

TMP95CS64F and TMP95C265F

1. OUTLINE AND FEATURES

TMP95CS64/265 is a high-speed 16-bit microcontroller designed for the control of various mid- to large-scale equipment. TMP95CS64 incorporates masked ROM, while TMP95C265 has no ROM. Otherwise, all the functions of the products are the same.

TMP95CS64/265 comes in a 100-pin flat package.

Listed below are the features.

(1) High-speed 16-bit CPU (900/H CPU)

- Instruction mnemonics are upward-compatible with TLCS-90/900
- 16M bytes of linear address space
- General-purpose registers and register banks
- 16-bit multiplication and division instructions; bit transfer and arithmetic instructions
- Micro DMA : Four-channels (640ns/2 bytes at 25MHz)

(2) Minimum instruction execution time : 160ns (at 25MHz)

(3) Built-in RAM : 2K bytes

Built-in ROM :

TMP95CS64	64K-byte ROM
TMP95C265	No ROM

(4) External memory expansion

- Expandable up to 16M bytes (shared program/data area)
- External data bus width select pin (AM8/ $\overline{I6}$)
- Can simultaneously support 8/16-bit width external data bus
... Dynamic data bus sizing

(5) 8-bit timers: 8 channels

- With event counter function : 2 channels

(6) 16-bit timer/event counter : 2 channels

(7) General-purpose serial interface : 3 channels

(8) 10-bit A/D converter : 8 channels

(9) 8-bit D/A converter : 2 channels

(10) Watchdog timer

(11) Chip select/wait controller : 4 blocks

(12) Interrupts : 45 interrupts

- 9 CPU interrupts : Software interrupt instruction and illegal instruction
 - 26 internal interrupts :
 - 10 external interrupts :
-] Seven selectable priority levels

(13) Input/output ports

TMP95CS64	81 pins
TMP95C265	55 pins

(14) Standby mode

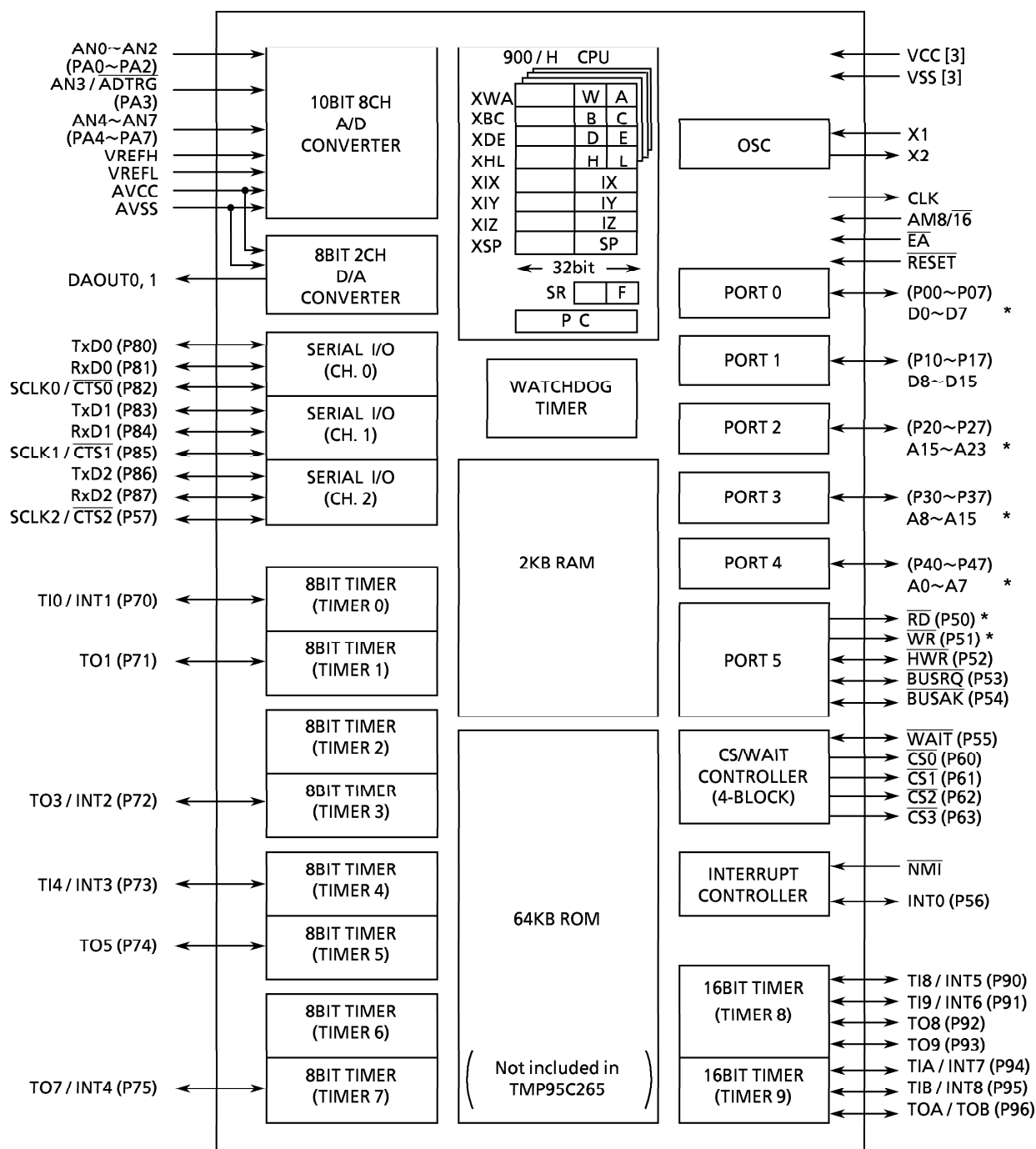
- Four HALT modes: RUN, IDLE2, IDLE1, STOP

(15) Operating voltage

- $V_{CC}=2.7 - 3.3V$
- $V_{CC}=4.5 - 5.5V$

(16) Package

TMP95CS64F	LQFP100-P-1414-0.50D
TMP95C265F	LQFP100-P-1414-0.50C



Note: Pin states after reset

Product	AM8/16	Pin function after reset
TMP95CS64	Fixed to high level	Multi-use pins can select function in parentheses ().
TMP95C265	High level	Multi-use pins other than those marked by an asterisk can select functions in parentheses ().
	Low level	Multi-use pins other than those marked by asterisk can select function in parentheses (). However, port 1 can select functions outside parentheses ().

Figure 1 TMP95CS64/TMP95C265 Block Diagram