

8-Pin FLASH MCU with A/D and Comparator Product Brief

High Performance RISC CPU:

- Only 35 single-word instructions to learn
- All single cycle instructions except program branches, which are two cycles
- Operating speed:
 - DC - 20 MHz oscillator/clock input
 - DC - 200 ns instruction cycle
- Memory:
 - 1024 x 14 words of FLASH Program Memory
 - 64 x 8 bytes of Data Memory (SRAM)
 - 128 x 8 bytes of EEPROM data memory
- 8-level deep stack
- Direct, indirect, and relative addressing modes for data and instructions

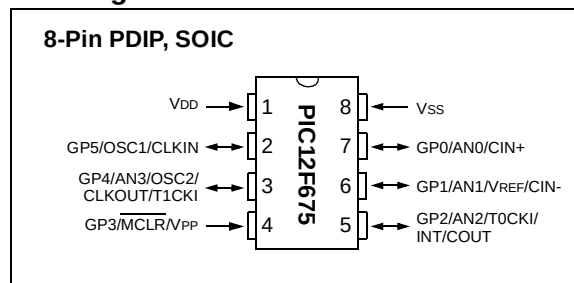
Peripheral Features:

- 6 I/O pins with individual direction control
- High current sink/source: 25 mA
- Programmable interrupt-on-pin change
- Programmable pull-ups on input pins
- Timer0 module: 8-bit timer/counter with 8-bit prescaler
- Timer1 module: 16-bit timer/counter with prescaler, can be incremented during SLEEP via external crystal/clock

Analog Features:

- Analog-to-Digital Converter module:
 - 10-bit resolution
 - Programmable 4-channel input
 - Voltage reference input
- Analog Comparator module:
 - One analog comparator
 - Programmable On-Chip Voltage Reference (VREF) module
 - Programmable input multiplexing from device inputs and internal voltage reference
 - Comparator output is externally accessible

Pin Diagrams



Special Microcontroller Features:

- 1,000 erase/write cycle FLASH program memory typical
- 1,000,000 erase/write cycle data EEPROM memory typical
- Data EEPROM Retention > 40 years
- In-Circuit Serial Programming (ICSP™) via two pins
- Watchdog Timer (WDT) with its own on-chip RC oscillator for reliable operation
- Internal 4 MHz oscillator with calibration
- Low power Brown-out Reset (BOR)
- Low power Power-on Reset (POR)
- Programmable code protection
- Power saving SLEEP mode
- Selectable oscillator options:
 - INTRC: Precision internal 4 MHz oscillator
 - EXTRC: External low cost RC oscillator
 - EC: External clock source
 - XT: Standard crystal/resonator
 - HS: High speed crystal/resonator
 - LP: Power saving, low frequency crystal

CMOS Technology:

- Low power, high speed FLASH technology
- Fully static design
- Wide operating voltage range (2.0V to 5.5V)
- Industrial and Extended temperature ranges
- Low power consumption
 - < 2 mA @ 5V, 4 MHz
 - 20 µA typical @ 3V, 32 kHz
 - < 1 µA typical standby current

PIC12F675

TABLE 1: SUMMARY OF FEATURES

Device	Program Memory		Data SRAM (Bytes)	EEPROM (Bytes)	I/O	ADC	Comparators	Timers 8-bit/16-bit	CCP (PWM)	BOR
	Bytes	# Single Word Instructions								
PIC12F675	1792	1024	64	128	6	Yes	1	1 / 1	—	Yes

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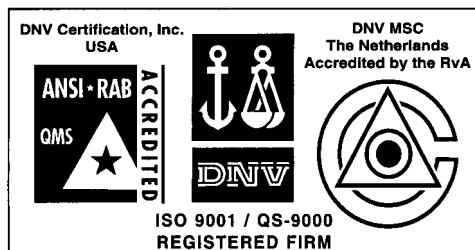
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