

28-Pin Enhanced FLASH Microcontroller with Full Speed USB and 10-bit A/D Product Brief

High Performance RISC CPU:

- C compiler optimized architecture/instruction set:
 - Source code compatible with the PIC18CXXX instruction set
- Linear program memory addressing; Linear data memory addressing
- 256 bytes of EEPROM data memory
- Up to 12 MIPS operation:
 - DC - 48 MHz clock
 - 4 MHz - 12 MHz clock with PLL active
- 16-bit wide instructions, 8-bit wide data path
- Priority levels for interrupts
- 8 x 8 Single Cycle Hardware Multiplier
- Pinout compatible with PIC16C745 (USB)

Peripheral Features:

- High current sink/source 25 mA/25 mA
- Three external interrupt pins
- Three 16-bit timer/counters
- One 8-bit timer/counter
- Secondary oscillator clock option - Timer1/Timer3
- Two Capture/Compare/PWM (CCP) modules
- USART
- Synchronous Serial Port with SPI™ Master mode and I²C™ Master/Slave mode

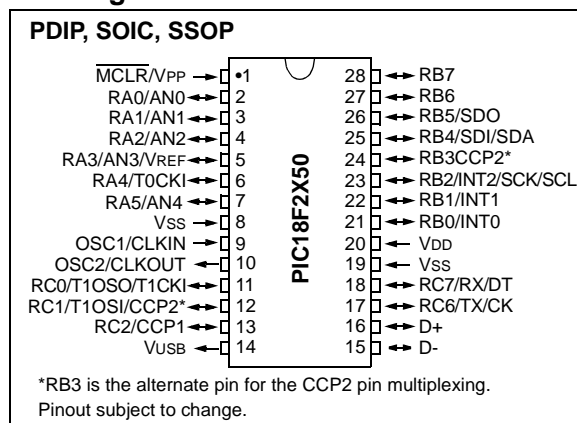
USB Features:

- Meets USB1.1 full speed specification (12 Mb per second)
- 16 endpoints
- 512 byte dual port buffer
- Integrated Transceiver
- Firmware control of attach/detach

Analog Features:

- 5-ch 10-bit Analog-to-Digital Converter (A/D)
- Low Voltage Detection (PLVD) module
- Programmable Brown-out Reset (PBOR)

Pin Diagram:



Special Microcontroller Features:

- 100,000 erase/write cycle Enhanced FLASH program memory typical
- 1,000,000 erase/write cycle Data EEPROM memory typical
- Data EEPROM Retention > 40 years
- Self-reprogrammable under software control
- In-Circuit Serial Programming™ (ICSP™) via two pins
- Single supply 5V In-Circuit Serial Programming
- Watchdog Timer (WDT) with its own on-chip RC oscillator for reliable operation
- Programmable code protection
- Power saving SLEEP mode
- Selectable oscillator options including:
 - 4X Phase Lock Loop (of primary oscillator)
 - Secondary Oscillator (32 kHz) clock input
 - 8-stage clock divider for low power designs
- In-Circuit Debug (ICD) via two pins

CMOS Technology:

- Low power, high speed FLASH/EEPROM technology
- Fully static design
- USB operating voltage range - 4.35V to 5.25V (3.3V detached)
- Industrial temperature ranges
- Low power consumption

Device	Program Memory		Data SRAM (Bytes)	EEPROM (Bytes)	I/O	10-bit A/D (ch)	CCP (PWM)	USART	Timers 8-bit/16-bit
	Bytes	# Single Word Instructions							
PIC18F2450	16K	8192	1024	256	19	5	2	Yes	1 / 3
PIC18F2550	32K	16384	1024	256	19	5	2	Yes	1 / 3

PIC18F2X50

NOTES:

Note the following details of the code protection feature on PICmicro® MCUs.

- The PICmicro family meets the specifications contained in the Microchip Data Sheet.
- Microchip believes that its family of PICmicro microcontrollers is one of the most secure products of its kind on the market today, when used in the intended manner and under normal conditions.
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- Microchip is willing to work with the customer who is concerned about the integrity of their code.
- Neither Microchip nor any other semiconductor manufacturer can guarantee the security of their code. Code protection does not mean that we are guaranteeing the product as “unbreakable”.
- Code protection is constantly evolving. We at Microchip are committed to continuously improving the code protection features of our product.

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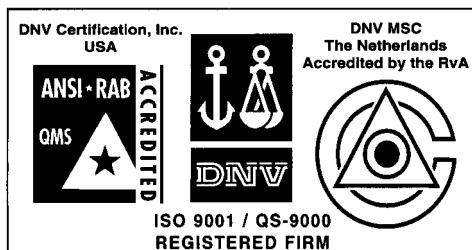
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