

64/68-Pin 8-Bit OTP High-Performance Microcontroller with 10-Bit A/D Product Brief

Device	Program Memory	Data Memory	Pins	HW Mult	10 bit A/D	16 bit Capture	10 bit PWM	No. of USARTs	I ² C Master
PIC17C752	8K x 16	678 x 8	64-68	Yes	12 ch	4 ch	3 ch	2	Yes
PIC17C756A	16K x 16	902 x 8	64-68	Yes	12 ch	4 ch	3 ch	2	Yes

Devices Included

- PIC17C752
- PIC17C756A

High-Performance RISC CPU Features:

- Operating speed:
 - DC - 33 MHz clock input
 - DC - 121 ns instruction cycle
- Up to **16384 x 16** on-chip EPROM program memory
- ★ Up to **902 x 8** general purpose registers (SRAM)
- ★ Multi-vector interrupt capability
- Sixteen levels deep hardware stack
- Direct, indirect and relative addressing modes
- Internal/External program memory execution

Peripheral Features:

- Up to 50 I/O pins with individual direction control
- ★ High sink/source current 25 mA
- **Four** pins that can be configured as capture input
- ★ **Three** pins can be configured as PWM output
- ★ Capture is 16-bit, max resolution 120 ns
- PWM resolution is 1- to 10-bit. Maximum PWM frequency @: 8-bit resolution = 130 kHz 10-bit resolution = 32 kHz
- TMR0: 16-bit timer/counter with 8-bit programmable prescaler
- TMR1: 8-bit timer/counter
- TMR2: 8-bit timer/counter
- TMR3: 16-bit timer/counter
- Two Serial Communications Interfaces (SCI/USART)
- Synchronous serial port (SSP) with two modes of operation:
 - 3-wire SPI™
 - I²C™ compatible including **master mode**
- ★ support
- **10-bit** 12-channel A/D:
 - High speed conversion rate
 - Can convert while in sleep mode

Special Microcontroller Features:

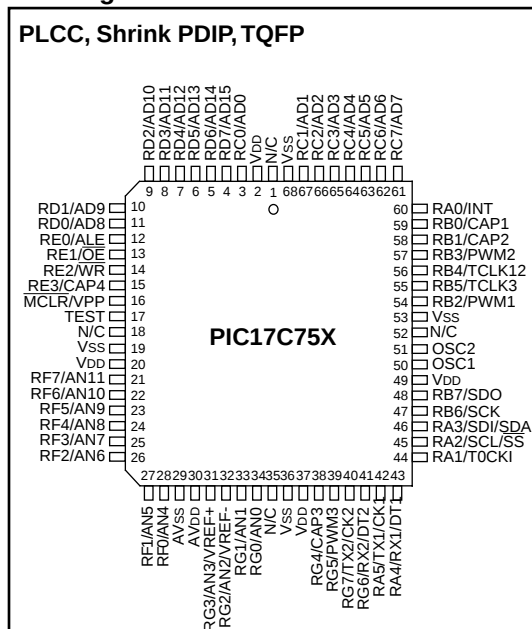
- Power-on Reset (POR)
- Power-up Timer (PWRT)

- Oscillator Start-up Timer (OST)
- In-Circuit Serial Programming (ICSP™) via two pins
- Brown-out Protection
- Watchdog Timer (WDT) with its own on-chip RC oscillator for reliable operation
- Programmable code Protection
- Power saving SLEEP mode
- Selectable oscillator options

CMOS Technology:

- Low-power, high-speed CMOS EPROM technology
- Fully static design
- Wide-operating voltage range (3.0V to 5.5V)
- Commercial and Industrial Temp. Range
- Low-power consumption
 - < 5.0 mA @ 5V, 4 MHz
 - 100µA typical @ 4.5V, 32 kHz
 - <1.0 µA typical standby current @ 5V

Pin Diagrams



I²C is a trademark of Philips Corporation. SPI is a trademark of Motorola Corporation.



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Microchip received ISO 9001 Quality System certification for its worldwide headquarters, design, and wafer fabrication facilities in January, 1997. Our field-programmable PICmicro™ 8-bit MCUs, Serial EEPROMs, related specialty memory products and development systems conform to the stringent quality standards of the International Standard Organization (ISO).

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