



# SCC

## ZiLOG's Family of Serial Communication Controllers

### ZiLOG Sets the standards for SCCs

For over 20 years ZiLOG has set the standard for Serial Communication Controllers. Based on the industry acclaimed SCC core, ZiLOG offers a wide variety of Serial Communication Controllers to meet your application requirements.

### Reduces the need for external logic

ZiLOG SCCs offer low power consumption, higher performance, and superior noise immunity. The many on-chip features offered in ZiLOG SCCs help dramatically to reduce the need for external logic and code development found in most of the competition.

### 8-bit Solutions

The standard serial and integrated communications controller, Z85C30, allows you to easily implement a fully integrated solution for many networking applications. The enhanced dual and mono SCCs, the Z80230, Z85230 and the 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.

### 8-bit Features include:

- Dual full-duplex channels (Z80230/Z85C30/Z85230)
- Single full-duplex channel (Z85233)
- Ability to accommodate a crystal oscillator, baud rate generator, and digital phase-locked loop on each channel
- Processing speeds up to 5Mbps
- Multi-protocol format (async, monosync, bisync, SDLC/HDLC, SDLC/HDLC loop)
- Encodes in the follow modes: NRZI, FM0, FM1 and Manchester
- CRC-16 or CRC-CCITT error detection
- 4-byte Transmit FIFO/8-byte Receive FIFO (Z80230/Z85230/Z85233)
- 1-byte transmit FIFO/3-byte receive FIFO (Z85C30)

### 16-bit Solutions

The standard and integrated universal serial controllers, Z16C30 and the Z16C32 offer 16-bit performance, with processing speeds up to 20 Mbps.

### 16-bit Features include:

- Single (Z16C32) and dual (Z16C30) full-duplex channels
- Accommodates two baud rate generators and one digital phase-locked loop
- Processing speeds up to 10Mbps (Z16C30) and 20Mbps (Z16C32)
- Multi-protocol format (async, monosync, slaved monosync, bisync, isochronous, nine-bit, SDLC/HDLC, SDLC/HDLC loop)

*(additional 16-bit features on back)*



*Additional 16-bit features*

- 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 FIFO/32-byte Receive FIFO
- 2 DMA control signals per channel (Z16C30)
- Transmit and receive DMA controllers with single buffer, pipelined, array and linked-list modes (Z16C32)
- 16-Bit Transfers
- Two transmit and two receive DMA channels (Z16C35 only)

Serial Family	Channels	DMA Controllers	Bus Interface	MHz	Part number	Package	Pins	Op. Temp. (°C)
SCC	2	0	Multiplex	8	Z80C3008PSC	DIP	40	0 +70
					Z80C3008VSC	PLCC	44	0 +70
				10	Z80C3010PSC	DIP	40	0 +70
					Z80C3010VSC	PLCC	44	0 +70
			Nonmultiplex	8	Z85C3008PEC	DIP	40	-40 +105
					Z85C3008PSC	DIP	40	0 +70
					Z85C3008VEC	PLCC	44	-40 +105
					Z85C3008VSC	PLCC	44	0 +70
				10	Z85C3010PEC	DIP	40	-40 +105
					Z85C3010PSC	DIP	40	0 +70
					Z85C3010VEC	PLCC	44	-40 +105
					Z85C3010VSC	PLCC	44	0 +70
16	Z85C3016PSC	DIP	40	0 +70				
	Z85C3016VSC	PLCC	44	0 +70				
ESCC	2	0	Multiplex	10	Z8023010PSC	DIP	40	0 +70
					Z8023010VSC	PLCC	44	0 +70
				16	Z8023016PSC	DIP	40	0 +70
					Z8023016VSC	PLCC	44	0 +70
			Nonmultiplex	8	Z8523008PSC	DIP	40	0 +70
					Z8523008VEC	PLCC	44	-40 +105
					Z8523008VSC	PLCC	44	0 +70
				10	Z8523010PEC	DIP	40	-40 +105
					Z8523010PSC	DIP	40	0 +70
					Z8523010VEC	PLCC	44	-40 +105
				16	Z8523016VSC	PLCC	44	0 +70
					Z8523016PEC	DIP	40	-40 +105
20	Z8523016PSC	DIP	40	0 +70				
	Z8523016VEC	PLCC	44	-40 +105				
20	Z8523016VSC	PLCC	44	0 +70				
	Z8523020PSC	DIP	40	0 +70				
	Z8523020VSC	PLCC	44	0 +70				
EMSCC	1	0	Nonmultiplex	10	Z8523310FSC	PQFP	44	0 +70
					Z8523310VSC	PLCC	44	0 +70
				16	Z8523316FSC	PQFP	44	0 +70
Z8523316VSC	PLCC	44	0 +70					
20	Z8523320FSC	PQFP	44	0 +70				
	USC	2	Multiplex and nonmultiplex	10	Z16C3010AEC	LQFP	100	-40 +105
					Z16C3010ASC	LQFP	100	0 +70
Z16C3010VEC					PLCC	68	-40 +105	
Z16C3010VSC					PLCC	68	0 +70	
IUSC	1	2	Multiplex and nonmultiplex	20	Z16C3220FSC	PQFP	80	0 +70
					Z16C3220VSC	PLCC	68	0 +70
ISCC	2	2	Multiplex and nonmultiplex	10	Z16C3510VSC	PLCC	68	0 +70
					16	Z16C3516VSC	PLCC	68

