



Z86C33/C43

CMOS Z8[®] MCU CONSUMER CONTROLLER PROCESSOR

FEATURES

Device	ROM (KB)	RAM* (Bytes)	Speed (MHz)
Z86C33	4	237	12, 16
Z86C43	4	236	12, 16

Note: *General-Purpose

- 40-Pin DIP, 44-Pin PLCC and QFP Packages (C43)
28-Pin DIP, 28-Pin SOIC, 28-Pin PLCC (C33)
- 3.0- to 5.5-Volt Operating Range
- Clock Free Watch-Dog Timer (WDT) Reset
- -40°C to +105°C Operating Range
- Expanded Register File (ERF)

- 32 Input/Output Lines (C43)
24 Input/Output Lines (C33)
- Vectored, Prioritized Interrupts with Programmable Polarity
- Two Analog Comparators
- Two Programmable 8-Bit Counter/Timers, Each with Two 6-Bit Programmable Prescaler
- Watch-Dog Timer (WDT)/Power-On Reset (POR)
- On-Chip Oscillator that Accepts a Crystal, Ceramic Resonator, LC, RC, or External Clock
- RAM and ROM Protect

GENERAL DESCRIPTION

The Z86C33/C43 Consumer Controller Processor (CCP™) is a member of Zilog's Z8[®] MCU single-chip family with enhanced wake-up circuitry, programmable Watch-Dog Timers (WDT), and low-noise/EMI options. These enhancements result in a more efficient, cost-effective design and provide the user with increased design flexibility over the standard Z8 microcontroller core. This low-power consumption CMOS microcontroller offers fast execution, efficient use of memory, sophisticated interrupts, input/output bit manipulation capabilities, and easy hardware/software system expansion.

The Z86C33/C43 features an Expanded Register File (ERF) to allow access to register-mapped peripheral and I/O circuits. Four basic address spaces are available to support this wide range of configurations: Program Memory, Register File, Data Memory, and ERF. The Register File is composed of 236 bytes of general-purpose registers, four I/O port registers, and 15 control and status registers. The ERF consists of three control registers.

For applications demanding powerful I/O capabilities, the Z86C33 provides 24 pins, and the Z86C43 provides 32 pins dedicated to input and output. These lines are configurable under software control to provide timing, status signals, parallel I/O with or without handshake, and address/data bus for interfacing external memory.

To unburden the system from coping with real-time tasks such as counting/timing and data communication, the Z86C33/C43 offers two on-chip counter/timers with a large number of user-selectable modes.

With ROM/ROMless selectivity, the Z86C43 provides both external memory and pre-programmed ROM, which enables this Z8[®] MCU to be used in high-volume applications, or where code flexibility is required.