MICROCHIP – ATMEL 8-BIT MICROCONTROLLER COMPETITIVE REFERENCE (OCTOBER 2001)

Part Number	PINS	Program Memory FLASH / OTP (Bytes)	ROM (Bytes)	Data EEProm	Data RAM (Bytes)	I/O #	Timers	PWM	Watchdog	Serial	8-bit A/D	BOR	Comments
8051 FAMILY													
AT89C1051U	20	1024 FLASH	—	—	64	14	1x16-bit	—	—	UART	—	—	Comparator
PIC16C620A	18/20	896	—	—	96	13	1x8-bit	—	Yes	—	—	Yes	Voltage Reference, 2 Comparator
PIC16C621A	18/20	1792	—	—	96	13	1x8-bit	—	Yes	—	—	Yes	Voltage Reference, 2 Comparator
PIC16CE624	18/20	1792	—	128	96	13	1x8-bit	—	Yes	—	—	Yes	Voltage Reference, 2 Comparator
PIC16F627	18/20	1792 FLASH	—	128	224	13	1x8-bit	—	Yes	UART	—	Yes	Voltage Reference, 2 Comparator
PIC16F84A	18/20	1792 FLASH	—	64	68	13	1x8-bit	—	Yes	—	—	—	ICSP™
AT89C2051	20	2048 FLASH	—	—	128	14	2x16-bit	—	—	UART	—	—	Comparator
PIC16C621A	18/20	1792	—	—	96	13	1x8-bit	—	Yes	—	—	Yes	Voltage Reference, 2 Comparator
PIC16CE624	18/20	1792	—	128	96	13	1x8-bit	—	Yes	—	—	Yes	Voltage Reference, 2 Comparator
PIC16F627	18/20	1792 FLASH	—	128	224	13	1x8-bit	—	Yes	UART	—	Yes	Voltage Reference, 2 Comparator
PIC16F84A	18/20	1792 FLASH	—	64	68	13	1x8-bit	—	Yes	—	—	—	ICSP
PIC16F818*	18/20	1792 FLASH	—	256	256	16	2x8-bit, 1x16-bit	1x10-bit	Yes	I²C/SPI	5x10-bit	Yes	CCP, ICSP, 2CCP, Internal Oscillator, 4 MHz
AT89C4051	20	4096 FLASH	—	—	128	14	2x16-bit	—	—	UART	—	—	Comparator
PIC16C622A	18/20	3584	—	—	128	13	1x8-bit	—	Yes	—	—	Yes	Voltage Reference, 2 Comparator
PIC16CE625	18/20	3584	—	128	128	13	1x8-bit	—	Yes	—	—	Yes	Voltage Reference, 2 Comparator
PIC16F628	18/20	3584 FLASH	—	128	224	13	1x8-bitt	—	Yes	UART	—	Yes	Voltage Reference, 2 Comparator
PIC16F819*	18/20	3584 FLASH	—	256	256	16	2x8-bit, 1x16-bit	1x10-bit	Yes	I²C/SPI	5x10-bit	Yes	CCP, ICSP, 2CCP, Internal Oscillator, 4 MHz
AT87F51	40/44	4096 FLASH	—	—	128	32	2x16-bit	—	—	UART	—	—	Quick FLASH (OTP FLASH)
AT89C51	40/44	4096 FLASH	—	—	128	32	2x16-bit	—	—	UART	—	—	
PIC16C64A	40/44	3584	—	—	128	33	2x8-bit, 1x16-bit	1x10-bit	Yes	SPI™/I²C™	—	Yes	2.5V - 6.0V, CCP, PSP, ICSP
PIC16F74	40/44	7168 FLASH	—	—	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I²C/USART	8	Yes	2CCP, PSP, ICSP
AT87LV51	40/44	4096 FLASH	—	—	128	32	2x16-bit	—	—	UART	—	—	Quick FLASH (OTP FLASH)
AT89LV51	40/44	4096 FLASH	—	—	128	32	2x16-bit	—	—	UART	—	—	2.7V - 6.0V
PIC16LC64A	40/44	3584	—	—	128	33	2x8-bit, 1x16-bit	1x10-bit	Yes	SPI/I²C	—	Yes	2.5V - 6.0V, CCP, ICSP, PSP
PIC16LF74	40/44	7168 FLASH	—	—	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I²C/USART	8	Yes	2.0 - 5.5V, 2CCP, ICSP, PSP
AT87F52	40/44	8192 FLASH	—	—	256	32	3x16-bit	—	—	UART	—	—	Quick FLASH (OTP FLASH)
AT89C52	40/44	8192 FLASH	—	—	256	32	3x16-bit	—	—	UART	—	—	—
PIC16C65B	40/44	7168	—	—	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I²C/USART	—	Yes	2CCP, ICSP, PSP
PIC16C765	40/44	7168	—	—	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	USART/SPI/I²C	8	Yes	USB, 2CCP, ICSP, PSP
PIC16F74	40/44	7168 FLASH	—	—	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I²C/USART	8	Yes	2CCP, ICSP, PSP
PIC16F874	40/44	7168 FLASH	—	128	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/MI²C/AUSART	8x10-bit	Yes	ICD, 2CCP, ICSP, PSP

MICROCHIP – ATMEL 8-BIT MICROCONTROLLER COMPETITIVE REFERENCE (OCTOBER 2001)

Part Number	PINS	Program Memory FLASH / OTP (Bytes)	ROM (Bytes)	Data EEProm	Data RAM (Bytes)	I/O #	Timers	PWM	Watchdog	Serial	8-bit A/D	BOR	Comments
8051 FAMILY *(Continued)*													
AT87LV52	40/44	8192 FLASH	—	—	256	32	3x16-bit	—	—	UART	—	—	Quick FLASH (OTP FLASH)
AT89LV52	40/44	8192 FLASH	—	—	256	32	3x16-bit	—	—	UART	—	—	2.7V - 6.0V
PIC16LC65B	40/44	7168	—	—	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I²C/USART	—	Yes	2.5V - 6.0V, 2CCP, ICSP, PSP
PIC16LF74	40/44	7168 FLASH	—	—	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I²C/USART	8	Yes	2.0 - 5.5V, 2CCP, ICSP, PSP
PIC16LF874	40/44	7168 FLASH	—	128	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/MI²C/AUSART	8x10-bit	Yes	ICD, 2.0 - 5.5V, 2CCP, ICSP, PSP
PIC16LC74B	40/44	7168	—	—	192	33	1x16-bit, 2x8-bit	2x10-bit	Yes	SPI/MI²C/USART	8	Yes	2.5V - 6.0V, 2CCP, ICSP, PSP
AT89S53	40/44	12288 FLASH	—	—	256	32	3x16-bit	—	—	UART	—	—	—
PIC16C65B	40/44	7168	—	—	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I²C/USART	—	Yes	2CCP, ICSP, PSP
PIC16F74	40/44	7168 FLASH	—	—	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I²C/USART	8	Yes	2CCP, ICSP, PSP
PIC16F874	40/44	7168 FLASH	—	128	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/MI²C/AUSART	8x10-bit	Yes	2CCP, ICSP, PSP, ICD
AT89LS53	40/44	12288 FLASH	—	—	256	32	3x16-bit	—	—	UART	—	—	—
PIC16LC65B	40/44	7168	—	—	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I²C/USART	—	Yes	2.5 - 6.0V, 2CCP, ICSP, PSP
PIC16LF74	40/44	7168 FLASH	—	—	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I²C/USART	8	Yes	2.0 - 5.5V, 2CCP, ICSP, PSP
PIC16LF874	40/44	7168 FLASH	—	128	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/MI²C/AUSART	8x10-bit	Yes	2.0 - 5.5V, 2CCP, ICSP, PSP, ICD
AT87F55WD	40/44	20480 FLASH	—	—	256	32	3x16-bit	—	—	UART	—	—	Quick FLASH (OTP FLASH)
AT89F55WD	40/44	20480 FLASH	—	—	256	32	3x16-bit	—	—	UART	—	—	—
PIC16C66	40/44	14336	—	—	368	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I²C/USART	—	Yes	2CCP, ICSP, PSP
PIC16F77	40/44	14336 FLASH	—	—	368	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I²C/USART	8	Yes	2CCP, ICSP, PSP
PIC16F877	40/44	14336 FLASH	—	256	368	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/MI²C/AUSART	8x10-bit	Yes	2CCP, ICSP, PSP, ICD
AT87LV55WD	40/44	20480 FLASH	—	—	256	32	3x16-bit	—	—	UART	—	—	2.7 - 6.0V
AT89LV55WD	40/44	20480 FLASH	—	—	256	32	3x16-bit	—	—	UART	—	—	2.7 - 6.0V
PIC16LC66	40/44	14336	—	—	368	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I²C/USART	—	Yes	2.0 - 5.5V, 2CCP, ICSP, PSP
PIC16LF77	40/44	14336 FLASH	—	—	368	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I²C/USART	8	Yes	2.0 - 5.5V, 2CCP, ICSP, PSP
PIC16LF877	40/44	14336 FLASH	—	256	368	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/MI²C/AUSART	8x10-bit	Yes	2.0 - 5.5V, 2CCP, ICSP, PSP, ICD
AT87F51RC	40/44	32768 FLASH	—	—	512	32	2x16-bit	—	—	UART	—	—	Quick FLASH (OTP FLASH)
AT89F51RC	40/44	32768 FLASH	—	—	512	32	2x16-bit	—	—	UART	—	—	—
PIC16C66	40/44	14336	—	—	368	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I²C/USART	—	Yes	2CCP, ICSP, PSP
PIC16F77	40/44	14336 FLASH	—	—	368	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I²C/USART	8	Yes	2CCP, ICSP, PSP
PIC16F877	40/44	14336 FLASH	—	256	368	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/MI²C/AUSART	8x10-bit	Yes	2CCP, ICSP, PSP
PIC18F442*	40/44	16384 FLASH	—	256	768	34	3x16-bit, 1x8-bit	2x10-bit	Yes	AUSART/MI²C/SPI	8x10-bit	PBOR	ICD, Self-Programming, PSP, 2CCP, ICSP
AT89S8252	40/44	8192 FLASH	—	2048	256	32	3x16-bit	—	—	UART	—	—	—
PIC16C65B	40/44	7168	—	—	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I²C/USART	—	Yes	2CCP, ICSP, PSP
PIC16F74	40/44	7168 FLASH	—	—	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I²C/USART	8	Yes	2CCP, ICSP, PSP
PIC16F874	40/44	7168 FLASH	—	128	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/MI²C/AUSART	8x10-bit	Yes	2CCP, ICSP, PSP, ICD
AT89LS8252	40/44	8192 FLASH	—	2048	128	32	3x16-bit	—	—	UART	—	—	—
PIC16LC65B	40/44	7168	—	—	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I²C/USART	—	Yes	2.5 - 6.0V, 2CCP, ICSP, PSP
PIC16LF74	40/44	7168 FLASH	—	—	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I²C/USART	8	Yes	2.0 - 5.5V, 2CCP, ICSP, PSP

Part Number	PINS	Program Memory		Data EEProm	Data RAM (Bytes)	I/O #	Timers	PWM	Watchdog	Serial	8-bit A/D	BOR	Comments
		FLASH / OTP (Bytes)	ROM (Bytes)										
8051 FAMILY *(Continued)*													
PIC16LF874	40/44	7168 FLASH	—	128	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/MI²C/AUSART	8x10-bit	Yes	2.0 - 5.5V, 2CCP, ICSP, PSP, ICD
83C51RB2	40/44	—	16384	—	512	32	4x16-bit	1x10-bit	Yes	UART	—	—	PCA, EMC
89C51RB2	40/44	16384 FLASH	—	—	512	32	4x16-bit	1x10-bit	Yes	UART	—	—	PCA, EMC
PIC18C442	40/44	16384	—	—	1536	34	3x16-bit, 1x8-bit	2x10-bit	Yes	AUSART/MI²C/SPI	8x10-bit	PBOR	PSP, ICSP, 2CCP
PIC18F442*	40/44	16384 FLASH	—	256	1536	34	3x16-bit, 1x8-bit	2x10-bit	Yes	AUSART/MI²C/SPI	8x10-bit	Yes	ICD, PSP, ICSP, 2CCP
83C51RC2	40/44	—	32768	—	512	32	4x16-bit	1x10-bit	Yes	UART	—	—	PCA, EMC
89C51RC2	40/44	32768 FLASH	—	—	512	32	4x16-bit	1x10-bit	Yes	UART	—	—	PCA, EMC
PIC18C452	40/44	32768	—	—	1536	34	3x16-bit, 1x8-bit	2x10-bit	Yes	USART/MI²C/SPI	8x10-bit	PBOR	PSP, ICSP, 2CCP
PIC18F452*	40/44	32768 FLASH	—	256	1536	34	3x16-bit, 1x8-bit	2x10-bit	Yes	USART/MI²C/SPI	8x10-bit	PBOR	ICD, PSP, ICSP, 2CCP
89C51AC2	40/44	32768 FLASH	—	2048	512	32	4x16-bit	1x10-bit	Yes	UART	8x10-bit	—	PCA, EMC
PIC18C452	40/44	32768	—	—	1536	34	3x16-bit, 1x8-bit	2x10-bit	Yes	USART/MI²C/SPI	8x10-bit	PBOR	PSP, ICSP, 2CCP
PIC18F452*	40/44	32768 FLASH	—	256	1536	34	3x16-bit, 1x8-bit	2x10-bit	Yes	USART/MI²C/SPI	8x10-bit	PBOR	ICD, PSP, ICSP, 2CCP
T89C51CC01	40/44	34816 FLASH	—	2048	256 + 1K	34	3x16-bit	5x8-bit	Yes	UART/CAN	8x10-bit	—	8 buffers
PIC18F458*	40/44	32768 FLASH	—	256	1536	34	3x16-bit, 1x8-bit	2x10-bit	Yes	USART/MI²C/SPI/ CAN 2.0	8x10-bit	PBOR	3 transmit buffers, 2 receive buffers, 2CCP, PSP, ICSP, ICD
T89C51CC02	28	18432 FLASH	—	2048	512	20	3x16-bit	5x8-bit	Yes	UART/CAN	8x10-bit	—	4 buffers
PIC18F248*	28	16384 FLASH	—	256	768	23	3x16-bit, 1x8-bit	2x10-bit	Yes	USART/MI²C/SPI/ CAN 2.0	5x10-bit	PBOR	3 transmit buffers, 2 receive buffers, 2CCP, ICSP, ICD
CLASSIC AVR													
AT90S1200	20	1024 FLASH	—	64	—	15	1x8-bit	—	Yes	—	—	—	Comparator
PIC16C621A	18/20	1792	—	—	96	13	1x8-bit	—	Yes	—	—	Yes	Voltage Reference, 2 Comparator
PIC16CE624	18/20	1792	—	128	96	13	1x8-bit	—	Yes	—	—	Yes	Voltage Reference, 2 Comparator
PIC16F627	18/20	1792 FLASH	—	128	224	13	1x8-bit	—	Yes	UART	—	Yes	Voltage Reference, 2 Comparator, 4 MHz, Internal Oscillator
PIC16F84A	18/20	1792 FLASH	—	64	68	13	1x8-bit	—	Yes	—	—	—	ICSP
PIC16F818*	18/20	1792 FLASH	—	256	256	16	2x8-bit, 1x16-bit	1x10-bit	Yes	I²C/SPI	5x10-bit	Yes	CCP, ICSP, 2CCP, 4 MHz, Internal Oscillator
AT90S2313	20	2048 FLASH	—	128	128	15	2x8-bit	1x 10-bit	Yes	UART	—	—	1x16-bit Cap/Comp, Comparator
PIC16C622A	18/20	3584	—	—	128	13	1x8-bit	—	Yes	—	—	Yes	Voltage Reference, 2 Comparator
PIC16CE625	18/20	3584	—	128	128	13	1x8-bit	—	Yes	—	—	Yes	Voltage Reference, 2 Comparator
PIC16F628	18/20	3584 FLASH	—	128	224	16	1x16-bit, 2x8-bit	1x10-bit	Yes	USART	—	Yes	Voltage Reference, 2 Comparator, 4 MHz, Internal Oscillator
PIC16F819*	18/20	3584 FLASH	—	256	256	16	2x8-bit, 1x16-bit	1x10-bit	Yes	I²C/SPI	5x10-bit	Yes	CCP, ICSP, 2CCP, 4 MHz, Internal Oscillator

Part Number	PINS	Program Memory		Data EEProm	Data RAM (Bytes)	I/O #	Timers	PWM	Watchdog	Serial	8-bit A/D	BOR	Comments
		FLASH / OTP (Bytes)	ROM (Bytes)										
CLASSIC AVR (Continued)													
AT90S2323	8	2048 FLASH	—	128	128	3	1x8-bit	—	Yes	UART	—	—	—
PIC12CE519	8	1536	—	16	41	5	1x8-bit	—	Yes	—	—	—	Internal Oscillator
PIC18F010*	8	2048 FLASH	—	64	256	6	1x8-bit	—	Yes	—	—	Yes	ICD, PBOR, LVD, 4 MHz, Internal Oscillator
PIC12CE673	8	1792	—	16	128	5	1x8-bit	—	Yes	—	4	—	Internal Oscillator
PIC12F629*	8	1792 FLASH	—	128	64	6	1x8-bit, 1x16-bit	—	Yes	—	—	Yes	Comparator, Internal Oscillator
AT90S2333	28	2048 FLASH	—	128	128	20	1x8-bit, 1x16-bit	1x10-bit	Yes	UART	6x10-bit	—	Comparator
PIC16C72A	28	3584	—	—	128	22	2x8-bit, 1x16-bit	1x10-bit	Yes	I^{2}C/SPI	5	Yes	CCP, ISP
PIC16F870	28	3584 FLASH	—	64	128	22	2x8-bit, 1x16-bit	1x10-bit	Yes	USART	5x10-bit	Yes	ICD, CCP, ICSP
PIC16F872	28	3584 FLASH	—	64	128	22	2x8-bit, 1x16-bit	1x10-bit	Yes	MI^{2}C/SPI	5x10-bit	Yes	ICD, CCP, ICSP
PIC16F72*	28	3584 FLASH	—	—	128	22	2x8-bit, 1x16-bit	1x10-bit	Yes	MI^{2}C/SPI	5	Yes	CCP, ICSP, 2CCP, 4 MHz, Internal Oscillator
AT90S2343	8	2048 FLASH	—	128	128	5	1x8-bit	—	Yes	—	—	—	Internal Oscillator
PIC12CE519	8	1536	—	16	41	5	1x8-bit	—	Yes	—	—	—	4 MHz, Internal Oscillator
PIC18F010*	8	2048 FLASH	—	64	256	6	1x8-bit	—	Yes	—	—	Yes	Clock speed up to 40 MHz, ICD, PBOR, LVD
PIC12CE673	8	1792	—	16	128	5	1x8-bit	—	Yes	—	4	—	4 MHz, Internal Oscillator
PIC12F629*	8	1792 FLASH	—	128	64	6	1x8-bit, 1x16-bit	—	Yes	—	—	Yes	Comparator, 4 MHz, Internal Oscillator
AT90S4414	40/44	4096 FLASH	—	256	256	32	1x8-bit, 1x16-bit	2x10-bit	Yes	UART	—	—	Comparator
PIC16C64A	40/44	3584	—	—	128	33	2x8-bit, 1x16-bit	1x10-bit	Yes	I^{2}C/SPI	—	Yes	CCP, ICSP, PSP
PIC16F871	40/44	3584 FLASH	—	64	128	33	2x8-bit, 1x16-bit	1x10-bit	Yes	AUSART	5x10-bit	Yes	ICD, CCP, ICSP, PSP
AT90S4433	28	4096 FLASH	—	256	128	20	1x8-bit, 1x16-bit	1x10-bit	Yes	—	6x10-bit	—	Comparator
PIC16C72A	28	3584	—	—	128	22	2x8-bit, 1x16-bit	1x10-bit	Yes	I^{2}C/SPI	5	Yes	CCP, ICSP
PIC16F870	28	3584 FLASH	—	64	128	22	2x8-bit, 1x16-bit	1x10-bit	Yes	USART	5x10-bit	Yes	CCP, ICSP, ICD
PIC16F872	28	3584 FLASH	—	64	128	22	2x8-bit, 1x16-bit	1x10-bit	Yes	MI^{2}C/SPI	5x10-bit	Yes	CCP, ICSP, ICD
PIC16F72*	28	3584 FLASH	—	—	128	22	2x8-bit, 1x16-bit	1x10-bit	Yes	MI^{2}C/SPI	5	Yes	CCP, ICSP, 2CCP, 4 MHz, Internal Oscillator
AT90S4434	40/44	4096 FLASH	—	256	256	32	2x8-bit, 1x16-bit	3x10-bit	Yes	UART	8x10-bit	—	Comparator
PIC16C74B	40/44	7168	—	—	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/MI^{2}C/AUSART	8	Yes	2CCP, ICSP, PSP
PIC16F74	40/44	7168 FLASH	—	—	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I^{2}C/USART	8	Yes	2CCP, ICSP, PSP
PIC16F874	40/44	7168 FLASH	—	128	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I^{2}C/USART	8x10-bit	Yes	2CCP, ICSP, PSP, ICD
AT90S8515	40/44	8192 FLASH	—	512	512	32	1x8-bit, 1x16-bit	2x10-bit	Yes	UART	—	—	Comparator
PIC18F4320*	40/44	8192 FLASH	—	256	512	34	1x8-bit, 3x16-bit	2x10-bit	Yes	SPI/MI^{2}C/AUSART	8x10-bit	PBOR	2CCP, ICSP, PSP
PIC16C67	40/44	14336	—	—	368	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I^{2}C/USART	—	Yes	2CCP, ICSP, PSP
PIC16F77	40/44	14336 FLASH	—	—	368	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I^{2}C/USART	8	Yes	2CCP, ICSP, PSP
PIC16F877	40/44	14336 FLASH	—	256	368	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/MI^{2}C/AUSART	8x10-bit	Yes	2CCP, ICSP, PSP, ICD
AT90S8534	48	8192 FLASH	—	512	256	15	1x8-bit, 1x16-bit	3x10-bit	Yes	—	6x10-bit	—	—
PIC18F4320*	40/44	8192 FLASH	—	128	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I^{2}C/USART	8x10-bit	PBOR	2CCP, ICSP, PSP, ICD
PIC16C67	40/44	14336	—	—	368	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I^{2}C/USART	—	Yes	2CCP, ICSP, PSP
PIC16F77	40/44	14336 FLASH	—	—	368	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I^{2}C/USART	8	Yes	2CCP, ICSP, PSP
PIC16F877	40/44	14336 FLASH	—	256	368	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/MI^{2}C/AUSART	8x10-bit	Yes	2CCP, ICSP, PSP, ICD

MICROCHIP – ATMEL 8-BIT MICROCONTROLLER COMPETITIVE REFERENCE (OCTOBER 2001)

Part Number	PINS	Program Memory FLASH / OTP (Bytes)	ROM (Bytes)	Data EEProm	Data RAM (Bytes)	I/O #	Timers	PWM	Watchdog	Serial	8-bit A/D	BOR	Comments
CLASSIC AVR (Continued)													
AT90S8535	40/44	8192 FLASH	—	512	512	32	2x8-bit, 1x16-bit	3x10-bit	Yes	UART	8x10-bit	—	—
PIC18F4320*	40/44	8192 FLASH	—	128	192	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I²C/USART	8x10-bit	PBOR	2CCP, ICSP, PSP, ICD
PIC16C77	40/44	14336	—	—	368	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I²C/USART	8	Yes	2CCP, ICSP, PSP
PIC16F77	40/44	14336 FLASH	—	—	368	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/I²C/USART	8	Yes	2CCP, ICSP, PSP
PIC16F877	40/44	14336 FLASH	—	256	368	33	2x8-bit, 1x16-bit	2x10-bit	Yes	SPI/MI²C/AUSART	8x10-bit	Yes	2CCP, ICSP, PSP, ICD
TINY AVR FAMILY													
Tiny10	8	1024 FLASH	—	—	—	6	1x8-bit	—	Yes	—	—	—	Internal Oscillator, Comparator
Tiny10L	8	1024 FLASH	—	—	—	6	1x8-bit	—	Yes	—	—	—	Internal Oscillator, Comparator
PIC12C509A	8	1536	—	—	41	6	1x8-bit	—	Yes	—	—	—	4 MHz, Internal Oscillator, ICSP
PIC12CE519	8	1536	—	16	41	6	1x8-bit	—	Yes	—	—	—	4 MHz, Internal Oscillator, ICSP
PIC18F010*	8	2048 FLASH	—	64	256	6	1x16-bit	—	Yes	—	—	Yes	4 MHz, Internal Oscillator, PBOR, LVD, ICD, Up to 40 MHz
PIC12F629*	8	1792 FLASH	—	128	64	6	1x8-bit, 1x16-bit	—	Yes	—	—	Yes	Comparator, Internal Oscillator, ICSP
Tiny11	8	1024 FLASH	—	—	—	6	1x8-bit	—	Yes	—	—	—	Internal Oscillator, Comparator
Tiny11L	8	1024 FLASH	—	—	—	6	1x8-bit	—	Yes	—	—	—	Internal Oscillator, Comparator
PIC12C509A	8	1536	—	—	41	6	1x8-bit	—	Yes	—	—	—	4 MHz, Internal Oscillator, ICSP
PIC12CE519	8	1536	—	16	41	6	1x8-bit	—	Yes	—	—	—	4 MHz, Internal Oscillator, ICSP
PIC18F010*	8	2048 FLASH	—	64	256	6	1x8/16-bit	—	Yes	—	—	Yes	4 MHz, Internal Oscillator, ICD, PBOR, LVD, Up to 40 MHz
PIC12F629*	8	1792 FLASH	—	128	64	6	1x8-bit, 1x16-bit	—	Yes	—	—	Yes	Comparator, 4 MHz, Internal Oscillator, ICSP
Tiny 12V	8	1024 FLASH	—	64	—	6	1x8-bit	—	Yes	—	—	—	Internal Oscillator, Comparator
Tiny12	8	1024 FLASH	—	64	—	6	1x8-bit	—	Yes	—	—	—	Internal Oscillator, Comparator
Tiny12L	8	1024 FLASH	—	64	—	6	1x8-bit	—	Yes	—	—	—	Internal Oscillator, Comparator
PIC12CE519	8	1536	—	16	41	6	1x8-bit	—	Yes	—	—	—	Internal Oscillator
PIC18F010*	8	2048 FLASH	—	64	256	6	1x16-bit	—	Yes	—	—	Yes	Internal Oscillator, PBOR, LVD, ICSP
PIC12F629*	8	1792 FLASH	—	128	64	6	1x8-bit, 1x16-bit	—	Yes	—	4	Yes	Comparator, Internal Oscillator

MICROCHIP – ATMEL 8-BIT MICROCONTROLLER COMPETITIVE REFERENCE (OCTOBER 2001)

Part Number	PINS	Program Memory FLASH / OTP (Bytes)	ROM (Bytes)	Data EEProm	Data RAM (Bytes)	I/O #	Timers	PWM	Watchdog	Serial	8-bit A/D	BOR	Comments
TINY AVR FAMILY (Continued)													
Tiny15L	8	1024 FLASH	—	64	—	6	2x8-bit	—	Yes	—	4x10-bit	—	Internal Oscillator, Comparator
PIC12CE519	8	1536	—	16	41	6	1x8-bit	—	Yes	—	—	—	4 MHz, Internal Oscillator, ICSP
PIC18F010*	8	2048 FLASH	—	64	256	6	1x16-bit	—	Yes	—	—	Yes	4 MHz, Internal Oscillator, PBOR, LVD, ICSP
PIC12F675*	8	1792 FLASH	—	128	64	6	1x8-bit, 1x16-bit	—	Yes	—	4x10-bit	Yes	Comparator, 4 MHz, Internal Oscillator, ICSP
Tiny22	8	2048 FLASH	—	128	128	3	1x8-bit	—	Yes	—	—	—	Internal Oscillator
Tiny22L	8	2048 FLASH	—	128	128	3	1x8-bit	—	Yes	—	—	—	Internal Oscillator
PIC18F010*	8	2048 FLASH	—	64	256	6	1x16-bit	—	Yes	—	—	—	4 MHz, Internal Oscillator, PBOR, LVD, ICSP
PIC12F629*	8	1792 FLASH	—	128	64	6	1x8-bit, 1x16-bit	—	Yes	—	4x10-bit	Yes	Comparator, 4 MHz, Internal Oscillator, ICSP
Tiny28V	28	2048 FLASH	—	—	—	20	1x8-bit	—	Yes	—	—	—	Internal Oscillator
Tiny28L	28	2048 FLASH	—	—	—	20	1x8-bit	—	Yes	—	—	—	Internal Oscillator
PIC16C72A	28	3584	—	—	128	22	2x8-bit, 1x16-bit	1x10-bit	Yes	I²C/SPI	5	Yes	CCP, ICSP
PIC16F72*	28	3584 FLASH	—	—	128	22	2x8-bit, 1x16-bit	1x10-bit	Yes	MI²C/SPI	5	Yes	CCP, ICSP, 2CCP, 4 MHz, Internal Oscillator
PIC16F870	28	3584 FLASH	—	64	128	22	2x8-bit, 1x16-bit	1x10-bit	Yes	USART	5x10-bit	Yes	CCP, ICSP
PIC16F872	28	3584 FLASH	—	64	128	22	2x8-bit, 1x16-bit	1x10-bit	Yes	MI²C/SPI	5x10-bit	Yes	2x16 Cap/Comp, ICD
MEGA AVR													
ATmega8	28/32	8192 FLASH	—	512	1024	23	3x16-bit, 2x8-bit	3	Yes	USART/SPI	2, 6x10-bit	Yes	Comparator, Cap/Comp
PIC18F2320*	28	8192 FLASH	—	256	512	23	3x16-bit, 1x8-bit	2x10-bit	Yes	AUSART/SPI/MI²C	5x10-bit	PBOR	ICSP, 2CCP, ICD
ATmega16	40/44	16384 FLASH	—	512	1024	32	3x16-bit, 2x8-bit	4	Yes	USART/SPI	8x10-bit	Yes	Comparator, Self-Programming
PIC18F442*	40/44	16384 FLASH	—	256	768	34	3x16-bit, 1x8-bit	2x10-bit	Yes	AUSART/SPI/MI²C	5x10-bit	PBOR	ICSP, 2CCP, ICD
ATmega128	64	131072 FLASH	—	4096	4096	53	2x16-bit, 2x16-bit	2x8-bit, 6x16-bit	Yes	USART/SPI	8x10-bit	Yes	Comparator, Cap/Comp, Self-Programming
PIC18F6720	28	151072 FLASH	—	1024	3840	52	3x16-bit, 2x8-bit	5x10-bit	Yes	2xAUSART/SPI/MI²C	12x10-bit	PBOR	ICSP, 2CCP, ICD, Self-Programming
ATmega323	40/44	32768 FLASH	—	1024	2048	32	2x8-bit, 1x16-bit	4	Yes	USART/SPI	8x10-bit	Yes	Comparator, Cap/Comp, Self-Programming
PIC18F452*	40/44	32768 FLASH	—	256	1024	34	1x8-bit, 3x16-bit	2	Yes	AUSART/SPI/MI²C	8x10-bit	PBOR	ICD, 2CCP, PSP, ICSP, Self-Programming
ATmega603	64	65536 FLASH	—	2048	4096	48	3x16-bit	—	Yes	UART	8x10-bit	Yes	Comparator
ATmega603L	64	65536 FLASH	—	2048	4096	48	3x16-bit	—	Yes	UART	8x10-bit	Yes	Comparator
PIC18F6620*	64	65536 FLASH	—	1024	3840	52	2x8-bit, 3x16-bit	5x10-bit	Yes	2xAUSART/MI²C/SPI	12x10-bit	PBOR	ICD, 2CCP, PSP, ICSP Self-Programming
ATmega83	40/44	8192 FLASH	—	512	512	32	4x16-bit	—	Yes	UART	8x10-bit	Yes	Comparator
ATmega83L	40/44	8192 FLASH	—	512	512	32	4x16-bit	—	Yes	UART	8x10-bit	Yes	Comparator
PIC18F4320*	40/44	8192 FLASH	—	256	512	34	1x8-bit, 3x16-bit	2x10-bit	Yes	SPI/MI²C/AUSART	8x10-bit	PBOR	2CCP, PSP, ICSP, Self-Programming
PIC18F442*	40/44	16384 FLASH	—	256	768	34	3x16-bit, 1x8-bit	2x10-bit	Yes	AUSART/MI²C/SPI	8x10-bit	PBOR	ICD, 2CCP, ICSP, PSP, Self-Programming

		Program Memory										
MICROCHIP – ATMEL 8-BIT MICROCONTROLLER COMPETITIVE REFERENCE (OCTOBER 2001)												
Part Number	PINS	FLASH / OTP (Bytes)	ROM (Bytes)	Data EEProm	Data RAM (Bytes)	I/O #	Timers	PWM	Watchdog	Serial	8-bit A/D	BOR	Comments
MEGA AVR (Continued)												
ATmega103	64	131072 FLASH	—	4096	4096	48	3x16-bit	—	Yes	UART	8x10-bit	Yes	Comparator, 4.0 - 5.5V
ATmega103L	64	131072 FLASH	—	4096	4096	48	3x16-bit	—	Yes	UART	8x10-bit	Yes	Comparator, 2.7 - 3.6V
PIC18F6720*	64	131072 FLASH	—	1024	3840	52	2x8-bit, 3x16-bit	5x10-bit	Yes	2xAUSART/MI^{2}C/SPI	12x10-bit	PBOR	ICD, 5CCP, ICSP, PSP, Self-Programming, 2 Comparator
ATmega161	40/44	16384 FLASH	—	512	1024	35	3x16-bit	—	Yes	UART	—	Yes	Comparator, 4.0 - 5.5V
ATmega161L	40/44	16384 FLASH	—	512	1024	35	3x16-bit	—	Yes	UART	—	Yes	Comparator, 2.7 - 5.5V
PIC18F442*	40/44	16384 FLASH	—	256	768	34	3x16-bit, 1x8-bit	2x10-bit	Yes	AUSART/MI^{2}C/SPI	8x10-bit	PBOR	ICD, 2CCP, ICSP, PSP, Self-Programming
ATmega163	40/44	16384 FLASH	—	1024	1024	32	3x16-bit	—	Yes	UART	—	Yes	Comparator
ATmega163L	40/44	16384 FLASH	—	1024	1024	32	3x16-bit	—	Yes	UART	—	Yes	Comparator
PIC18F442*	40/44	16384 FLASH	—	256	768	34	3x16-bit, 1x8-bit	2x10-bit	Yes	AUSART/MI^{2}C/SPI	8x10-bit	PBOR	ICD, 2CCP, ICSP, PSP Self-Programming
* Contact Microchip for availability												

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