

MICROCHIP PICMicro Microcontroller Family



◆ Surface Mount Device

Microchip's RISC-based PICmicro® MCUs are designed for applications requiring high performance and low cost. The PICmicro® MCU portfolio is comprised of more than 140 products and features a variety of memory configurations, low voltage and power, small footprint and ease-of-use. There is a great deal of "smarts" packed into a tiny space in our minimal footprint 8-bit MCUs. As your designs grow in complexity, the code you write (later) can be easily transitioned to larger Microchip MCUs with more peripheral resources. A seamless product migration path between PICmicro® MCU families provides for complete upward compatibility in embedded control designs. If you already know the specifications you need for your application, you can select that criteria through Microchip's parametric search engine. The criteria used in this selection process are: Program Memory, Data RAM, Memory Type and Package. If you are not yet familiar with Microchip's PICmicro® MCUs the following information will help you get started. PICmicro® MCUs combine high performance, low cost, and small package size, offering the best price/performance ratio in the industry. Microchip offers five families of 8-bit MCUs to best fit your needs.

PIC10FXXX 6 PIN, 8BIT FLASH MCU'S. "THE WORLDS SMALLEST MICROCONTROLLER."

High-Performance RISC CPU:

- Only 33 single-word instructions to learn
- All single-cycle instructions except for program branches, which are two-cycle
- 12-bit wide instructions
- 2-level deep hardware stack
- Direct, Indirect and Relative Addressing modes for data and instructions
- 8-bit wide data path
- 8 Special Function Hardware registers
- Operating speed: 4 MHz internal clock
1 μ s instruction cycle

Special Microcontroller Features:

- 4 MHz precision internal oscillator: Factory calibrated to $\pm 1\%$
- In-Circuit Serial Programming™ (ICSP™)
- In-Circuit Debugging (ICD) support
- Power-on Reset (POR)
- Device Reset Timer (DRT)
- Watchdog Timer (WDT) with dedicated on-chip RC oscillator for reliable operation
- Programmable code protection
- Multiplexed MCLR input pin
- Internal weak pull-ups on I/O pins
- Power-saving Sleep mode
- Wake-up from Sleep on pin change

Low-Power Features/CMOS Technology:

- Operating Current: < 350 μ A @ 2V, 4 MHz
- Standby Current: 100 nA @ 2V, typical
- Low-power, high-speed Flash technology:
100,000 Flash endurance
> 40 year retention
- Fully static design
- Wide operating voltage range: 2.0V to 5.5V
- Wide temperature range: Industrial: -40°C to +85°C
Extended: -40°C to +125°C

MOUSER STOCK NO.	Microchip Part No.	Package Type	PM Memory Flash (Words)	Data Memory RAM (Bytes)	I/O	Timers 8-bit	Comparator	Price Each		
								1	25	100
579-PIC10F200-I/P	PIC10F200-I/P	PDIP-8	256	16	4	1	-	.96	.74	.50
579-PIC10F200T-I/OT	PIC10F200T-I/OT	SOT-23	256	16	4	1	-	.89	.68	.46
579-PIC10F202-I/P	PIC10F202-I/P	PDIP-8	512	24	4	1	-	1.03	.80	.54
579-PIC10F202T-I/OT	PIC10F202T-I/OT	SOT-23	512	24	4	1	-	.96	.74	.50
579-PIC10F204-I/P	PIC10F204-I/P	PDIP-8	256	16	4	1	1	1.03	.80	.54
579-PIC10F204T-I/OT	PIC10F204T-I/OT	SOT-23	256	16	4	1	1	.96	.74	.50
579-PIC10F206-I/P	PIC10F206-I/P	PDIP-8	512	24	4	1	1	1.08	.83	.57
579-PIC10F206T-I/OT	PIC10F206T-I/OT	SOT-23	512	24	4	1	1	1.01	.78	.53

MICROCHIP PIC12CXXX MCUS

Features:

- 400ns Instruction Execution, 33/35 Instructions, 4/5 Oscillator Selections.
- ICSP™, 6 I/O Pins, 1-8 bit Timer, 1-WDT, 400Hz Internal Oscillator.

MOUSER STOCK NO.	Microchip Part No.	Package Type	Program Memory		RAM Bytes	Price Each		
			Bytes	OTPW		1	25	100
579-PIC12C508A04P	PIC12C508A-04/P	PDIP-8	768	512x12	25	1.66	1.28	.96
◆ 579-PIC12C508A04SM	PIC12C508A-04/SM	SOIC-8	768	512x12	25	1.66	1.28	.96
579-PIC12C508A04IP	PIC12C508A-04/I/P	PDIP-8	768	512x12	25	1.82	1.41	1.05
◆ 579-PIC12C508A04ISM	PIC12C508A-04/I/SM	SOIC-8	768	512x12	25	1.82	1.41	1.05
◆ 579-12C508A-04I/SN	PIC12C508A-04/I/SN	SOIC-8	768	512x12	25	1.87	1.44	1.09
579-PIC12CE51804P	PIC12CE518-04/P	PDIP-8	768	512x12	128	2.02	1.55	1.17
◆ 579-PIC12CE51804SM	PIC12CE518-04/SM	SOIC-8	768	512x12	128	2.14	1.65	1.23
579-PIC12C509A04SN	PIC12C509A-04/SN	SOIC-8	1536	1024x12	41	1.80	1.39	1.03
579-PIC12C509A04IP	PIC12C509A-04/I/P	PDIP-8	1536	1024x12	41	1.87	1.44	1.09
◆ 579-PIC12C509A04ISM	PIC12C509A-04/I/SM	SOIC-8	1536	1024x12	41	1.87	1.44	1.09
◆ 579-PIC12C509A04ISN	PIC12C509A-04/I/SN	SOIC-8	1536	1024x12	41	1.94	1.50	1.12
579-PIC12C67104P	PIC12C671-04/P	PDIP-8	3584	2048x14	128	3.02	2.33	1.75
◆ 579-PIC12C67104SM	PIC12C671-04/SM	SOIC-8	3584	2048x14	128	3.14	2.42	1.82
◆ 579-PIC12C671-04I/P	PIC12C671-04/I/P	PDIP-8	3584	2048x14	128	3.29	2.53	1.92
579-PIC12C672-04P	PIC12C672-04/P	PDIP-8	3584	2048x14	128	3.29	2.53	1.92

MICROCHIP PIC12FXXX FLASH MCUS

Features:

- Upwardly Compatible with PIC12Cxxx, 200ns Instruction Execution, 35 Instructions, 5 Oscillator Selections.
- ICSP™, 6 I/O Pins; 1-8 bit, 1-16 bit Timer; 1-WDT; 1 Comparator; 400Hz Internal Oscillator, ICD; 20MHz Max Speed.

◆ 579-PIC12F629-I/SN	PIC12F629-I/SN	SOIC-8	1792	1024x14	64	1.54	1.18	.80
579-PIC12F675-I/MF	PIC12F675-I/MF	DFN-8	1792	1024x14	64	1.92	1.48	1.00
579-PIC12F675-I/P	PIC12F675-I/P	PDIP-8	1792	1024x14	64	1.85	1.42	.96
◆ 579-PIC12F675-I/SN	PIC12F675-I/SN	SOIC-8	1792	1024x14	64	1.68	1.30	.88

MICROCHIP PIC16C5X FAMILY: 12-BIT PROGRAM WORD

Features:

- 100-200ns Instruction Execution, 33 Instructions, 4/5 Oscillator Selections.
- 1-8 bit Timer, 1-WDT

MOUSER STOCK NO.	Microchip Part No.	Package Type	Program Memory		RAM Bytes	I/O Pins	Max MHz	Price Each		
			Bytes	OTPW				1	25	100
579-PIC16C55A20P	PIC16C55A-20/P	PDIP-28	768	512x12	24	20	40	3.29	2.53	1.92
579-PIC16C55RCP	PIC16C55-RC/P	PDIP-28	768	512x12	24	20	40	4.78	3.68	3.05
◆ 579-PIC16C55RCSSO	PIC16C55-RC/SSO	SOIC-28	768	512x12	24	20	40	4.97	3.83	3.17
◆ 579-PIC16C55XTISS	PIC16C55-XTI/SS	SSOP-28	768	512x12	24	20	40	6.19	4.77	3.96
579-PIC16C54A04P	PIC16C54A-04/P	PDIP-18	768	512x12	25	12	40	3.86	2.98	2.48
◆ 579-PIC16C54A04SO	PIC16C54A-04/SO	SOIC-18	768	512x12	25	12	40	3.96	3.05	2.53
579-PIC16C54C04P	PIC16C54C-04/P	PDIP-18	768	512x12	25	12	40	2.42	1.87	1.40
◆ 579-PIC16C54C04SO	PIC16C54C-04/SO	SOIC-18	768	512x12	25	12	40	2.45	1.89	1.43
579-PIC16C54C20P	PIC16C54C-20/P	PDIP-18	768	512x12	25	12	40	2.59	2.00	1.50
◆ 579-PIC16C54C20SO	PIC16C54C-20/SO	SOIC-18	768	512x12	25	12	40	2.64	2.04	1.54
579-PIC16C54HSP	PIC16C54-HS/P	PDIP-18	768	512x12	25	12	40	4.15	3.20	2.65
◆ 579-PIC16C54HSSO	PIC16C54-HS/SO	SOIC-18	768	512x12	25	12	40	4.22	3.26	2.72
579-PIC16C54RCP	PIC16C54-RC/P	PDIP-18	768	512x12	25	12	40	3.86	2.98	2.48
◆ 579-PIC16C54XTSO	PIC16C54-XT/SO	SOIC-18	768	512x12	25	12	40	3.96	3.05	2.53
579-PIC16C50504P	PIC16C505-04/P	PDIP-14	1536	1024x12	72	12	20	2.16	1.67	1.25
◆ 579-PIC16C50504SL	PIC16C505-04/SL	SOIC-14	1536	1024x12	72	12	20	2.16	1.67	1.25
579-PIC16C50504IP	PIC16C505-04/I/P	PDIP-14	1536	1024x12	72	12	20	2.16	1.67	1.25
◆ 579-PIC16C50520P	PIC16C505-20/P	PDIP-14	1536	1024x12	72	12	20	2.21	1.70	1.29
◆ 579-PIC16C50520SL	PIC16C505-20/SL	SOIC-14	1536	1024x12	72	12	20	2.21	1.70	1.29
◆ 579-PIC16C50520ISL	PIC16C505-20/I/SL	SOIC-14	1536	1024x12	72	12	20	2.21	1.70	1.29
579-PIC16C57C20SP	PIC16C57C-20/SP	SPDIP-28	3072	2048x12	72	20	40	3.84	2.96	2.23
579-PIC16C57XTP	PIC16C57-XT/P	PDIP-28	3072	2048x12	72	20	40	6.48	5.00	4.15
◆ 579-PIC16C57XTSO	PIC16C57-XT/SO	SOIC-28	3072	2048x12	72	20	40	6.74	5.20	4.31
579-PIC16C58B-20E/P	PIC16C58B-20E/P	PDIP-18	3072	2048x12	72	12	40	3.55	2.74	2.05

