	1	1	–	–	–	BOR	–	–	✓	call for pricing	PDIP (P), SOIC (SO), SSOP (SS), 4 × 4 QFN (ML)	
28-Pin	PIC16F570	NR	28	25	3 KB 2 Kw	RW	132	64	2V–5.5V	20 MHz	8 MHz	–	–	8	–	–	2	–	2	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	BOR	–	–	–	call for pricing	SPDIP (P), 6 × 6 QFN (ML), SSOP (SS), SOIC (SO)	
	PIC16F57	R	28	20	3 KB 2 Kw	–	72	–	2V–5.5V	20 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	$0.52	SPDIP (SP), SOIC (SO), SSOP (SS)	
	PIC16F722A XLP	R	28	25	3.5 KB 2 Kw	R	128	–	1.8V–5.5V	20 MHz	16 MHz	–	11	11	–	–	–	–	–	–	–	2	–	–	–	–	–	2	1	1	–	1	–	–	–	BOR	SW◊	–	✓	$0.78	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)	Temp*
	PIC16LF1902 XLP	R	28	25	3.5 KB 2 Kw	RW	128	–	1.8V–3.6V	20 MHz	16 MHz	72	11	–	11	–	–	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–	–	SW◊	–	–	$0.78	SPDIP (SP), SOIC (SO), SSOP (SS), 4 × 4 UQFN (MV)	Temp*
	PIC16F1512 XLP	R	28	25	3.5 KB 2 Kw	RW	128	–	1.8V–5.5V	20 MHz	16 MHz, 31 KHz	–	17	–	17	–	–	–	–	–	–	2	–	–	–	–	–	2	1	–	1	1	–	–	–	PBOR	SW	–	✓	$0.81	SPDIP (SP), SOIC (SO), SSOP (SS), 4 × 4 UQFN (MV)	Temp*
	PIC16F723A XLP	R	28	25	7 KB 4 Kw	R	192	–	1.8V–5.5V	20 MHz	16 MHz	–	11	11	–	–	–	–	–	–	–	2	–	–	–	–	–	2	1	1	–	1	–	–	–	BOR	SW◊	–	✓	$0.85	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)	Temp*
	PIC16LF1903 XLP	R	28	25	7 KB 4 Kw	RW	256	–	1.8V–3.6V	20 MHz	16 MHz	72	11	–	11	–	–	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–	–	SW◊	–	–	$0.85	SPDIP (SP), SOIC (SO), SSOP (SS), 4 × 4 UQFN (MV)	Temp*
	PIC16F1513 XLP	R	28	25	7 KB 4 Kw	RW	256	–	1.8V–5.5V	20 MHz	16 MHz, 31 KHz	–	17	–	17	–	–	–	–	–	–	2	–	–	–	–	–	2	1	–	1	1	–	–	–	PBOR	SW	–	✓	$0.88	SPDIP (SP), SOIC (SO), SSOP (SS), 4 × 4 UQFN (MV)	Temp*
	PIC16LF1906 XLP	R	28	25	14 KB 8 Kw	RW	512	–	1.8V–3.6V	20 MHz	16 MHz	72	11	–	11	–	–	–	–	–	–	–	–	–	–	–	–	1	1	–	1	–	–	–	–	–	SW◊	–	–	$0.91	SPDIP (SP), SOIC (SO), SSOP (SS), 4 × 4 UQFN (MV)	Temp*
	PIC16F1516 XLP	R	28	25	14 KB 8 Kw	RW	512	–	1.8V–5.5V	20 MHz	16 MHz	–	17	–	17	–	–	–	–	–	–	2	–	–	–	–	–	2	1	–	1	1	–	–	–	PBOR	SW	–	✓	$0.95	SPDIP (SP), SOIC (SO), SSOP (SS), 4 × 4 UQFN (MV)	Temp*
	PIC16F1518 XLP	R	28	25	28 KB 16 Kw	RW	1024	–	1.8V–5.5V	20 MHz	16 MHz	–	17	–	17	–	–	–	–	–	–	2	–	–	–	–	–	2	1	–	1	1	–	–	–	PBOR	SW	–	✓	$1.01	SPDIP (SP), SOIC (SO), SSOP (SS), 4 × 4 UQFN (MV)	Temp*
	PIC16F882	R	28	25	3.5 KB 2 Kw	RW	128	128	2V–5.5V	20 MHz	8 MHz, 31 kHz	–	11	–	11	–	2	–	–	–	–	1	1	–	–	–	–	2	1	–	1	1	–	–	–	BOR	SW◊	✓	✓	$1.16	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML)	
	PIC16F726 XLP	R	28	25	14 KB 8 Kw	R	368	–	1.8V–5.5V	20 MHz	16 MHz	–	11	11	–	–	–	–	–	–	–	2	–	–	–	–	–	2	1	1	–	1	–	–	–	BOR	SW◊	–	✓	$1.23	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)	Temp*
	PIC16F1782 XLP	R	28	25	3.5 KB 2 Kw	RW	256	256	1.8V–5.5V	32 MHz	32 MHz	–	11	–	–	11	3	–	2	0/1/0	–	2	–	–	–	2	–	2	1	–	1	1	–	–	–	BOR	SW◊	–	✓	$1.23	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)	
	PIC16F1933 XLP	R	28	25	7 KB 4 Kw	RW	256	256	1.8V–5.5V	32 MHz	32 MHz, 31 kHz	60	11	–	11	–	2	–	–	–	–	2	3	–	–	–	–	4	1	–	1	1	–	–	–	PBOR	SW◊	✓	✓	$1.23	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)	Temp*
	PIC18F23K20 XLP	R	28	25	8 KB 4 Kw	RW	512	256	1.8V–3.6V	64 MHz	16 MHz, 31 kHz	–	11	–	11	–	2	–	–	–	–	1	1	–	–	–	–	1	3	–	1	1	–	–	–	BOR	✓	–	–	$1.23	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)	
	PIC16F1783 XLP	R	28	25	7 KB 4 Kw	RW	512	256	1.8V–5.5V	32 MHz	32 MHz	–	11	–	–	11	3	–	2	0/1/0	–	2	–	–	–	2	–	2	1	–	1	1	–	–	–	BOR	SW◊	–	✓	$1.30	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)	
	PIC16F1936 XLP	R	28	25	14 KB 8 Kw	RW	512	256	1.8V–5.5V	32 MHz	32 MHz, 31 kHz	60	11	–	11	–	2	–	–	–	–	2	3	–	–	–	–	4	1	–	1	1	–	–	–	PBOR	SW◊	✓	✓	$1.30	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)	Temp*
	PIC18F24K20 XLP	R	28	25	16 KB 8 Kw	RW	768	256	1.8V–3.6V	64 MHz	16 MHz, 31 kHz	–	11	–	11	–	2	–	–	–	–	1	1	–	–	–	–	1	3	–	1	1	–	–	–	PBOR	✓	–	–	$1.30	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML)	
	PIC16F883	R	28	25	7 KB 4 Kw	RW	256	256	2V–5.5V	20 MHz	8 MHz, 31 kHz	–	11	–	11	–	2	–	–	–	–	1	1	–	–	–	–	2	1	–	1	1	–	–	–	BOR	SW◊	✓	✓	$1.37	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML)	
	PIC16F1786 XLP	R	28	25	14 KB 8 Kw	RW	1024	256	1.8V–5.5V	32 MHz	32 MHz	–	11	–	–	11	4	–	2	0/1/0	–	3	–	–	–	3	–	2	1	–	1	1	–	–	–	BOR	SW◊	–	✓	$1.37	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML)	
	PIC16F1938 XLP	R	28	25	28 KB 16 Kw	RW	1024	256	1.8V–5.5V	32 MHz	32 MHz, 31 kHz	60	11	–	11	–	2	–	–	–	–	2	3	–	–	–	–	4	1	–	1	1	–	–	–	PBOR	SW◊	✓	✓	$1.37	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)	Temp*
	PIC18F25K20 XLP	R	28	25	32 KB 16 Kw	RW	1536	256	1.8V–3.6V	64 MHz	16 MHz, 31 kHz	–	11	–	11	–	2	–	–	–	–	1	1	–	–	–	–	1	3	–	1	1	–	–	–	PBOR	✓	–	–	$1.37	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 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.
* Integrated Temperature Indicator: Reference Application Note AN1333 for implementation.
XLP eXtreme Low Power variants available.

8-BIT PIC® MICROCONTROLLERS

	Product	Released (R) Not Released (NR)	Pins		Core	Memory				Voltage Range	Operating Speed		LCD Segments	mTouch™ Channels	Analog Sensing & Measurement							Digital											Communication						Monitors		SR-Latch	Timer 1 Gate	5 ku Pricing†	Packages (Designator)	Special Features
			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	Comparators	Charge Time Measurement Unit	Op Amp	DAC (5b/8b/9b)	PWM	CCP	ECCP	CWG/COG	NCO	PSMC	CLC	8-bit Timer	16-bit Timer	AUSART	EUSART	I²C™/SPI	Ethernet (MAC/PHY)	USB 2.0 Device	CAN	BOR/PBOR	PLVD					
28-Pin (Cont.)	PIC18F23K22 XLP	R	28	25	PIC18	8 KB 4 Kw	RW	512	256	1.8V–5.5V	64 MHz	16 MHz, 31 kHz	–	17	–	17	–	2	✓	–	–	–	1	1	–	–	–	–	–	3	–	2	2	–	–	–	PBOR	✓	✓	✓	$1.41	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML), 4 × 4 UQFN (MV)	Temp*
	PIC18F24J10	R	28	21	PIC18	16 KB 8 Kw	RW	1024	–	2V–3.6V	40 MHz	32 kHz	–	10	–	10	–	2	–	–	–	–	2	–	–	–	–	–	–	2	–	1	1	–	–	–	BOR	–	–	–	$1.44	SPDIP (SP), SOIC (SO), QFN (ML)	
	PIC16F1788 XLP	NR	28	25	EMR	28 KB 16 Kw	RW	2K	256	1.8V–5.5V	32 MHz	32 MHz	–	11	–	–	11	4	–	2	3/1/0	–	3	–	–	–	4	–	2	1	–	1	1	–	–	–	BOR	SW◊	–	✓	$1.44	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML)	
	PIC18F24K22 XLP	R	28	25	PIC18	16 KB 8 Kw	RW	768	256	1.8V–5.5V	64 MHz	16 MHz, 31 kHz	–	17	–	17	–	2	✓	–	–	–	1	1	–	–	–	–	–	3	–	2	2	–	–	–	PBOR	✓	✓	✓	$1.48	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML), 4 × 4 UQFN(MV)	Temp*
	PIC16F886	R	28	25	MR	14 KB 8 Kw	RW	368	256	2V–5.5V	20 MHz	8 MHz, 31 kHz	–	11	–	11	–	2	–	–	–	–	1	1	–	–	–	–	–	1	–	1	1	–	–	–	BOR	SW◊	✓	✓	$1.49	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML)	
	PIC18F25J10	R	28	21	PIC18	32 KB 16 Kw	RW	1024	–	2V–3.6V	40 MHz	32 kHz	–	10	–	10	–	2	–	–	–	–	2	–	–	–	–	–	–	2	–	1	1	–	–	–	BOR	–	–	–	$1.58	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)	
	PIC18F25K22 XLP	R	28	25	PIC18	32 KB 16 Kw	RW	1536	256	1.8V–5.5V	64 MHz	16 MHz, 31 kHz	–	17	–	17	–	2	✓	–	–	–	2	3	–	–	–	–	–	4	–	2	2	–	–	–	PBOR	✓	✓	✓	$1.62	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML)	Temp*
	PIC18F24J11 XLP	R	28	21	PIC18	16 KB 8 Kw	RW	3800	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	10	–	10	–	2	✓	–	–	–	–	2	–	–	–	–	–	3	–	2	2	–	–	–	BOR	SW◊	–	–	$1.65	SPDIP (SP), SOIC (SO), QFN (ML)	Peripheral Pin Select, Deep Sleep Mode
	PIC18F24K50 XLP	R	28	25	PIC18	16 KB 8 Kw	RW	2K	256	1.8V–5.5V	48 MHz	48 MHz	–	14	–	14	–	2	✓	–	–	–	1	1	–	–	–	–	2	2	–	1	1	–	✓	–	BOR	–	–	–	$1.65	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML)	
	PIC18F26K20 XLP	R	28	25	PIC18	64 KB 32 Kw	RW	3936	1024	1.8V–3.6V	64 MHz	16 MHz, 31 kHz	–	11	–	11	–	2	–	–	–	–	1	1	–	–	–	–	–	3	–	1	1	–	–	–	PBOR	✓	–	–	$1.65	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML)	Temp*
	PIC18F25K50 XLP	R	28	25	PIC18	16 KB 16 Kw	RW	2K	256	1.8V–5.5V	48 MHz	48 MHz	–	14	–	14	–	2	✓	–	–	–	1	1	–	–	–	–	2	2	–	1	1	–	✓	–	BOR	–	–	–	$1.76	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML)	Crystal Free USB
	PIC18F25J11 XLP	R	28	21	PIC18	32 KB 16 Kw	RW	3800	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	10	–	10	–	2	✓	–	–	–	–	2	–	–	–	–	–	3	–	2	2	–	–	–	BOR	SW◊	–	–	$1.79	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)	Peripheral Pin Select, Deep Sleep Mode
	PIC18F24J50 XLP	R	28	22	PIC18	16 KB 8 Kw	RW	3800	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	10	–	10	–	2	✓	–	–	–	–	2	–	–	–	–	2	3	–	2	2	–	✓	–	BOR	SW◊	–	–	$1.86	SPDIP (SP), SOIC (SO), QFN (ML)	Peripheral Pin Select, Deep Sleep Mode
	PIC18F26K22 XLP	R	28	25	PIC18	64 KB 32 Kw	RW	3896	1024	1.8V–5.5V	64 MHz	16 MHz, 31 kHz	–	17	–	17	–	2	✓	–	–	–	2	3	–	–	–	–	3	4	–	2	2	–	–	–	PBOR	✓	✓	✓	$1.92	SPDIP (SP), SOIC (SO), SSOP (SS), 6 × 6 QFN (ML)	Temp*
	PIC18F25K80 XLP	R	28	24	PIC18	32 KB 16 Kw	RW	3648	1024	1.8V–5.5V	64 MHz	8 MHz, 31 kHz	–	8	–	–	8	2	✓	–	–	–	4	1	–	–	–	–	2	3	–	2	1	–	–	✓	PBOR	✓	–	–	$1.93	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)	Deep Sleep Mode
	PIC18F25J50 XLP	R	28	22	PIC18	32 KB 16 Kw	RW	3800	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	10	–	10	–	2	✓	–	–	–	–	2	–	–	–	–	2	3	–	2	2	–	✓	–	BOR	SW◊	–	–	$2.00	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)	Peripheral Pin Select, Deep Sleep Mode
	PIC18F26J11 XLP	R	28	21	PIC18	64 KB 32 Kw	RW	3800	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	10	–	10	–	2	✓	–	–	–	–	2	–	–	–	–	2	3	–	2	2	–	–	–	BOR	SW◊	–	–	$2.07	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)	Peripheral Pin Select, Deep Sleep Mode
	PIC18F26K80 XLP	R	28	24	PIC18	64 KB 32 Kw	RW	3648	1024	1.8V–5.5V	64 MHz	8 MHz, 31 kHz	–	8	–	–	8	2	✓	–	–	–	4	1	–	–	–	–	2	3	–	2	1	–	–	✓	PBOR	✓	–	–	$2.21	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)	Deep Sleep Mode
	PIC18F26J13 XLP	R	28	23	PIC18	64 KB 32 Kw	RW	3808	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	10	–	–	10	3	✓	–	–	–	7	3	–	–	–	–	4	4	–	2	2	–	–	–	BOR	✓	–	–	$2.24	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)	SPI w/DMA
	PIC18F26J50 XLP	R	28	22	PIC18	64 KB 32 Kw	RW	3800	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	10	–	10	–	2	✓	–	–	–	–	2	–	–	–	–	2	3	–	2	2	–	✓	–	BOR	SW◊	–	–	$2.28	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)	Peripheral Pin Select, Deep Sleep Mode
	PIC18F26J53 XLP	R	28	22	PIC18	64 KB 32 Kw	RW	3808	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	10	–	–	10	3	✓	–	–	–	7	3	–	–	–	–	4	4	–	2	2	–	✓	–	BOR	✓	–	–	$2.45	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)	SPI w/DMA
	PIC18F27J13 XLP	R	28	23	PIC18	128 KB 64 Kw	RW	3808	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	10	–	–	10	3	✓	–	–	–	7	3	–	–	–	–	4	4	–	2	2	–	–	–	BOR	✓	–	–	$2.48	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)	SPI w/DMA
	PIC18F27J53 XLP	R	28	22	PIC18	128 KB 64 Kw	RW	3808	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	10	–	–	10	3	✓	–	–	–	7	3	–	–	–	–	4	4	–	2	2	–	✓	–	BOR	✓	–	–	$2.69	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)	SPI w/DMA
	PIC16F1718 XLP	NR	28	25	EMR	28 KB	RW	2048	–	1.8V–5.5V	32 MHz	32 MHz	–	17	–	17	–	2	–	2	1/1/0	2	2	0	0/1	1	–	4	4	1	–	1	1	–	–	–	BOR	–	–	✓	call for pricing	PDIP (P), SOIC (SO), SSOP (SS), UQFN 4 × 4 (MV), QFN 6 × 6 (ML)	
40-Pin	PIC16F59	R	40	32	BL	3 KB 2 Kw	–	134	–	2V–5.5V	20 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	$0.85	PDIP (P), TQFP (PT)	
	PIC16LF1904 XLP	R	40	36	EMR	7 KB 4 Kw	RW	256	–	1.8V–3.6V	20 MHz	16 MHz	116	14	–	14	–	–	–	–	–	–	–	–	–	–	–	–	1	1	–	1	–	–	–	–	–	–	–	–	$1.19	PDIP (P), TQFP (PT), 5 × 5 UQFN (MV)	Integrated LCD Driver, Temp*
	PIC16LF1907 XLP	R	40	36	EMR	14 KB 8 Kw	RW	512	–	1.8V–3.6V	20 MHz	16 MHz	116	14	–	14	–	–	–	–	–	–	–	–	–	–	–	–	1	1	–	1	–	–	–	–	–	–	–	–	$1.25	PDIP (P), TQFP (PT), 5 × 5 UQFN (MV)	Integrated LCD Driver, Temp*
	PIC16F1517 XLP	R	40	36	EMR	14 KB 8 Kw	RW	512	–	1.8V–5.5V	20 MHz	16 MHz	–	28	–	28	–	–	–	–	–	–	2	–	–	–	–	–	2	1	–	1	1	–	–	–	PBOR	SW	–	✓	$1.32	PDIP (P), TQFP (PT), 5 × 5 UQFN (MV)	Temp*
	PIC16F1519 XLP	R	40	36	EMR	28 KB 16 Kw	RW	1024	–	1.8V–5.5V	20 MHz	16 MHz	–	28	–	28	–	–	–	–	–	–	2	–	–	–	–	–	2	1	–	1	1	–	–	–	PBOR	SW	–	✓	$1.37	PDIP (P), TQFP (PT), 5 × 5 UQFN (MV)	Temp*
	PIC16F724 XLP	R	40	36	MR	7 KB 4 Kw	RW	192	–	1.8V–5.5V	20 MHz	16 MHz	–	16	14	–	–	–	–	–	–	–	2	–	–	–	–	–	2	1	1	–	1	–	–	–	BOR	SW◊	–	✓	$1.40	PDIP (P), TQFP (PT), 8 × 8 QFN (ML), 5 × 5 UQFN (MV)	Temp*
	PIC16F1934 XLP	R	40	36	EMR	7 KB 4 Kw	RW	256	256	1.8V–5.5V	32 MHz	32 MHz, 31 kHz	96	16	–	14	–	2	–	–	–	–	2	3	–	–	–	–	4	1	–	1	1	–	–	–	PBOR	SW◊	✓	✓	$1.47	PDIP (P), TQFP (PT), 8 × 8 QFN (ML), 5 × 5 UQFN (MV)	Temp*
	PIC18F43K20 XLP	R	40	36	PIC18	8 KB 4 Kw	RW	512	256	1.8V–3.6V	64 MHz	16 MHz, 31 kHz	–	14	–	14	–	2	–	–	–	–	1	1	–	–	–	–	1	3	–	1	1	–	–	–	BOR	✓	–	–	$1.47	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.
* Integrated Temperature Indicator: Reference Application Note AN1333 for implementation.
XLP eXtreme Low Power variants available.

8-BIT PIC® MICROCONTROLLERS

	Product	Released (R) Not Released (NR)	Pins		Core	Memory				Voltage Range	Operating Speed		LCD Segments	mTouch™ Channels	Analog Sensing & Measurement							Digital									Communication						Monitors		SR-Latch	Timer 1 Gate	5 ku Pricing†	Packages (Designator)	Special Features
			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	Comparators	Charge Time Measurement Unit	Op Amp	DAC (5b/8b/9b)	PWM	CCP	ECCP	CWG/COG	NCO	PSMC	CLC	8-bit Timer	16-bit Timer	AUSART	EUSART	I²C™/SPI	Ethernet (MAC/PHY)	USB 2.0 Device	CAN	BOR/PBOR	PLVD				
40/44-Pin (Cont.)	PIC16F727 XLP	R	40	36	MR	14 KB 8 Kw	RW	368	–	1.8V–5.5V	20 MHz	16 MHz	–	16	14	–	–	–	–	–	–	–	2	–	–	–	–	–	2	1	1	–	1	–	–	–	BOR	SW◊	–	✓	$1.54	PDIP (P), TQFP (PT), 8 × 8 QFN (ML), 5 × 5 UQFN (MV)	Temp*
	PIC16F1784 XLP	R	40	36	EMR	7 KB 4 Kw	RW	512	256	1.8V–5.5V	32 MHz	32 MHz	–	–	–	–	14	4	–	3	0/1/0	–	3	–	–	–	3	–	2	1	–	1	1	–	–	–	BOR	SW◊	–	✓	$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	1.8V–5.5V	32 MHz	32 MHz, 31 kHz	96	16	–	14	–	2	–	–	–	–	2	3	–	–	–	–	4	1	–	1	1	–	–	–	PBOR	SW◊	✓	✓	$1.54	PDIP (P), TQFP (PT), 8 × 8 QFN (ML), 5 × 5 UQFN (MV)	Temp*
	PIC18F44K20 XLP	R	40	36	PIC18	16 KB 8 Kw	RW	768	256	1.8V–3.6V	64 MHz	16 MHz, 31 kHz	–	14	–	14	–	2	–	–	–	–	1	1	–	–	–	–	1	3	–	1	1	–	–	–	PBOR	✓	–	–	$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	1024	256	1.8V–5.5V	32 MHz	32 MHz	–	–	–	–	14	4	–	3	0/1/0	–	3	–	–	–	3	–	2	1	–	1	1	–	–	–	BOR	SW◊	–	✓	$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	1024	256	1.8V–5.5V	32 MHz	32 MHz, 31 kHz	96	16	–	14	–	2	–	–	–	–	2	3	–	–	–	–	4	1	–	1	1	–	–	–	PBOR	SW◊	✓	✓	$1.61	PDIP (P), TQFP (PT), 8 × 8 QFN (ML), 5 × 5 UQFN (MV)	Temp*
	PIC18F45K20 XLP	R	40	36	PIC18	32 KB 16 Kw	RW	1536	256	1.8V–3.6V	64 MHz	16 MHz, 31 kHz	–	14	–	14	–	2	–	–	–	–	1	1	–	–	–	–	1	3	–	1	1	–	–	–	PBOR	✓	–	–	$1.61	PDIP (P), TQFP (PT), 8 × 8 QFN (ML), 5 × 5 UQFN (MV)	
	PIC16F884	R	40	36	MR	7 KB 4 Kw	RW	256	256	2V–5.5V	20 MHz	8 MHz, 31 kHz	–	14	–	14	–	2	–	–	–	–	1	1	–	–	–	–	2	1	–	1	1	–	–	–	BOR	SW◊	✓	✓	$1.63	PDIP (P), TQFP (PT), 8 × 8 QFN (ML)	
	PIC18F44J10	R	40	32	PIC18	16 KB 8 Kw	RW	1024	–	2V–3.6V	40 MHz	31 kHz	–	13	–	13	–	2	–	–	–	–	1	1	–	–	–	–	1	2	–	1	2	–	–	–	BOR	–	–	–	$1.67	PDIP (P), TQFP (PT), QFN (ML)	
	PIC18F43K22 XLP	R	40	36	PIC18	8 KB 4 Kw	RW	512	256	1.8V–5.5V	64 MHz	16 MHz, 31 kHz	–	28	–	28	–	2	✓	–	–	–	1	1	–	–	–	–	1	3	–	2	2	–	–	–	PBOR	P	P	P	$1.68	PDIP (P), TQFP (PT), 8 × 8 QFN (ML), 5 × 5 UQFN (MV)	Temp*
	PIC18F1789 XLP	NR	40	36	EMR	28 KB 16 kW	RW	2K	256	1.8V–5.5V	32 MHz	32 MHz	–	14	–	–	14	4	–	3	3/1/0	–	3	–	–	–	4	–	2	1	–	1	1	–	–	–	BOR	–	–	✓	$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	1.8V–5.5V	64 MHz	16 MHz, 31 kHz	–	28	–	28	–	2	✓	–	–	–	1	1	–	–	–	–	1	3	–	2	2	–	–	–	PBOR	P	P	P	$1.75	PDIP (P), TQFP (PT), 8 × 8 QFN (ML), 5 × 5 UQFN (MV)	Temp*
	PIC16F887	R	40	36	MR	14 KB 8 Kw	RW	368	256	2V–5.5V	20 MHz	8 MHz, 31 kHz	–	14	–	14	–	2	–	–	–	–	1	1	–	–	–	–	2	1	–	1	1	–	–	–	BOR	SW◊	✓	✓	$1.78	PDIP (P), TQFP (PT), 8 × 8 QFN (ML)	
	PIC18F45J10	R	40	32	PIC18	32 KB 16 Kw	RW	1024	–	2V–3.6V	40 MHz	31 kHz	–	13	–	13	–	2	–	–	–	–	1	1	–	–	–	–	1	2	–	1	2	–	–	–	BOR	–	–	–	$1.81	PDIP (P), TQFP (PT), QFN (ML)	
	PIC18F46K20 XLP	R	40	36	PIC18	64 KB 32 Kw	RW	3936	1024	1.8V–3.6V	64 MHz	16 MHz, 31 kHz	–	14	–	14	–	2	–	–	–	–	1	1	–	–	–	–	1	3	–	1	1	–	–	–	PBOR	✓	–	–	$1.82	PDIP (P), TQFP (PT), 8 × 8 QFN (ML)	
	PIC18F45K22 XLP	R	40	36	PIC18	32 KB 16 Kw	RW	1536	256	1.8V–5.5V	64 MHz	16 MHz, 31 kHz	–	28	–	28	–	2	✓	–	–	–	2	2	–	–	–	–	3	4	–	2	2	–	–	–	PBOR	✓	✓	✓	$1.89	PDIP (P), TQFP (PT), 8 × 8 QFN (ML), 5 × 5 UQFN (MV)	Temp*
	PIC18F44J11 XLP	R	40	34	PIC18	16 KB 8 Kw	RW	3800	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	13	–	13	–	2	✓	–	–	–	–	2	–	–	–	–	2	3	–	2	2	–	–	–	BOR	SW◊	–	–	$1.95	TQFP (PT), QFN (ML)	Peripheral Pin Select, Deep Sleep Mode
	PIC18F45K50 XLP	R	40	36	PIC18	32KB 16 kW	RW	2K	256	1.8V–5.5V	48 MHz	48 MHz	–	25	–	25	–	2	✓	–	–	–	1	1	–	–	–	–	2	2	–	1	1	–	✓	–	BOR	–	–	–	$1.99	PDIP (P), TQFP (PT), 5 × 5 UQFN (MV)	Crystal Free USB
	PIC18F45J11 XLP	R	40	34	PIC18	32 KB 16 Kw	RW	3800	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	13	–	13	–	2	✓	–	–	–	–	2	–	–	–	–	2	3	–	2	2	–	–	–	BOR	SW◊	–	–	$2.09	TQFP (PT), QFN (ML)	Peripheral Pin Select, Deep Sleep Mode
	PIC18F44J50 XLP	R	40	34	PIC18	16 KB 8 Kw	RW	3800	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	13	–	13	–	2	✓	–	–	–	–	2	–	–	–	–	2	3	–	2	2	–	✓	–	BOR	SW◊	–	–	$2.16	TQFP (PT), QFN (ML)	Peripheral Pin Select, Deep Sleep Mode
	PIC18F45K80 XLP	R	40	35	PIC18	32 KB 16 Kw	RW	3648	1024	1.8V–5.5V	64 MHz	8 MHz, 31 kHz	–	11	–	–	11	2	✓	–	–	–	4	1	–	–	–	–	2	3	–	2	1	–	–	✓	PBOR	✓	✓	✓	$2.17	PDIP (P), TQFP (PT), QFN (ML)	Deep Sleep Mode
	PIC18F46K22 XLP	R	40	36	PIC18	64 KB 32 Kw	RW	3896	1024	1.8V–5.5V	64 MHz	16 MHz, 31 kHz	–	28	–	28	–	2	✓	–	–	–	2	2	–	–	–	–	3	4	–	2	2	–	–	–	PBOR	✓	✓	✓	$2.17	PDIP (P), TQFP (PT), 8 × 8 QFN (ML), 5 × 5 UQFN (MV)	Temp*
	PIC18F45J50 XLP	R	40	34	PIC18	32 KB 16 Kw	RW	3800	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	13	–	13	–	2	✓	–	–	–	–	2	–	–	–	–	2	3	–	2	2	–	✓	–	BOR	SW◊	–	–	$2.30	TQFP (PT), QFN (ML)	Peripheral Pin Select, Deep Sleep Mode
	PIC18F46J11 XLP	R	40	34	PIC18	64 KB 32 Kw	RW	3800	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	13	–	13	–	2	✓	–	–	–	–	2	–	–	–	–	2	3	–	2	2	–	–	–	BOR	SW◊	–	–	$2.37	PDIP (P), TQFP (PT), QFN (ML)	Peripheral Pin Select, Deep Sleep Mode
	PIC18F46K80 XLP	R	44	35	PIC18	64 KB 32 Kw	RW	3648	1024	1.8V–5.5V	64 MHz	8 MHz, 31 kHz	–	11	–	–	11	2	✓	–	–	–	4	1	–	–	–	–	2	3	–	2	1	–	–	✓	PBOR	✓	–	–	$2.45	PDIP (P), TQFP (PT), QFN (ML)	Deep Sleep Mode
	PIC18F46J13 XLP	R	44	34	PIC18	64 KB 32 Kw	RW	3808	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	13	–	–	13	3	✓	–	–	–	7	3	–	–	–	–	4	4	–	2	2	–	–	–	BOR	✓	–	–	$2.52	TQFP (PT), QFN (ML)	SPI w/ DMA
	PIC18F46J50 XLP	R	40	34	PIC18	64 KB 32 Kw	RW	3800	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	13	–	13	–	2	✓	–	–	–	–	2	–	–	–	–	2	3	–	2	2	–	✓	–	BOR	SW◊	–	–	$2.58	PDIP (P), TQFP (PT), QFN (ML)	Peripheral Pin Select, Deep Sleep Mode
	PIC18F46J53 XLP	R	44	33	PIC18	64 KB 32 Kw	RW	3808	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	13	–	–	13	3	✓	–	–	–	7	3	–	–	–	–	4	4	–	2	2	–	✓	–	BOR	✓	–	–	$2.73	TQFP (PT), QFN (ML)	Integrated LCD Driver, SPI w/DMA
	PIC18F47J13 XLP	R	44	34	PIC18	128 KB 64 Kw	RW	3808	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	13	–	–	13	3	✓	–	–	–	7	3	–	–	–	–	4	4	–	2	2	–	–	–	BOR	✓	–	–	$2.76	TQFP (PT), QFN (ML)	SPI w/ DMA
	PIC18F47J53 XLP	R	44	33	PIC18	128 KB 64 Kw	RW	3808	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	13	–	–	13	3	✓	–	–	–	7	3	–	–	–	–	4	4	–	2	2	–	✓	–	BOR	✓	–	–	$2.97	TQFP (PT), QFN (ML)	Integrated LCD Driver, SPI w/DMA
	PIC16F1719 XLP	NR	40	36	EMR	28 KB	RW	2048	–	1.8V–5.5V	32 MHz	32 MHz	–	28	–	28	–	2	–	3	1/1/0	2	2	0	0/1	1	–	4	4	1	–	1	1	–	–	–	BOR	–	–	✓	call for pricing	PDIP (P), TQFP (PT), 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.
* Integrated Temperature Indicator: Reference Application Note AN1333 for implementation.
XLP eXtreme Low Power variants available.

8-BIT PIC® MICROCONTROLLERS

	Product	Released (R) Not Released (NR)	Pins		Core	Memory				Voltage Range	Operating Speed		LCD Segments	mTouch™ Channels	Analog Sensing & Measurement							Digital									Communication						Monitors		SR-Latch	Timer 1 Gate	5 ku Pricing†	Packages (Designator)	Special Features
			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	Comparators	Charge Time Measurement Unit	Op Amp	DAC (5b/8b/9b)	PWM	CCP	ECCP	CWG/COG	NCO	PSMC	CLC	8-bit Timer	16-bit Timer	AUSART	EUSART	I²C™/SPI	Ethernet (MAC/PHY)	USB 2.0 Device	CAN	BOR/PBOR	PLVD					
64-Pin	PIC16F1526 XLP	R	64	54	EMR	14 KB 8 Kw	RW	768	–	1.8V–5.5V	20 MHz	16 MHz	–	30	–	30	–	–	–	–	–	–	10	–	–	–	–	–	6	3	–	2	2	–	–	–	PBOR	SW◊	–	✓	$1.47	TQFP (PT), QFN (MR)	Temp*
	PIC16F1527 XLP	R	64	54	EMR	28 KB 16 Kw	RW	1536	–	1.8V–5.5V	20 MHz	16 MHz	–	30	–	30	–	–	–	–	–	–	10	–	–	–	–	–	6	3	–	2	2	–	–	–	PBOR	SW◊	–	✓	$1.54	TQFP (PT), QFN (MR)	Temp*
	PIC16F1946 XLP	R	64	53	EMR	14 KB 8 Kw	RW	512	256	1.8V–5.5V	32 MHz	32 MHz, 31 kHz	184	17	–	17	–	3	–	–	–	–	2	3	–	–	–	–	4	1	–	2	2	–	–	–	BOR	SW◊	✓	✓	$1.75	TQFP (PT), QFN (MR)	Temp*
	PIC16F1947 XLP	R	64	53	EMR	28 KB 16 Kw	RW	1024	256	1.8V–5.5V	32 MHz	32 MHz, 31 kHz	184	17	–	17	–	3	–	–	–	–	2	3	–	–	–	–	4	1	–	2	2	–	–	–	BOR	SW◊	✓	✓	$1.82	TQFP (PT), QFN (MR)	Temp*
	PIC18F63J11	R	64	54	PIC18	8 KB 4 Kw	RW	1024	–	2V–3.6V	40 MHz	8 MHz, 31 kHz	–	12	–	12	–	2	–	–	–	–	2	–	–	–	–	–	1	3	1	1	1	–	–	–	PBOR	SW◊	–	–	$2.20	TQFP (PT)	
	PIC18F65J10	R	64	50	PIC18	32 KB 16 Kw	RW	2048	–	2V–3.6V	40 MHz	31 kHz	–	11	–	11	–	2	–	–	–	–	2	3	–	–	–	–	2	3	–	2	2	–	–	–	BOR	✓	–	–	$2.25	TQFP (PT)	
	PIC18F64J11	R	64	54	PIC18	16 KB 8 Kw	RW	1024	–	2V–3.6V	40 MHz	8 MHz, 31 kHz	–	12	–	12	–	2	–	–	–	–	2	–	–	–	–	–	1	3	1	1	1	–	–	–	BOR	SW◊	–	–	$2.27	TQFP (PT)	
	PIC18F63J90	R	64	51	PIC18	8 KB 4 Kw	RW	1024	–	2V–3.6V	40 MHz	8 MHz, 31 kHz	132	12	–	12	–	2	–	–	–	–	2	–	–	–	–	–	1	3	1	1	1	–	–	–	BOR	✓	–	–	$2.35	TQFP (PT)	Integrated LCD Driver
	PIC18F65J11	R	64	54	PIC18	32 KB 16 Kw	RW	2048	–	2V–3.6V	40 MHz	8 MHz, 31 kHz	–	12	–	12	–	2	–	–	–	–	2	–	–	–	–	–	1	3	1	1	1	–	–	–	BOR	SW◊	–	–	$2.37	TQFP (PT)	
	PIC18F65J94 XLP	R	64	51	PIC18	32 KB 16 Kw	RW	4096	–	2V–3.6V	64 MHz	64 MHz	224	24	–	16	16	3	✓	–	–	✓	7	3	–	–	–	–	4	4	–	4	2	–	✓	–	BOR	–	–	✓	$2.38	QFN (MR), TQFP (PT)	USB & LCD
	PIC18F65K22 XLP	R	64	53	PIC18	32 KB 16 Kw	RW	2048	1024	1.8V–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz	–	16	–	–	16	3	✓	–	–	–	5	3	–	–	–	–	4	4	–	2	2	–	–	–	BOR	✓	–	–	$2.39	TQFP (PT), QFN (MR)	
	PIC18F64J90	R	64	51	PIC18	16 KB 8 Kw	RW	1024	–	2V–3.6V	40 MHz	8 MHz, 31 kHz	132	12	–	12	–	2	–	–	–	–	2	–	–	–	–	–	1	3	1	1	1	–	–	–	BOR	✓	–	–	$2.41	TQFP (PT)	Integrated LCD Driver
	PIC18F66J10	R	64	50	PIC18	64 KB 32 Kw	RW	2048	–	2V–3.6V	40 MHz	31 kHz	–	11	–	11	–	2	–	–	–	–	2	3	–	–	–	–	2	3	–	2	2	–	–	–	BOR	✓	–	–	$2.49	TQFP (PT)	
	PIC18F65J90	R	64	50	PIC18	32 KB 16 Kw	RW	2048	–	2V–3.6V	40 MHz	8 MHz, 31 kHz	132	12	–	12	–	2	–	–	–	–	2	–	–	–	–	–	1	3	1	1	1	–	–	–	BOR	✓	–	–	$2.52	TQFP (PT)	Integrated LCD Driver
	PIC18F65K90 XLP	R	64	53	PIC18	32 KB 16 Kw	RW	2048	1024	1.8V–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz	132	16	–	–	16	3	✓	–	–	–	5	3	–	–	–	–	4	4	–	2	2	–	–	–	BOR	✓	–	–	$2.53	TQFP (PT), QFN (MR)	Integrated LCD Driver
	PIC18F65J50	R	64	49	PIC18	32 KB 16 Kw	RW	3904	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	8	–	8	–	2	–	–	–	–	2	3	–	–	–	–	2	3	–	2	2	–	✓	–	BOR	✓	–	–	$2.63	TQFP (PT)	
	PIC18F66J11	R	64	50	PIC18	64 KB 32 Kw	RW	3904	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	11	–	11	–	2	–	–	–	–	2	3	–	–	–	–	2	3	–	2	2	–	–	–	BOR	✓	–	–	$2.63	TQFP (PT)	
	PIC18F66J94 XLP	R	64	51	PIC18	64 KB 32 Kw	RW	4096	–	2V–3.6V	64 MHz	64 MHz	224	24	–	16	16	3	✓	–	–	✓	7	3	–	–	–	–	4	4	–	4	2	–	✓	–	BOR	–	–	✓	$2.69	QFN (MR), TQFP (PT)	USB & LCD
	PIC18F66J93	R	64	51	PIC18	64 KB 32 Kw	RW	3900	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	132	12	–	–	12	2	✓	–	–	–	2	–	–	–	–	–	1	3	1	1	1	–	–	–	BOR	✓	–	–	$2.70	TQFP (PT)	Integrated LCD Driver, RTCC
	PIC18F65K80 XLP	R	64	54	PIC18	32 KB 16 Kw	RW	3648	1024	1.8V–5.5V	64 MHz	8 MHz, 31 kHz	–	11	–	–	11	2	✓	–	–	–	4	1	–	–	–	–	2	3	–	2	1	–	–	✓	PBOR	✓	–	–	$2.70	TQFP (PT), QFN (MR)	Deep Sleep Mode
	PIC18F66K22 XLP	R	64	53	PIC18	64 KB 32 Kw	RW	4096	1024	1.8V–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz	–	16	–	–	16	3	✓	–	–	–	7	3	–	–	–	–	6	5	–	2	2	–	–	–	BOR	✓	–	–	$2.70	TQFP (PT), QFN (MR)	
	PIC18F67J10	R	64	50	PIC18	128 KB 64 Kw	RW	3936	–	2V–3.6V	40 MHz	31 kHz	–	11	–	11	–	2	–	–	–	–	2	3	–	–	–	–	2	3	–	2	2	–	–	–	BOR	✓	–	–	$2.77	TQFP (PT)	
	PIC18F66K90 XLP	R	64	53	PIC18	64 KB 32 Kw	RW	4096	1024	1.8V–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz	132	16	–	–	16	3	✓	–	–	–	7	3	–	–	–	–	6	5	–	2	2	–	–	–	BOR	✓	–	–	$2.84	TQFP (PT), QFN (MR)	Integrated LCD Driver
	PIC18F66J50	R	64	49	PIC18	64 KB 32 Kw	RW	3904	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	8	–	8	–	2	–	–	–	–	2	3	–	–	–	–	2	3	–	2	2	–	✓	–	BOR	✓	–	–	$2.90	TQFP (PT)	
	PIC18F67J11	R	64	50	PIC18	128 KB 64 Kw	RW	3904	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	11	–	11	–	2	–	–	–	–	2	3	–	–	–	–	2	3	–	2	2	–	–	–	BOR	✓	–	–	$2.93	TQFP (PT)	
	PIC18F67J94 XLP	R	64	51	PIC18	128 KB 64 Kw	RW	4096	–	2V–3.6V	64 MHz	64 MHz	224	24	–	16	16	3	✓	–	–	✓	7	3	–	–	–	–	4	4	–	4	2	–	✓	–	BOR	–	–	✓	$2.93	QFN (MR), TQFP (PT)	USB & LCD
	PIC18F67K22 XLP	R	64	53	PIC18	128 KB 64 Kw	RW	4096	1024	1.8V–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz	–	16	–	–	16	3	✓	–	–	–	7	3	–	–	–	–	6	5	–	2	2	–	–	–	BOR	✓	–	–	$2.94	TQFP (PT), QFN (MR)	
	PIC18F66K80 XLP	R	64	54	PIC18	64 KB 32 Kw	RW	3648	1024	1.8V–5.5V	64 MHz	8 MHz, 31 kHz	–	11	–	–	11	2	✓	–	–	–	4	1	–	–	–	–	2	3	–	2	1	–	–	✓	PBOR	✓	–	–	$2.98	TQFP (PT), QFN (MR)	Deep Sleep Mode
	PIC18F67J93	R	64	51	PIC18	128 KB 64 Kw	RW	3900	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	132	12	–	–	12	2	✓	–	–	–	2	–	–	–	–	–	1	3	1	1	1	–	–	–	BOR	✓	–	–	$3.00	TQFP (PT)	Integrated LCD Driver, RTCC
	PIC18F67K90 XLP	R	64	53	PIC18	128 KB 64 Kw	RW	4096	1024	1.8V–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz	132	16	–	–	16	3	✓	–	–	–	7	3	–	–	–	–	6	5	–	2	2	–	–	–	BOR	✓	–	–	$3.08	TQFP (PT), QFN (MR)	Integrated LCD Driver
	PIC18F67J50	R	64	49	PIC18	128 KB 64 Kw	RW	3904	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	8	–	8	–	2	–	–	–	–	2	3	–	–	–	–	2	3	–	2	2	–	✓	–	BOR	✓	–	–	$3.19	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.
* Integrated Temperature Indicator: Reference Application Note AN1333 for implementation.
XLP eXtreme Low Power variants available.

8-BIT PIC® MICROCONTROLLERS

	Product	Released (R) Not Released (NR)	Pins		Core	Memory				Voltage Range	Operating Speed		LCD Segments	mTouch™ Channels	Analog Sensing & Measurement							Digital									Communication						Monitors		SR-Latch	Timer 1 Gate	5 ku Pricing†	Packages (Designator)	Special Features
			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	Comparators	Charge Time Measurement Unit	Op Amp	DAC (5b/8b)	PWM	CCP	ECCP	CWG/COG	NCO	PSMC	CLC	8-bit Timer	16-bit Timer	AUSART	EUSART	I²C™/SPI	Ethernet (MAC/PHY)	USB 2.0 Device	CAN	BOR/PBOR	PLVD				
80-Pin	PIC18F83J11	R	80	70	PIC18	8 KB 4 Kw	RW	1024	–	2V–3.6V	40 MHz	8 MHz, 31 kHz	–	12	–	12	–	2	–	–	–	–	2	–	–	–	–	–	1	3	1	1	1	–	–	–	BOR	SW◊	–	–	$2.46	TQFP (PT)	
	PIC18F85J10	R	80	66	PIC18	32 KB 16 Kw	RW	2048	–	2V–3.6V	40 MHz	31 kHz	–	15	–	15	–	2	–	–	–	–	2	3	–	–	–	–	2	3	–	2	2	–	–	–	BOR	✓	–	–	$2.49	TQFP (PT)	
	PIC18F84J11	R	80	70	PIC18	16 KB 8 Kw	RW	1024	–	2V–3.6V	40 MHz	8 MHz, 31 kHz	–	12	–	12	–	2	–	–	–	–	2	–	–	–	–	–	1	3	1	1	1	–	–	–	BOR	SW◊	–	–	$2.52	TQFP (PT)	
	PIC18F83J90	R	80	66	PIC18	8 KB 4 Kw	RW	1024	–	2V–3.6V	40 MHz	8 MHz, 31 kHz	192	12	–	12	–	2	–	–	–	–	2	–	–	–	–	–	1	3	1	1	1	–	–	–	BOR	✓	–	–	$2.60	TQFP (PT)	Integrated LCD Driver
	PIC18F85J11	R	80	70	PIC18	32 KB 16 Kw	RW	2048	–	2V–3.6V	40 MHz	8 MHz, 31 kHz	–	12	–	12	–	2	–	–	–	–	2	–	–	–	–	–	1	3	1	1	1	–	–	–	BOR	SW◊	–	–	$2.63	TQFP (PT)	
	PIC18F85J94 XLP	R	80	67	PIC18	32 KB 16 Kw	RW	4096	–	2V–3.6V	64 MHz	64 MHz	352	24	–	24	24	3	✓	–	–	✓	7	3	–	–	–	–	4	4	–	4	2	–	✓	–	BOR	–	–	✓	$2.65	TQFP (PT)	USB & LCD
	PIC18F85K22 XLP	R	80	69	PIC18	32 KB 16 Kw	RW	2048	1024	1.8V–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz		24	–	–	24	3	✓	–	–	–	5	3	–	–	–	–	4	4	–	2	2	–	–	–	BOR	✓	–	–	$2.66	TQFP (PT)	
	PIC18F84J90	R	80	66	PIC18	16 KB 8 Kw	RW	1024	–	2V–3.6V	40 MHz	8 MHz, 31 kHz	192	12	–	12	–	2	–	–	–	–	2	–	–	–	–	–	1	3	1	1	1	–	–	–	BOR	✓	–	–	$2.67	TQFP (PT)	Integrated LCD Driver
	PIC18F86J10	R	80	66	PIC18	64 KB 32 Kw	RW	2048	–	2V–3.6V	40 MHz	31 kHz	–	15	–	15	–	2	–	–	–	–	2	3	–	–	–	–	2	3	–	2	2	–	–	–	BOR	✓	–	–	$2.74	TQFP (PT)	
	PIC18F85J90	R	80	66	PIC18	32 KB 16 Kw	RW	2048	–	2V–3.6V	40 MHz	8 MHz, 31 kHz	192	12	–	12	–	2	–	–	–	–	2	–	–	–	–	–	1	3	1	1	1	–	–	–	BOR	✓	–	–	$2.77	TQFP (PT), LQFP (PL)	Integrated LCD Driver
	PIC18F85K90 XLP	R	80	69	PIC18	32 KB 16 Kw	RW	2048	1024	1.8V–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz	192	24	–	–	24	3	✓	–	–	–	5	3	–	–	–	–	4	4	–	2	2	–	–	–	BOR	✓	–	–	$2.80	TQFP (PT)	Integrated LCD Driver
	PIC18F85J50	R	80	65	PIC18	32 KB 16 Kw	RW	3904	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	12	–	12	–	2	–	–	–	–	2	3	–	–	–	–	2	3	–	2	2	–	✓	–	BOR	✓	–	–	$2.90	TQFP (PT)	
	PIC18F86J11	R	80	66	PIC18	64 KB 32 Kw	RW	3904	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	15	–	15	–	2	–	–	–	–	2	3	–	–	–	–	2	3	–	2	2	–	–	–	BOR	✓	–	–	$2.90	TQFP (PT)	
	PIC18F86J94 XLP	R	80	67	PIC18	64 KB 32 Kw	RW	4096	–	2V–3.6V	64 MHz	64 MHz	352	24	–	24	24	3	✓	–	–	✓	7	3	–	–	–	–	4	4	–	4	2	–	✓	–	BOR	–	–	✓	$2.95	TQFP (PT)	USB & LCD
	PIC18F86J93	R	80	67	PIC18	64 KB 32 Kw	RW	3900	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	192	12	–	–	12	2	✓	–	–	–	2	–	–	–	–	–	1	3	1	1	1	–	–	–	BOR	✓	–	–	$2.97	TQFP (PT)	Integrated LCD Driver, RTCC
	PIC18F86K22 XLP	R	80	69	PIC18	64 KB 32 Kw	RW	4096	1024	1.8V–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz		24	–	–	24	3	✓	–	–	–	7	3	–	–	–	–	6	5	–	2	2	–	–	–	BOR	✓	–	–	$2.97	TQFP (PT)	
	PIC18F87J10	R	80	66	PIC18	128 KB 64 Kw	RW	3936	–	2V–3.6V	40 MHz	31 kHz	–	15	–	15	–	2	–	–	–	–	2	3	–	–	–	–	2	3	–	2	2	–	–	–	BOR	✓	–	–	$3.02	TQFP (PT), LQFP (PL)	
	PIC18F86K90 XLP	R	80	69	PIC18	64 KB 32 Kw	RW	4096	1024	1.8V–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz	192	24	–	–	24	3	✓	–	–	–	7	3	–	–	–	–	6	5	–	2	2	–	–	–	BOR	✓	–	–	$3.11	TQFP (PT)	Integrated LCD Driver
	PIC18F86J50	R	80	65	PIC18	64 KB 32 Kw	RW	3904	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	12	–	12	–	2	–	–	–	–	2	3	–	–	–	–	2	3	–	2	2	–	✓	–	BOR	✓	–	–	$3.15	TQFP (PT)	
	PIC18F87J11	R	80	66	PIC18	128 KB 64 Kw	RW	3904	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	15	–	15	–	2	–	–	–	–	2	3	–	–	–	–	2	3	–	2	2	–	–	–	BOR	✓	–	–	$3.19	TQFP (PT)	
	PIC18F87J94 XLP	R	80	67	PIC18	128 KB 64 Kw	RW	4096	–	2V–3.6V	64 MHz	64 MHz	352	24	–	24	24	3	✓	–	–	✓	7	3	–	–	–	–	4	4	–	4	2	–	✓	–	BOR	–	–	✓	$3.19	TQFP (PT)	USB & LCD
	PIC18F87K22 XLP	R	80	69	PIC18	128 KB 64 Kw	RW	4096	1024	1.8V–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz		24	–	–	24	3	✓	–	–	–	7	3	–	–	–	–	6	5	–	2	2	–	–	–	BOR	✓	–	–	$3.21	TQFP (PT)	
	PIC18F87J93	R	80	67	PIC18	128 KB 64 Kw	RW	3900	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	192	12	–	–	12	2	✓	–	–	–	2	–	–	–	–	–	1	3	1	1	1	–	–	–	BOR	✓	–	–	$3.26	TQFP (PT)	Integrated LCD Driver, RTCC
	PIC18F87K90 XLP	R	80	69	PIC18	128 KB 64 Kw	RW	4096	1024	1.8V–5.5V	64 MHz	31 kHz, 500 kHz, 16 MHz	192	24	–	–	24	3	✓	–	–	–	7	3	–	–	–	–	6	5	–	2	2	–	–	–	BOR	✓	–	–	$3.35	TQFP (PT)	Integrated LCD Driver
	PIC18F87J50	R	80	65	PIC18	128 KB 64 Kw	RW	3904	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	–	12	–	12	–	2	–	–	–	–	2	3	–	–	–	–	2	3	–	2	2	–	✓	–	BOR	✓	–	–	$3.44	TQFP (PT)	
	PIC18F86J60	R	80	55	PIC18	64 KB 32 Kw	RW	3808	–	2V–3.6V	42 MHz	31 kHz	–	15	–	15	–	2	–	–	–	–	2	3	–	–	–	–	2	3	–	2	1	1	–	–	BOR	✓	–	–	$3.63	TQFP (PT)	Integrated MAC, 10 Base T PHY
	PIC18F87J60	R	80	55	PIC18	128 KB 64 Kw	RW	3808	–	2V–3.6V	42 MHz	32 kHz, 31 kHz	–	15	–	15	–	2	–	–	–	–	2	3	–	–	–	–	2	3	–	2	1	1	–	–	BOR	✓	–	–	$3.92	TQFP (PT)	Integrated MAC, 10 Base T PHY
	PIC18F86J72	R	80	51	PIC18	64 KB 32 Kw	RW	3923	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	132	12	–	–	12	2	✓	–	–	–	2	–	–	–	–	–	1	3	1	1	1	–	–	–	BOR	✓	–	–	$4.12	TQFP (PT)	2 × 24-bit ADC, RTCC
	PIC18F87J72	R	80	51	PIC18	128 KB 64 Kw	RW	3923	–	2V–3.6V	48 MHz	8 MHz, 31 kHz	132	12	–	–	12	2	✓	–	–	–	2	–	–	–	–	–	1	3	1	1	1	–	–	–	BOR	✓	–	–	$4.35	TQFP (PT)	2 × 24-bit ADC, RTCC
100-Pin	PIC18F95J94 XLP	R	100	85	PIC18	32 KB 16 Kw	RW	4096	–	2V–3.6V	64 MHz	64 MHz	480	24	–	24	24	3	✓	–	–	✓	7	3	–	–	–	–	4	4	–	4	2	–	✓	–	BOR	–	–	✓	$2.83	TQFP (PT/PF)	USB & LCD
	PIC18F96J94 XLP	R	100	85	PIC18	64 KB 32 Kw	RW	4096	–	2V–3.6V	64 MHz	64 MHz	480	24	–	24	24	3	✓	–	–	✓	7	3	–	–	–	–	4	4	–	4	2	–	✓	–	BOR	–	–	✓	$3.14	TQFP (PT/PF)	USB & LCD
	PIC18F97J94 XLP	R	100	85	PIC18	128 KB 64 Kw	RW	4096	–	2V–3.6V	64 MHz	64 MHz	480	24	–	24	24	3	✓	–	–	✓	7	3	–	–	–	–	4	4	–	4	2	–	✓	–	BOR	–	–	✓	$3.37	TQFP (PT/PF)	USB & LCD
	PIC18F96J60	R	100	70	PIC18	64 KB 32 Kw	RW	3808	–	2V–3.6V	42 MHz	31 kHz	–	16	–	16	–	2	–	–	–	–	2	3	–	–	–	–	2	3	–	2	2	1	–	–	BOR	✓	–	–	$3.84	TQFP (PT)	Integrated MAC, 10 Base T PHY
	PIC18F97J60	R	100	70	PIC18	128 KB 64 Kw	RW	3808	–	2V–3.6V	42 MHz	31 kHz	–	16	–	16	–	2	–	–	–	–	2	3	–	–	–	–	2	3	–	2	2	1	–	–	BOR	✓	–	–	$4.13	TQFP (PT), LQFP (PL)	Integrated MAC, 10 Base T PHY

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: 10-bit ADC	Analog Sensing & Measurement: 10/12-bit ADC 1100/500 KSPS	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)	PMP	RTCC/CRC	PPS	5 ku Pricing[†]	Monitors: System Mgmt. Features	Packages (Designator)
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)
14-Pin	PIC24F04KA200 XLP	R	12	PIC24	4	512	AN1095[1]	–	1.8V3.6V	16	8 MHz, 32 kHz	✓	7	–	2	–	–	1	1	3	1 UART, 1 SPI, 1 I²C	–	–	–	–	$1.16	BOR, POR, WDT, Deep Sleep, XLP	SPDIP (SP), TSSOP (ST)
14-Pin	PIC24F08KL200 XLP	R	12	PIC24	8	512	AN1095[1]	–	1.8V–3.6V	16	8 MHz, 32 kHz	–	7	–	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	NR	18	PIC24	8	1024	512	–	1.8V–5.5V	16	8 MHz, 32KHz	✓	–	16	1	–	–	5	5	11	1 UART, 1 SPI/I²C (MSSP)	–	–	✓	–	$1.08	BOR, HLVD, POR,WDT, OST, XLP	PDIP (P), SOIC (SO)
20-Pin	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)
20-Pin	PIC24F04KA201 XLP	R	18	PIC24	4	512	AN1095[1]	–	1.8V–3.6V	16	8 MHz, 32 kHz	✓	9	–	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)
20-Pin	PIC24F08KL201 XLP	R	17	PIC24	8	512	AN1095[1]	–	1.8V–3.6V	16	8 MHz, 32 kHz	–	12	–	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)
20-Pin	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)
20-Pin	PIC24F08KL401 XLP	R	18	PIC24	8	1024	512	–	1.8V–3.6V	16	8 MHz, 32 kHz	–	12	–	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)
20-Pin	PIC24F16KL401 XLP	R	18	PIC24	16	1024	512	–	1.8V–3.6V	16	8 MHz, 32 kHz	–	12	–	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)
20-Pin	PIC24F08KA101 XLP	R	18	PIC24	8	1536	512	–	1.8V–3.6V	16	8 MHz, 32 kHz	✓	9	–	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)
20-Pin	PIC24F16KA101 XLP	R	18	PIC24	16	1536	512	–	1.8V–3.6V	16	8 MHz, 32 kHz	✓	9	–	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)
20-Pin	PIC24FJ32MC101	R	15	PIC24	32	2048	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 kHz	✓	6	–	3	–	–	8	3	5	1 UART, 1 SPI, 1 I²C	–	–	✓	✓	$1.68	BOR, POR, WDT	PDIP (P), SOIC (SO), SSOP (SS), QFN (MQL)
20-Pin	PIC24FJ16MC101	R	15	PIC24	16	1024	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 kHz	✓	4	–	3	–	–	8	3	3	1 UART, 1 SPI, 1 I²C	–	–	✓	✓	$1.73	BOR, POR, WDT	PDIP (P), SOIC (SO), SSOP (SS), QFN (MQL)
20-Pin	PIC24F16KA301 XLP	R	18	PIC24	16	2048	512	–	1.8V–5.5V	16	8 MHz, 32 kHz	✓	–	9	3	–	–	3	3	5	2 UART, 2 SPI, 2 I²C	–	–	✓	–	$1.86	PWRT, HLVD, POR, OST, WDT	SPDIP (SP), SSOP (SS), SOIC (SO)
20-Pin	PIC24F32KA301 XLP	R	18	PIC24	32	2048	512	–	1.8V–5.5V	16	8 MHz, 32 kHz	✓	–	9	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)
28-Pin	PIC24F08KL402 XLP	R	24	PIC24	8	1024	512	–	1.8V–3.6V	16	8 MHz, 32 kHz	–	12	–	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)
28-Pin	PIC24F16KL402 XLP	R	24	PIC24	16	1024	512	–	1.8V–3.6V	16	8 MHz, 32 kHz	–	12	–	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)
28-Pin	PIC24F08KA102 XLP	R	24	PIC24	8	1536	512	–	1.8V–3.6V	16	8 MHz, 32 kHz	✓	9	–	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)
28-Pin	PIC24F16KA102 XLP	R	24	PIC24	16	1536	512	–	1.8V–3.6V	16	8 MHz, 32 kHz	✓	9	–	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)
28-Pin	PIC24FJ16MC102	R	21	PIC24	16	1024	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 kHz	✓	6	–	3	–	–	8	3	3	1 UART, 1 SPI, 1 I²C	–	–	✓	✓	$1.68	BOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML) TLA (TL)
28-Pin	PIC24FJ16MC101	R	15	PIC24	16	1024	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 kHz	✓	4	–	3	–	–	8	3	3	1 UART, 1 SPI, 1 I²C	–	–	✓	✓	$1.73	BOR, POR, WDT	PDIP (P), SOIC (SO), SSOP (SS), QFN (MQL)
28-Pin	PIC32FJ32MC102	R	21	PIC24	32	2048	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 kHz	✓	8	–	3	–	–	8	3	5	1 UART, 1 SPI, 1 I²C	–	–	✓	✓	$1.73	BOR, POR, WDT	PDIP (P), SOIC (SO), SSOP (SS), QFN (MQL), VTLA (TL)
28-Pin	PIC24FJ16GA002	R	21	PIC24	16	4096	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	–	10	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	✓	✓	✓	$1.74	BOR, LVD, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
28-Pin	PIC24F08KM102 XLP	NR	24	PIC24	8	1024	512	–	1.8V–5.5V	16	8 MHz, 32 KHz	✓	–	19	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)
28-Pin	PIC24F16KM102 XLP	NR	24	PIC24	16	1024	512	–	1.8V–5.5V	16	8 MHz, 32 KHz	✓	–	19	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)
28-Pin	PIC24F08KM202 XLP	NR	24	PIC24	8	2048	512	–	1.8V–5.5V	16	8 MHz, 32 KHz	✓	–	19	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)
28-Pin	PIC24F16KM202 XLP	NR	24	PIC24	16	2048	512	–	1.8V–5.5V	16	8 MHz, 32 KHz	✓	–	19	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)
28-Pin	PIC24FJ32GA002	R	21	PIC24	32	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	–	10	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	✓	✓	✓	$2.06	BOR, LVD, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
28-Pin	PIC24F16KA302 XLP	R	24	PIC24	16	2048	512	–	1.8V–5.5V	16	8 MHz, 32 kHz	✓	–	10	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)
28-Pin	PIC24F32KA302 XLP	R	24	PIC24	32	2048	512	–	1.8V–5.5V	16	8 MHz, 32 kHz	✓	–	10	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)
28-Pin	PIC24FJ32GA102 XLP	R	21	PIC24	32	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	10	–	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)
28-Pin	PIC24FJ32GB002 XLP	R	19	PIC24	32	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	9	–	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)
28-Pin	PIC24FJ64GA002	R	21	PIC24	64	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	–	10	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	✓	✓	✓	$2.48	BOR, LVD, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (ML)
28-Pin	PIC24FJ64GA102 XLP	R	21	PIC24	64	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	10	–	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)
28-Pin	PIC24FJ64GB002 XLP	R	19	PIC24	64	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	9	–	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)

* 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: 10-bit ADC	Analog Sensing & Measurement: 10/12-bit ADC 1100/500 KSPS	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)	PMP	RTCC/CRC	PPS	5 ku Pricing†	Monitors: System Mgmt. Features	Packages (Designator)
44-Pin	PIC24FJ16GA004	R	35	PIC24	16	4096	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	–	13	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C™	–	✓	✓	✓	$1.93	BOR, LVD, POR, WDT	TQFP (PT), QFN (ML)
44-Pin	PIC24FJ32MC104	R	35	PIC24	32	2048	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 kHz	✓	14	–	3	–	–	8	3	5	1 UART, 1 SPI, 1 I²C	–	–	✓	✓	$2.02	BOR POR, WDT	TQFP (PT), TLA, QFN (ML)
44-Pin	PIC24F16KM104 XLP	NR	38	PIC24	16	1024	512	–	1.8V–5.5V	16	8 MHz, 32 KHz	✓	–	22	1	–	–	5	5	11	1 UART, 1 SPI/I²C (MSSP)	–	–	✓	–	$2.06	BOR, HLVD, POR,WDT, OST, XLP	TQFP, QFN, UQFN
44-Pin	PIC24F08KM204 XLP	NR	38	PIC24	8	2048	512	–	1.8V–5.5V	16	8 MHz, 32 KHz	✓	–	22	3	–	–	5	5	11	2 UART, 2 SPI/I²C (MSSP)	–	–	✓	–	$2.06	BOR, HLVD, POR,WDT, OST, XLP	TQFP, QFN, UQFN
44-Pin	PIC24F16KM204 XLP	NR	38	PIC24	16	2048	512	–	1.8V–5.5V	16	8 MHz, 32 KHz	✓	–	22	3	–	–	5	5	11	2 UART, 2 SPI/I²C (MSSP)	–	–	✓	–	$2.13	BOR, HLVD, POR,WDT, OST, XLP	TQFP, QFN, UQFN
44-Pin	PIC24FJ32GA004	R	35	PIC24	32	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	–	13	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	✓	✓	✓	$2.30	BOR, LVD, POR, WDT	TQFP (PT), QFN (ML)
44-Pin	PIC24F16KA304 XLP	R	38	PIC24	16	2048	512	–	1.8V–5.5V	16	8 MHz, 32 kHz	✓	–	16	3	–	–	3	3	5	2 UART, 2 SPI, 2 I²C	–	–	✓	–	$2.30	PWRT, HLVD, POR, OST, WDT	TQFP (PT), QFN (ML), UQFN (MV)
44-Pin	PIC24FJ32GA104 XLP	R	35	PIC24	32	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	13	–	3	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	✓	✓	✓	$2.44	BOR, LVD, POR, WDT, Deep Sleep, XLP	TQFP (PT), QFN (ML)
44-Pin	PIC24F32KA304 XLP	R	38	PIC24	32	2048	512	–	1.8V–5.5V	16	8 MHz, 32 kHz	✓	–	16	3	–	–	3	3	5	2 UART, 2 SPI, 2 I²C	–	–	✓	–	$2.44	PWRT, HLVD, POR, OST, WDT	TQFP (PT), QFN (ML), UQFN (MV)
44-Pin	PIC24FJ32GB004 XLP	R	33	PIC24	32	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	13	–	3	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	✓	✓	✓	✓	$2.65	BOR, LVD, POR, WDT, Deep Sleep, XLP	TQFP (PT), QFN (ML)
44-Pin	PIC24FJ64GA004	R	35	PIC24	64	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	–	13	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	✓	✓	✓	$2.72	BOR, LVD, POR, WDT	TQFP (PT), QFN (ML)
44-Pin	PIC24FJ64GA104 XLP	R	35	PIC24	64	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	13	–	3	–	–	5	5	5	2 UART, 2 SPI, 2 I2C	–	✓	✓	✓	$2.86	BOR, LVD, POR, WDT, Deep Sleep, XLP	TQFP (PT), QFN (ML)
44-Pin	PIC24FJ64GB004 XLP	R	33	PIC24	64	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	13	–	3	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	✓	✓	✓	✓	$3.07	BOR, LVD, POR, WDT, Deep Sleep, XLP	TQFP (PT), QFN (ML)
64-Pin	PIC24FJ64GA306 XLP	R	53	PIC24	64	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	–	16	3	240	–	7	7	5	4 UART, 2 SPI, 2 I²C	–	✓	✓	✓	$2.77	BOR, LVD, POR, WDT, XLP, Deep Sleep	TQFP (PT), QFN (MR)
64-Pin	PIC24FJ128GA306 XLP	R	53	PIC24	128	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	–	16	3	240	–	7	7	5	4 UART, 2 SPI, 2 I²C	–	✓	✓	✓	$3.00	BOR, LVD, POR, WDT, XLP, Deep Sleep	TQFP (PT), QFN (MR)
64-Pin	PIC24FJ64GA006	R	53	PIC24	64	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	–	16	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	✓	✓	–	$3.05	BOR, POR, WDT	TQFP (PT)
64-Pin	PIC24FJ64GA106	R	53	PIC24	64	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	16	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	–	✓	✓	✓	$3.32	BOR, LVD, POR, WDT	TQFP (PT), QFN (MR)
64-Pin	PIC24FJ128GA006	R	53	PIC24	128	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	–	16	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	✓	✓	–	$3.35	BOR, POR, WDT	TQFP (PT)
64-Pin	PIC24FJ128GA106	R	53	PIC24	128	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	16	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	–	✓	✓	✓	$3.56	BOR, LVD, POR, WDT	TQFP (PT), QFN (MR)
64-Pin	PIC24FJ64GB106	R	52	PIC24	64	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	16	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	✓	✓	✓	✓	$3.64	BOR, LVD, POR, WDT	TQFP (PT), QFN (MR)
64-Pin	PIC24FJ128GB106	R	52	PIC24	128	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	16	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	✓	✓	✓	✓	$3.93	BOR, LVD, POR, WDT	TQFP (PT), QFN (MR)
64-Pin	PIC24FJ256GA106	R	53	PIC24	256	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	16	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	–	✓	✓	✓	$3.98	BOR, LVD, POR, WDT	TQFP (PT), QFN (MR)
64-Pin	PIC24FJ128GB206	R	52	PIC24	128	98304	AN1095[1]	–	2.2V–3.6V	16	8 MHz, 32 kHz	✓	16	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	✓	✓	✓	✓	$4.30	BOR, LVD, POR, WDT	TQFP (PT), QFN (MR)
64-Pin	PIC24FJ128DA106	R	52	PIC24	128	24576	AN1095[1]	–	2.2V–3.6V	16	8 MHz, 32 kHz	✓	16	–	3	–	✓	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	✓	✓	$4.34	BOR, LVD, POR, WDT	TQFP (PT), QFN (MR)
64-Pin	PIC24FJ256GB106	R	52	PIC24	256	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	16	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	✓	✓	✓	✓	$4.35	BOR, LVD, POR, WDT	TQFP (PT), QFN (MR)
64-Pin	PIC24FJ256GB206	R	52	PIC24	256	98304	AN1095[1]	–	2.2V–3.6V	16	8 MHz, 32 kHz	✓	16	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	✓	✓	✓	✓	$4.65	BOR, LVD, POR, WDT	TQFP (PT), QFN (MR)
64-Pin	PIC24FJ256DA106	R	52	PIC24	256	24576	AN1095[1]	–	2.2V–3.6V	16	8 MHz, 32 kHz	✓	16	–	3	–	✓	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	✓	✓	$4.69	BOR, LVD, POR, WDT	TQFP (PT), QFN (MR)
64-Pin	PIC24FJ128DA206	R	52	PIC24	128	98304	AN1095[1]	–	2.2V–3.6V	16	8 MHz, 32 kHz	✓	16	–	3	–	✓	9	9	5	4 UART, 3 SPI, 3 I²C	✓	–	✓	✓	$4.76	BOR, LVD, POR, WDT	TQFP (PT), QFN (MR)
64-Pin	PIC24FJ256DA206	R	52	PIC24	256	98304	AN1095[1]	–	2.2V–3.6V	16	8 MHz, 32 kHz	✓	16	–	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	✓	–	16	3	368	–	7	7	5	4 UART, 2 SPI, 2 I²C	–	✓	✓	✓	$2.98	BOR, LVD, POR, WDT, XLP, Deep Sleep	TQFP (PT)
80-Pin	PIC24FJ128GA308 XLP	R	69	PIC24	128	8192	AN1095[1]	6	2V–3.6V	16	8 MHz, 32 kHz	✓	–	16	3	368	–	7	7	5	4 UART, 2 SPI, 2 I²C	–	✓	✓	✓	$3.23	BOR, LVD, POR, WDT, XLP, Deep Sleep	TQFP (PT)
80-Pin	PIC24FJ64GA008	R	69	PIC24	64	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	–	16	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	✓	✓	–	$3.30	BOR, POR, WDT	TQFP (PT)
80-Pin	PIC24FJ64GA108	R	69	PIC24	64	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	16	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	–	✓	✓	✓	$3.58	BOR, LVD, POR, WDT	TQFP (PT)
80-Pin	PIC24FJ128GA008	R	69	PIC24	128	8192	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	–	16	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	✓	✓	–	$3.60	BOR, POR, WDT	TQFP (PT)
80-Pin	PIC24FJ128GA108	R	69	PIC24	128	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	16	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	–	✓	✓	✓	$3.82	BOR, LVD, POR, WDT	TQFP (PT)
80-Pin	PIC24FJ64GB108	R	68	PIC24	64	16384	AN1095[1]	–	2V–3.6V	16	8 MHz, 32 kHz	✓	16	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	✓	✓	✓	✓	$3.91	BOR, LVD, 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: 10-bit ADC	Analog Sensing & Measurement: 10/12-bit ADC 1100/500 KSPS	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)	PMP	RTCC/CRC	PPS	5 ku Pricing†	Monitors: System Mgmt. Features	Packages (Designator)
80-Pin (Cont.)	PIC24FJ128GB108	R	68	PIC24	128	16384	AN1095(1)	–	2V–3.6V	16	8 MHz, 32 kHz	✓	16	–	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	✓	16	–	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	✓	16	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	✓	✓	✓	✓	$4.62	BOR, LVD, POR, WDT	TQFP (PT)
100-Pin	PIC24FJ64GA310 XLP	R	85	PIC24	64	8192	AN1095(1)	6	2V–3.6V	16	8 MHz, 32 kHz	✓	–	24	3	480	–	7	7	5	4 UART, 2 SPI, 2 I²C	–	✓	✓	✓	$3.16	BOR, LVD, POR, WDT, Deep Sleep	TQFP (PT), BGA121 (BG)
	PIC24FJ128GA310 XLP	R	85	PIC24	128	8192	AN1095(1)	6	2V–3.6V	16	8 MHz, 32 kHz	✓	–	24	3	480	–	7	7	5	4 UART, 2 SPI, 2 I²C	–	✓	✓	✓	$3.42	BOR, LVD, POR, WDT, Deep Sleep	TQFP (PT), BGA121 (BG)
	PIC24FJ64GA010	R	85	PIC24	64	8192	AN1095(1)	–	2V–3.6V	16	8 MHz, 32 kHz	–	16	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	✓	✓	–	$3.51	BOR, POR, WDT	TQFP (PT)
	PIC24FJ64GA110	R	85	PIC24	64	16384	AN1095(1)	–	2V–3.6V	16	8 MHz, 32 kHz	✓	16	–	3	–	–	9	9	5	4 UART, 3 SPI, 3 I²C	–	✓	✓	✓	$3.79	BOR, LVD, POR, WDT	TQFP (PT), BGA121 (BG)
	PIC24FJ128GA010	R	85	PIC24	128	8192	AN1095(1)	–	2V–3.6V	16	8 MHz, 32 kHz	–	16	–	2	–	–	5	5	5	2 UART, 2 SPI, 2 I²C	–	✓	✓	–	$3.81	BOR, POR, WDT	TQFP (PT)
	PIC24FJ128GA110	R	85	PIC24	128	16384	AN1095(1)	–	2V–3.6V	16	8 MHz, 32 kHz	✓	16	–	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	✓	16	–	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	✓	16	–	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	✓	16	–	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	✓	24	–	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	✓	24	–	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	✓	16	–	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	✓	24	–	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	✓	24	–	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	✓	24	–	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	✓	24	–	3	–	✓	9	9	5	4 UART, 3 SPI, 3 I²C	✓	✓	✓	✓	$5.60	BOR, LVD, POR, WDT	TQFP (PT), BGA121 (BG)

* 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.

16-BIT PIC® MICROCONTROLLERS (PIC24H/E)

	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: 10-bit ADC	Analog Sensing & Measurement: 10/12-bit ADC 1100/500 KSPS	Analog Sensing & Measurement: Comparators	Analog Sensing & Measurement: Op Amps	Output Compare/PWM	Motor Control PWM Ch.	QEI	Input Capture	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)
18-Pin	PIC24HJ12GP201	R	13	PIC24	12	1	AN1095(1)	–	3V–3.6V	40	7.37 MHz, 32 KHz	–	–	6 ch	–	–	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	✓	–	6 ch	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	✓	–	6 ch	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	✓	–	6 ch	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	✓	–	6 ch	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	✓	–	6 ch	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	✓	–	6 ch	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)

* 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.

16-BIT PIC® MICROCONTROLLERS (PIC24H/E)

	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: 10-bit ADC	Analog Sensing & Measurement: 10/12-bit ADC 1100/500 KSPS	Analog Sensing & Measurement: Comparators	Analog Sensing & Measurement: Op Amps	Output Compare/PWM	Motor Control PWM Ch.	QEI	Input Capture	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)
28-Pin (Cont.)	PIC24EP256MC202	R	21	PIC24	256	32	AN1095(1)	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	–	6 ch	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	✓	–	6 ch	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	NR	21	PIC24	512	48	AN1095(1)	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	–	6 ch	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	NR	21	PIC24	512	48	AN1095(1)	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	–	6 ch	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)
36-Pin	PIC24EP64MC203	R	25	PIC24	64	8	AN1095(1)	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	–	8 ch	1 +2*	3	10	6	1	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.52	PBOR, POR, WDT	VTLA (TL)
	PIC24EP64GP203	R	25	PIC24	64	8	AN1095(1)	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	–	8 ch	1 +2*	3	4	–	–	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.52	PBOR, POR, WDT	VTLA (TL)
	PIC24EP32MC203	R	25	PIC24	32	4	AN1095(1)	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	–	8 ch	1 +2*	3	10	6	1	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$1.96	PBOR, POR, WDT	VTLA (TL)
	PIC24EP32GP203	R	25	PIC24	32	4	AN1095(1)	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	–	8 ch	1 +2*	3	4	–	–	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$1.96	PBOR, POR, WDT	VTLA (TL)
44-Pin	PIC24EP32MC204	R	35	PIC24	32	4	AN1095(1)	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	–	9 ch	1 +3*	3	10	6	1	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.03	PBOR, POR, WDT	VTLA(TL), QFN(ML), TQFP(PT)
	PIC24EP32GP204	R	35	PIC24	32	4	AN1095(1)	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	–	9 ch	1 +3*	3	4	–	–	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.03	PBOR, POR, WDT	VTLA(TL), QFN(ML), TQFP(PT)
	PIC24EP64MC204	R	35	PIC24	64	8	AN1095(1)	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	–	9 ch	1 +3*	3	10	6	1	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.59	PBOR, POR, WDT	VTLA(TL), QFN(ML), TQFP(PT)
	PIC24EP64GP204	R	35	PIC24	64	8	AN1095(1)	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	–	9 ch	1 +3*	3	4	–	–	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.59	PBOR, POR, WDT	VTLA(TL), QFN(ML), TQFP(PT)
	PIC24EP128MC204	R	35	PIC24	128	16	AN1095(1)	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	–	9 ch	1 +3*	3	10	6	1	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.80	PBOR, POR, WDT	VTLA(TL), QFN(ML), TQFP(PT)
	PIC24EP128GP204	R	35	PIC24	128	16	AN1095(1)	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	–	9 ch	1 +3*	3	4	–	–	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.80	PBOR, POR, WDT	VTLA(TL), QFN(ML), TQFP(PT)
	PIC24EP256MC204	R	35	PIC24	256	32	AN1095(1)	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	–	9 ch	1 +3*	3	10	6	1	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.28	PBOR, POR, WDT	VTLA(TL), QFN(ML), TQFP(PT)
	PIC24EP256GP204	R	35	PIC24	256	32	AN1095(1)	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	–	9 ch	1 +3*	3	4	–	–	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.28	PBOR, POR, WDT	VTLA(TL), QFN(ML), TQFP(PT)
	PIC24EP512MC204	NR	35	PIC24	512	48	AN1095(1)	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	–	9 ch	1 +3*	3	10	6	1	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.64	PBOR, POR, WDT	QFN(ML), TQFP(PT)
	PIC24EP512GP204	NR	35	PIC24	512	48	AN1095(1)	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	–	9 ch	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	✓	–	16 ch	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	✓	–	16 ch	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	✓	–	16 ch	1 +3*	3	10	6	1	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$2.94	PBOR, POR, WDT	QFN(MR), TQFP(PT)
	PIC24EP128GP206	R	53	PIC24	128	16	AN1095(1)	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	–	16 ch	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	✓	–	16 ch	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	✓	–	16 ch	1 +3*	3	4	–	–	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.42	PBOR, POR, WDT	QFN(MR), TQFP(PT)
	PIC24EP512MC206	NR	53	PIC24	512	48	AN1095(1)	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	–	16 ch	1 +3*	3	10	6	1	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.78	PBOR, POR, WDT	QFN(MR), TQFP(PT)
	PIC24EP512GP206	NR	53	PIC24	512	48	AN1095(1)	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	–	16 ch	1 +3*	3	4	–	–	4	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.78	PBOR, POR, WDT	QFN(MR), TQFP(PT)
	PIC24EP512GP806	NR	53	PIC24	536	52	AN1095(1)	15	3V–3.6V	70	7.37 MHz, 32 KHz	✓	–	24 ch, 2 A/D	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	–	–	32 ch	–	–	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	–	–	32 ch	–	–	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	–	–	32 ch	–	–	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	–	–	32 ch	–	–	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	–	–	32 ch	–	–	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	–	–	32 ch	–	–	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	–	–	32 ch, 2 ADC	–	–	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	–	–	32 ch, 2 ADC	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	–	–	32 ch, 2 ADC	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	–	–	32 ch, 2 ADC	3	–	16	–	–	16	9	4 UART, 4 SPI, 2 I²C	2	✓	✓	✓	✓	$6.31	PBOR, POR, WDT	TQFP (PT, PF)
	PIC24EP512GU814	R	122	PIC24	536	28	AN1095(1)	15	3V–3.6V	60	7.37 MHz, 32 KHz	–	–	32 ch, 2 ADC	3	–	16	–	–	16	9	4 UART, 4 SPI, 2 I²C	2	✓	✓	✓	✓	$6.99	PBOR, POR, WDT	TQFP (PT, PF)

* 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 10/12-bit 1100/500 ksps	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)
20- Pin	dsPIC33FJ16GP101*	R	13	dsPIC®	16	1	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 KHz	✓	4 ch (10-bit)	–	3	–	2	3	–	–	3	1 UART, 1 SPI, 1 I²C™	–	–	–	✓	✓	$1.57	BOR, POR, WDT	PDIP(P), SOIC(SO), QFN (MQL), SSOP (SS)
20- Pin	dsPIC33FJ16MC101*	R	15	dsPIC	16	1	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 KHz	✓	4 ch (10-bit)	–	3	–	2	3	6	–	3	1 UART, 1 SPI, 1 I²C	–	–	–	✓	✓	$1.57	BOR, POR, WDT	PDIP(P), SOIC(SO), QFN (MQL), SSOP (SS)
20- Pin	dsPIC33FJ32GP101*	R	13	dsPIC	32	2	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 KHz	✓	6 ch	–	3	–	2	3	–	–	5	1 UART, 1 SPI, 1 I²C	–	–	–	✓	✓	$1.68	BOR, POR, WDT	PDIP(P), SOIC(SO), QFN (MQL), SSOP (SS)
20- Pin	dsPIC33FJ32MC101*	R	15	dsPIC	32	2	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 KHz	✓	6 ch	–	3	–	2	3	6	–	5	1 UART,1 SPI, 1 I²C	–	–	–	✓	✓	$1.68	BOR, POR, WDT	PDIP(P), SOIC (SO), SSOP (SS)
28-Pin	dsPIC33FJ16GP102*	R	21	dsPIC	16	1	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 KHz	✓	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), VTLA (TL)
28-Pin	dsPIC33FJ16MC102*	R	21	dsPIC	16	1	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 KHz	✓	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), VTLA (TL)
28-Pin	dsPIC33FJ32GP102*	R	21	dsPIC	32	2	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 KHz	✓	8 ch	–	3	–	2	3	–	–	5	1 UART, 1 SPI, 1 I²C	–	–	–	✓	✓	$1.73	BOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MQL), VTLA (TL)
28-Pin	dsPIC33FJ32MC102*	R	21	dsPIC	32	2	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 KHz	✓	8 ch	–	3	–	2	3	6	-	5	1 UART,1 SPI, 1 I²C	–	–	–	✓	✓	$1.73	BOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM),
28-Pin	dsPIC33EP32GP502*	R	21	dsPIC	32	4	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	6 ch	–	1 + 2†	2	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$2.10	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM),
28-Pin	dsPIC33EP32MC502*	R	21	dsPIC	32	4	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	6 ch	–	1 + 2†	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),
28-Pin	dsPIC33EP64MC202*	R	21	dsPIC	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	6 ch	–	1 + 2†	2	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	0	–	–	✓	✓	$2.45	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM),
28-Pin	dsPIC33EP64GP502*	R	21	dsPIC	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	6 ch	–	1 + 2†	2	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$2.66	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM),
28-Pin	dsPIC33EP64MC502*	R	21	dsPIC	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	6 ch	–	1 + 2†	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),
28-Pin	dsPIC33EP128MC202*	R	21	dsPIC	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	6 ch	–	1 + 2†	2	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	0	–	–	✓	✓	$2.66	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM),
28-Pin	dsPIC33EP128GP502*	R	21	dsPIC	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	6 ch	–	1 + 2†	2	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$2.87	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM),
28-Pin	dsPIC33EP128MC502*	R	21	dsPIC	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	6 ch	–	1 + 2†	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),
28-Pin	dsPIC33EP256MC202*	R	21	dsPIC	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	6 ch	–	1 + 2†	2	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	0	–	–	✓	✓	$3.14	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM),
28-Pin	dsPIC33EP256GP502*	R	21	dsPIC	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	6 ch	–	1 + 2†	2	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.35	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM),
28-Pin	dsPIC33EP256MC502*	R	21	dsPIC	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	6 ch	–	1 + 2†	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),
28-Pin	dsPIC33EP512MC202*	NR	21	dsPIC	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	6 ch	–	1 + 2†	2	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	0	–	–	✓	✓	$3.50	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM),
28-Pin	dsPIC33EP512GP502*	NR	21	dsPIC	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	6 ch	–	1 + 2†	2	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.71	PBOR, POR, WDT	SPDIP (SP), SOIC (SO), SSOP (SS), QFN (MM),
28-Pin	dsPIC33EP512MC502*	NR	21	dsPIC	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	6 ch	–	1 + 2†	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),
36-Pin	dsPIC33EP32MC203*	R	25	dsPIC	32	4	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	8 ch	–	1 + 2†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	0	–	–	✓	✓	$1.96	PBOR, POR, WDT	VTLA (TL)
36-Pin	dsPIC33EP32GP503*	R	25	dsPIC	32	4	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	8 ch	–	1 + 2†	3	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$2.17	PBOR, POR, WDT	VTLA (TL)
36-Pin	dsPIC33EP32MC503*	R	25	dsPIC	32	4	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	8 ch	–	1 + 2†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$2.17	PBOR, POR, WDT	VTLA (TL)
36-Pin	dsPIC33EP64MC203*	R	25	dsPIC	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	8 ch	–	1 + 2†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	0	–	–	✓	✓	$2.52	PBOR, POR, WDT	VTLA (TL)
36-Pin	dsPIC33EP64GP503*	R	25	dsPIC	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	8 ch	–	1 + 2†	3	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$2.73	PBOR, POR, WDT	VTLA (TL)
36-Pin	dsPIC33EP64MC503*	R	25	dsPIC	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	8 ch	–	1 + 2†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$2.73	PBOR, POR, WDT	VTLA (TL)
36-Pin	dsPIC33EP256MC203*	R	25	dsPIC	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	8 ch	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	–	–	–	✓	✓	$3.21	PBOR, POR, WDT	VTLA (TL)
44-Pin	dsPIC33FJ32GP104*	R	35	dsPIC	32	2	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 KHz	✓	14 ch	–	3	–	2	3	–	–	5	1 UART, 1 SPI, 1 I²C	–	–	–	✓	✓	$2.02	BOR, POR, WDT	TQFP (PT), TLA, QFN (ML)
44-Pin	dsPIC33FJ32MC104*	R	35	dsPIC	32	2	AN1095[1]	–	3V–3.6V	16	7.37 MHz, 32 KHz	✓	14 ch	–	3	–	2	3	6	–	5	1 UART,1 SPI, 1 I²C	–	–	–	✓	✓	$2.02	BOR, POR, WDT	TQFP (PT), VTLA (TL), QFN (ML)
44-Pin	dsPIC33EP32MC204*	R	35	dsPIC	32	4	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	9 ch	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	0	–	–	✓	✓	$2.03	PBOR, POR, WDT	TQFP (PT), VTLA (TL), QFN (ML)
44-Pin	dsPIC33EP32GP504*	R	35	dsPIC	32	4	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	9 ch	–	1 + 3†	3	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$2.24	PBOR, POR, WDT	TQFP (PT), VTLA (TL), QFN (ML)
44-Pin	dsPIC33EP32MC504*	R	35	dsPIC®	32	4	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	9 ch	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$2.24	PBOR, POR, WDT	TQFP (PT), VTLA (TL), QFN (ML)
44-Pin	dsPIC33EP64MC204*	R	35	dsPIC	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	9 ch	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	0	–	–	✓	✓	$2.59	PBOR, POR, WDT	TQFP (PT), VTLA (TL), QFN (ML)
44-Pin	dsPIC33EP64GP504*	R	35	dsPIC	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	9 ch	–	1 + 3†	3	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$2.80	PBOR, POR, WDT	TQFP (PT), VTLA (TL), QFN (ML)
44-Pin	dsPIC33EP64MC504*	R	35	dsPIC	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	9 ch	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$2.80	PBOR, POR, WDT	TQFP (PT), VTLA (TL), QFN (ML)
44-Pin	dsPIC33EP128MC204*	R	35	dsPIC	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	9 ch	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	0	–	–	✓	✓	$2.80	PBOR, POR, WDT	TQFP (PT), VTLA (TL), 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 10/12-bit 1100/500 ksps	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.)	dsPIC33EP128GP504*	R	35	dsPIC®	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	9 ch	–	1 + 3†	3	4	4	–	–	5	2 UART, 2 SPI, 1 I²C™	1	–	–	✓	✓	$3.01	PBOR, POR, WDT	TQFP (PT), VTLA (TL), QFN (ML)
	dsPIC33EP128MC504*	R	35	dsPIC	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	9 ch	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.01	PBOR, POR, WDT	TQFP (PT), VTLA (TL), QFN (ML)
	dsPIC33EP256MC204*	R	35	dsPIC	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	9 ch	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	0	–	–	✓	✓	$3.28	PBOR, POR, WDT	TQFP (PT), VTLA (TL), QFN (ML)
	dsPIC33EP256GP504*	R	35	dsPIC	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	9 ch	–	1 + 3†	3	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.49	PBOR, POR, WDT	TQFP (PT), VTLA (TL), QFN (ML)
	dsPIC33EP256MC504*	R	35	dsPIC	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	9 ch	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.49	PBOR, POR, WDT	TQFP (PT), VTLA (TL), QFN (ML)
	dsPIC33EP512MC204*	NR	35	dsPIC	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	9 ch	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	0	–	–	✓	✓	$3.64	PBOR, POR, WDT	TQFP (PT), VTLA (TL), QFN (ML)
	dsPIC33EP512GP504*	NR	35	dsPIC	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	9 ch	–	1 + 3†	3	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.85	PBOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33EP512MC504*	NR	35	dsPIC	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	9 ch	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.85	PBOR, POR, WDT	TQFP (PT), VTLA (TL), QFN (ML)
64-Pin	dsPIC33EP64MC206*	R	53	dsPIC	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	16 ch	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	0	–	–	✓	✓	$2.73	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP64GP506*	R	53	dsPIC	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	16 ch	–	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	64	8	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	16 ch	–	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	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	16 ch	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	0	–	–	✓	✓	$2.94	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP128GP506*	R	53	dsPIC	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	16 ch	–	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	128	16	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	16 ch	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.15	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP256MC206*	R	53	dsPIC	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	16 ch	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	0	–	–	✓	✓	$3.42	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP256GP506*	R	53	dsPIC	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	16 ch	–	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	256	32	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	16 ch	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.63	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP512MC206*	NR	53	dsPIC	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	16 ch	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	0	–	–	✓	✓	$3.78	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP512GP506*	NR	53	dsPIC	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	16 ch	–	1 + 3†	3	4	4	–	–	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.99	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP512MC506*	NR	53	dsPIC	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	✓	16 ch	–	1 + 3†	3	4	4	6	1	5	2 UART, 2 SPI, 1 I²C	1	–	–	✓	✓	$3.99	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP512MC806*	NR	53	dsPIC	536	52	AN1095[1]	15	3V–3.6V	70	7.37 MHz, 32 KHz	–	24 ch, 2 ADC	–	3	–	16	16	8	2	9	4 UART, 2 SPI, 2 I²C	2	Y	Y	✓	✓	$5.22	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP512GP806*	NR	53	dsPIC	536	52	AN1095[1]	15	3V–3.6V	70	7.37 MHz, 32 KHz	–	24 ch, 2 ADC	–	3	–	16	16	–	–	9	4 UART, 2 SPI, 2 I²C	2	–	Y	✓	✓	$5.60	PBOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33EP256MU806*	R	53	dsPIC	512	48	AN1095[1]	4	3V–3.6V	70	7.37 MHz, 32 KHz	–	24 ch, 2 ADC	–	3	–	16	16	8	2	9	4 UART, 2 SPI, 2 I²C	2	–	Y	✓	✓	$5.60	PBOR, POR, WDT	TQFP (PT), QFN (MR)
100-Pin	dsPIC33FJ64GP310A*	R	85	dsPIC	64	16	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 KHz	–	32 ch	–	–	–	8	8	–	–	9	2 UART, 2 SPI, 2 I²C	–	–	–	–	–	$3.99	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33FJ64MC510A*	R	85	dsPIC	64	8	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 KHz	–	24 ch	–	–	–	8	8	8	1	9	2 UART, 2 SPI, 2 I²C	1	–	–	–	–	$4.33	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33FJ128GP310A*	R	85	dsPIC	128	16	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 KHz	–	32 ch	–	–	–	8	8	–	–	9	2 UART, 2 SPI, 2 I²C	–	–	–	–	–	$4.25	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33FJ128MC510A*	R	85	dsPIC	128	8	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 KHz	–	24 ch	–	–	–	8	8	8	1	9	2 UART, 2 SPI, 2 I²C	1	–	–	–	–	$4.59	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33FJ64GP710A*	R	85	dsPIC	64	16	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 KHz	–	32 ch, 2 ADC	–	–	–	8	8	–	–	9	2 UART, 2 SPI, 2 I²C	2	–	–	–	–	$4.61	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33FJ64MC710A*	R	85	dsPIC	64	16	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 KHz	-	24 ch, 2 ADC	–	–	–	8	8	8	1	9	2 UART, 2 SPI, 2 I²C	2	–	–	–	–	$4.91	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33FJ256GP510A*	R	85	dsPIC	256	16	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 KHz	-	32 ch	–	–	–	8	8	–	–	9	2 UART, 2 SPI, 2 I²C	1	–	–	–	–	$4.66	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33FJ128GP710A*	R	85	dsPIC	128	16	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 KHz	-	32 ch, 2 ADC	–	–	–	8	8	–	–	9	2 UART, 2 SPI, 2 I²C	2	–	–	–	–	$4.86	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33FJ256MC510A*	R	85	dsPIC	256	16	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 KHz	-	16 ch	–	–	–	8	8	8	1	9	2 UART, 2 SPI, 2 I²C	1	–	–	–	–	$4.97	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33FJ128MC710A*	R	85	dsPIC	128	16	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 KHz	-	24 ch, 2 ADC	–	–	–	8	8	8	1	9	2 UART, 2 SPI, 2 I²C	2	–	–	–	–	$5.18	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33FJ256GP710A*	R	85	dsPIC	256	30	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 KHz	-	32 ch, 2 ADC	–	–	–	8	8	–	–	9	2 UART, 2 SPI, 2 I²C	2	–	–	–	–	$5.32	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33FJ256MC710A*	R	85	dsPIC	256	30	AN1095[1]	8	3V–3.6V	40	7.37 MHz, 32 KHz	-	24 ch, 2 ADC	–	–	–	8	8	8	1	9	2 UART, 2 SPI, 2 I²C	2	–	–	–	–	$5.67	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33EP256MU810*	R	83	dsPIC	280	28	AN1095[1]	15	3V–3.6V	60	7.37 MHz, 32 KHz	-	32 ch, 2 ADC	–	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	536	52	AN1095[1]	15	3V–3.6V	60	7.37 MHz, 32 KHz	-	32 ch, 2 ADC	–	3	–	16	16	12	2	9	2 UART, 2 SPI, 2 I²C	2	✓	✓	✓	✓	$6.37	PBOR, POR, WDT	TQFP (PT, PF)
144-Pin	dsPIC33EP256MU814*	R	122	dsPIC	280	28	AN1095[1]	15	3V–3.6V	60	7.37 MHz, 32 KHz	-	32 ch, 2 ADC	–	3	–	16	16	12	2	9	2 UART, 2 SPI, 2 I²C	2	✓	✓	✓	✓	$6.31	PBOR, POR, WDT	TQFP (PT, PF)
	dsPIC33EP512MU814*	R	122	dsPIC	536	52	AN1095[1]	15	3V–3.6V	60	7.37 MHz, 32 KHz	-	32 ch, 2 ADC	–	3	–	16	16	12	2	9	2 UART, 2 SPI, 2 I²C	2	✓	✓	✓	✓	$6.99	PBOR, POR, WDT	TQFP (PT, PF)

* 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: Program (KB)	Memory: Data RAM (B)	Memory: EEPROM	Memory: DMA #Ch	Voltage Range	Operating Speed: Maximum Speed MIPS	Operating Speed: Internal Oscillator	Analog: ADC 10-bit 2000 ksps (‡ 4000 ksps)	Analog: DAC	Analog: Comparators	Output Compare/PWM	Input Capture	Power Supply PWM Ch[1]	QEI	16-bit Timer[2]	Communication: Digital Communication	Communication: CAN	PMP	RTCC	PPS	5 ku Pricing†	Monitors: System Mgmt. Features	Packages (Designator)
18-Pin	dsPIC33FJ06GS001	R	13	dsPIC®	6	256	AN1095[1]	–	3V–3.6V	40	7.37 MHz, 32 kHz	6 ch	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	6 ch	–	–	1	–	4	–	2	1 UART, 1 SPI, 1 I²C	–	–	–	✓	$1.75	BOR, POR, WDT	PDIP (P), SOIC (SO), SSOP (SS)
28-Pin	dsPIC33FJ06GS102A	R	21	dsPIC	6	256	AN1095[1]	–	3V–3.6V	40	7.37 MHz, 32 kHz	6 ch	–	–	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	6 ch	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	8 ch	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	8 ch	–	–	2	2	6	–	3	1 UART, 1 SPI, 1 I²C	–	–	–	✓	$2.52	BOR, POR, WDT	SPDIP (SP), SOIC (SO), QFN (MM)
	dsPIC33FJ16GS502*	R	21	dsPIC	16	2048	AN1095[1]	–	3V–3.6V	50	7.37 MHz, 32 kHz	8 ch, 2 ADC†	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)
44-Pin	dsPIC33FJ16GS404*	R	35	dsPIC	16	2048	AN1095[1]	–	3V–3.6V	50	7.37 MHz, 32 kHz	8 ch	–	–	2	2	6	–	3	1 UART, 1 SPI, 1 I²C	–	–	–	✓	$2.77	BOR, POR, WDT	TQFP (PT), QFN (ML)
	dsPIC33FJ16GS504*	R	35	dsPIC	16	2048	AN1095[1]	–	3V–3.6V	50	7.37 MHz, 32 kHz	12 ch, 2 ADC†	4 × 10-bit	4	2	2	8	–	3	1 UART, 1 SPI, 1 I²C	–	–	–	✓	$3.42	BOR, POR, WDT	TQFP (PT), QFN (ML)
64-Pin	dsPIC33FJ32GS406	R	58	dsPIC	32	4096	AN1095[1]	–	3V–3.6V	50	7.37 MHz, 32 kHz	16 ch	–	–	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	16 ch	–	–	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	16 ch, 2 ADC†	4 × 10-bit	4	4	4	12	2	5	2 UART, 2 SPI, 2 I²C	–	–	–	–	$3.36	BOR, POR, WDT	TQFP (PT), QFN (MR)
	dsPIC33FJ64GS606	R	58	dsPIC	64	9216	AN1095[1]	4	3V–3.6V	50	7.37 MHz, 32 kHz	16 ch, 2 ADC†	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)
80-Pin	dsPIC33FJ32GS608	R	74	dsPIC	32	4096	AN1095[1]	–	3V–3.6V	50	7.37 MHz, 32 kHz	18 ch, 2 ADC†	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	18 ch, 2 ADC†	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	24 ch, 2 ADC†	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	24 ch, 2 ADC†	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 PIC32 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	Peripheral Pin Select (PPS)	5 ku Pricing†	Monitors: System Mgmt. Features	Packages (Designator)
28-Pin	PIC32MX110F016B	R	21	PIC32	16 + 3	4	AN1095	4/0	2.3V–3.6V	40	8 MHz, 32 KHz	✓	10 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$1.51	POR, BOR, LVD, WDT	SPDIP (SP), SOIC (SO), SSOC (SS), QFN (ML)
	PIC32MX210F016B	R	21	PIC32	16 + 3	4	AN1095	4/2	2.3V–3.6V	40	8 MHz, 32 KHz	✓	10 ch	3	5/5/5	5/2	2/2	2	2	Device	–	–	✓	✓	✓	$1.62	POR, BOR, LVD, WDT	SPDIP (SP), SOIC (SO), SSOC (SS), QFN (ML)
	PIC32MX120F032B	R	21	PIC32	32 + 3	8	AN1095	4/0	2.3V–3.6V	50	8 MHz, 32 KHz	✓	10 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$1.71	POR, BOR, LVD, WDT	SPDIP (SP), SOIC (SO), SSOC (SS), QFN (ML)
	PIC32MX220F032B	R	21	PIC32	32 + 3	8	AN1095	4/2	2.3V–3.6V	50	8 MHz, 32 KHz	✓	10 ch	3	5/5/5	5/2	2/2	2	2	Device	–	–	✓	✓	✓	$1.82	POR, BOR, LVD, WDT	SPDIP (SP), SOIC (SO), SSOC (SS), QFN (ML)
	PIC32MX130F064B	R	21	PIC32	64 + 3	16	AN1095	4/0	2.3V–3.6V	40	8 MHz, 32 KHz	✓	10 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$2.03	POR, BOR, LVD, WDT	SPDIP (SP), SOIC (SO), SSOC (SS), QFN (ML)
	PIC32MX150F128B	R	21	PIC32	128 + 3	32	AN1095	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), SSOC (SS), QFN (ML)
	PIC32MX230F064B	R	21	PIC32	64 + 3	16	AN1095	4/2	2.3V–3.6V	40	8 MHz, 32 KHz	✓	10 ch	3	5/5/5	5/2	2/2	2	2	OTG	–	–	✓	✓	✓	$2.31	POR, BOR, LVD, WDT	SPDIP (SP), SOIC (SO), SSOC (SS), QFN (ML)
	PIC32MX250F128B	R	21	PIC32	128 + 3	32	AN1095	4/2	2.3V–3.6V	50	8 MHz, 32 KHz	✓	10 ch	3	5/5/5	5/2	2/2	2	2	OTG	–	–	✓	✓	✓	$2.59	POR, BOR, LVD, WDT	SPDIP (SP), SOIC (SO), SSOC (SS), QFN (ML)
36-Pin	PIC32MX110F016C	R	25	PIC32	16 + 3	4	AN1095	4/0	2.3V–3.6V	40	8 MHz, 32 KHz	✓	12 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$1.65	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MX210F016C	R	25	PIC32	16 + 3	4	AN1095	4/2	2.3V–3.6V	40	8 MHz, 32 KHz	✓	12 ch	3	5/5/5	5/2	2/2	2	2	Device	–	–	✓	✓	✓	$1.76	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MX120F032C	R	25	PIC32	32 + 3	8	AN1095	4/0	2.3V–3.6V	50	8 MHz, 32 KHz	✓	12 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$1.85	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MX220F032C	R	25	PIC32	32 + 3	8	AN1095	4/2	2.3V–3.6V	50	8 MHz, 32 KHz	✓	12 ch	3	5/5/5	5/2	2/2	2	2	Device	–	–	✓	✓	✓	$1.96	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MX130F064C	R	25	PIC32	64 + 3	16	AN1095	4/0	2.3V–3.6V	40	8 MHz, 32 KHz	✓	12 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$2.17	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MX150F128C	R	25	PIC32	128 + 3	32	AN1095	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)
	PIC32MX230F064C	R	25	PIC32	64 + 3	16	AN1095	4/2	2.3V–3.6V	40	8 MHz, 32 KHz	✓	12 ch	3	5/5/5	5/2	2/2	2	2	OTG	–	–	✓	✓	✓	$2.45	POR, BOR, LVD, WDT	VTLA (TL)
	PIC32MX250F128C	R	25	PIC32	128 + 3	32	AN1095	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	34	PIC32	16 + 3	4	AN1095	4/0	2.3V–3.6V	40	8 MHz, 32 KHz	✓	13 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$1.75	POR, BOR, LVD, WDT	TQFP (PT), QFN (ML), VTLA (TL)
	PIC32MX210F016D	R	34	PIC32	16 + 3	4	AN1095	4/2	2.3V–3.6V	40	8 MHz, 32 KHz	✓	13 ch	3	5/5/5	5/2	2/2	2	2	Device	–	–	✓	✓	✓	$1.85	POR, BOR, LVD, WDT	TQFP (PT), QFN (ML), VTLA (TL)
	PIC32MX120F032D	R	34	PIC32	32 + 3	8	AN1095	4/0	2.3V–3.6V	50	8 MHz, 32 KHz	✓	13 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$1.95	POR, BOR, LVD, WDT	TQFP (PT), QFN (ML), VTLA (TL)
	PIC32MX220F032D	R	34	PIC32	32 + 3	8	AN1095	4/2	2.3V–3.6V	50	8 MHz, 32 KHz	✓	13 ch	3	5/5/5	5/2	2/2	2	2	Device	–	–	✓	✓	✓	$2.04	POR, BOR, LVD, WDT	TQFP (PT), QFN (ML), VTLA (TL)
	PIC32MX130F064D	R	34	PIC32	64 + 3	16	AN1095	4/0	2.3V–3.6V	40	8 MHz, 32 KHz	✓	13 ch	3	5/5/5	5/2	2/2	2	2	–	–	–	✓	✓	✓	$2.24	POR, BOR, LVD, WDT	TQFP (PT), QFN (ML), VTLA (TL)
	PIC32MX150F128D	R	34	PIC32	128 + 3	32	AN1095	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)
	PIC32MX230F064D	R	34	PIC32	64 + 3	16	AN1095	4/2	2.3V–3.6V	40	8 MHz, 32 KHz	✓	13 ch	3	5/5/5	5/2	2/2	2	2	OTG	–	–	✓	✓	✓	$2.52	POR, BOR, LVD, WDT	TQFP (PT), QFN (ML), VTLA (TL)
	PIC32MX250F128D	R	34	PIC32	128 + 3	32	AN1095	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)
64-Pin	PIC32MX330F064H	NR	53	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	4	–	–	–	✓	✓	✓	call for pricing	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	PIC32MX430F064H	NR	53	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	4	OTG	–	–	✓	✓	✓	call for pricing	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)
	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)
	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	–	–	–	✓	✓	–	$3.75	POR, BOR, LVD, WDT	TQFP (PT), QFN (MR)
	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	✓	✓	–	$3.89	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	–	–	–	✓	✓	–	$3.96	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	✓	✓	–	$4.10	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	–	–	✓	✓	–	$4.23	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	–	–	–	✓	✓	–	$4.31	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	✓	✓	–	$4.34	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	–	✓	✓	–	$4.34	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	–	–	✓	✓	–	$4.58	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	–	✓	✓	–	$4.58	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 PIC32 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	Peripheral Pin Select (PPS)	5 ku Pricing†	Monitors: System Mgmt. Features	Packages (Designator)
64-Pin (Cont.)	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	✓	✓	–	$4.69	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	–	–	–	✓	✓	–	$4.77	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)
	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	–	–	✓	✓	–	$5.04	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	PIC32MX330F064L	NR	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	–	–	–	✓	✓	–	call for pricing	POR, BOR, LVD, WDT	TQFP (PT, PF), VTLA (TL)
	PIC32MX430F064L	NR	85	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	–	–	✓	✓	–	call for pricing	POR, BOR, LVD, WDT	TQFP (PT, PF), VTLA (TL)
	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	✓	✓	–	$4.37	POR, BOR, LVD, WDT	TQFP (PT, PF), XBGA (BG)
	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	–	–	–	✓	✓	–	$4.44	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	–	–	–	✓	✓	–	$4.44	POR, BOR, LVD, WDT	TQFP (PT), XBGA (BG)
	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	✓	✓	–	$4.58	POR, BOR, LVD, WDT	TQFP (PT, PF), XBGA (BG)
	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	–	–	✓	✓	–	$4.70	POR, BOR, LVD, WDT	TQFP (PT), XBGA (BG)
	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	–	–	–	✓	✓	–	$4.79	POR, BOR, LVD, WDT	TQFP (PT), 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	✓	✓	–	$4.82	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	–	✓	✓	–	$4.82	POR, BOR, LVD, WDT	TQFP (PT, PF), 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	–	–	✓	✓	–	$5.05	POR, BOR, LVD, WDT	TQFP (PT), 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	–	✓	✓	–	$5.05	POR, BOR, LVD, WDT	TQFP (PT, PF), XBGA (BG)
	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	✓	✓	–	$5.17	POR, BOR, LVD, WDT	TQFP (PT, PF), 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	–	–	–	✓	✓	–	$5.25	POR, BOR, LVD, WDT	TQFP (PT), XBGA (BG)
	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)
	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	–	–	✓	✓	–	$5.52	POR, BOR, LVD, WDT	TQFP (PT), 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".

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
MCP98243	SMBus/I²C Temperature Sensor with EEPROM	1	0.5/3.0	–40 to +125	+3.0 to +3.6	200	1	–	–	8-pin DFN, 8-pin TDFN, 8-pin TSSOP, 8-pin UDFN
MCP9843	SMBus/I²C JEDEC Temperature Sensor	1	0.5/3.0	–40 to +125	+3.0 to +3.6	200	1	–	–	8-pin DFN, 8-pin TDFN, 8-pin TSSOP
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
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: Fan Controllers

Product	Description	# Fan Drivers	PWM/Linear Control	# External Temp. Inputs	Typical Accuracy	Tpyical/Max. Accuracy	Vcc Range (V)	Interface	Alerts	Fan Speed Lookup Table	Packages
EMC2101	Programmable Fan Controller with Thermal Mgt	1	PWM	2	0.5	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	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	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	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	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	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	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	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/PWM Controllers

Product	Input Voltage Range (V)	Output Voltage (V)	Operating Temp. Range (°C)	Control Scheme	Switching Frequency (kHz)	Typical Active Current (µA)	Output Current (mA)	Features	Packages
TC1303/04/13	2.7 to 5.5	DC/DC: 0.8 to 4.5 LDO: 1.5 to 3.3	–40 to +85	PFM/PWM	2000	65/600	DC/DC: 500 mA LDO: 300 mA	Synchronous Buck Regulator, LDO w/Power Good with PFM/PWM auto-switching, Power Good output or Power Sequencing	MSOP, DFN
MCP1602/3	2.7 to 5.5	0.8 to 4.5 /4.0	–40 to +85	PFM/PWM	2000	35/45	500	Synchronous Buck Regulator PFM, PWM auto-switching, UVLO, Soft-start, Power Good indicator, Over-temperature/current protection	MSOP, DFN, TSOT
MCP1630/1631/V/HV/VHV	3.0 to 16	–	–40 to +125	PWM	1000/2000	2800/3700	Ext	Current/Voltage mode PWM controllers. Options with integrated 16V LDO, Integrated error amplifier, Current and voltage sense amplifier, Overvoltage comparator and integrated MOSFET driver	MSOP, SSOP, TSSOP, DFN
MCP19035	4.5 to 30	–	–40 to +125	PWM	300	6000	Ext	Voltage mode PWM synchronous buck controller. Integrates LDO, error amplifer, current and voltage sense, UVLO/OVLO/MOSFET Dead Time adj, and MOSFET Drivers	DFN
MCP1640/B/C/D	0.65 to 6	2.0 to 5.5	–40 to +85	PWM or PWM/PFM	500	19	350	Integrated synchronous boost regulator, –0.65V start-up voltage, Soft-start, True load disconnect or input-to-output bypass option	SOT-23, DFN
MCP1650/1/2/3	2.7 to 5.5	2.5 to ext. tx limited	–40 to +125	Constant Frequency	750	120	560/440	Step-up DC/DC Controller with shutdown control, Low battery detect, Power Good indicator, UVLO, Soft start	MSOP
MCP16301	4.0 to 30	2.0 to 15	–40 to +85	PWM	500	2000	600	Integrated N-channel, UVLO, Soft-start, Over-temperature protection	SOT-23
MCP16321	6 to 24	0.9 to 5	–40 to +125	PWM/PFM	1000	2300	1000	Integrated switches, Internal compensation, Peak current mode control, Soft-start, UVLO, Power Good pin	QFN
MCP16322	6 to 24	0.9 to 5	–40 to +125	PWM/PFM	1000	2300	2000	Integrated switches, Internal compensation, Peak current mode control, Soft-start, UVLO, Power Good pin	QFN
MCP16323	6 to 18	0.9 to 5	–40 to +125	PWM/PFM	1000	2300	3000	Integrated switches, Internal compensation, Peak current mode control, Soft-start, UVLO, Power Good pin	QFN

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
MCP19111	4.5 to 32	–	–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	QFN

POWER MANAGEMENT: Power MOSFETs

Product	Vds (V)	Configuration	Polarity	Rds (on) @ 4.5V (mΩ, Max.)	Rds (on) @ 10V (mΩ, Max.)	Qg @ 4.5V (nC, Max.)	Id (A, Max. @ 25°C, Tcase)	Vgs (th) (V, Min.)	Qgd (nC, Typ.)	Rg (Ω Typ.)	Package
MCP87018	25	Single	–	2.2	1.9	37	100	1	13	1.5	5 x 6 PDFN
MCP87022	25	Single	–	2.6	2.3	29	100	1	9	1.3	5 x 6 PDFN
MCP87030	25	Single	–	4	3.5	22	100	1	6.7	1.2	5 x 6 PDFN
MCP87050	25	Single	–	6	5	15	100	1	4.7	1.1	5 x 6 PDFN
MCP87055	25	Single	–	7	6	14	60	1	4.5	2.1	3.3 x 3.3 PDFN
MCP87090	25	Single	–	12	10.5	10	64	1.1	2.8	1.8	5 x 6 PDFN, 3.3 x 3.3 PDFN
MCP87130	25	Single	–	16.5	13.5	8	54	1.1	2.6	1.7	5 x 6 PDFN, 3.3 x 3.3 PDFN

POWER MANAGEMENT: Linear Regulators

Product	Max. Input Voltage (V)	Output Voltage (V)	Output Current (mA)	Typical Active Current (µA)	Typical Dropout Voltage @ Max. I_{OUT} (mV)	Typical Output Voltage Accuracy (%)	Features	Packages
TC1016/17	6	1.8 to 4.0	80/150	53	150/285	±0.5	Shutdown	SOT-23A, SC70
TC1301A/B	6	1.5 to 3.3	LDO1: 300 LDO2: 150	103/114	LDO1: 104 LDO2: 150	±0.5	Dual LDO plus Reset output, Shutdown, Reference bypass, Voltage detect	MSOP, DFN
TC1302AB	6	1.5 to 3.3	LDO1: 300 LDO2: 150	103/114	LDO1: 104 LDO2: 150	±0.5	Dual LDO, Shutdown, Reference bypass, Voltage detect	MSOP, DFN
TC2014/5, TC2185	6	1.8 to 5.0	50/100/150	55	45/90/140	±0.4	Shutdown, Reference bypass input	SOT-23A
TC2054/5, TC2186	6	1.8 to 5.0	50/100/150	55	45/90/140	±0.4	Shutdown, Error output	SOT-23A
MCP1700	6	1.2 to 5.0	250	1.6	300	±0.4	Very low I_Q	SOT-23A, SOT-89, TO-92
MCP1702/3 /3A	13.2/16/16	1.2 to 5.0	250	2	330/625/625	±0.4	Very low I_Q	DFN, TO-92, SOT-23A, SOT-89, SOT-223
MCP1725/6/7	6	0.8 to 5.0	500/1000/1500	120/140/140	210/300/330	±0.5	Shutdown, C_{DELAY}, Power Good	SOIC, DFN
MCP1754/S	16	1.8 to 5.5	150	56	300	±0.4	Power Good, Shutdown	DFN, SOT-23A, SOT-89, SOT-223
MCP1790/1	30	3.0, 3.3, 5.0	70	70	500	±0.2	Load dump, Shutdown, Power Good	SOT-223, DDPAK
MCP1801/2	10	0.9 to 6.0	150/300	25	250/800	±0.4	Shutdown, High PSRR	SOT-23A
MCP1804	28	1.8 to 18	150	50	300	±0.5	Shutdown, High PSRR	SOT-23, SOT-89, SOT-223
MCP1824/5/6/7	6	0.8 to 5.0	300/500/1000/1500	120/120/140/140	200/210/300/330	±0.5	Fixed and Adjustable output, Shutdown, Power Good	SOT-23, SOT-223, TO-220, DDPAK
MCP1824S/5S/6S/7S	6	0.8 to 5.0	300/500/1000/1500	120/120/140/140	200/210/300/330	±0.5	3-pin high current LDOs	SOT-223, TO-220, DDPAK

POWER MANAGEMENT: Charge Pump DC-to-DC Converters

Product	Input Voltage Range (V)	Output Voltage (V)	Operating Temp. Range (°C)	Max. Input Current (µA)	Typical Output Current (mA)	Features	Packages
TC1044S	1.5 to 12	$-V_{IN}$ or $2*V_{IN}$	–40 to +85	160	20	85 kHz oscillator Boost mode	PDIP, SOIC
TC7660	1.5 to 10	$-V_{IN}$ or $2*V_{IN}$	–40 to +85	180	20	10 kHz oscillator	PDIP, SOIC
TC7660H	1.5 to 10	$-V_{IN}$ or $2*V_{IN}$	–40 to +85	1000	20	120 kHz oscillator	PDIP, SOIC
TC7660S	1.5 to 12	$-V_{IN}$ or $2*V_{IN}$	–40 to +85	160	20	45 kHz oscillator Boost mode	PDIP, SOIC
TC7662B	1.5 to 15	$-V_{IN}$ or $2*V_{IN}$	–40 to +85	180	20	35 kHz oscillator Boost mode	PDIP, SOIC
TC7662A	3.0 to 18	$-V_{IN}$ or $2*V_{IN}$	–40 to +85	200	40	12 kHz oscillator	PDIP, SOIC
MCP1256	1.8 to 3.6	3.3	–40 to +85	100	100	Power Good Sleep mode	MSOP, DFN
MCP1257	1.8 to 3.6	3.3	–40 to +85	100	100	Sleep mode low battery indication	MSOP, DFN
MCP1258	1.8 to 3.6	3.3	–40 to +85	100	100	Low battery indication input/output bypass 1	MSOP, DFN

POWER MANAGEMENT: CPU/System Supervisors

Product	Description	Operating Temp. Range (°C)	Features	Packages
MCP11(1/2) TC (1/2/3/4)	System Voltage Detectors (No Reset Delay)	–40 to +125 –40 to +85	Wide V_{CC} input range, Wide detection range (custom options available), Low current, CMOS/Push-Pull active low reset options	5-SOT-23, 3-TO-92, 3-SOT-23A, 3-SOT-89, 3-SC70
MCP809, MCP100, MCP130, MCP120 MCP13XX, TC1270A and more	System Voltage Supervisors (Available Reset Delays)	–40 to +125 –40 to +85	Wide detection range (custom options available), Low current, Push-Pull/Open Drain, Active high/low, Watchdog, Manual reset, Dual output options, Multiple reset delay options	8-SOIC (150 mil), 5-SOT-23, 4-SOT-143, 3-TO-92, 3-SOT-23, 5-SC70

POWER MANAGEMENT: Power MOSFET Drivers

Product	Configuration	Operating Temp. Range (°C)	Peak Output Current (A)	Output Resistance (Max. @ 25°C)	Max Supply Voltage (V)	Input/Output Delay (ns)	Packages
MCP1401/02 Single	Inverting/Non-inverting	−40 to +125	0.5	18/16	18	40/40	SOT-23
MCP1415/16 Single	Inverting/Non-inverting	−40 to +125	1.5	7.5/5.5	18	50/55	SOT-23
TC4467/8/9 Quad	Inverting/ Non-inverting	−40 to +85	1.2	15/15	18	40/40	PDIP, SOIC
TC4426A/27A/28A Dual	Inverting/Non-inverting	−40 to +125	1.5	9/9	18	30/30	PDIP, SOIC, DFN
TC4423A/24A/25A Dual	Inverting/Non-inverting	−40 to +125	3	3 (typ.)/4 (typ.)	18	40 (typ.)/40 (typ.)	PDIP, SOIC, DFN
MCP14E3/E4/E5 Dual	Inverting/Non-inverting	−40 to +125	4	3.5/3.0	18	55/55	PDIP, SOIC, DFN
MCP14E6/E7/E8 Dual	Inverting/Non-inverting/Inverting and Non-inverting	−40 to +125	2	2.2/2.8	18	45/45	PDIP, SOIC, DFN
MCP14E9/E10/E11 Dual	Inverting/Non-inverting/Inverting and Non-inverting	−40 to +125	3	2.2/2.8	18	75/75	PDIP, SOIC, DFN
MCP1406/07 Single	Inverting/Non-inverting	−40 to +125	6	1.8/2.0 (typ.)	18	30/30	TO-220, PDIP, SOIC, DFN
TC4420/29	Inverting/Non-inverting	−40 to +125	6	2.8/2.5	18	55/55	TO-220, PDIP, SOIC, DFN
TC4421A/22A Single	Inverting /Non-inverting	−40 to +125	9	1.25 (typ.)/1.5	18	38/42	TO-220, PDIP, SOIC, DFN
TC4451/52 Single	Inverting /Non-inverting	−40 to +125	12	0.6 (typ.)/1.5	18	15/15	TO-220, PDIP, SOIC, DFN, DDPAK
TC4431/32 Single	Inverting /Non-inverting	−40 to +85	1.5	10/10	30	62/78	PDIP, SOIC

POWER MANAGEMENT: Synchronous Buck High-Side Driver

Product	Configuration	Operating Temp Range (°C)	Peak Output Current (A)	Output Resistance (Max.@ 25°C)	Max Supply Voltage (V)	Input/Output Delay (ns)	Packages
MCP14700/14628	Dual input/Single input	−40 to +85	2	2.5/2.5	5 (V_{DD}), 36 (Boot Pin)	18/20	SOIC, DFN

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 × 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 × 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 × 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 × 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 × 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 × 4 QFN

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
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	1	7.5	530	1	2 to 5.5	SOT, SC70
MCP6H81/2/4	1/2/4	5.5	700	4	3.5 to 12.0	DFN, SOIC, TSSOP
MCP6281/2/3/4/5	1/2/1/4/2	5	445	3	2.2 to 6.0	PDIP, SOIC, MSOP, TSSOP, SOT
MCP6481	1	4	240	1	2 to 5.5	SOT, SC70
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	1	2	100	1	2 to 5.5	SOT, SC70
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

Product	# per Package	GBWP (MHz)	I_Q Typical (µA)	V_{OS} Max (mV)	Operating Voltage (V)	Packages
MCP6V26/7/8	1/2/1	2	620	0.002	2.3 to 5.5	SOIC, MSOP, DFN
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
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	1	0.3	23	0.008	1.8 to 5.5	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
MCP6V11	1	0.08	7.5	0.008	1.6 to 5.5	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: 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

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	I²C™	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	Voltage Reference	Output Settling Time (µs)	DNL (±LSB)	Typical Operating Current (µA)	Temperature Range (°C)	Packages
MCP47DA1	6	1	I²C™	V_{DD}	6	0.25	130	–40 to +125	SOT-23
MCP4706/16/26	8/10/12	1	I²C	Ext	6	0.05/0.188/0.75	210	–40 to +125	SOT-23
MCP4725	12	1	I²C	V_{DD}	6	0.75	175	–40 to +125	SOT-23
MCP4728	12	4	I²C	Int	6	0.75	250	–40 to +125	MSOP
MCP4801/11/21	8/10/12	1	SPI	Int	4.5	0.5/0.5/0.75	330	–40 to +125	PDIP, SOIC, MSOP, 2x3 DFN
MCP4802/12/22	8/10/12	2	SPI	Int	4.5	0.5/0.5/0.75	415	–40 to +125	MSOP, PDIP, SOIC
MCP4901/11/21	8/10/12	1	SPI	Ext	4.5	0.5/0.5/0.75	175	–40 to +125	PDIP, SOIC, MSOP, 2x3 DFN
MCP4902/12/22	8/10/12	2	SPI	Ext	4.5	0.5/0.5/0.75	350	–40 to +125	PDIP, SOIC, TSSOP
TC1320/1	8/10	1	SMbus	Ext	10	0.8/2	350	–40 to +85	MSOP, SOIC

MIXED SIGNAL: Energy Measurement ICs

Product	Dynamic Range	Typical Accuracy	ADC Channels	Gain Selection	Output Type	Typical Supply Current (mA)	Analog Voltage Range (V)	Digital Voltage Range (V)	Temperature Range (°C)	Packages
MCP3911	24-bit resolution	94.5 dB SINAD	2	up to 32	SPI	1.7	2.7 to 3.6	2.7 to 3.6	–40 to +125	SSOP, QFN
MCP3903	24-bit resolution	91 dB SINAD	6	up to 32	SPI	8.3	4.5 to 5.5	2.7 to 3.6	–40 to +125	SSOP
MCP3905A/06A	500:1 /1000:1	0.1%	2	up to 32	Active power pulse	3.9	4.5 to 5.5	4.5 to 5.5	–40 to +125	SSOP
MCP3909	1000:1	0.1%	2	up to 16	Active power pulse/SPI	3.9	4.5 to 5.5	4.5 to 5.5	–40 to +125	SSOP

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
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
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
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

INTERFACE: Controller Area Network (CAN), Infrared, LIN Transceivers, Ethernet, Serial Peripherals, USB

Product	Description	Operating Temperature Range (°C)	Other Features	Packages
MCP2515	Stand-alone CAN controller with SPI Interface	–40 to +125	3 Tx Buffers, 2 Rx Buffers, 6 Filters, 2 Masks, Interrupt output, MCP2510 upgrade	PDIP, SOIC, TSSOP, QFN
MCP2551	CAN (Controller Area Network), High-speed CAN transceiver	–40 to +125	1 Mbps max. CAN bus speed, ISO11898 compatible, Industry standard pinout	PDIP, SOIC
MCP200(3/4)A, MCP202(1/2)A, MCP2025, MCP2050	LIN (Local Interconnect Network) transceivers	–40 to +125	Product options: Stand-alone transceiver, intergrated V_{REG} = 3.3V or 5V @ 70 mA, integrated WWDT, integrated ratio-metric battery monitor. V_{CC} Range = 6 to 18 V, Max Baud Rate = 20 Kbaud, Compliant with LIN 1.3, 2.0 2.1, SAE J2602, Automotive grade	PDIP, SOIC, TSSOP, DFN, QFN
MCP23X09/18	8-bit I/O port expander, 16-bit I/O port expander	–40 to +125	I²C™ (up to 3.4 MHz) or SPI (up to 10 MHz) interface, 25 mA source/sink per I/O	PDIP, SDIP, SOIC, SSOP
MCP212(0/2), MCP2140A, MCP215(0/5)	Infrared IrDA encoders, Decoders, Protocol handlers	–40 to +85	UART to IR encoder/decoder w/hardware & software baud rate selection, IrDA® standard protocol handler plus encoder/decoder	PDIP, SDIP, SOIC, SSOP
MCP2200, MCP2210	USB Bridge Products: USB-to-UART, USB-to-SPI	–40 to +85	Supports full speed, USB 2.0 compliant, integrated PHY, Tx/Rx buffer size 64–128 bytes each, 8–9 GPIO, V_{DD} Range = 3.0 to 5.5V	SOIC, SSOP, QFN
ENC28J60	Stand-alone 10 Base-T Ethernet controller with SPI interface	–40 to +85	Ethernet controller, 8 KB RAM Buffer, Integrated 10 BASE-T PHY	SPDIP, SOIC, SSOP, QFN
ENC424J600	Stand-alone 10/100 Base-T Ethernet controller with SPI and parallel interface	–40 to +85	Ethernet controller, 24 KB RAM Buffer, Cryptographic Security Engine, 10/100 Base-T PHY	TQFP, QFN
ENC624J600	Stand-alone 10/100 Base-T Ethernet controller with SPI and parallel interface	–40 to +85	Ethernet controller, 24 KB RAM Buffer, Cryptographic Security Engine, 10/100 Base-T PHY	TQFP

INTERFACE: USB Port Power Controllers with Charger Emulation

Product	Description	USB Port Power Switch (55 mW)	Hi-Speed USB 2.0 Switch	Battery Charger Emulation Profiles	8 Resistor Set Current Limits	Indicator Output	Current Measurement	Interface	Packages
UCS1001-1/2	USB Port Power Controller with Charger Emulation	1	1	9	Up to 2.5A	Charging/Attach Detect	–	Discrete I/O	20-pin 4 × 4 QFN
UCS1002-1	Programmable USB Port Power Controller with Charger Emulation	1	1	9 plus 1 programmable	Up to 2.5A	Charging	✓	I²C™ /SMBus	20-pin 4 × 4 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 Manufactures 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 Manufactures 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

SAFETY & 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	122/7,152	–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 Motos, 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	Temp. Operating Range (°C)	Features	Packages
MTS62C19A	One Bipolar Stepper Motor or Two DC Motors	10.0 to 40.0	Internal	750	Direct PWM Input, Current Limit Control, Microstepping	No	Overcurrent, Overtemperature, Under Voltage	–20 to +85	Dual Full Bridge Motor Driver for Stepper Motors, Pin Compatible with Allegro 6219	24-SOP
MTS2916A	One Bipolar Stepper Motor or Two DC Motors	10.0 to 40.0	Internal	750	Direct PWM Input, Current Limit Control, Microstepping	No	Overcurrent, Overtemperature, Under Voltage	–20 to +85	Dual Full Bridge Motor Driver for Stepper Motors, Pin Compatible with Allegro 2916	24-SOP
MTD6505	3-Phase Brushelss DC Motor	2.0 to 5.5	Internal	750	Sensorless Sinusoidal	Frequency Generator	Overcurrent, Overvoltage, Short Circuit, Overtemperature, Motor Lock-up	–40 to +125	180° Sinusoidal Sensorless Drive, Direction Control, Programmable BEMF Coefficient Range, Fsw = 30 kHz	10-UDFN (3 × 3)
MTD6501C/D/G	3-Phase Brushless DC Motor	2.0 to 14.0	Internal	800/500/800	Sensorless Sinusoidal	Frequency Generator	Overcurrent, Short Circuit Overtemperature, Motor Lock-up	–30 to +95	180° Sinusoidal Sensorless Drive, Direction Control, Boost Mode (D), Fsw = 20 kHz (C/D), 23 kHz (G)	8-SOP (C, G), 10-MSOP (D)
MTD6502B	3-Phase Brushless DC Motor	2.0 to 5.5	Internal	750	Sensorless Sinusoidal	Frequency Generator	Overcurrent, Short Circuit Overtemperature, Motor Lock-up	–40 to+125	180° Sinusoidal Sensorless Drive, Direction Control, Fsw = 30 kHz	10-TDFN (3 × 3)

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)	ID/MAC (Bits)	Min V_{CC}	Min I_{BAT}			
I²C™	MCP7940M	8	±127 ppm	1 sec.	–	$\overline{IRQ}$/CLK	64	0	0	1.8	–	–	$0.46	SOIC (SN), TSSOP (ST), MSOP (MS), TDFN (MNY), PDIP (P)
I²C™	MCP7940N	8	±127 ppm	1 sec.	–	$\overline{IRQ}$/CLK	64	0	0	1.8	1.3	Power Fail Timestamp	$0.59	SOIC (SN), TSSOP (ST), MSOP (MS), TDFN (MNY), PDIP (P)
I²C™	MCP7940X	8	±127 ppm	1 sec.	–	$\overline{IRQ}$/CLK	64	0	64	1.8	1.3	Power Fail Timestamp	$0.66	SOIC (SN), TSSOP (ST), MSOP (MS), TDFN (MNY)
I²C™	MCP7941X	8	±127 ppm	1 sec.	–	$\overline{IRQ}$/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.	–	$\overline{IRQ}$/CLK	64	1	128	1.8	1.3	Power Fail Timestamp	$0.90	SOIC (SL), TSSOP (ST)
SPI	MCP7952X	10	±255 ppm	0.01 sec.	–	$\overline{IRQ}$/CLK	64	2	128	1.8	1.3	Power Fail Timestamp	$0.96	MSOP (MS), TDFN (MN)
SPI	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)
SPI	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 ID programming options: [0 = Blank ID], [1 = EU-48™ MAC Address], [2 =EUI-64™ MAC Address]
2: The Power Fail Timestamp in all RTCCs occur at Battery Switchover.

Products sorted by pin count followed by pricing.
† 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		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)
SPI	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)
SPI	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)
SPI	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)
Serial NVSRAM																	
SPI	23LCV512	R	512 Kb	× 8	20 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)
SPI	23LCV1024	R	1024 Kb	× 8	20 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 (MNY), DFN (MC), TO-92 (TO), 3-SOT-23 (TT), WLCSP (CS)
UNI/O® Bus	11XX020/E48	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 option available	PDIP (P), SOIC (SN), MSOP (MNY), DFN (MC), TO-92 (TO), 3-SOT-23 (TT), WLCSP (CS)
UNI/O® Bus	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 (MNY), DFN (MC), TO-92 (TO), 3-SOT-23 (TT), WLCSP (CS)
UNI/O® Bus	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 (MNY), DFN (MC), TO-92 (TO), 3-SOT-23 (TT), WLCSP (CS)
UNI/O® Bus	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 (MNY), DFN (MC), 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 (MC), 5-SOT-23 (OT)
I²C™	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 (MNY), DFN (MC), 5-SOT-23 (OT), SC70 (LT)
I²C™	24XX02/024/E48	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 option available	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MNY), DFN (MC), 5-SOT-23 (OT), SC70 (LT)
I²C™	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 restable software WP – DIMM-DDR2/3	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY), 6-SOT-23 (OT),
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 (MC), 5-SOT-23 (OT)
I²C™	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 (MNY), DFN (MC), 5-SOT-23 (OT), SC70 (LT)
I²C™	24XX02/024/E48	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 option available	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MNY), DFN (MC), 5-SOT-23 (OT), SC70 (LT)
I²C™	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 restable software WP – DIMM-DDR2/3	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY), 6-SOT-23 (OT)
I²C™	24XX04	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 (MNY), DFN (MC), 5-SOT-23 (OT), WLCSP (CS)
I²C™	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),
I²C™	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 (MNY), DFN (MC), 5-SOT-23 (OT), WLCSP (CS)
I²C™	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 (MNY), DFN (MC), 5-SOT-23 (OT), WLCSP (CS)
I²C™	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 (MNY), DFN (MC), 5-SOT-23 (OT), WLCSP (CS)
I²C™	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 (MNY), DFN (MC), WLCSP (CS)
I²C™	24XX256	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	PDIP (P), SOIC (SN), TSSOP (ST), SOIJ (SM), MSOP (MS), DFN (MF), WLCSP (CS)
I²C™	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)
I²C™	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)
I²C™	24XX1024	NR	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)

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 Spreeds	Max. Standby Current (@ 5.5V, 85°C)	Write Protect		Protected Array Size	5 ku Pricing†	Special/Unique Features	Packages
												Hardware	Software				
Serial EEPROM (Cont.)																	
Microwire	93XX46A/B/C	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	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)
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)
	25XX020A/E48	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 option available	PDIP (P), SOIC (SN), TSSOP (ST), MSOP (MS), DFN (MNY), 6-SOT-23 (OT)
	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)
	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)
	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)
	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)
	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),
	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)
	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)
	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)
	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)

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 Spped (Typical)	Write Protect: 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, 8B-XFBGA
×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	SST25PF020B	R	2 Mb	256K × 8	40 MHz	2.3–3.6V	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	NR	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	80 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	SST25PF040B	R	4 Mb	512K × 8	40 MHz	2.3–3.6V	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	SST25VF080B	R	8 Mb	1M × 8	80 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	SST25PF080B	R	8 Mb	1M × 8	40 MHz	2.3–3.6V	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	SST25VF016B	R	16 Mb	2M × 8	75 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	SST25VF032B	R	32 Mb	4M × 8	80 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	NR	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	NR	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
×1, ×2	SST25VF064C	R	64 Mb	8M × 8	80 MHz	2.7–3.6V	−40°C to +85°C	100,000 cycles (typical)	100 years	1.5 ms (Page Program)	5 µA	✓	✓	Various	Dual output and dual I/O read, Single- and dual-input page program, One-time programmable area, Fast read, program and erase	8L-SOIC, 8C-WSON, 16L-SOIC
×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)	8 µA	✓	✓	Various	SQI™ Quad I/O 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)	8 µA	✓	✓	Various	SQI Quad I/O 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	NR	8 Mb	1M × 8	104 MHz	1.65–1.95V	0°C to 70°C −40°C to +85°C	100,000 cycles (minimum)	100 years	1 ms (Page Program)	3 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	NR	16 Mb	2M × 8	104 MHz	1.65–1.95V	0°C to 70°C −40°C to +85°C	100,000 cycles (minimum)	100 years	1 ms (Page Program)	3 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	NR	32 Mb	4M × 8	104 MHz	2.7–3.6V	0°C to 70°C −40°C to +85°C	100,000 cycles (minimum)	100 years	1 ms (Page Program)	15 µA	✓	✓	Various	×1, ×2, x×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	NR	64 Mb	8M × 8	104 MHz	2.7–3.6V	0°C to 70°C −40°C to +85°C	100,000 cycles (minimum)	100 years	1 ms (Page Program)	15 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)	Write Protect: 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	Max. Clock Frequency	Operating Voltage	Temperature Range	E/W Endurance (Minimum)	Data Retention (Minimum)	Write Speed (Typical)	Write Protect				Special/Unique Features	Packages**
											Max. Standby Current	Hardware	Software	Protected Array Size		
×8	SST39SF010A	R	1 Mb	128K × 8	45/70 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
	SST39LF010	R	1 Mb	512K × 8	45 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
	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
	SST39LF020	R	2 Mb	512K × 8	45 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
	SST39SF020A	R	2 Mb	256K × 8	45/55/70 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
	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
	SST39SF040	R	4 Mb	512K × 8	45/70 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
	SST39LF040	R	4 Mb	512K × 8	45 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
	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
	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
×16	SST39LF200A	R	2 Mb	128K × 16	55 ns	3.0–3.6V	0°C to 70°C	100,000 cycles	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	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	100 years	28 µs (Word Program)	5 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	100 years	28 µs (Word Program)	5 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	100 years	28 µs (Word Program)	5 µA	✓	–	32 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	NR	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	Pin Count	Frequency Range (GHz)	Sensitivity (dBm)	Power Output (dBm)	RSSI	Tx Power Consumption (mA)	Rx Power Consumption (mA)	Clock	Sleep	MAC	MAC Features	Protocols	Encryption	Interface	Volume Pricing†	Packages
IEEE 802.11 Modules																
MRF24WB0MA	36	2.412–2.484	–91	10	Yes	156	85	25 MHz	0.1 µA(1)	Yes	802.11b	Wi-Fi® Connection Manager, Announce, DNS, DDNS, DHCP, FTP, HTTP, NBNS, SNMP, SNTP, SSL, TCP, UDP, ZeroConf(2)	WPA, WPA2, WEP	4-wire SPI	$12.48	36/Module
MRF24WB0MB	36	2.412–2.484	–91	10	Yes	156	85	25 MHz	0.1 µA(1)	Yes	802.11b	Wi-Fi Connection Manager, Announce, DNS, DDNS, DHCP, FTP, HTTP, NBNS, SNMP, SNTP, SSL, TCP, UDP, ZeroConf(2)	WPA, WPA2, WEP	4-wire SPI	$12.48	36/Module
RN171	49	2.412–2.484	–83	12	Yes	130	30	44 MHz	4 µA	Yes	802.11b/g, Wi-Fi Direct, SoftAP, WPS, Webscan	DHCP, DNS, ARP, ICMP, FTP client, HTTP client, TCP, UDP	WEP, WPA, WPA2	UART, SPI Slave, Wi-Fi	$18.11	49/Module
MRF24WG0MA	36	2.412–2.484	–95	18	Yes	240	156	25 MHz	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	4-wire SPI	$18.75	36/Module
MRF24WG0MB	36	2.412–2.484	–95	18	Yes	240	156	25 MHz	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	4-wire SPI	$18.75	36/Module
RN131C	44	2.412–2.484	–85	18	Yes	210 (+18 dBm)	40	44 MHz	4 µA	Yes	802.11b/g, Wi-Fi Direct, SoftAP, WPS, Webscan	DHCP, DNS, ARP, ICMP, FTP client, HTTP client, TCP, UDP	WEP, WPA, WPA2	UART, SPI Slave, Wi-Fi	$24.90	44/Module
RN131G	44	2.412–2.484	–85	18	Yes	210 (+18 dBm)	40	44 MHz	4 µA	Yes	802.11b/g, Wi-Fi Direct, SoftAP, WPS, Webscan	DHCP, DNS, ARP, ICMP, FTP client, HTTP client, TCP, UDP	WEP, WPA, WPA2	UART, SPI Slave, Wi-Fi	$27.75	44/Module
IEEE 802.15.4 Transeivers/Modules																
MRF24J40	40	2.405–2.48	–95	0	Yes	23	19	20 MHz	2 µA	Yes	CSMA-CA	–	AES128	4-wire SPI	$2.36	40/QFN
MRF24J40MA	12	2.405–2.48	–95	0	Yes	23	19	20 MHz	2 µA	Yes	CSMA-CA	–	AES128	4-wire SPI	$4.94	12/Module
MRF24J40MB	12	2.405–2.48	–102	20	Yes	130	25	20 MHz	5 µA	Yes	CSMA-CA	–	AES128	4-wire SPI	$10.66	12/Module
MRF24J40MC	12	2.405–2.48	–108	20	Yes	120	25	20 MHz	12 µA	Yes	CSMA-CA	–	AES128	4-wire SPI	$10.66	12/Module

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

WIRELESS PRODUCTS

Product	Pin Count	Frequency Range (GHz)	Sensitivity (dBm)	Power Output (dBm)	Power Consumption	Sleep	MAC	Profiles	Interface	Volume Pricing†	Packages
Bluetooth®											
RN42-I/RM	35	2.4 to 2.48	–80	4	Standby/Idle 25 mA, Connected (normal mode) 3 mA, Connected (low power sniff) 8 mA	Standby/Idle (deep sleep enabled) 26 µA	Yes	SPP, DUN, HID, iAP, HCI, RFCOMM, L2CAP, SDP	UART, USB, Bluetooth®	$12.50	35/Module
RN52-I/RM*	40	2.4 to 2.48	-85	4	TBD	Standby/Idle (deep sleep enabled) 26 µA	Yes	A2DP, AVRCP, SPP, HFP/HSP, iAP	(audio) Analog speaker, microphone, I²S master mode, S/PDIF, (data) UART, USB, GPIO	$16.04	40/Module
RN41-I/RM	35	2.4 to 2.48	–80	15	Standby/Idle 25 mA, Connected (normal mode) 30 mA, Connected (low power sniff) 8 mA	Standby/Idle (deep sleep enabled) 250 µA	Yes	SPP, DUN, HID, iAP, HCI, RFCOMM, L2CAP, SDP	UART, USB, Bluetooth	$18.75	35/Module

*Not yet released.

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
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 @ 0 dBm	3	12.8 MHz	0.1 µA	4-wire SPI	$1.76	32/TQFN
MRF89XAM8A	12	868	–113	12.5	Yes	25 mA @ 0 dBm	3	12.8 MHz	0.1 µA	4-wire SPI	$5.20	12/Module
MRF89XAM9A	12	915	–113	12.5	Yes	25 mA @ 0 dBm	3	12.8 MHz	0.1 µA	4-wire SPI	$5.20	12/Module

rfPIC™ Transmitters + PIC® MCUs

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
PIC12F529T48A	6	418–868	2.3 K	–	201	1	1	8	Yes	OOK/FSK	100	10	2.0–3.7	$0.85	14/TSSOP
PIC12F529T39A	6	310–928	2.3 K	–	201	1	1	8	Yes	OOK/FSK	100	10	2.0–3.7	$0.95	14/TSSOP
PIC12LF1840T48A	6	418–868	7.1 K	256	256	2	1	32	Yes	OOK/FSK	100	10	1.8–3.6	$1.12	14/TSSOP
PIC12LF1840T39A	6	310–928	7.1 K	256	256	2	1	32	Yes	OOK/FSK	100	10	1.8–3.6	$1.27	14/TSSOP
rfPIC12F675F	6	380–450	1.7 K	128	64	1	1	20	Yes	ASK/FSK	40	10	2.0–5.5	$2.11	20/SSOP
rfPIC12F675H	6	850–930	1.7 K	128	64	1	1	20	Yes	ASK/FSK	40	10	2.0–5.5	$2.11	20/SSOP
rfPIC12F675K	6	290–350	1.7 K	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.

USB: SuperSpeed USB 3.0 Hubs
USB 3.0 Hub Controller Family for Computing and Consumer Applications

Product	Features	Downstream USB Ports	Industrial Temp. Option (–40 to 85°C)	Pin	Packages
USB5532B	USB 3.0 Superspeed hub, two port, OTP flash programmable with advanced battery charging support	2	USB5532Bi	64	QFN
USB5533B	USB 3.0 Superspeed hub, three port, OTP flash programmable with advanced battery charging support	3	USB5533Bi	64	QFN
USB5534B	USB 3.0 Superspeed hub, four port, OTP flash programmable with advanced battery charging support	4	USB5534Bi	64	QFN
USB5537B	USB 3.0 hybrid hub, seven total ports, four USB 3.0 with three additional USB 2.0 downstream ports, OTP flash programmable with advanced battery charging support	USB 3.0: 4 USB 2.0: 3	USB5537Bi	72	QFN

USB: Hi-Speed USB 2.0 Hubs
Low-Power, Small-Footprint, Cost-Effective USB 2.0 Hub Controller Family

Product	Features	Downstream USB Ports	Industrial Temp. Option (–40 to 85°C)	Pin	Packages
USB2422	Small-footprint, two port value hub, commercial and industrial temperature with USB battery charging 1.1	2	USB2422i	24	QFN
USB2412	Small-footprint, low-power, standard commercial temperature range	2	–	28	QFN
USB2512B	Low-power, extended commercial temperature range, USB Battery Charging 1.1	2	USB2512Bi	36	QFN
USB2513B	Low-power, small-footprint, extended commercial temperature range, USB Battery Charging 1.1 (USB2513B/2514B only), SMSC's proprietary PortMap, PortSwap, TrueSpeed, PHYBoost and MultiTRAK™ technologies	3	USB2513Bi	36	QFN
USB2514B	Low-power, small-footprint, extended commercial temperature range, USB Battery Charging 1.1 (USB2513B/2514B only), SMSC's proprietary PortMap, PortSwap, TrueSpeed, PHYBoost and MultiTRAK technologies	4	USB2514Bi	36/64	QFN, VFBGA
USB2517	Low-power, small-footprint, extended commercial temperature range, USB Battery Charging 1.1 (USB2513B/2514B only), SMSC's proprietary PortMap, PortSwap, TrueSpeed, PHYBoost and MultiTRAK technologies	7	USB2517i	64	QFN
USB2524	MultiSwitch™ technology combining Hi-Speed USB hub and switching functionality in a single-chip, cost-effective solution	2 upstream/4 downstream	–	56	QFN
USB2532	Low-power, small-footprint, extended commercial temperature range, USB Battery Charging 1.2, PortMap, PortSwap, TrueSpeed, PHYBoost, MultiTRAK, VariSense and FlexConnect technologies	2	USB2532i	36	SQFN
USB2533	Low-power, small-footprint, extended commercial temperature range, USB Battery Charging 1.2, PortMap, PortSwap, TrueSpeed, PHYBoost, MultiTRAK, VariSense and FlexConnect technologies	3	USB2533i	36	SQFN
USB2534	Low-power, small-footprint, extended commercial temperature range, USB Battery Charging 1.2, PortMap, PortSwap, TrueSpeed, PHYBoost, MultiTRAK, VariSense™ and FlexConnect technologies	4	USB2534i	36	SQFN
USB3613	Ultra small, extremely low power, mobile embedded USB 2.0 hub with HSIC host connectivity, LPM compatibility and advanced battery charging support	USB 2.0: 2 HSIC: 1	USB3613i	30	WLCSOP
USB3813	Ultra small, extremely low power, mobile embedded USB 2.0 hub with USB 2.0 host connectivity, LPM compatibility and advanced battery charging support	USB 2.0: 2 HSIC: 1	USB3813i	30	WLCSOP
USB4604	Advanced USB 2.0 hub with USB 2.0 downstream ports and HSIC or USB host connectivity, I/O bridging, low power and advanced battery charging support	USB 2.0 4	USB4604i	48	QFN
USB4624	Advanced USB 2.0 hub with USB 2.0/HSIC downstream ports and HSIC or USB host connectivity, I/O bridging, low power and advanced battery charging support	USB 2.0: 2 HSIC: 2	USB4624i	48	QFN

USB: Hi-Speed USB 2.0 Portable Hubs
Ultra-Small Hubs for Portable Applications

Product	Features	Industrial Temp. Option (–40 to 85°C)	Upstream Interface	Pin/Ball	Packages
USB3803C	Ultra-small, extremely low standby power, high-performance, built-in ESD protection, USB Battery Charging 1.2 detection	USB3803i	USB	25	WLCSP
USB3503A	Ultra-small, extremely low standby power, high-performance, built-in ESD protection, USB Battery Charging 1.2 detection	USB3503i	HSIC	25	WLCSP

USB: Hi-Speed USB to Ethernet Controllers
USB 2.0 to 10/100 or 10/100/1000 Ethernet Controllers

Product	Features	Industrial Temp. Option (–40 to 85°C)	Pin	Packages
LAN9500A	10/100, NetDetach™ technology, EEPROM-less operation, UniClock™ technology	LAN9500Ai	56	QFN
LAN7500	10/100/1000 Gigabit controller with integrated USB and Ethernet PHYs, single-chip, high-performance, cost-effective, EEPROM-less operation, UniClock technology	LAN7500i	56	QFN
LAN9730	HSIC Ethernet controller, multiple low-power modes, HSIC interface reduces pin count and power budget, drivers fully backward compatible to existing USB 2.0 software for seamless transition, industrial temperature for rugged environments	LAN9730i	56	QFN

USB: Hi-Speed USB to Ethernet Controllers
USB 2.0 Hub and 10/100 Ethernet Controllers with Superior ESD Protection

Product	Features	Downstream USB Ports	Industrial Temp. Option (–40 to 85°C)	Pin	Packages
LAN9512	Industry's first fully-integrated, single-chip device, UniClock™ technology, EEPROM-less design option	2	LAN9512i	64	QFN
LAN9513	Industry's first fully-integrated, single-chip device, UniClock technology, EEPROM-less design option	3	LAN9513i	64	QFN
LAN9514	Industry's first fully-integrated, single-chip device, UniClock technology, EEPROM-less design option	4	LAN9514i	64	QFN

USB: Hi-Speed USB Flash Media Controllers

Standalone USB 2.0, Multi-Format Flash Media Controllers

Product	Features	Socket Type	Supports	Industrial Temp. Option (–40 to 85°C)	Pin	Packages
USB2240	Ultra Hi-Speed, cost-effective, external or internal ROM option, secure memory format options	Single	SD™/MultiMediaCard™/SmartMedia™/xD-Picture Card™/Memory Stick®	USB2240i	36	QFN
USB2241	Ultra Hi-Speed, cost-effective, external or internal ROM option, secure memory format options	Single	SD/MultiMediaCard/SmartMedia/Memory Stick	USB2241i	36	QFN
USB2242	Ultra Hi-Speed, cost-effective, external or internal ROM option, secure memory format options	Single	Memory Stick	USB2242i	36	QFN
USB2244	Ultra Hi-Speed, cost-effective, external or internal ROM option, secure memory format options	Single	SD/MultiMediaCard	USB2244i	36	QFN
USB2250	Ultra Hi-Speed, cost-effective, external or internal ROM option, secure memory format options	Multi	SD/MultiMediaCard/SmartMedia/xD-Picture Card/Memory Stick/Compact Flash® and external memory	USB2250i	128	VTQFP
USB2251	Ultra Hi-Speed, cost-effective, external or internal ROM option, secure memory format options	Multi	SD/MultiMediaCard/SmartMedia/xD-Picture Card/Memory Stick/Compact Flash and external memory	USB2251i	128	VTQFP

USB: Transceivers

Hi-Speed USB 2.0 Transceivers

Product	Features	Interface	Reference Clock	Pin/Ball	Packages
USB3310	Highly-integrated, small footprint, internal ESD protection circuits, integrated 3.3V LDO regulator, integrated USB switch, external passive components minimized, flexPWR® technology	1.8V ULPI	Multi-frequency	24-pin	QFN
USB3311	Highly-integrated, small footprint, internal ESD protection circuits, integrated 3.3V LDO regulator, integrated USB switch, external passive components minimized, flexPWR technology	1.8V ULPI	26 MHz	24-pin /25-ball	QFN, VFBGA
USB3313	Highly-integrated, small footprint, internal ESD protection circuits, integrated 3.3V LDO regulator, integrated USB switch, external passive components minimized, flexPWR technology	1.8V–3.3V ULPI	26 MHz	25-ball	VFBGA
USB3315	Highly-integrated, small footprint, internal ESD protection circuits, integrated 3.3V LDO regulator, integrated USB switch, external passive components minimized, flexPWR technology	1.8V–3.3V ULPI	24 MHz	24-pin	QFN
USB3316	Highly-integrated, small footprint, internal ESD protection circuits, integrated 3.3V LDO regulator, integrated USB switch, external passive components minimized, flexPWR technology	1.8V ULPI	19.2 MHz	24-pin /25-ball	QFN, VFBGA, UFBGA
USB3317	Highly-integrated, small footprint, internal ESD protection circuits, integrated 3.3V LDO regulator, integrated USB switch, external passive components minimized, flexPWR technology	1.8V–3.3V ULPI	26 MHz	24-pin /25-ball	QFN, VFBGA
USB3318	Highly-integrated, small footprint, internal ESD protection circuits, integrated 3.3V LDO regulator, integrated USB switch, external passive components minimized, flexPWR technology	1.8V–3.3V ULPI	13 MHz	24-pin	QFN
USB3319	Highly-integrated, small footprint, internal ESD protection circuits, integrated 3.3V LDO regulator, integrated USB switch, external passive components minimized, flexPWR technology	1.8V ULPI	13 MHz	24-pin /25-ball	QFN, VFBGA
USB3320	Full-featured, USB OTG transceiver, integrated Vbus over-voltage protection, USB switch, ESD protection circuits and 3.3V LDO regulator, ULPI 60 MHz clock-in mode including crystal support, flexPWR technology	1.8V–3.3V ULPI	Multi-frequency	32-pin	QFN
USB3321	Small-footprint, integrated Vbus over-voltage protection, USB switch, ESD protection circuits and 3.3V LDO regulator, ULPI 60 MHz clock-in mode, flexPWR technology	1.8V ULPI	26 MHz	25-ball	WLCSP
USB3322	Small-footprint, integrated Vbus over-voltage protection, USB switch, ESD protection circuits and 3.3V LDO regulator, ULPI 60 MHz clock-in mode, flexPWR technology	1.8V ULPI	12 MHz	25-ball	WLCSP
USB3326	Small-footprint, integrated Vbus over-voltage protection, USB switch, ESD protection circuits and 3.3V LDO regulator, ULPI 60 MHz clock-in mode, flexPWR technology	1.8V ULPI	19.2 MHz	25-ball	WLCSP
USB3327	Small-footprint, integrated Vbus over-voltage protection, USB switch, ESD protection circuits and 3.3V LDO regulator, ULPI 60 MHz clock-in mode, flexPWR technology	1.8V ULPI	27 MHz	25-ball	WLCSP
USB3329	Small-footprint, integrated Vbus over-voltage protection, USB switch, ESD protection circuits and 3.3V LDO regulator, ULPI 60 MHz clock-in mode, flexPWR technology	1.8V ULPI	13 MHz	25-ball	WLCSP
USB3330	Small-footprint, integrated Vbus over-voltage protection, internal ESD protection circuits, integrated 1.8V & 3.3V LDO regulators, ULPI 60 MHz clock-in mode, flexPWR technology, battery charger detection supported through RapidCharge Anywhere™ technology	1.8V ULPI	Multi-frequency	25-ball	WLCSP
USB3331	Small-footprint, integrated Vbus over-voltage protection, internal ESD protection circuits, integrated 1.8V & 3.3V LDO regulators, integrated USB switch, ULPI 60 MHz clock-in mode, flexPWR technology, battery charger detection supported through RapidCharge Anywhere technology	1.8V ULPI	26 MHz	25-ball	WLCSP
USB3333	Small-footprint, integrated Vbus over-voltage protection, internal ESD protection circuits, integrated 1.8V & 3.3V LDO regulators, ULPI 60 MHz clock-in mode, flexPWR technology, battery charger detection supported through RapidCharge Anywhere technology	1.8V–3.3V ULPI	19.2 MHz/26 MHz	25-ball	WLCSP
USB3336	Small-footprint, integrated Vbus over-voltage protection, internal ESD protection circuits, integrated 1.8V & 3.3V LDO regulators, integrated USB switch, ULPI 60 MHz clock-in mode, flexPWR technology, battery charger detection supported through RapidCharge Anywhere technology	1.8V ULPI	19.2 MHz	25-ball	WLCSP
USB3338	Small-footprint, integrated Vbus over-voltage protection, internal ESD protection circuits, integrated 1.8V & 3.3V LDO regulators, ULPI 60 MHz clock-in mode, flexPWR technology, battery charger detection supported through RapidCharge Anywhere technology	1.8V ULPI	38.4 MHz	25-ball	WLCSP
USB3340	Highly-integrated, small-footprint, internal ESD protection circuits, integrated 1.8V & 3.3V LDO regulators, integrated USB switch, ULPI 60 MHz clock-in mode, flexPWR technology, battery charger detection supported through RapidCharge Anywhere technology	1.8V–3.3V ULPI	Multi-frequency	32-pin	QFN
USB3341	Highly-integrated, small-footprint, internal ESD protection circuits, integrated 1.8V & 3.3V LDO regulators, integrated USB switch, ULPI 60 MHz clock-in mode, flexPWR technology, battery charger detection supported through RapidCharge Anywhere technology	1.8V ULPI	26 MHz	24-pin	QFN
USB3343	Highly-integrated, small-footprint, internal ESD protection circuits, integrated 1.8V & 3.3V LDO regulators, ULPI 60 MHz clock-in mode, flexPWR technology, battery charger detection supported through RapidCharge Anywhere technology	1.8V–3.3V ULPI	26 MHz crystal	24-pin	QFN
USB3346	Highly-integrated, small-footprint, internal ESD protection circuits, integrated 1.8V & 3.3V LDO regulators, integrated USB switch, ULPI 60 MHz clock-in mode, flexPWR technology, battery charger detection supported through RapidCharge Anywhere technology	1.8V ULPI	19.2 MHz	24-pin	QFN
USB3347	Highly-integrated, small-footprint, internal ESD protection circuits, integrated 1.8V & 3.3V LDO regulators, ULPI 60 MHz clock-in mode, flexPWR technology, battery charger detection supported through RapidCharge Anywhere technology	1.8V ULPI	27 MHz	24-pin	QFN

USB: Switches

Hi-Speed USB 2.0 Switches

Product	Features	Pin	Packages
USB3740	Ultra-small package options, high-bandwidth, extremely low operating power, low on resistance	10	QFN

USB: Hi-Speed USB Hub and Flash Media Controllers

Hi-Speed USB 2.0 Hub and Multi-Format Flash Media Reader Combos

Product	Features	Socket Type	Supports	Downstream USB Ports	Industrial Temp. Option (−40 to 85°C)	Pin	Packages
USB2660	Ultra Hi-Speed, cost-effective, low-power, small-footprint	Dual	SD™/MultiMediaCard™/xD-Picture Card™/Memory Stick®	2	USB2660i	64	QFN
USB2640	Ultra Hi-Speed, cost-effective, low-power, small-footprint	Single	SD/MultiMediaCard/Memory Stick	2	USB2640i	48	QFN
USB2641	Ultra Hi-Speed, cost-effective, low-power, small-footprint	Single	SD/MultiMediaCard/xD-Picture Card/Memory Stick	2	USB2641i	48	QFN
USB2601/2602	Integrated card power FETs and Hi-Speed USB 2.0 hub	Multi	SD/MultiMediaCard/SmartMedia™/Memory Stick® /CompactFlash® and external memory	3	–	128	VTQFP
USB4640	Ultra-fast digital, Hi-Speed Interchip Interface (HSIC)	Single	SD/MultiMediaCard/xD-Picture Card/Memory Stick	2	USB4640i	48	QFN

USB: Hi-Speed USB 2.0 Portable Power

Product	Features	Pin	Packages
USB3750	Ultra-small package options, VBUS over-voltage and ESD protection, USB Battery Charging v1.2 detection	16	QFN
USB3751	Ultra-small package options, VBUS over-voltage and ESD protection, USB Battery Charging v1.2 detection	16	QFN

USB: HSIC Controllers

Hi-Speed USB Interchip Controllers for On-Board USB Connectivity

Product	Features	Upstream Port	Downstream Port	Bridge Function	Pin/Ball	Packages
USB4640	HSIC Flash media reader hub multi-function controller	HSIC	USB	SD™/MultiMediaCard™/Memory Stick®	48	QFN
USB3503	3-port HSIC hub for portable applications, ultra-small, extremely low standy power, high-performance, built-in ESD protection, USB Battery Charging 1.2 detection	HSIC	USB	USB pass-thru	25	WLCSP
LAN9730	HSIC Ethernet controller, multiple low-power modes, HSIC interface reduces pin count and power budget, drivers fully backward compatible to existing USB 2.0 software for seamless transition, industrial temperature for rugged environments	HSIC	N/A	10/100 Ethernet	56	QFN
SEC4410	USB secure authentication and encrypted storage token with AES encryption, 35 MB/s transfer rates and 32-bit controller	HSIC	N/A	SD/MultiMediaCard/ISO-7816	64/72	QFN

ETHERNET: Hi-Speed USB to Ethernet Controllers

USB 2.0 to 10/100 or 10/100/1000 Ethernet Controllers

Product	Features	Industrial Temp. Option (−40 to 85°C)	Pin	Packages
LAN9500A	10/100, NetDetach™ technology, EEPROM-less operation, UniClock™ technology	LAN9500Ai	56	QFN
LAN7500	10/100/1000 Gigabit controller integrated USB and Ethernet PHYs, single-chip, high-performance, cost-effective, EEPROM-less operation, UniClock technology	LAN7500i	56	QFN
LAN9730	HSIC Ethernet controller, multiple low-power modes, HSIC interface reduces pin count and power budget, drivers fully backward compatible to existing USB 2.0 software for seamless transition, industrial temperature for rugged environments	LAN9730i	56	QFN

ETHERNET: Hi-Speed USB and Ethernet Controllers

USB 2.0 and 10/100 Ethernet Controllers with Superior ESD Protection

Product	Features	Downstream USB Ports	Industrial Temp. Option (−40 to 85°C)	Pin	Packages
LAN9512	Industry's first fully-integrated, single-chip device, ±8 kV/±15 kV ESD protection, UniClock™ technology, EEPROM-less design option	2	LAN9512i	64	QFN
LAN9513	Industry's first fully-integrated, single-chip device, ±8 kV/±15 kV ESD protection, UniClock technology, EEPROM-less design option	3	LAN9513i	64	QFN
LAN9514	Industry's first fully-integrated, single-chip device, ±8 kV/±15 kV ESD protection, UniClock technology, EEPROM-less design option	4	LAN9514i	64	QFN

ETHERNET: PCI Ethernet Controllers

High-Performance 10/100 Ethernet Controllers Supporting HP Auto-MDIX

Product	Features	Bus Interface (Bits)	Industrial Temp. Option (−40 to 85°C)	Pin	Packages
LAN9420	33 MHz, PCI 3.0-compliant interface	32	LAN9420i	128	VTQFP

ETHERNET: Local Bus Ethernet Controllers

10/100 Ethernet Controllers Supporting HP Auto-MDIX

Product	Features	BUS Interface (Bits)	Industrial Temp. Option (−40 to 85°C)	Pin	Packages
LAN9221	Small-footprint, advanced performance options, supports a wide range of software drivers, supports local bus interface from 1.8V to 3.3V, integrated checksum offload engine	16	LAN9221i	56	QFN
LAN9220	Small-footprint, advanced performance options, supports a wide range of software drivers, supports local bus interface from 1.8V to 3.3V, integrated checksum offload engine	16	–	56	QFN
LAN9218	High-throughput performance options	32	LAN9218i	100	TQFP
LAN9217	External MII, high-throughput performance options	16	–	100	TQFP

ETHERNET: Ethernet Switches
10/100 Ethernet Switches

Product	Features	Ports	Host Interface	Industrial Temp. Option (–40 to 85 °C)	Pin	Packages
LAN9303	High-performance, small-footprint, full-featured	3	Single MII/RMII	LAN9303i	56	QFN
LAN9303M	High-performance, small-footprint, full-featured	3	Dual MII/RMII	LAN9303Mi	72	QFN
LAN9311	Local bus, IEEE 1588 support	2	16-bit local bus	LAN9311i	128	VTQFP, XVTQFP
LAN9312	Local bus, IEEE 1588 support	2	32-bit local bus	–	128	VTQFP, XVTQFP
LAN9313	MII interface, IEEE 1588 support	3 (1-port MII)	Single MII	LAN9313i	128	VTQFP, XVTQFP

ETHERNET: Ethernet Transceivers
10/100 and 10/100/1000 Transceivers with Superior Performance

Product	Features	Industrial Temp. Option (–40 to 85 °C)	Host Interface	Pin	Packages
LAN8710A	Full-featured, small-footprint, variable I/O, low power consumption	LAN8710Ai	MII/RMII	32	QFN
LAN8720A	Full-featured, small-footprint, variable I/O, low power consumption	LAN8720Ai	RMII	24	QFN
LAN8740A	Small-footprint, full-featured variable I/O with Energy Efficient Ethernet, Wake-on-LAN for overall system power reduction, cable diagnostics for ease of network installation and maintenance (Devices available for sampling)	LAN8740i	MII/RMII	32	SQFN
LAN8741A	Small-footprint, full-featured variable I/O with Energy Efficient Ethernet, Wake-on-LAN for overall system power reduction, cable diagnostics for ease of network installation and maintenance (Devices available for sampling)	LAN8741i	MII/RMII	32	SQFN
LAN8742A	Small-footprint, full-featured variable I/O with Energy Efficient Ethernet, Wake-on-LAN for overall system power reduction, cable diagnostics for ease of network installation and maintenance (Devices available for sampling)	LAN8742i	RMII	24	SQFN
LAN8810	Single-chip Ethernet physical layer transceiver (PHY), compliant with IEEE 802.3ab (1000BASE-T), IEEE 802.3u (Fast Ethernet) and ISO 802-3/IEEE 802.3 (10BASE-T)	LAN8810i	GMII	72	QFN
LAN8820	Single-chip Ethernet physical layer transeiver (PHY), compliant with IEEE 802.3ab (1000BASE-T), IEEE 802.3u (Fast Ethernet) and ISO 802-3/IEEE 802.3 (10BASE-T) (Devices available for sampling)	LAN8820i	RGMII	56	QFN

NETWORKING: ARCNET Controllers
Controllers Featuring Deterministic Throughput and an Operating Temperature Well-Suited for Industrial and Embedded Networking Environments

Product	Features	Speed	Pin	Packages
COM20019i	Controller with operating temperature range of –40° to 85°C	312.5 Kbps	28/48	PLCC/TQFP
COM20020i	Controller with operating temperature range of –40° to 85°C	5 Mbps	28/48	PLCC/TQFP
COM20022i	Controller with operating temperature range of –40° to 85°C	10 Mbps	48	TQFP
TMC2005	5-port hub	156.25K–10 Mbps	64	TQFP
HYC9088A R-LF	High-impedance transceiver	2.5 Mbps	20	SIP
HYC2000	High-impedance transceiver	156.25–625 Kbps	8	SIP
HYC5000	High-impedance transceiver	2.5M–10 Mbps	8	SIP

NETWORKING: CircLink® Controllers
Derivative of ARCNET, Well-Suited for Industrial & Commercial Machinery

Product	Features	Speed	Pin	Packages
TMC2074	Peripheral and standalone	5 Mbps	128	VTQFP
TMC2072	Peripheral	5 Mbps	100	TQFP
TMC2084	Standalone	5 Mbps	48	TQFP

AUTOMOTIVE: MOST® (Media Oriented Systems Transport) Network Inferface Controllers
Intelligent Network Interface Controller (INIC) for MOST Networks

Product	Features	Interface	Temperature Range	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°C	48	QFN
OS81082 INIC	Fully-encapsulated, single-chip, embedded network management (MOST50)	MOST50 electrical (UTP), I²C, I²S, MediaLB	–40° to 95°C	64	ETQFP
OS81092 INIC	ROM version of OS81082 INIC (MOST50)	MOST50 electrical (UTP), I²C, I²S, MediaLB	–40° to 105°C	48	QFN
OS81050 INIC	Fully-encapsulated, single-chip with embedded network management (MOST25)	MOST25 FOT, I²C, I²S, MediaLB	Standard range: –40° to 85°C Extended range: –40° to 105°C	44	QFP, ETQFP
OS81060 INIC	ROM version of OS81050 INIC (MOST25)	MOST25 FOT, I²C, I²S, MediaLB	–40° to 105°C (targeted)	40	QFN

AUTOMOTIVE: Power Management Companion
For Diagnostics, Staus Monitoring and Power Supply

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

AUTOMOTIVE: Multimedia I/O Companion
Multimedia I/O Port Expander

Product	Features	Interface	Temperature Range	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°C	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°C	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°C	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°C	48	QFN

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

Product	Features	Interface	Temperature Range	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°C	100	TQFP
LAN89530	Hi-Speed USB 2.0 to 10/100 Ethernet controller	USB 2.0	–40° to 85°C	56	QFN
LAN89730	Hi-Speed HSIC to 10/100 Ethernet controller	HSIC	–40° to 85°C	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	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°C	4	56	QFN

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

Product	Features	Interface	Temperature Range	Pin	Packages
LAN88730	Small-footprint, low-power consumption, full-featured	10BASE-T/100BASE-TX, MII/RMII	LAN88730AM: –40° to 85°C LAN88730BM: –40° to 105°C	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	Ports	Pin	Packages
USB82512	Versatile, cost-effective, energy-efficient, incorporating MultiTRAK™, PortMap, PortSwap, PHYBoost technologies	SMBus/I²C™	–40° to 85°C	2	36	QFN
USB82513	Versatile, cost-effective, energy-efficient, incorporating MultiTRAK, PortMap, PortSwap, PHYBoost technologies	SMBus/I²C	–40° to 85°C	3	36	QFN
USB82514	Versatile, cost-effective, energy-efficient, incorporating MultiTRAK, PortMap, PortSwap, PHYBoost technologies	SMBus/I²C	–40° to 85°C	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	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°C	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°C	2	48	QFN
USB82662	USB bridge/card reader combo with USB to SDIO and USB to I²C bridging functionality and PortMap, PortSwap and PHYBoost technologies	Dual	SD/SD High Capacity/MultiMediaCard/Memory Stick/MS PRO, MS PRO-HG	–40° to 105°C	2	64	QFN

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

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

AUTOMOTIVE: Hi-Speed USB 2.0 Battery Charger

Standalone USB Battery Charger

Product	Features	Temperature Range	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°C	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°C	USB, I²C, SMBus	28	QFN

AUTOMOTIVE: Wireless Audio

Radio Requency 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

PC SYSTEM & I/O CONTROLLERS: Notebook PC Products

Embedded Controller and I/O Devices for Notebook PC Platforms

Product	Features	I/O Ports	System Interface	Pin	Packages
MEC1621	32-bit embedded controller with 192K bytes embedded flash, 1K bytes EEPROM, 16K bytes SRAM, ADC, temp sensing, connected standby support	3 PS/2, 3 SMBus, 2 SPI, 16 PWM, 6 tachs, 1 serial (2-pin), 16 ADC channels, 4 temp inputs, 3 LED, 1 HDMI-CEC, 146 GPIOs, 3 SMSC BC-Link™	LPC/SMBus	176/225	LFBGA, LFBGA
MEC1620	32-bit embedded controller with 192K bytes embedded flash, 1K bytes EEPROM, 16K bytes SRAM, ADC, connected standby support	3 PS/2, 3 SMBus, 2 SPI, 16 PWM, 6 tachs, 1 serial (2-pin), 16 ADC channels, 3 LED, 1 HDMI-CEC, 153 GPIOs, 3 SMSC BC-Link	LPC/SMBus	176	LFBGA, LFBGA
MEC1308	8-bit embedded controller with 64K bytes SRAM, SPI Flash Memory Interface, ADC, Consumer IR, SMSC BC-Link technology	4 PS/2, 2 SMBus, 4 PWMs, 2 tachs, 1 serial (2-pin), 55 GPIOs, RC-6 CIR, 1 SMSC BC-Link	LPC/SMBus	128/144	VTQFP, TFBGA
MEC1312	8-bit embedded controller with 96K bytes SRAM, SPI Flash Memory Interface, PECI, ADC, PID Fan Control, SMSC BC-Link technology	4 PS/2, 3 SMBus, PECI, 4 PWMs, 2 tachs, 1 serial (2-pin), 63 GPIOs, 1 SMSC BC-Link	LPC/SMBus	128	VTQFP
SIO1028	Super I/O controller, small form factor package	3 serial, 24 GPIOs	LPC	64	QFN
LPC47N217	Super I/O controller for notebook and embedded PC applications	1 serial, 1 parallel, 14 GPIOs, IrDA® , CIR	LPC	64/56	STQFP
LPC47N217N	Super I/O controller for notebook and embedded PC applications	1 serial, 1 parallel, 14 GPIOs	LPC	64/56	STQFP, QFN
ECE1088	GPIO expander with SMSC BC-Link technology	20 GPIOs	SMBus or SMSC BC-Link	28	QFN
ECE1099	GPIO expander with Keyscan and SMSC BC-Link technology	32 GPIOs, 23:8 Keyscan	SMBus or SMSC BC-Link	40	QFN
ECE1105	GPIO expander with Keyscan, PS/2 and SMSC BC-Link technology	40 GPIOs, 23:8 Keyscan, 2 PS/2	SMBus or SMSC BC-Link	48	QFN

PC SYSTEM & I/O CONTROLLERS: Desktop PC Products

Embedded Controller and Highly-Integrated Super I/O Devices for Desktop PC Platforms

Product	Features	I/O Ports	System Interface	Pin	Packages
SCH5636	Desktop embedded controller, embedded SRAM for custom applications, closed-loop fan control, PECI 3.0 support, temperature and voltage monitoring	FDC, parallel, 2 serial, 8042 KB controller, 2 SMBus, 4 PWMs, 4 tachs, 60 GPIOs	LPC	128	QFP
SCH5627	Desktop embedded controller, SMBus master for PCH temperature support, PECI 3.0 support, voltage monitoring	FDC, parallel, 2 serial, 8042 KB controller, 2 SMBus, 4 PWMs, 4 tachs, 60 GPIOs	LPC	128	QFP
SCH5627P	Desktop embedded controller with "XLS5" power savings mode, SMBus master for PCH temperature support, PECI 3.0 support and voltage monitoring	FDC, parallel, 2 serial, 8042 KB controller, 2 SMBus, 4 PWMs, 4 tachs, 60 GPIOs	LPC	128	QFP
SCH5147	Super I/O controller, LPC hardware monitoring, PECI support, voltage monitoring	FDC, parallel, 2 serial, 8042 KB controller, 2 SMBus, 3 PWMs, 3 tachs, 29 GPIOs	LPC	128	QFP

PC SYSTEM & I/O CONTROLLERS: Server/Workstation Products

Embedded Controller and Super I/O Devices for Server and Workstation PC Platforms

Product	Features	I/O Ports	System Interface	Pin	Packages
SCH4304	Super I/O controller, X-Bus interface, RTC and auto fan control over SensorBus™ sensor interface	FDC, parallel, 2 serial, 8042 KB controller, SMBus, 3 PWMs, 8 tachs, 51 GPIOs	LPC	128	QFP

PC SYSTEM & I/O CONTROLLERS: Embedded I/O Products

Highly-Integrated Super i/O Devices with Long Product Lifecycles for Embedded PC Platforms

Product	Features	I/O Ports	System Interface	Pin	Packages
SCH3112	Super I/O controller with SMBus hardware and voltage monitoring	2 serial, parallel, FDC, 8042 KB controller, 40 GPIOs	LPC	128	VTQFP
SCH3114	Super I/O controller with SMBus hardware and voltage monitoring	4 serial, parallel, FDC, 8042 KB controller, 40 GPIOs	LPC	128	VTQFP
SCH3116	Super I/O controller with SMBus hardware and voltage monitoring	6 serial, parallel, FDC, 8042 KB controller, 40 GPIOs	LPC	128	VTQFP
LPC47M10X	Super I/O controller, full legacy I/O support	2 serial ports, parallel, 8042 KB controller, FDC, 37 GPIOs	LPC	100	QFP
SIO10N268	Super I/O controller for ISA or LPC designs, X-Bus interface for I/O memory and FWH emulation	4 serial ports, parallel, FDC, WDT, 33 GPIOs	LPC/ISA	128	VTQFP
FDC37B78X	Super I/O controller, real-time clock, consumer IR, watchdog timer, 5V operation	2 serial ports, parallel, FDC, 8042 KB controller, parallel IRQs, serial IRQs, 20 GPIOs	ISA	128	QFP

CAPACITIVE TOUCH SENSORS

Product	Input Channels	LED Drivers	Additional Features	Proximity Included	Interface	Pin	Packages
CAP1114	14	11	Slider, reset and alert, automatic recalibration, base capacitance compensation	✓	I²C™/SMBus	32	QFN
CAP1188	8	8	Reset, wake and alert, automatic recalibration, base capacitance compensation	✓	I²C/SPI/SMSC BC-Link™	24	QFN
CAP1128	8	2	Reset, wake and alert, automatic recalibration, base capacitance compensation	✓	I²C/SPI/SMSC BC-Link	20	QFN
CAP1166	6	6	Reset, wake and alert, automatic recalibration, base capacitance compensation	✓	I²C/SPI/SMSC BC-Link	20	QFN
CAP1126	6	2	Reset, wake and alert, automatic recalibration, base capacitance compensation	✓	I²C/SPI/SMSC BC-Link	16	QFN
CAP1133	3	3	Alert, automatic recalibration, base capacitance compensation	✓	I²C/SMBus	10	DFN
CAP1106	6	0	Alert, automatic recalibration, base capacitance compensation	✓	I²C/SMSC BC-Link	10	DFN
CAP1105	5	0	Automatic recalibration, base capacitance compensation	✓	SPI	10	DFN
CAP1214	14	11	Slider, reset and alert, automatic recalibration, base capacitance compensation, audio output	✓	I²C/SMBus	32	QFN

WIRELESS AUDIO: Highly Integrated Wireless Audio Baseband Processors

Product	Additional Features	Frequency	Interface	Pin	Packages
DARR82	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 & HD audio, excellent Wi-Fi® and Bluetooth® coexistence, bi-directional audio support, control data channel up to 100kbps, integrated MCU and SRC	Dual-band 2.4/5.8GHz	I²S, S/PDIF, I²C™, SPI	80	LQFP
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 & HD audio, excellent Wi-Fi and Bluetooth coexistence, bi-directional audio support, control data channel up to 100kbps, integrated MCU and SRC, integrated audio class USB	Tri-band 2.4/5.2/5.8GHz	I²S, S/PDIF, I²C, SPI, USB 2.0	129	FBGA
DARR84	Supports streaming of two wireless uncompressed stereo audio channels simultaneously, supports a microphone input for voice applications, latency < 20 ms, point-to-multi-point transmission, SD & HD audio, excellent Wi-Fi and Bluetooth coexistence using Wireless DNA™ technology, control data channel up to 100 kbps, integrated MCU and SRC, integrated codec and headphone amplifier for headset applications	Tri-band 2.4/5.2/5.8GHz	I²S, S/PDIF, I²C, SPI/Analog In	129	FBGA
DM870A	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 a faster time to market.	2.4GHz, 802.11 b/g	I²S, S/PDIF, I²C, USB, SD/SDIO, Ethernet, TFT for Display, SPI, CCIR 656 out	320	LFBGA
DM875	Reduced feature set version of the DM870A with no LCD and video output capability, well-suited for customer applications that support standard software AirPlay® software package	2.4GHz, 802.11 b/g	I²S, S/PDIF, I²C, USB, SD/SDIO, Ethernet, SPI,	320	LFBGA
DM860A	Available as an alternative to DM870A with no Wi-Fi capability.	–	I²S, S/PDIF, I²C, USB, SD/SDIO, Ethernet, TFT for Display, SPI, CCIR 656 out	320	LFBGA

WIRELESS AUDIO: Reference Designs

Product	Features	Frequency	Interface	Pin	Module Dimensions
DWAM82	Uncompressed wireless digital audio transceiver OEM modules based on the DARR82 and DARR83 chipsets, supports up to four stereo audio streams, data encryption, bi-directional control messaging, automatic pairing, WLAN detection, automatic frequency allocation	Single-band, 5.8 GHz	I²S, S/PDIF, I²C™ ,SPI	26-pin FFC Connector	42 × 42 mm Square PCB
DWAM83	Uncompressed wireless digital audio transceiver OEM modules based on the DARR82 and DARR83 chipsets, 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
DWUSB83	Uncompressed wireless digital audio transceiver OEM modules based on the DARR82 and DARR83 chipsets, 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
DWPCIE83	Uncompressed wireless digital audio transceiver OEM module based on the DARR82 chip, supports up to two stereo audio streams, data encryption, bi-directional control messaging, automatic pairing, WLAN detection, automatic frequency allocation, well-suited for receiver applications such as speakers	Tri-band, 2.4/5.2/5.8 GHz	USB	–	30 × 26.8 mm
LCOS82	Uncompressed wireless digital audio transceiver OEM module based on the DARR82 chip, supports up to two stereo audio streams, data encryption, bi-directional control messaging, automatic pairing, WLAN detection, automatic frequency allocation, well-suited for receiver applications such as speakers	Single-band, 2.4 GHz	I²S, S/PDIF, I²C, SPI	26-pin Pin Header Connector	30 × 50 mm Rectangle

WIRELESS AUDIO: Highly-Integrated Wireless Audio Modules

Product	Features	Frequency	Interface	Pin	Module Dimensions
DWHS84	Uncompressed wireless digital audio ready-to-go headset and headphone application reference design that supports audio and microphone inputs to process gaming and VOIP headsets/ headphone applications, supports multiple RF bands making it well-suited to effectively manage the interference commonly associated with Wi-Fi®, Bluetooth® and microwave ovens, using our Wireless DNA architecture, integrates 1MB SPI Flash, enabling SMSC's KleerNet™ interoperability platform which allows for connectivity across products and brands	Tri-band 2.4/5.2/5.8 GHz	I²S, S/PDIF, I²C™, SPI	–	54 x 54.5 mm
DWLC84	Uncompressed wireless digital audio transceiver OEM module based on the DARR84 chip, 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	Tri-band 2.4/5.2/5.8 GHz	I²S, S/PDIF, I²C, SPI	–	30 x 42 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.	2.4GHz, 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 x 85.8 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

SECURITY: Smart Card Readers and Encrypted Storage

Smart Card Reader Family for Readers, Tokens, POS Terminals and Computing

Product	Features	USB Interface	Pin	Packages
SEC1100	USB single-port smart card reader with integrated self clock	USB 1.1	16	QFN
SEC1200	USB dual-port smart card reader with with UART/SPI interface and integrated self clock	USB 1.1	24/48	QFN
SEC1300	USB keyboard and LCD controller with smart card reader and self clock (Device available for sampling)	USB 1.1	64	QFN, Bare Die
SEC2410	USB secure authentication and encrypted storage token with AES encryption, 35 MB/s transfer rates and 32-bit controller	USB 2.0	64/72	QFN
SEC4410	USB secure authentication and encrypted storage token with AES encryption, 35 MB/s transfer rates and 32-bit controller	HSIC	64/72	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
AUSART Addressable Universal Synchronous Asynchronous Receiver Transceiver
BL/Baseline 12-bit instruction word: 33 instructions
BOR/PBOR Brown Out Reset/Programmable Brown Out Reset
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 Cyclical Redundancy Check
CSM mTouch: Capacitive Sensing Module
CSP Chip Scale Package
CTMU mTouch™: Charge Time Measurement Unit
CVD Charge Voltage Divide (Capacitive Sensing Implemented via ADC)
CWG Complementary Waveform Generator
DAC Digital-to-Analog Converter
DSM Data Signal Modulator
dsPIC® 16-bit Core with DSP
EBL Enhanced Baseline
EEPROM Electrically Erasable Programmable Read Only Memory
EFT Electrical Fast Transient
EMC Electromagnetic Compatibility
EMI Electromagnetic Interference
EMF/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
HV High Voltage
ICD In-Circuit Debug
ICE In-Circuit Emulation
ICSP™ In-Circuit Serial Programming™
IDE Integrated Development Environment
Inst Amp Instrumentation Amplifier
LCD Liquid Crystal Display
LDO Low Drop-Out voltage regulator
LF Low Power Flash
MI²C/I²C™ Master Inter-Integrated Circuit bus/Inter-Integrated Circuit bus
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
POR/POOR Power ON Reset/Power ON/OFF Reset
PSMC Programmable Switch Mode Controller
PWM Pulse Width Modulation
RAM Random Access Memory
RTCC Real-Time Clock Calendar
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
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
XLP nanoWatt XLP eXtreme Low Power Technology

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 DDPAK (EB)

5-lead DDPAK (ET)

3-lead SOT-89

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

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

Quad Flat No Lead QFN

16-lead QFN (MG)
3 × 3 × 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

64-lead QFN (MR)
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)

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

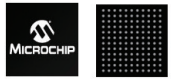
Plastic Quad Flatpack QFP

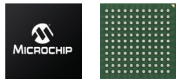
32-lead LQFP (LQ)
7 × 7 × 1.4 mm

44-lead MQFP (PQ)
10 × 10 × 2 mm

144-lead LQFP (PL)
20 × 20 × 1.4 mm

Ball Grid Array BGA


100-ball BGA (BG)
10 × 10 × 1.1 mm

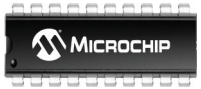

121-ball BGA (BG)
10 × 10 × 0.8 mm

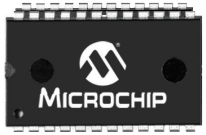
Plastic Dual In-Line PDIP

8-lead PDIP (P)

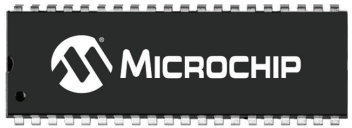
14-lead PDIP (P)

18-lead PDIP (P)


20-lead PDIP (P)


24-lead PDIP (P)

28-lead SPDIP (SP)


40-lead PDIP (P)

Additional Package Options

NOR Flash Memory

8-lead WSON (A6/QAE)
5 × 6 mm

32-lead PDIP (P2/PHE)
600 mil

32-lead PLCC (PE/NHE)
0.452" × 0.552"

40-lead TSOP (W8/EIE)
10 × 20 mm

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

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

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

RF Devices

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

8-lead XSON (Q7/QX8E)
2 × 2 × 0.5 mm

6-lead UQFN (QU/QU6E)
3 × 1.6 × 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"

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.

Support

Microchip is committed to supporting its customers in developing products faster and more efficiently. We maintain a worldwide network of field applications engineers and technical support ready to provide product and system assistance. In addition, the following service areas are available at www.microchip.com:

- **Support** link provides a way to get questions answered fast: http://support.microchip.com
- **Sample** link offers evaluation samples of any Microchip device: http://sample.microchip.com
- **Forum** link provides access to knowledge base and peer help: http://forum.microchip.com
- **Buy** link provides locations of Microchip Sales Channel Partners: www.microchip.com/sales

Training

If additional training interests you, then Microchip can help. We continue to expand our technical training options, offering a growing list of courses and in-depth curriculum locally, as well as significant online resources – whenever you want to use them.

- Technical Training Centers: www.microchip.com/training
- MASTERs Conferences: www.microchip.com/masters
- Worldwide Seminars: www.microchip.com/seminars
- eLearning: www.microchip.com/webseminars
- Resources from our Distribution and Third Party Partners www.microchip.com/training

Sales Office Listing

AMERICAS

Atlanta
Tel: 678-957-9614
Boston
Tel: 774-760-0087
Chicago
Tel: 630-285-0071
Cleveland
Tel: 216-447-0464
Dallas
Tel: 972-818-7423
Detroit
Tel: 248-538-2250
Indianapolis
Tel: 317-773-8323
Los Angeles
Tel: 949-462-9523
Santa Clara
Tel: 408-961-6444
Toronto
Mississauga, Ontario
Tel: 905-673-0699

EUROPE

Austria - Wels
Tel: 43-7242-2244-39
Denmark - Copenhagen
Tel: 45-4450-2828
France - Paris
Tel: 33-1-69-53-63-20
Germany - Munich
Tel: 49-89-627-144-0
Italy - Milan
Tel: 39-0331-742611
Netherlands - Drunen
Tel: 31-416-690399
Spain - Madrid
Tel: 34-91-708-08-90
UK - Wokingham
Tel: 44-118-921-5869

ASIA/PACIFIC

Australia - Sydney
Tel: 61-2-9868-6733
China - Beijing
Tel: 86-10-8569-7000
China - Chengdu
Tel: 86-28-8665-5511
China - Chongqing
Tel: 86-23-8980-9588
China - Hangzhou
Tel: 86-571-2819-3187
China - Hong Kong SAR
Tel: 852-2943-5100
China - Nanjing
Tel: 86-25-8473-2460
China - Qingdao
Tel: 86-532-8502-7355
China - Shanghai
Tel: 86-21-5407-5533
China - Shenyang
Tel: 86-24-2334-2829
China - Shenzhen
Tel: 86-755-8864-2200
China - Wuhan
Tel: 86-27-5980-5300
China - Xiamen
Tel: 86-592-2388138
China - Xian
Tel: 86-29-8833-7252
China - Zhuhai
Tel: 86-756-3210040

ASIA/PACIFIC

India - Bangalore
Tel: 91-80-3090-4444
India - New Delhi
Tel: 91-11-4160-8631
India - Pune
Tel: 91-20-2566-1512
Japan - Osaka
Tel: 81-6-6152-7160
Japan - Tokyo
Tel: 81-3-6880-3770
Korea - Daegu
Tel: 82-53-744-4301
Korea - Seoul
Tel: 82-2-554-7200
Malaysia - Kuala Lumpur
Tel: 60-3-6201-9857
Malaysia - Penang
Tel: 60-4-227-8870
Philippines - Manila
Tel: 63-2-634-9065
Singapore
Tel: 65-6334-8870
Taiwan - Hsin Chu
Tel: 886-3-5778-366
Taiwan - Kaohsiung
Tel: 886-7-213-7828
Taiwan - Taipei
Tel: 886-2-2508-8600
Thailand - Bangkok
Tel: 66-2-694-1351

11/27/12

Microcontrollers • Digital Signal Controllers • Analog • Memory • Wireless

Information subject to change. The Microchip name and logo, the Microchip logo, dsPIC, MPLAB and PIC are registered trademarks and PICDEM, PICtail and mTouch are trademarks of Microchip Technology Incorporated in the U.S.A. and other countries. All other trademarks mentioned herein are property of their respective companies. © 2013, Microchip Technology Incorporated. All Rights Reserved. Printed in the U.S.A. 2/13

DS01308J

MICROCHIP

www.microchip.com

Microchip Technology Inc.
2355 W. Chandler Blvd.
Chandler, AZ 85224-6199

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Microchip:
USB3613-1080XY-TR USB3813-1080XY-TR USB4604-1080HN-TR USB4604I-1080HN-TR USB4624-1080HN-TR USB4624I-1080HN USB4624I-1080HN-TR