The ZiLOG Family of Serial Communication Controllers



Setting the standards for SCCs

Over the last 20 years ZiLOG has set the standard for SCCs. Built from the industry acclaimed Serial Communication Controller core, ZiLOG offers a wide selection of (SCCs) based on your application requirements.

Reducing the need for external logic

ZiLOG's SCCs offer low power consumption, higher performance, and superior noise immunity. The many on-chip features offered in our SCCs help dramatically to reduce the need for external logic found with much of the competition. Go with an SCC you can trust, and make ZiLOG your one-stop SCC solution provider.

Offering a fully integrated solution

The standard serial and integrated communications controllers, Z85C30 and Z16C35, allow you to easily implement a fully integrated solution for many networking applications. The chips' features include:

- Dual full-duplex channels
- Ability to accommodate a crystal oscillator, baud rate generator, and digital phase-locked loop on each channel
- Processing speeds up to 4 Mbps
- Multi-protocol format (async, monosync, bisync, SDLC/HDLC, SDLC/HDLC loop)
- Encodes in the following modes: NRZ, NRZI, FM0, FM1, and Manchester
- CRC-16 or CRC-CCITT error detection
- 1-byte transmit FIF0/3-byte receive FIF0
- 2 transmit and 2 receive DMA channels (16C35 only)

Simplifying software

The enhanced dual and mono SCCs Z80230, Z85230, and Z85233, include many features that make programming easy. These parts also reduce CPU overhead, allowing the programmer to select packet handling response and improve cycle access recovery time. Features include:

- Dual full-duplex channels (Z80230/Z85230)
- Single full-duplex channel (Z85233 only)
- Ability to accommodate a crystal oscillator, baud rate generator, and digital phase-locked loop on each channel
- Processing speeds up to 5 Mbps
- Multi-protocol format (async, monosync, bisync, SDLC/HDLC, SDLC/HDLC loop)
- Encodes in the following modes: NRZI, FM0, FM1, and Manchester
- CRC-16 or CRC-CCITT error detection
- 4-byte transmit FIF0/8-byte receive FIF0

Increasing speed

The standard and integrated universal serial controllers Z16C30, Z16C35, and Z16C32 offer faster performance. Features include:

- Dual full-duplex channels (Z16C30)
- Single full-duplex channel (Z16C32)
- Accommodates two baud rate generators and one digital phase-locked loop (on each channel)
- 2 DMA control signals per channel (Z80C30/Z85C30 only)

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ZiLOG SCC Solutions

Standard and integrated universal serial controllers

Z16C30/Z16C32 *(Continued)*

- Processing speeds up to 10 Mbps (Z16C30)
- Processing speeds up to 20 Mbps (Z16C32)
- Multi-protocol format (async, monosync, slaved monosync, bisync, isochronous, nine-bit, SDLC/HDLC, SDLC/HDLC loop)
- Encodes in the following modes: NRZ, NRZI-Mark, NRZI-Space, Bi-Phase-Mark (FM1), Bi-Phase-Space (FM0), Bi-Phase-Level (Manchester), Differential Bi-Phase-Level
- CRC-32, CRC-16, and CRC-CCITT
- 32-byte transmit FIF0/32-byte receive FIF0
- 2 DMA control signals per channel (16C30 only)
- Transmit and receive DMA controllers with single buffer, pipelined, array, and linked-list modes (16C32 only)

Serial Family	Channels	DMA Controllers	Bus Interface	MHz	Part number	Package	Pins	Op. Temp. (°C)
SCC	2	0	Multiplex	8	Z80C3008PEC	DIP	40	-40 -100
					Z80C3008PSC			0 -70
					Z80C3008VSC	PLCC	44	
				10	Z80C3010PSC	DIP	40	
					Z80C3010VSC	PLCC	44	
			Nonmultiplex	8	Z85C3008PEC	DIP	40	-40 -100
					Z85C3008PSC			0 -70
					Z85C3008VEC	PLCC	44	-40 -100
					Z85C3008VSC			0 -70
				10	Z85C3010PEC	DIP	40	-40 -100
					Z85C3010PSC			0 -70
					Z85C3010VEC	PLCC	44	-40 -100
					Z85C3010VSC			0 -70
				16	Z85C3016PSC	DIP	40	
					Z85C3016VEC	PLCC	44	-40 -100
					Z85C3016VSC			0 -70
ISCC	2	2	Multiplex and nonmultiplex	10	Z16C3510VSC	PLCC	68	0 -70
				16	Z16C3516VSC			
ESCC	2	0	Multiplex	10	Z8023010PSC	DIP	40	0 -70
					Z8023010VSC	PLCC	44	
				16	Z8023016PSC	DIP	40	
					Z8023016VSC	PLCC	44	
			Nonmultiplex	8	Z8523008PEC	DIP	40	-40 -100
					Z8523008PSC			0 -70
					Z8523008VEC	PLCC	44	-40 -100
					Z8523008VSC			0 -70
				10	Z8523010PEC	DIP	40	-40 -100
					Z8523010PSC			0 -70
					Z8523010VEC	PLCC	44	-40 -100
					Z8523010VSC			0 -70
				16	Z8523016PEC	DIP	40	-40 -100
					Z8523016PSC			0 -70
					Z8523016VEC	PLCC	44	-40 -100
					Z8523016VSC			0 -70
				20	Z8523020PSC	DIP	40	
					Z8523020VSC	PLCC	44	
EMSCC	1	0	Nonmultiplex	10	Z8523310FSC	PQFP	44	0 -70
					Z8523310VSC	PLCC		
				16	Z8523316FSC	PQFP		
					Z8523316VSC	PLCC		
				20	Z8523320FSC	PQFP		
USC	2	0	Multiplex and nonmultiplex	10	Z16C3010AEC	VQFP	100	-40 -100
					Z16C3010ASC			0 -70
					Z16C3010VEC	PLCC	68	-40 -100
					Z16C3010VSC			0 -70
IUSC	1	2	Multiplex and nonmultiplex	20	Z16C3220FSC	PQFP	80	0 -70
					Z16C3220VSC	PLCC	68	