

80-Pin Enhanced FLASH CAN bus Microcontroller

Product Brief

High Performance RISC CPU:

- C compiler optimized architecture/instruction set:
 - Source code compatible with both the PIC16 and PIC18 instruction set
- Up to 10 MIPS operation:
 - DC - 40 MHz osc./clock input
 - 4 - 10 MHz osc./clock input 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 to PIC18C858 family

Peripheral Features:

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

Analog Features:

- 10-bit 16-channel Analog-to-Digital Converter (A/D)
- Two Analog Comparators
- Programmable Low Voltage Detection (LVD)
- Programmable Brown-out Reset (BOR)

CAN bus Module Features:

- Implements full CAN model
- Message bit rates up to 1 Mbps
- Conforms to CAN 2.0B ACTIVE specification
- 3 Transmit Message buffers with prioritization
- 8 Receive Message buffers and 1 Receive Message Assembly buffer
- 16 full 29-bit Acceptance Filters
- Prioritization of Acceptance Filters
- 2 full 29-bit Acceptance Filter Masks
- Programmable wake-up functionality with integrated low-pass filter
- Programmable time-stamp operation for received messages
- Advanced Error Management features

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 on-chip RC oscillator
- Selectable oscillator options including:
 - 4X Phase Lock Loop
 - Secondary Oscillator (32 kHz) clock input
- In-Circuit Debug (ICD) via two pins
- Power saving SLEEP mode

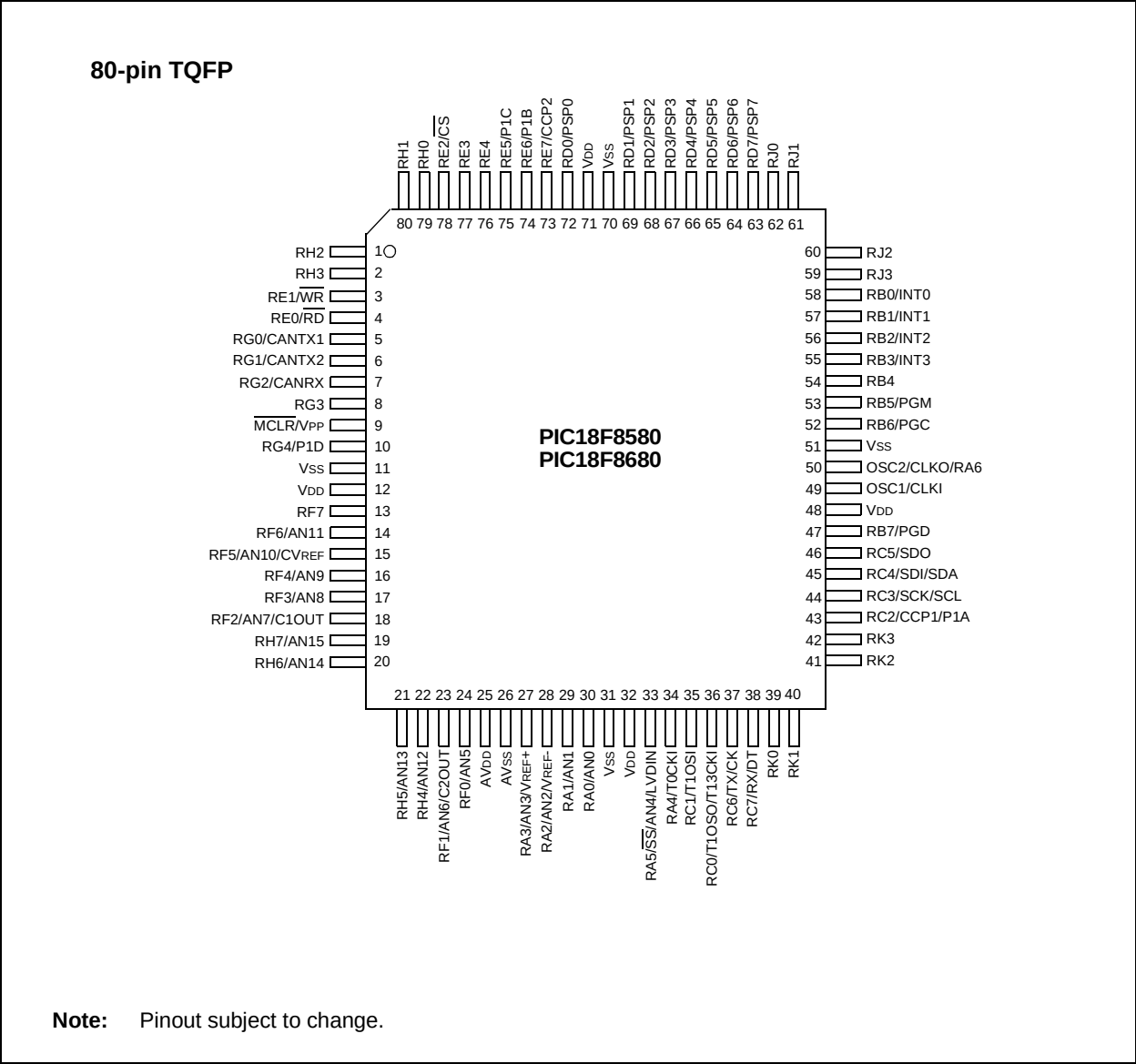
CMOS Technology:

- Low power, high speed FLASH/EEPROM technology
- Wide operating voltage range (2.0V to 5.5V)
- Industrial and Extended temperature ranges
- Low power consumption

Device	Program Memory		Data SRAM (Bytes)	EEPROM (Bytes)	I/O	10-bit A/D (ch)	CCP/ECCP (PWM)	CAN 2.0B	MSSP		AUSART	Timers 8/16-bit
	Bytes	# Single Word Instructions							SPI	Master I²C		
PIC18F8580	32K	16384	3072	256	68	16	1/1	Yes	Yes	Yes	Yes	1/3
PIC18F8680	64K	32768	3072	256	68	16	1/1	Yes	Yes	Yes	Yes	1/3

PIC18F8580/8680

Pin Diagram:



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- The PICmicro family meets the specifications contained in the Microchip Data Sheet.
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- 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.
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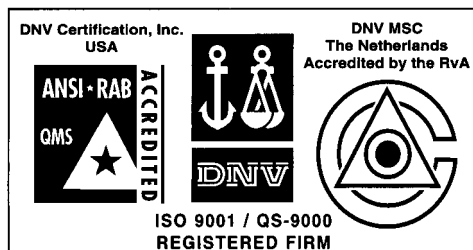
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