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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
			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	–	–	–	–	–	–	–	–	–	–
	PIC10F202	R	6	4	BL	0.75 KB 0.50 Kw	–	24	–	2V–5.5V	4 MHz	4 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–
	PIC10F204	R	6	4	BL	0.375 KB 0.25 Kw	–	16	–	2V–5.5V	4 MHz	4 MHz	–	1	–	–	–	1	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–
	PIC10F206	R	6	4	BL	0.75 KB 0.50 Kw	–	24	–	2V–5.5V	4 MHz	4 MHz	–	1	–	–	–	1	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–
	PIC10F220	R	6	4	BL	0.375 KB 0.25 Kw	–	16	–	2V–5.5V	8 MHz	4 MHz, 8 MHz	–	2	2	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–
	PIC10F222	R	6	4	BL	0.75 KB 0.50 Kw	–	23	–	2V–5.5V	8 MHz	4 MHz, 8 MHz	–	2	2	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–
	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◊	–
	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◊	–
8-Pin	PIC12F508	R	8	6	BL	0.75 KB 0.50 Kw	–	25	–	2V–5.5V	4 MHz	4 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–
	PIC12F509	R	8	6	BL	1.5 KB 1 Kw	–	41	–	2V–5.5V	4 MHz	4 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–
	PIC12F510	R	8	6	BL	1.5 KB 1 Kw	–	38	–	2V–5.5V	8 MHz	4 MHz, 8 MHz	–	3	3	–	–	1	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–
	PIC12F519	R	8	6	BL	1.5 KB 1 Kw	–	41	64	2V–5.5V	8 MHz	4 MHz, 8 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–
	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◊	–
	PIC12F609	R	8	6	MR	1.75 KB 1 Kw	–	64	–	2V–15V	20 MHz	4 MHz, 8 MHz	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–	BOR	SW◊	–
	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◊	–
	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◊	–
	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◊	–
	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	–	–
	PIC12F629	R	8	6	MR	1.75 KB 1 Kw	–	64	128	2V–5.5V	20 MHz	4 MHz	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–	BOR	SW◊	–
	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◊	–
	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◊	–
	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	✓
	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	✓	–
	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◊	–
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◊	–
	PIC16F505	R	14	12	BL	1.5 KB 1 Kw	–	72	–	2V–5.5V	20 MHz	4 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–
	PIC16F506	R	14	12	BL	1.5 KB 1 Kw	–	67	–	2V–5.5V	20 MHz	4/8 MHz	–	4	4	–	–	2	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–
	PIC16F526	R	14	12	BL	1.5 KB 1 Kw	–	67	64	2V–5.5V	20 MHz	4/8 MHz	–	4	4	–	–	2	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–
	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◊	–
	PIC16F610	R	14	12	MR	1.75 KB 1 Kw	–	64	–	2V–15V	20 MHz	4/8 MHz	–	–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–	BOR	–	✓
	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◊	✓
	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◊	✓

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		
			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	SR-Latch
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◊	✓
	PIC16F630	R	14	12	MR	1.75 KB 1 Kw	–	64	128	2V–5.5V	20 MHz	4 MHz	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–	BOR	–	–
	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	–
	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	–	–
	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◊	✓
	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	–	–
	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	–	–
	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	–	–
	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	–
	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	–	–
18-Pin	PIC16F54	R	18	12	BL	0.75 KB 0.50 Kw	–	25	–	2V–5.5V	20 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–
	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◊	✓
	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◊	✓
	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	✓
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	–	–
	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	–
	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◊	–
	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	–
	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	–
	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◊	–
	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◊	✓
	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◊	✓
	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◊	✓
	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◊	✓
	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◊	✓
	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◊	–
	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◊	✓
	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◊	✓

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				
			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	SR-Latch	Timer 1 Gate
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◊	–	✓
	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◊	✓	✓
	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◊	✓	–
	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◊	✓	–
	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◊	✓	–
	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◊	✓	–
	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	–	–	✓
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	–	–	–
	PIC16F57	R	28	20	3 KB 2 Kw	–	72	–	2V–5.5V	20 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–
	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◊	–	✓
	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◊	–	–
	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	–	✓
	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◊	–	✓
	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◊	–	–
	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	–	✓
	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◊	–	–
	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	–	✓
	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	–	✓
	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◊	✓	✓
	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◊	–	✓
	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◊	–	✓
	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◊	✓	✓
	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	✓	–	–
	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◊	–	✓
	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◊	✓	✓
	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	✓	–	–
	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◊	✓	✓
	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◊	–	✓
	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◊	✓	✓
	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	✓	–	–

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			
			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	SR-Latch	Timer 1 Gate
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	✓	✓	✓
	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	–	–	–
	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◊	–	✓
	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	✓	✓	✓
	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◊	✓	✓
	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	–	–	–
	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	✓	✓	✓
	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◊	–	–
	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	–	–	–
	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	✓	–	–
	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	–	–	–
	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◊	–	–
	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◊	–	–
	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	✓	✓	✓
	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	✓	–	–
	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◊	–	–
	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◊	–	–
	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	✓	–	–
	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	✓	–	–
	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◊	–	–
	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	✓	–	–
	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	✓	–	–
	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	✓	–	–
	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	–	–	✓
40-Pin	PIC16F59	R	40	32	BL	3 KB 2 Kw	–	134	–	2V–5.5V	20 MHz	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–
	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	–	–	–	–	–	–	–
	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	–	–	–	–	–	–	–
	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	–	✓
	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	–	✓
	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◊	–	✓
	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◊	✓	✓
	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	✓	–	–

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◊ Software PLVD implemented via ADC.
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			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◊	–
	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◊	–
	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◊	✓
	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	✓	–
	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◊	–
	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◊	✓
	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	✓	–
	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◊	✓
	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	–	–
	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
	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	–	–
	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
	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◊	✓
	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	–	–
	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	✓	–
	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	✓	✓
	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◊	–
	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	–	–
	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◊	–
	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◊	–
	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	✓	✓
	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	✓	✓
	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◊	–
	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◊	–
	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	✓	–
	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	✓	–
	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◊	–
	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	✓	–
	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	✓	–
	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	✓	–
	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	–	–

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	
			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◊
	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◊
	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◊
	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◊
	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◊
	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	✓
	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◊
	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	✓
	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◊
	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	–
	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	✓
	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	✓
	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	✓
	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	✓
	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	✓
	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	✓
	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	✓
	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	–
	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	✓
	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	✓
	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	✓
	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	✓
	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	✓
	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	✓
	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	✓
	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	–
	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	✓
	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	✓
	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	✓
	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	✓
	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	✓

Products sorted by pin count followed by pricing.
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◊ Software PLVD implemented via ADC.
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	Product	Released (R) Not Released (NR)	Pins		Core	Memory				Voltage Range	Operating Speed		LCD Segments	mTouch™ Channels	Analog Sensing & Measurement							Digital									Communication						Monitors	
			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◊
	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	✓
	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◊
	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	✓
	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◊
	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	–
	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	✓
	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	✓
	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	✓
	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	✓
	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	✓
	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	✓
	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	✓
	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	–
	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	✓
	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	✓
	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	✓
	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	✓
	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	✓
	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	✓
	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	–
	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	✓
	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	✓
	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	✓
	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	✓
	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	✓
	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	✓
	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	✓
	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	✓
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	–
	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	–
	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	–
	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	✓
	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	✓

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				Voltage Range	Operating Speed		Analog Sensing & Measurement				LCD Segments	Graphics Controller	Output Compare/PWM	Input Capture	16-bit Timer[2]	Communication		PMP	RTCC/CRC	PPS	5 ku Pricing†	
					Program (KB)	Data RAM (B)	EEPROM	DMA #Ch		Maximum MIPS	Internal Oscillator	Charge Time Measurement Unit	10-bit ADC	10/12-bit ADC 1100/500 KSPS	Comparators						Digital Communication	USB 2.0 (Peripheral, Host, OTG)					
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	BO WD
	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	BO De
	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	BO WD
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	BO OS
	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	BO WD
	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	BO De
	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	BO WD
	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	BO WD
	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	BO WD
	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	BO WD
	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	BO De
	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	BO De
	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	BO
	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	BO
	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	PW OS
	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	PW OS
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	BO WD
	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	BO WD
	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	BO WD
	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	BO De
	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	BO De
	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	BO
	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	BO
	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	BO
	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	BO
	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	BO OS
	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	BO OS
	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	BO OS
	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	BO OS
	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	BO
	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	PW OS
	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	PW OS
	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	BO De
	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	BO De
	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	BO
	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	BO De
	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	BO De

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

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

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

Products sorted by pin count followed by pricing.

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

16-BIT PIC® MICROCONTROLLERS (PIC24F)

	Product	Released (R) Not Released (NR)	I/O Pins	Core	Memory				Voltage Range	Operating Speed		Analog Sensing & Measurement				LCD Segments	Graphics Controller	Output Compare/PWM	Input Capture	16-bit Timer[2]	Communication		PMP	RTCC/CRC	PPS	5 ku Pricing†
					Program (KB)	Data RAM (B)	EEPROM	DMA #Ch		Maximum MIPS	Internal Oscillator	Charge Time Measurement Unit	10-bit ADC	10/12-bit ADC 1100/500 KSPS	Comparators						Digital Communication	USB 2.0 (Peripheral, Host, OTC)				
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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
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
	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
	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
	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
	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
	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
	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

* 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†	
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	B
	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	B
	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	B
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	B
	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	B
	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	B
	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	B
	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	B
	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	B
	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	B
	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	B
	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	B
	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	B
	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	B
	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	B
	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	B
	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	B
	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	B
	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	B

* 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	
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™	–	–	–	–	✓	$1
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
	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
	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	–	–	–	✓	✓	$1
	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
	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
	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

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

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

16-BIT PIC® MICROCONTROLLERS (PIC24H/E)

	Product	Released (R) Not Released (NR)	I/O Pins	Core	Memory				Voltage Range	Operating Speed		Analog Sensing & Measurement					Output Compare/PWM	Motor Control PWM Ch.	QEI	Input Capture	16-bit Timer[2]	Communication			PMP	RTCC/CRC	PPS	
					Program (KB)	Data RAM (B)	EEPROM	DMA #Ch		Maximum MIPS	Internal Oscillator	Charge Time Measurement Unit	10-bit ADC	10/12-bit ADC 1100/500 KSPS	Comparators	Op Amps						Digital Communication	CAN	FS USB OTG				
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
	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
	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
	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
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	–	–	–	✓	✓	$3
	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	–	–	–	✓	✓	$3
	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	–	–	–	✓	✓	$3
	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	–	–	–	✓	✓	$3
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	–	–	–	✓	✓	$3
	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	–	–	–	✓	✓	$3
	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	–	–	–	✓	✓	$3
	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	–	–	–	✓	✓	$3
	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	–	–	–	✓	✓	$3
	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	–	–	–	✓	✓	$3
	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
	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
	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
	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-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	–	–	–	✓	✓	$3
	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	–	–	–	✓	✓	$3
	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	–	–	–	✓	✓	$3
	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	–	–	–	✓	✓	$3
	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
	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
	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
	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
	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	–	✓	✓	✓	$3
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
	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
	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
	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
	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
	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
	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
	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	✓	✓	✓	✓	$3
	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	✓	✓	✓	✓	$3
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	✓	✓	✓	✓	$4
	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	✓	✓	✓	✓	$4

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

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

dsPIC33 DSC GENERAL PURPOSE AND MOTOR CONTROL FAMILY

	Product	Released (R) Not Released (NR)	I/O Pins	Core	Memory				Voltage Range	Operating Speed		Analog Sensing & Measurement					Output Compare/PWM	Input Capture	Motor Control PWM Ch	QEI	16-bit Timer[2]	Communication			PMP	RTCC/CRC	PPS	5 ku Pricing†
					Program (KB)	Data RAM (B)	EEPROM	DMA #Ch		Maximum Speed MIPS	Internal Oscillator	Charge Time Measurement Unit	ADC 10/12-bit 1100/500 ksps	DAC	Comparators	Op Amps						Digital Communication	CAN	FS USB OTG				
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
	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
	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
	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
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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
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
	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
	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
	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
	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
	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
	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
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
	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
	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
	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
	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
	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
	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
	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
	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

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

dsPIC33 DSC GENERAL PURPOSE AND MOTOR CONTROL FAMILY

	Product	Released (R) Not Released (NR)	I/O Pins	Core	Memory				Voltage Range	Operating Speed		Analog Sensing & Measurement					Output Compare/PWM	Input Capture	Motor Control PWM Ch	QEI	16-bit Timer[2]	Communication			PMP	RTCC/CRC
					Program (KB)	Data RAM (B)	EEPROM	DMA #Ch		Maximum Speed MIPS	Internal Oscillator	Charge Time Measurement Unit	ADC 10/12-bit 1100/500 ksps	DAC	Comparators	Op Amps						Digital Communication	CAN	FS USB OTG		
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	–	–	✓
	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	–	–	✓
	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	–	–	✓
	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	–	–	✓
	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	–	–	✓
	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	–	–	✓
	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	–	–	✓
	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	–	–	✓
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	–	–	✓
	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	–	–	✓
	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	–	–	✓
	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	–	–	✓
	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	–	–	✓
	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	–	–	✓
	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	–	–	✓
	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	–	–	✓
	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	–	–	✓
	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	–	–	✓
	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	–	–	✓
	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	–	–	✓
	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	✓
	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	✓
	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	✓
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	–	–	–	–
	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	–	–	–
	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	–	–	–	–
	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	–	–	–
	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	–	–	–
	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	–	–	–
	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	–	–	–
	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	–	–	–
	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	–	–	–
	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	–	–	–
	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	–	–	–
	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	–	–	–
	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	✓	✓	✓
	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	✓	✓	✓
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	✓	✓	✓
	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	✓	✓	✓

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

dsPIC33 DSC SMPS AND DIGITAL POWER CONVERSION FAMILY

	Product	Released (R) Not Released (NR)	I/O Pins	Core	Memory				Voltage Range	Operating Speed		Analog			Output Compare/PWM	Input Capture	Power Supply PWM Ch[1]	QEI	16-bit Timer[2]	Communication		PMP	RTCC	PPS	5 ku Pricing†
					Program (kB)	Data RAM (B)	EEPROM	DMA #Ch		Maximum Speed MIPS	Internal Oscillator	ADC 10-bit 2000 ksps (‡ 4000 ksps)	DAC	Comparators						Digital Communication	CAN				
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
	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
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
	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
	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
	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
	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
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
	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
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
	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
	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
	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
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
	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
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
	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

* 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			DMA Channels General/Dedicated	Voltage Range	Operating Speed		Charge Time Measurement Unit	Analog		IC/OC/PWM	Timers 16/32-bit	Communication						PMP	RTCC	Peripheral Pin Select (PPS)	5 ku Pricing†
					Flash KB + Boot Flash	Data RAM (KB)	EEPROM			Maximum Speed (MHz)	Internal Oscillator		ADC 10-bit 1,000 ksps	Comparators			SPI/I²S	I²C™	UARTs	FS USB	Ethernet	CAN				
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
	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
	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
	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
	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
	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
	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
	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
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
	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
	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
	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
	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
	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
	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
	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
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
	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
	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
	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
	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
	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
	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
	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
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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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

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[1]
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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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

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 Compens
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	–	–	–
MCP9509/10	Resistor-Programmable Temperature Switch	1	0.5/3.5	–40 to +125	+2.7 to +5.5	30	–	–	–
MCP9800/1/2/3	SMBus/I²C™ Temperature Sensor	1	0.5/1.0	–55 to +125	+2.7 to +5.5	200	1	–	–
MCP9804	SMBus/I²C Temperature Sensor	1	0.25/1.0	–40 to +125	+2.7 to +5.5	200	1	–	–
MCP9808	SMBus/I²C Temperature Sensor	1	0.25/0.5	–40 to +125	+2.7 to +5.5	200	1	–	–
MCP98243	SMBus/I²C Temperature Sensor with EEPROM	1	0.5/3.0	–40 to +125	+3.0 to +3.6	200	1	–	–
MCP9843	SMBus/I²C JEDEC Temperature Sensor	1	0.5/3.0	–40 to +125	+3.0 to +3.6	200	1	–	–
TCN75A	SMBus/I²C Temperature Sensor	1	0.5/3.0	–40 to +125	+2.7 to +5.5	200	1	–	–
MCP9700/01	Linear Active Thermistor IC	1	1.0/4.0	–40 to +150	+2.3 to +5.5	6	–	–	–
MCP9700/01A	Linear Active Thermistor IC	1	1.0/2.0	–40 to +150	+2.3 to +5.5	6	–	–	–
EMC1033	SMBus/I²C Multi Temperature Sensor	3	1.0/3.0	–40 to +125	+3.0 to +3.6	50	2	✓	–
EMC1043	SMBus/I²C Multi Temperature Sensor	3	0.5/1.0	–40 to +125	+3.0 to +3.6	105	–	✓	Configura
EMC1046	SMBus/I²C Multi Temp Sensor with Hottest of Zones	6	0.25/1.0	–40 to +125	+3.0 to +3.6	395	–	✓	Automa
EMC1047	SMBus/I²C Multi Temp Sensor with Hottest of Zones	7	0.25/1.0	–40 to +125	+3.0 to +3.6	395	–	✓	Automa
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	✓	Automa
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	✓	Automa
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	✓	Automa

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 L Table
EMC2101	Programmable Fan Controller with Thermal Mgt	1	PWM	2	0.5	0.5/1.0	+3.0 to +3.6	SMBus/I²C™	✓	✓
EMC2300	Programmable Multi-Fan Controller with Thermal Mgt	3	PWM	3	0.25	0.25/3.0	+3.0 to +3.6	SMBus/I²C	✓	✓
EMC2112	Programmable Fan Controller with Thermal Mgt	1	Linear	3	0.25	0.25/1.0	+3.3 and +5	SMBus/I²C	✓	✓
EMC2103-1	Programmable Fan Controller with Thermal Mgt	1	PWM	1	0.5	0.5/1.0	+3.0 to +3.6	SMBus/I²C	✓	✓
EMC2103-4	Programmable Fan Controller with EEPROM Load	1	PWM	3	0.5	0.5/1.0	+3.0 to +3.6	SMBus/I²C	✓	✓
EMC2104	Programmable Multi-Fan Controller with Thermal Mgt	2	PWM	4	0.25	0.25/1.0	+3.0 to +3.6	SMBus/I²C	✓	✓
EMC2105	Programmable Fan Controller with Thermal Mgt	1	Linear	4	0.25	0.25/1.0	+3.3 and +5	SMBus/I²C	✓	✓
EMC2113	Programmable Fan Controller with Thermal Mgt	1	PWM	3	0.5	0.5/1.0	+3.0 to +3.6	SMBus/I²C	✓	✓
EMC2301/2/3/5	Programmable Fan Controller	1/2/3/5	PWM	–	–	–	+3.0 to +3.6	SMBus/I²C	✓	–

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
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 o
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,
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 amp amplifier, Overvoltage comparator and integrated MOSFET driver
MCP19035	4.5 to 30	–	–40 to +125	PWM	300	6000	Ext	Voltage mode PWM synchronous buck controller. Integrates LDO, error amplifer, current and vo Dead Time adj, and MOSFET Drivers
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 disconne
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, UVL
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
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, Powe
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, Powe
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, Powe

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
MCP19111	4.5 to 32	–	–40 to +125	Buck	✓	4	256	Synchronous buck controller, Integrated MCU, LDO, and synchronous MOSFET driver, including MOSFET dead time, Switching frequency, Analog loop compensation, and p

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.)
MCP87018	25	Single	–	2.2	1.9	37	100	1	13
MCP87022	25	Single	–	2.6	2.3	29	100	1	9
MCP87030	25	Single	–	4	3.5	22	100	1	6.7
MCP87050	25	Single	–	6	5	15	100	1	4.7
MCP87055	25	Single	–	7	6	14	60	1	4.5
MCP87090	25	Single	–	12	10.5	10	64	1.1	2.8
MCP87130	25	Single	–	16.5	13.5	8	54	1.1	2.6

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
TC1016/17	6	1.8 to 4.0	80/150	53	150/285	±0.5	Shutdown
TC1301A/B	6	1.5 to 3.3	LD01: 300 LD02: 150	103/114	LD01: 104 LD02: 150	±0.5	Dual LDO plus Reset output, Shutdown, Reference bypass, Volt
TC1302AB	6	1.5 to 3.3	LD01: 300 LD02: 150	103/114	LD01: 104 LD02: 150	±0.5	Dual LDO, Shutdown, Reference bypass, Voltage detect
TC2014/5, TC2185	6	1.8 to 5.0	50/100/150	55	45/90/140	±0.4	Shutdown, Reference bypass input
TC2054/5, TC2186	6	1.8 to 5.0	50/100/150	55	45/90/140	±0.4	Shutdown, Error output
MCP1700	6	1.2 to 5.0	250	1.6	300	±0.4	Very low I_Q
MCP1702/3 /3A	13.2/16/16	1.2 to 5.0	250	2	330/625/625	±0.4	Very low I_Q
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
MCP1754/S	16	1.8 to 5.5	150	56	300	±0.4	Power Good, Shutdown
MCP1790/1	30	3.0, 3.3, 5.0	70	70	500	±0.2	Load dump, Shutdown, Power Good
MCP1801/2	10	0.9 to 6.0	150/300	25	250/800	±0.4	Shutdown, High PSRR
MCP1804	28	1.8 to 18	150	50	300	±0.5	Shutdown, High PSRR
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
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

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)	Feature
TC1044S	1.5 to 12	$-V_{IN}$ or $2*V_{IN}$	–40 to +85	160	20	85 kHz oscillator Boost mode
TC7660	1.5 to 10	$-V_{IN}$ or $2*V_{IN}$	–40 to +85	180	20	10 kHz oscillator
TC7660H	1.5 to 10	$-V_{IN}$ or $2*V_{IN}$	–40 to +85	1000	20	120 kHz oscillator
TC7660S	1.5 to 12	$-V_{IN}$ or $2*V_{IN}$	–40 to +85	160	20	45 kHz oscillator Boost mode
TC7662B	1.5 to 15	$-V_{IN}$ or $2*V_{IN}$	–40 to +85	180	20	35 kHz oscillator Boost mode
TC7662A	3.0 to 18	$-V_{IN}$ or $2*V_{IN}$	–40 to +85	200	40	12 kHz oscillator
MCP1256	1.8 to 3.6	3.3	–40 to +85	100	100	Power Good Sleep mode
MCP1257	1.8 to 3.6	3.3	–40 to +85	100	100	Sleep mode low battery indicat
MCP1258	1.8 to 3.6	3.3	–40 to +85	100	100	Low battery indication input/ou

POWER MANAGEMENT: CPU/System Supervisors

Product	Description	Operating Temp. Range (°C)	Features	
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-
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

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
MCP1401/02 Single	Inverting/Non-inverting	–40 to +125	0.5	18/16	18	40/4
MCP1415/16 Single	Inverting/Non-inverting	–40 to +125	1.5	7.5/5.5	18	50/5
TC4467/8/9 Quad	Inverting/ Non-inverting	–40 to +85	1.2	15/15	18	40/4
TC4426A/27A/28A Dual	Inverting/Non-inverting	–40 to +125	1.5	9/9	18	30/3
TC4423A/24A/25A Dual	Inverting/Non-inverting	–40 to +125	3	3 (typ.)/4 (typ.)	18	40 (typ.)/4
MCP14E3/E4/E5 Dual	Inverting/Non-inverting	–40 to +125	4	3.5/3.0	18	55/5
MCP14E6/E7/E8 Dual	Inverting/Non-inverting/Inverting and Non-inverting	–40 to +125	2	2.2/2.8	18	45/4
MCP14E9/E10/E11 Dual	Inverting/Non-inverting/Inverting and Non-inverting	–40 to +125	3	2.2/2.8	18	75/7
MCP1406/07 Single	Inverting/Non-inverting	–40 to +125	6	1.8/2.0 (typ.)	18	30/3
TC4420/29	Inverting/Non-inverting	–40 to +125	6	2.8/2.5	18	55/5
TC4421A/22A Single	Inverting /Non-inverting	–40 to +125	9	1.25 (typ.)/1.5	18	38/4
TC4451/52 Single	Inverting /Non-inverting	–40 to +125	12	0.6 (typ.)/1.5	18	15/1
TC4431/32 Single	Inverting /Non-inverting	–40 to +85	1.5	10/10	30	62/7

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/O
MCP14700/14628	Dual input/Single input	–40 to +85	2	2.5/2.5	5 (V_{DD}), 36 (Boot Pin)	

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
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
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
MCP73830/L	Linear	Li-ion/Li-Polymer	1	3.75 to 6	4.2	1000/200	±0.75	Int	Soft-start, Charge enable pin
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
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 c
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 charge currents

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)
MCP6V26/7/8	1/2/1	2	620	0.002
MCP6071/2/4	1/2/4	1.2	110	0.15
MCP6H01/2/4	1/2/4	1.2	135	4.5
MCP6001/2/4	1/2/4	1	100	4.5
MCP6401/2/4	1/2/4	1	45	4.5
MCP6061/2/4	1/2/4	0.73	60	0.15
MCP6241/2/4	1/2/4	0.55	50	5
MCP6051/2/4	1/2/4	0.385	30	0.15
MCP6V31	1	0.3	23	0.008
MCP6231/2/4	1/2/4	0.3	20	5
MCP616/7/8/9	1/2/1/4	0.19	19	0.15
MCP606/7/8/9	1/2/1/4	0.155	19	0.25
MCP6141/2/3/4	1/2/1/4	0.1	0.6	3
MCP6V11	1	0.08	7.5	0.008
MCP6041/2/3/4	1/2/1/4	0.014	0.6	3
MCP6031/2/3/4	1/2/1/4	0.01	0.9	0.15
MCP6441/2/4	1/2/4	0.009	0.45	4.5

LINEAR: Comparators

Product	# per Package	Typical Propagation Delay (µs)	I_Q Typical (µA)	V_{OS} Max (mV)	Operating Voltage (V)	Temperature Range (°C)	Features
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
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
MCP65R41/6	1	4	2.5	10	1.8 to 5.5	–40 to +125	Integrated V_{REF} (1.21V or 2.4V)
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
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

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)	Tem
MCP3021/3221	10/12	22	1	Single-ended	I²C™	250	
MCP3001/2/4/8	10	200	1/2/4/8	Single-ended	SPI	500-550	
MCP3201/2/4/8	12	100	1/2/4/8	Single-ended	SPI	400-550	
MCP3301/2/4	13	100	1/2/4	Differential	SPI	450	

MIXED SIGNAL: Digital-to-Analog Converters

Product	Resolution (Bits)	DAC Channels	Interface	Voltage Reference	Output Settling Time (µs)	DNL (±LSB)	Typical Operating Current (µA)	Tempera
MCP47DA1	6	1	I²C™	V_{DD}	6	0.25	130	–40
MCP4706/16/26	8/10/12	1	I²C	Ext	6	0.05/0.188/0.75	210	–40
MCP4725	12	1	I²C	V_{DD}	6	0.75	175	–40
MCP4728	12	4	I²C	Int	6	0.75	250	–40
MCP4801/11/21	8/10/12	1	SPI	Int	4.5	0.5/0.5/0.75	330	–40
MCP4802/12/22	8/10/12	2	SPI	Int	4.5	0.5/0.5/0.75	415	–40
MCP4901/11/21	8/10/12	1	SPI	Ext	4.5	0.5/0.5/0.75	175	–40
MCP4902/12/22	8/10/12	2	SPI	Ext	4.5	0.5/0.5/0.75	350	–40
TC1320/1	8/10	1	SMbus	Ext	10	0.8/2	350	–40

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
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
MCP3903	24-bit resolution	91 dB SINAD	6	up to 32	SPI	8.3	4.5 to 5.5	2.7 to 3.6
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
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

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	
PAC1710	1	Current/DC Power Sensor	10, 20, 40, 80	±1	2.5 to 2600	0 to +40	N/A	N/A	1	–	S
PAC1720	2	Dual Current/ DC Power Sensor	10, 20, 40, 80	±1	2.5 to 2600	0 to +40	N/A	N/A	1	–	S
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	✓	S

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
MCP4331/32	129	Volatile	4	SPI
MCP4351/52	257	Volatile	4	SPI
MCP4431/32	129	Volatile	4	I²C
MCP4441/42	129	Nonvolatile	4	I²C
MCP4451/52	257	Volatile	4	I²C
MCP4461/62	257	Nonvolatile	4	I²C
MCP4531/32	128	Volatile	1	I²C
MCP4631/32	128	Volatile	2	I²C
MCP4541/42	128	Nonvolatile	1	I²C
MCP4641/42	128	Nonvolatile	2	I²C
MCP4551/52	256	Volatile	1	I²C
MCP4651/52	256	Volatile	2	I²C
MCP4561/62	256	Nonvolatile	1	I²C
MCP4661/62	256	Nonvolatile	2	I²C

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)	
MCP3421/2/3/4	18 to 12	4 to 240	1/2/2/4 Diff	I²C™	155	–40 to +125	PGA,
MCP3425/6/7/8	16 to 12	15 to 240	1/2/2/4 Diff	I²C	155	–40 to +125	PGA,
MCP3550/1/3	22	13/14/60	1 Diff	SPI	120	–40 to +125	50 &

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

Product	Description	Operating Temperature Range (°C)	Other Features
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
MCP2551	CAN (Controller Area Network), High-speed CAN transceiver	–40 to +125	1 Mbps max. CAN bus speed, ISO11898 compatible, Industry standard pinout
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 Range = 6 to 18 V, Max Baud Rate = 20 Kbaud, Compliant with LIN 1.3, 2.0 2.1, SAE J2602, Automotive gra
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
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
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}
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
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
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

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 Measureme
UCS1001-1/2	USB Port Power Controller with Charger Emulation	1	1	9	Up to 2.5A	Charging/Attach Detect	–
UCS1002-1	Programmable USB Port Power Controller with Charger Emulation	1	1	9 plus 1 programmable	Up to 2.5A	Charging	✓

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†	Spe
AR1021	Analog Resistive	SPI, I²C™	All Manufacturers 4, 5 and 8 wire	Internal 10-bit Ratiometric	1024 x 1024	2.5V DC ±5% 5.5V DC ±5%	140 pps	–40 to +85	Per schematic	$1.32	Controller driv Universal for
AR1011	Analog Resistive	UART	All Manufacturers 4, 5 and 8 wire	Internal 10-bit Ratiometric	1024 x 1024	2.5V DC ±5% 5.5V DC ±5%	140 pps	–40 to +85	Per schematic	$1.39	Controller driv Universal for
AR1100	Analog Resistive	USB, UART	All Manufactures 4, 5 and 8 wire	Internal 10-bit Ratiometric	1024 x 1024	3.3V DC ±5% 5.5V DC ±5%	150 pps	–40 to +85	Per schematic	$1.61	Controller driv Universal for
AR1100BRD	Analog Resistie	USB, RS-232	All Manufactures 4, 5 and 8 wire	Internal 10-bit Ratiometric	1024 x 1024	3.3V DC ±5% 5.5V DC ±5%	150 pps	–40 to +85	Per schematic	$12.78	Controller driv Universal for

SAFETY & SECURITY: Smoke Detector and Horn Driver ICs

Product	Horn Driver	Detection Method	Low Battery Detection	Alarm Memory	Alarm Interconnect	Hush/Sensitivity Timer	C
RE46C140/1/3/4/5	Yes	Photo	Yes	No	Yes	140/4/5	
RE46C12X & 152	Yes	Ion	Yes	No	Not 120	122/7,152	
RE46C10X & 11X	Yes	Just Driver	5/7/9/19	NA	9/19	None	
RE46C162/3, 5/6/7/8	Yes	Ion/Photo	Yes	Yes	Yes	Yes	
RE46C180	Yes	Ion	Yes	Yes	Yes	Yes	
RE46C190	Yes	Photo	Yes	Yes	Yes	Yes	
RE46C317/8	Yes	Just Driver	No	No	No	No	

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)	
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 with Allegro 6219
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 with Allegro 2916
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 Sensc Programmable BEMF C
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 Sensc (D), Fsw = 20 kHz (C/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 Sensc

REAL-TIME CLOCK/CALENDAR (RTCC)

Bus	Product	Pins	Timing Features				Memory(1)			Power		Unique Features(2)	5 ku Pricin
			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
	MCP7940N	8	±127 ppm	1 sec.	–	$\overline{IRQ}$/CLK	64	0	0	1.8	1.3	Power Fail Timestamp	$0.59
	MCP7940X	8	±127 ppm	1 sec.	–	$\overline{IRQ}$/CLK	64	0	64	1.8	1.3	Power Fail Timestamp	$0.66
	MCP7941X	8	±127 ppm	1 sec.	–	$\overline{IRQ}$/CLK	64	1	64	1.8	1.3	Power Fail Timestamp	$0.72
SPI	MCP7951X	10	±255 ppm	0.01 sec.	–	$\overline{IRQ}$/CLK	64	1	128	1.8	1.3	Power Fail Timestamp	$0.90
	MCP7952X	10	±255 ppm	0.01 sec.	–	$\overline{IRQ}$/CLK	64	2	128	1.8	1.3	Power Fail Timestamp	$0.96
	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
	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

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	
												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
	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
	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), PD
	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), PD
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), PDI
	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), PDI
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
	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
	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
	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
	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
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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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

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

SERIAL MEMORY PRODUCTS

Bus	Product	Released (R) Not Released (NR)	Density	Organization	Max. Clock Frequency	Operating Voltage	Temperature Range	E/W Endurance (Minimum)	Data Retention (Minimum)	Max. Write Speeds	Max. Standby Current (@ 5.5V, 85°C)	Write Protect		Protected Array Size	5 ku Pricing†	Special/Unique Features	
												Hardware	Software				
Serial EERPOM (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
	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
	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
	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
	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
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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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

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				Special/Unique Featu
											Max. Standby Current	Hardware	Software	Protected Array Size	
×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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
×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 p program and erase
	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 Fast read, program and erase
	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 area, Fast read, program and erase
×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 jun write protection. Fast read, program and erase
	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 write protection. Fast read, program and erase
×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, Burs block read and write protection, Fast read, program and er
	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, Burs block read and write protection, Fast read, program and er
	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, ×4 read, Single-and quad-input page program, Bu block read and write protection, Fast read, program and er
	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, Burs block read and write protection, Fast read, program and er

*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				Special/Unique Feature
											Max. Standby Current	Hardware	Software	Protected Array Size	
×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
	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
	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) protection for the storage and update of code and data
	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) protection for the storage and update of code and data

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 Spped (Typical)	Write Protect				Special/Unique Features
											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 s
	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 s
	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 s
	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 s
	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 s
	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 s
	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 s
	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 s
	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 s
	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 s
×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 s
	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 s
	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 s command set and boot block structure
	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 s
	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 s command set and boot block structure
	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 s
	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 s command set and boot block structure
	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 s command set and boot block structure
	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 s
	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 s command set and boot block structure
	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 s
	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 s
	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 s command set and boot block structure
	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 s command set and boot block structure, Security features
	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 stand command set and boot block structure, Security features

*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
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]
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]
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
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]
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]
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
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
IEEE 802.15.4 Transeivers/Modules												
MRF24J40	40	2.405–2.48	–95	0	Yes	23	19	20 MHz	2 µA	Yes	CSMA-CA	–
MRF24J40MA	12	2.405–2.48	–95	0	Yes	23	19	20 MHz	2 µA	Yes	CSMA-CA	–
MRF24J40MB	12	2.405–2.48	–102	20	Yes	130	25	20 MHz	5 µA	Yes	CSMA-CA	–
MRF24J40MC	12	2.405–2.48	–108	20	Yes	120	25	20 MHz	12 µA	Yes	CSMA-CA	–

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	
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	U
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 mode, S/
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	

*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	In
MRF49XA	16	433/868/915	–110	7	Yes	15 mA @ 0 dBm	11	10 MHz	0.3 µA	4
MRF89XA	32	868/915/950	–113	12.5	Yes	25 mA @ 0 dBm	3	12.8 MHz	0.1 µA	4
MRF89XAM8A	12	868	–113	12.5	Yes	25 mA @ 0 dBm	3	12.8 MHz	0.1 µA	4-
MRF89XAM9A	12	915	–113	12.5	Yes	25 mA @ 0 dBm	3	12.8 MHz	0.1 µA	4-

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)
PIC12F529T48A	6	418–868	2.3 K	–	201	1	1	8	Yes	OOK/FSK	100	10
PIC12F529T39A	6	310–928	2.3 K	–	201	1	1	8	Yes	OOK/FSK	100	10
PIC12LF1840T48A	6	418–868	7.1 K	256	256	2	1	32	Yes	OOK/FSK	100	10
PIC12LF1840T39A	6	310–928	7.1 K	256	256	2	1	32	Yes	OOK/FSK	100	10
rfPIC12F675F	6	380–450	1.7 K	128	64	1	1	20	Yes	ASK/FSK	40	10
rfPIC12F675H	6	850–930	1.7 K	128	64	1	1	20	Yes	ASK/FSK	40	10
rfPIC12F675K	6	290–350	1.7 K	128	64	1	1	20	Yes	ASK/FSK	40	10

† 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)
USB5532B	USB 3.0 Superspeed hub, two port, OTP flash programmable with advanced battery charging support	2	USB5532Bi
USB5533B	USB 3.0 Superspeed hub, three port, OTP flash programmable with advanced battery charging support	3	USB5533Bi
USB5534B	USB 3.0 Superspeed hub, four port, OTP flash programmable with advanced battery charging support	4	USB5534Bi
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

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)
USB2422	Small-footprint, two port value hub, commercial and industrial temperature with USB battery charging 1.1	2	USB2422i
USB2412	Small-footprint, low-power, standard commercial temperature range	2	–
USB2512B	Low-power, extended commercial temperature range, USB Battery Charging 1.1	2	USB2512Bi
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
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
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
USB2524	MultiSwitch™ technology combining Hi-Speed USB hub and switching functionality in a single-chip, cost-effective solution	2 upstream/4 downstream	–
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
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
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
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
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
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
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

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
USB3803C	Ultra-small, extremely low standby power, high-performance, built-in ESD protection, USB Battery Charging 1.2 detection	USB3803i	USB
USB3503A	Ultra-small, extremely low standby power, high-performance, built-in ESD protection, USB Battery Charging 1.2 detection	USB3503i	HSIC

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)
LAN9500A	10/100, NetDetach™ technology, EEPROM-less operation, UniClock™ technology	LAN9500Ai
LAN7500	10/100/1000 Gigabit controller with integrated USB and Ethernet PHYs, single-chip, high-performance, cost-effective, EEPROM-less operation, UniClock technology	LAN7500i
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

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)
LAN9512	Industry's first fully-integrated, single-chip device, UniClock™ technology, EEPROM-less design option	2	LAN9512i
LAN9513	Industry's first fully-integrated, single-chip device, UniClock technology, EEPROM-less design option	3	LAN9513i
LAN9514	Industry's first fully-integrated, single-chip device, UniClock technology, EEPROM-less design option	4	LAN9514i

USB: Hi-Speed USB Flash Media Controllers

Standalone USB 2.0, Multi-Format Flash Media Controllers

Product	Features	Socket Type	Supports	Industrial T (–40 t
USB2240	Ultra Hi-Speed, cost-effective, external or internal ROM option, secure memory format options	Single	SD™/MultiMediaCard™/SmartMedia™/xD-Picture Card™/Memory Stick®	USB
USB2241	Ultra Hi-Speed, cost-effective, external or internal ROM option, secure memory format options	Single	SD/MultiMediaCard/SmartMedia/Memory Stick	USB
USB2242	Ultra Hi-Speed, cost-effective, external or internal ROM option, secure memory format options	Single	Memory Stick	USB
USB2244	Ultra Hi-Speed, cost-effective, external or internal ROM option, secure memory format options	Single	SD/MultiMediaCard	USB
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	USB
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	USB

USB: Transceivers

Hi-Speed USB 2.0 Transceivers

Product	Features	Interface	Reference Clock
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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

USB: Switches

Hi-Speed USB 2.0 Switches

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

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 (–40 to 85
USB2660	Ultra Hi-Speed, cost-effective, low-power, small-footprint	Dual	SD™/MultiMediaCard™/xD-Picture Card™/Memory Stick®	2	USB266
USB2640	Ultra Hi-Speed, cost-effective, low-power, small-footprint	Single	SD/MultiMediaCard/Memory Stick	2	USB264
USB2641	Ultra Hi-Speed, cost-effective, low-power, small-footprint	Single	SD/MultiMediaCard/xD-Picture Card/Memory Stick	2	USB264
USB2601/2602	Integrated card power FETs and Hi-Speed USB 2.0 hub	Multi	SD/MultiMediaCard/SmartMedia™/Memory Stick® /CompactFlash® and external memory	3	–
USB4640	Ultra-fast digital, Hi-Speed Interchip Interface (HSIC)	Single	SD/MultiMediaCard/xD-Picture Card/Memory Stick	2	USB464

USB: Hi-Speed USB 2.0 Portable Power

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

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

Product	Features	Upstream Port	Downstream Port	Bridge Functio
USB4640	HSIC Flash media reader hub multi-function controller	HSIC	USB	SD™/MultiMediaCard™/Me
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
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 Etherne
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/IS

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
LAN9500A	10/100, NetDetach™ technology, EEPROM-less operation, UniClock™ technology	LAN9500Ai	56
LAN7500	10/100/1000 Gigabit controller integrated USB and Ethernet PHYs, single-chip, high-performance, cost-effective, EEPROM-less operation, UniClock technology	LAN7500i	56
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

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)
LAN9512	Industry's first fully-integrated, single-chip device, ±8 kV/±15 kV ESD protection, UniClock™ technology, EEPROM-less design option	2	LAN9512i
LAN9513	Industry's first fully-integrated, single-chip device, ±8 kV/±15 kV ESD protection, UniClock technology, EEPROM-less design option	3	LAN9513i
LAN9514	Industry's first fully-integrated, single-chip device, ±8 kV/±15 kV ESD protection, UniClock technology, EEPROM-less design option	4	LAN9514i

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)
LAN9420	33 MHz, PCI 3.0-compliant interface	32	LAN9420i

ETHERNET: Local Bus Ethernet Controllers
10/100 Ethernet Controllers Supporting HP Auto-MDIX

Product	Features	BUS Interface (Bits)	Industrial Temp. Optio (–40 to 85°C)
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
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	–
LAN9218	High-throughput performance options	32	LAN9218i
LAN9217	External MII, high-throughput performance options	16	–

ETHERNET: Ethernet Switches
10/100 Ethernet Switches

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

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

Product	Features	Industrial Temp. Option (–40 to 85°C)	Host Interface
LAN8710A	Full-featured, small-footprint, variable I/O, low power consumption	LAN8710Ai	MII/RMII
LAN8720A	Full-featured, small-footprint, variable I/O, low power consumption	LAN8720Ai	RMII
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
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
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
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
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

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

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

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

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

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

Product	Features	Interface	Temperature Range
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
OS81082 INIC	Fully-encapsulated, single-chip, embedded network management (MOST50)	MOST50 electrical (UTP), I²C, I²S, MediaLB	–40° to 95°C
OS81092 INIC	ROM version of OS81082 INIC (MOST50)	MOST50 electrical (UTP), I²C, I²S, MediaLB	–40° to 105°C
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
OS81060 INIC	ROM version of OS81050 INIC (MOST25)	MOST25 FOT, I²C, I²S, MediaLB	–40° to 105°C (targeted)

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

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

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

Product	Features	Interface	Temperature Range
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
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
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
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

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

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

*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
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

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

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

*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
USB82512	Versatile, cost-effective, energy-efficient, incorporating MultiTRAK™, PortMap, PortSwap, PHYBoost technologies	SMBus/I²C™	–40° to 85°C	2
USB82513	Versatile, cost-effective, energy-efficient, incorporating MultiTRAK, PortMap, PortSwap, PHYBoost technologies	SMBus/I²C	–40° to 85°C	3
USB82514	Versatile, cost-effective, energy-efficient, incorporating MultiTRAK, PortMap, PortSwap, PHYBoost technologies	SMBus/I²C	–40° to 85°C	4

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	T
USB82640	Features PortMap, PortSwap and PHYBoost technologies	Single	SD™/SD High Capacity™/MultiMediaCard™/Memory Stick®/MS PRO™, MS PRO-HG™	–
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	–
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	–

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

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

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

Product	Features	Temperature Range	Supports
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
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

AUTOMOTIVE: Wireless Audio
Radio Requency Digital Audio Transceiver

Product	Features	Typical Sink Mode Power Consumption	PA Output Power
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

AUTOMOTIVE: Capacitive Touch Sensors

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

PC SYSTEM & I/O CONTROLLERS: Notebook PC Products
Embedded Controller and I/O Devices for Notebook PC Platforms

Product	Features	I/O Ports	System Inter
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/SMBu
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/SMBu
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/SMBu
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/SMBu
SIO1028	Super I/O controller, small form factor package	3 serial, 24 GPIOs	LPC
LPC47N217	Super I/O controller for notebook and embedded PC applications	1 serial, 1 parallel, 14 GPIOs, IrDA® , CIR	LPC
LPC47N217N	Super I/O controller for notebook and embedded PC applications	1 serial, 1 parallel, 14 GPIOs	LPC
ECE1088	GPIO expander with SMSC BC-Link technology	20 GPIOs	SMBus or SMSC
ECE1099	GPIO expander with Keyscan and SMSC BC-Link technology	32 GPIOs, 23:8 Keyscan	SMBus or SMSC
ECE1105	GPIO expander with Keyscan, PS/2 and SMSC BC-Link technology	40 GPIOs, 23:8 Keyscan, 2 PS/2	SMBus or SMSC

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
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
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
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
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

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
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

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
SCH3112	Super I/O controller with SMBus hardware and voltage monitoring	2 serial, parallel, FDC, 8042 KB controller, 40 GPIOs	LPC
SCH3114	Super I/O controller with SMBus hardware and voltage monitoring	4 serial, parallel, FDC, 8042 KB controller, 40 GPIOs	LPC
SCH3116	Super I/O controller with SMBus hardware and voltage monitoring	6 serial, parallel, FDC, 8042 KB controller, 40 GPIOs	LPC
LPC47M10X	Super I/O controller, full legacy I/O support	2 serial ports, parallel, 8042 KB controller, FDC, 37 GPIOs	LPC
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
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

CAPACITIVE TOUCH SENSORS

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

WIRELESS AUDIO: Highly Integrated Wireless Audio Baseband Processors

Product	Additional Features	Frequency	
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	
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,
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,
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, I D
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,
DM860A	Available as an alternative to DM870A with no Wi-Fi capability.	–	I²S, S/PDIF, I D

WIRELESS AUDIO: Reference Designs

Product	Features	Frequency	Interface	
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	
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	
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	
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	
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	

WIRELESS AUDIO: Highly-Integrated Wireless Audio Modules

Product	Features	Frequency	Interface
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™,
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, S
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/S TFT for Display, SPI, CCI

WIRELESS AUDIO: Radio Frequency Digital Audio Transceivers

Product	Features	Typical Sink Mode Power Consumption	PA Output Power	A
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	1 44.1 K

SECURITY: Smart Card Readers and Encrypted Storage

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

Product	Features	USB Interface	Pin
SEC1100	USB single-port smart card reader with integrated self clock	USB 1.1	16
SEC1200	USB dual-port smart card reader with with UART/SPI interface and integrated self clock	USB 1.1	24/4
SEC1300	USB keyboard and LCD controller with smart card reader and self clock (Device available for sampling)	USB 1.1	64
SEC2410	USB secure authentication and encrypted storage token with AES encryption, 35 MB/s transfer rates and 32-bit controller	USB 2.0	64/7
SEC4410	USB secure authentication and encrypted storage token with AES encryption, 35 MB/s transfer rates and 32-bit controller	HSIC	64/7

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 Ma
mTouch Pro
NCO Nur
Op Amp Ope
PIC10/12/16/18 8-b
PIC24 16-
PIC32 32-
PLVD Pro
POR/POOR Pow
PSMC Pro
PWM Puls
RAM Ran
RTCC Rea
Source/Sink Current All
SR Latch Set
SRAM Sta
SPI Ser
T1G Tim
USART Uni Tra
USB Uni
USB (Full Speed) 12
USB OTG USI
XLP nan

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

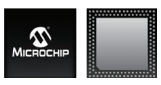

8-lead DFN (MD) 4 × 4 × 0.9 mm


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

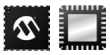

16-lead QFN (MG) 3 × 3 × 0.9 mm


20-lead QFN (ML) 4 × 4 × 0.9 mm


20-lead QFN (MQ) 5 × 5 × 0.9 mm

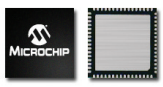

28-lead UQFN (MV) 4 × 4 × 0.5 mm


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 Outli 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 Ou TSSOP


8-lead TSSOP (ST)


14-lead TSSOP (ST)


20-lead TSSOP (ST)

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

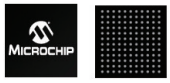
Plastic Quad Flatpack QFP

32-lead LQFP (LQ)
7 × 7 × 1.4 mm

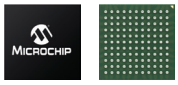
44-lead MQFP (PQ)
10 × 10 × 2 mm

144-lead LQFP (PL)
20 × 20 × 1.4 mm

Ball Grid Array BGA



100-ball BGA (BG)
10 × 10 × 1.1 mm



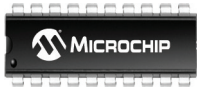
121-ball BGA (BG)
10 × 10 × 0.8 mm

Plastic Dual In-Line PDIP

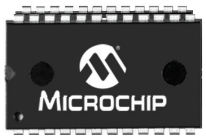
8-lead PDIP (P)

14-lead PDIP (P)

18-lead PDIP (P)

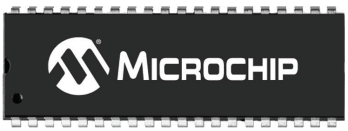


20-lead PDIP (P)



24-lead PDIP (P)

28-lead SPDIP (SP)



40-lead PDIP (P)

NOR Flash M

8-lead WSON (
5 × 6 m

32-lead PDIP (
600 m

32-lead PLCC (
0.452" × 0

40-lead TSOP
10 × 20

48-lead WFBGA (
4 × 6 × 0.7

48-lead TFBGA (
6 × 8 × 1.2

48-lead TSOP (
12 × 20 × 1

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