



PIC18F6520/8520

64/80-Pin Enhanced FLASH Microcontroller Product Brief

High Performance RISC CPU:

- C compiler optimized architecture/instruction set
 - Source code compatible with the PIC16 and PIC17 instruction set
- Linear program memory addressing up to 32 Kbytes
- Linear data memory addressing to 2048 bytes
- Up to 512 bytes of Data EEPROM
- Up to 10 MIPS operation:
 - DC - 40 MHz osc./clock input
 - 4 MHz - 10 MHz osc./clock input with PLL active
- 16-bit wide instructions, 8-bit wide data path
- Priority levels for interrupts
- 31-level, software accessible hardware stack
- 8 x 8 Single Cycle Hardware Multiplier

External Memory Interface (PIC18F8520 only):

- Address capability of up to 2 Mbytes
- 16-bit interface

Peripheral Features:

- High current sink/source 25 mA/25 mA
- Four external interrupt pins
- Timer0 module: 8-bit/16-bit timer/counter
- Timer1 module: 16-bit timer/counter
- Timer2 module: 8-bit timer/counter
- Timer3 module: 16-bit timer/counter
- Timer4 module: 8-bit timer/counter
- Secondary low power oscillator clock option - Timer1/Timer3
- Three Capture/Compare/PWM (CCP) modules
- Two Enhanced Capture/Compare/PWM (ECCP) modules with Auto-Shutdown and up to 4 PWM outputs
- Master Synchronous Serial Port (MSSP) module. Two modes of operation:
 - 3-wire SPI™ (supports all 4 SPI modes)
 - I²C™ Master and Slave mode
- Two addressable USART modules (RS485 and RS232)
- Parallel Slave Port (PSP) module

Analog Features:

- Up to 16-ch 10-bit Analog-to-Digital Converter (A/D):
 - Conversion available during SLEEP
- Programmable 16-level Low Voltage Detection (LVD) module
 - Supports interrupt-on-Low Voltage Detection
- Programmable Brown-out Reset (BOR)
- Dual analog comparators
 - Programmable input/output configuration

Special Microcontroller Features:

- 100,000 erase/write cycle Enhanced FLASH program memory typical
- 1,000,000 erase/write cycle Data EEPROM memory typical
- 1 second programming time
- Data EEPROM Retention: > 40 years
- Self-reprogrammable under software control
- Power-on Reset (POR), Power-up Timer (PWRT) and Oscillator Start-up Timer (OST)
- 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
 - Secondary Oscillator (32 kHz) clock input
- In-Circuit Serial Programming™ (ICSP™) via two pins
- MPLAB® In-Circuit Debug (ICD) via two pins

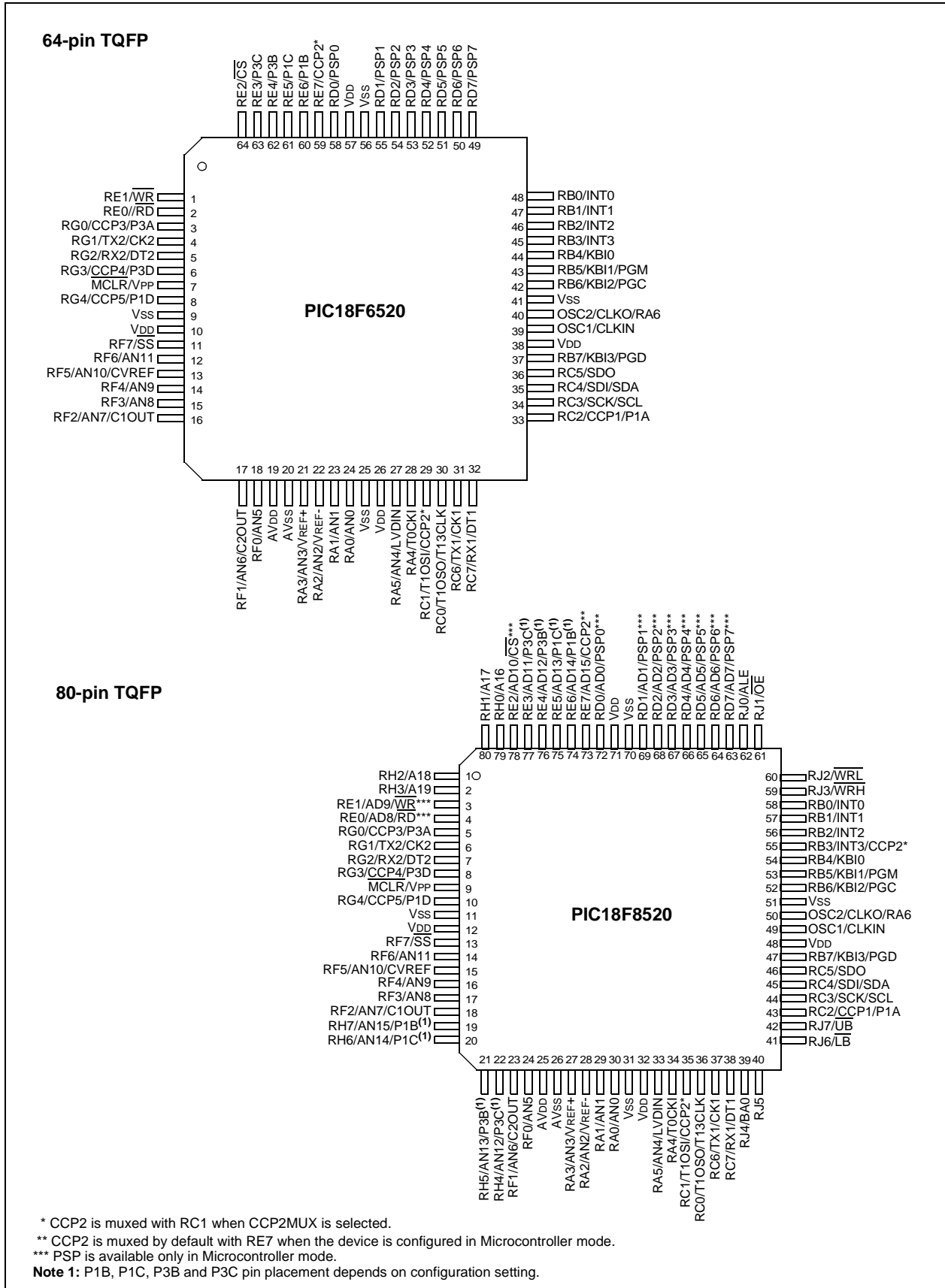
CMOS Technology:

- Low power, high speed FLASH technology
- Fully static design
- Wide operating voltage range (2.0 V to 5.5 V)
- Industrial temperature range

Device	Program Memory		Data Memory		I/O	10-bit A/D (ch)	CCP/ECCP (PWM)	MSSP		USART	Timers 8-bit/16-bit
	Bytes	# Single Word Instructions	SRAM (bytes)	EEPROM (bytes)				SPI	Master I ² C		
PIC18F6520	32K	16384	2048	512	52	12	3/2	Y	Y	2	2/3
PIC18F8520	32K	16384	2048	512	68	16	3/2	Y	Y	2	2/3

PIC18F6520/8520

Pin Diagrams



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.
- There are dishonest and possibly illegal methods used to breach the code protection feature. All of these methods, to our knowledge, require using the PICmicro microcontroller in a manner outside the operating specifications contained in the data sheet. The person doing so may be engaged in theft of intellectual property.
- 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.

If you have any further questions about this matter, please contact the local sales office nearest to you.

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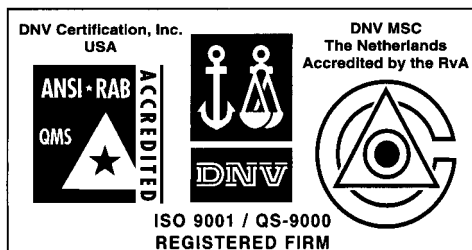
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