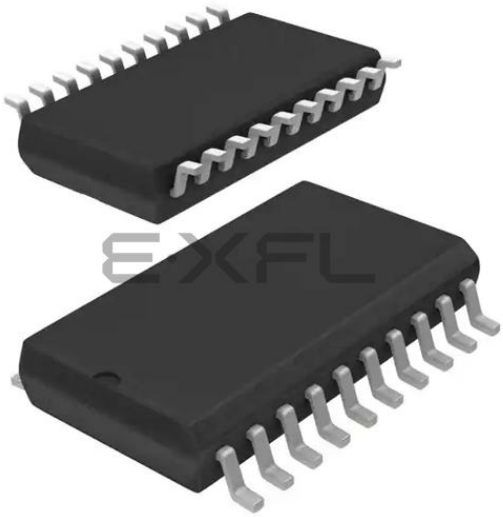
Zilog - ZGP323LSS2016G Datasheet



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What is "Embedded - Microcontrollers"?

"Embedded - Microcontrollers" refer to small, integrated circuits designed to perform specific tasks within larger systems. These microcontrollers are essentially compact computers on a single chip, containing a processor core, memory, and programmable input/output peripherals. They are called "embedded" because they are embedded within electronic devices to control various functions, rather than serving as standalone computers. Microcontrollers are crucial in modern electronics, providing the intelligence and control needed for a wide range of applications.

Applications of "Embedded - Microcontrollers"

Details	
Product Status	Obsolete
Core Processor	Z8
Core Size	8-Bit
Speed	8MHz
Connectivity	-
Peripherals	HLVD, POR, WDT
Number of I/O	16
Program Memory Size	16KB (16K x 8)
Program Memory Type	OTP
EEPROM Size	-
RAM Size	237 x 8
Voltage - Supply (Vcc/Vdd)	2V ~ 3.6V
Data Converters	-
Oscillator Type	Internal
Operating Temperature	0°C ~ 70°C (TA)
Mounting Type	Surface Mount
Package / Case	20-SOIC (0.295", 7.50mm Width)
Supplier Device Package	-
Purchase URL	https://www.e-xfl.com/product-detail/zilog/zgp323lss2016g

List of Tables

Table 1. Features 1
Table 2. Power Connections 3
Table 3. 20-Pin PDIP/SOIC/SSOP/CDIP* Pin Identification. 5
Table 4. 28-Pin PDIP/SOIC/SSOP/CDIP* Pin Identification. 6
Table 5. 40- and 48-Pin Configuration 8
Table 6. Absolute Maximum Ratings 10
Table 7. Capacitance 11
Table 8. DC Characteristics 11
Table 9. EPROM/OTP Characteristics 13
Table 10. AC Characteristics 15
Table 11. Port 3 Pin Function Summary 21
Table 12. CTR0(D)00H Counter/Timer8 Control Register 31
Table 13. CTR1(0D)01H T8 and T16 Common Functions 33
Table 14. CTR2(D)02H: Counter/Timer16 Control Register. 36
Table 15. CTR3 (D)03H: T8/T16 Control Register 37
Table 16. Interrupt Types, Sources, and Vectors 50
Table 17. IRQ Register 50
Table 18. SMR2(F)0DH:Stop Mode Recovery Register 2* 56
Table 19. Stop Mode Recovery Source 58
Table 20. Watch-Dog Timer Time Select 61
Table 21. EPROM Selectable Options 62

- Port 1: 0–3 pull-up transistors
- Port 1: 4–7 pull-up transistors
- Port 2: 0–7 pull-up transistors
- EPROM Protection
- WDT enabled at POR

Note: The mask option pull-up transistor has a *typical* equivalent resistance of 200 KΩ ±50% at V_{CC}=3 V and 450 KΩ ±50% at V_{CC}=2 V.

General Description

The Z8 GP™ OTP MCU Family is an OTP-based member of the MCU family of infrared microcontrollers. With 237B of general-purpose RAM and up to 32KB of OTP, ZiLOG®'s CMOS microcontrollers offer fast-executing, efficient use of memory, sophisticated interrupts, input/output bit manipulation capabilities, automated pulse generation/reception, and internal key-scan pull-up transistors.

The Z8 GP™ OTP MCU Family architecture (Figure 1) is based on ZiLOG's 8-bit microcontroller core with an Expanded Register File allowing access to register-mapped peripherals, input/output (I/O) circuits, and powerful counter/timer circuitry. The Z8® offers a flexible I/O scheme, an efficient register and address space structure, and a number of ancillary features that are useful in many consumer, automotive, computer peripheral, and battery-operated hand-held applications.

There are three basic address spaces available to support a wide range of configurations: Program Memory, Register File and Expanded Register File. The register file is composed of 256 Bytes (B) of RAM. It includes 4 I/O port registers, 16 control and status registers, and 236 general-purpose registers. The Expanded Register File consists of two additional register groups (F and D).

To unburden the program from coping with such real-time problems as generating complex waveforms or receiving and demodulating complex waveform/pulses, the Z8 GP OTP MCU offers a new intelligent counter/timer architecture with 8-bit and 16-bit counter/timers (see Figure 2). Also included are a large number of user-selectable modes and two on-board comparators to process analog signals with separate reference voltages.

Note: All signals with an overline, "$\overline{}$", are active Low. For example, $\overline{B/W}$, in which WORD is active Low, and $\overline{B}$/W, in which BYTE is active Low.

Power connections use the conventional descriptions listed in Table 2.