



# PIC17C75X

## 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 <sup>2</sup> C Master
PIC17C752	8K x 16	454 x 8	64-68	Yes	12 ch	4 ch	3 ch	2	Yes
PIC17C756	16K x 16	902 x 8	64-68	Yes	12 ch	4 ch	3 ch	2	Yes

### Devices Included

- PIC17C752
- PIC17C756

### High-Performance RISC CPU Features:

- Operating speed:
  - DC - 33 MHz clock input
  - DC - 120 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 current sink/source
- ★ **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™
- ★ - I<sup>2</sup>C™ 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)
- 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

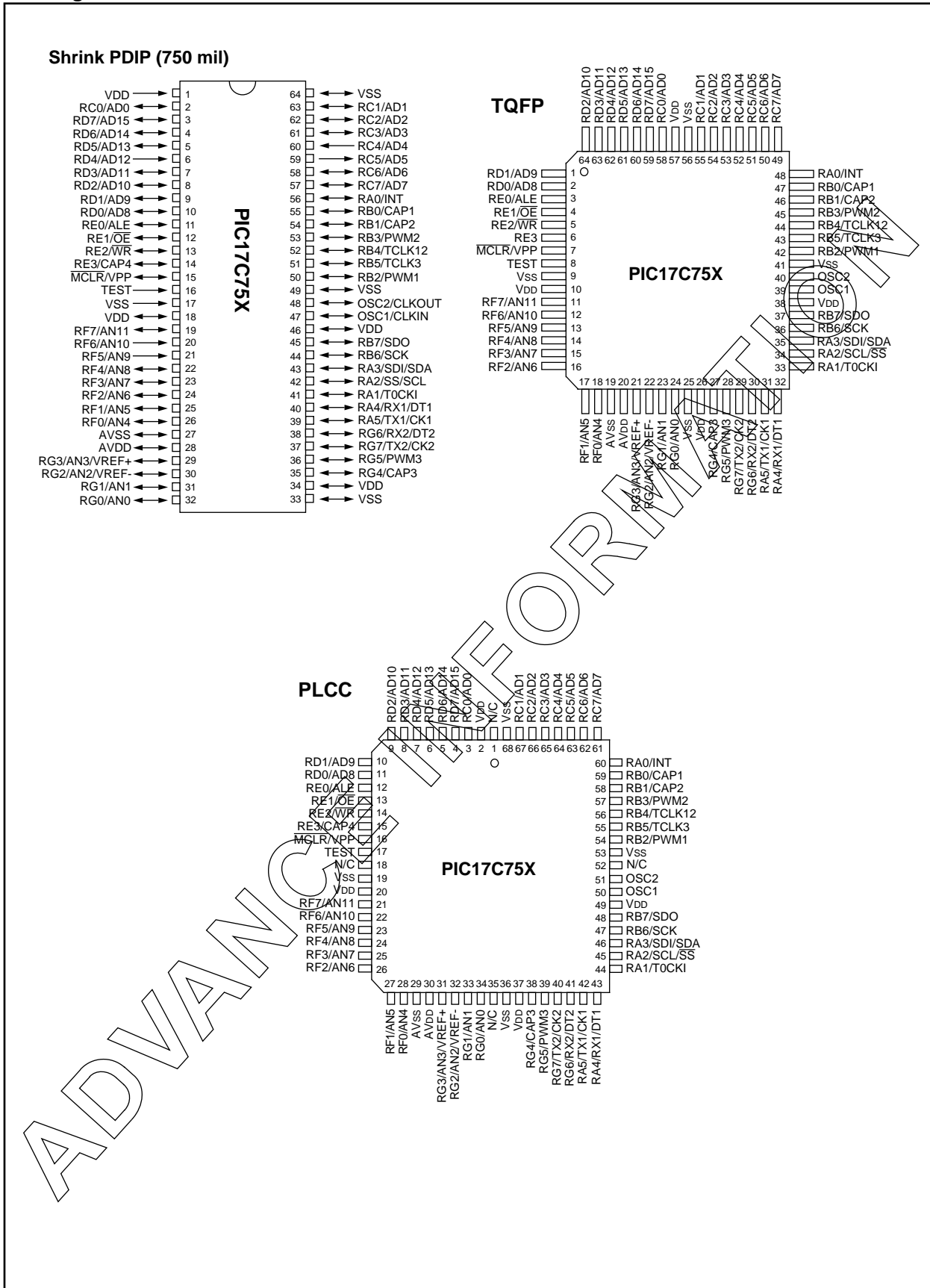
### CMOS Technology:

- Low-power, high-speed CMOS EPROM technology
- Fully static design
- Wide operating voltage range (3.0V to 6.0V)
- 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

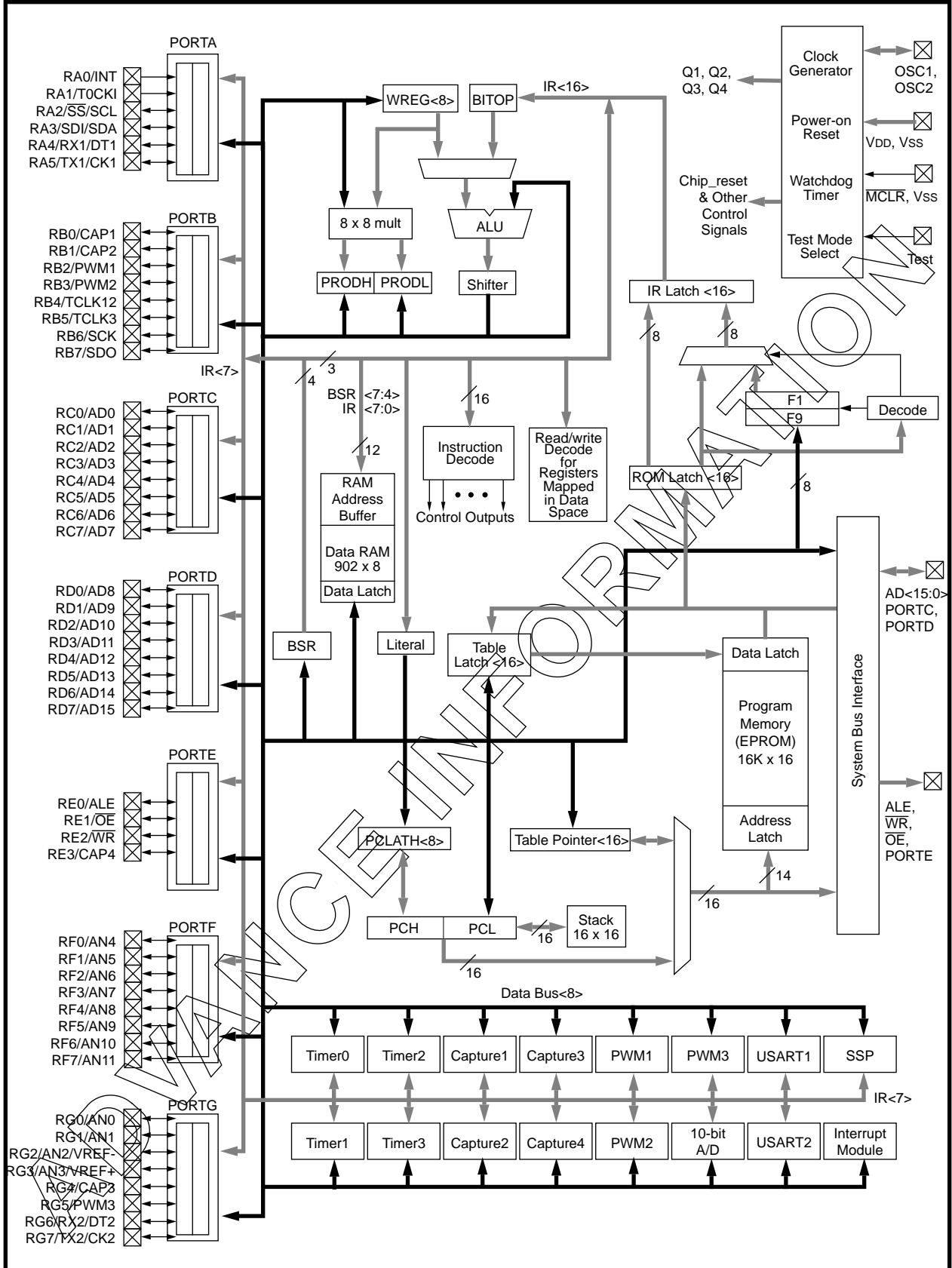
I<sup>2</sup>C is a trademark of Philips Corporation. SPI is a trademark of Motorola Corporation.

# PIC17C75X

## Pin Diagrams



## 68-Pin PIC17C75X Block Diagram



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# WORLDWIDE SALES & SERVICE

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