ACB3

Dual Channel High Speed Sync/Async RS-232 Serial Interface

Features

- ■ **Dual Channel Sync/ Async**

- ■ **8530-8 SCC (Serial Communications Controller)**

- ■ **DMA Supports Data Rate Greater Than 1 Million bps**

- ■ **Full Duplex DMA Transfer Capability**

- ■ **Selectable Port Address, IRQ Level (2, 3, 4, 5) and DMA Channel (1 or 3)**

- ■ **RS-232 Interface Modem Control Signals Supported: TD, RD, RTS, CTS, DSR, DCD, DTR, TXC, RXC, TT**

- ■ **Software Programmable Baud Rate**

- ■ **Software Developer's Tool Kit Included with Source Code**

- ■ **DB-25P Interface Cable Included with 2 Channel Boards**

- ■ **Higher Speed Enhanced SCCs and CMOS SCCs Optional**

- ■ **Various Oscillators Available for Custom Clock Rates**

CE

Description

The ACB3 provides the PC with two direct synchronous/asynchronous links to RS-232 devices. RS-232 connections with full modem clocking options are utilized, providing an industry standard interface to synchronous data links, modems, and other devices. The Model ACB3 can be used in a variety of sophisticated communications such as SDLC, HDLC, X.25, and High Speed Assync.

The Model ACB3 utilizes the Zilog 8530 Serial Communications Controller (SCC). This chip features programmable baud rate, data format, interrupt control, and DMA control.

Ordering Guide

ACB3	Board, manual Software
ACB3/SP	Single channel board, manual, software

ICS
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Mission Critical Applied Computing Solutions

Applications

- **Requiring Protocols Such As: SDLC, HDLC, X.25, MONOSYNC, BISYNC, and ASYNC**

- **Fractional T1 Pipelines/Data Highways**

- **PLC Communications**

- **RS-232/422/485 Synchronous Communications**

Synchronous/Asynchronous Communications

Serial Communication in most PC applications is asynchronous. Asynchronous communications is often not the best solution when higher data rates are required. Synchronous communication does not have the character synchronization over head of start or stop bits. Character synchronization can be achieved by many different methods when using synchronous communications. A common method for character synchronization is implemented by the transmission of "sync characters" or "sync flags". This is accomplished by transmitting a pre-defined bit pattern so that the receiver can lock on to the correct alignment of the data stream. Synchronous communication also differs from asynchronous communication in the clocking of data bits. In asynchronous communications bit cell lengths are pre-defined on both the transmitting and the receiving ends. Both nodes must be programmed for the same data rate and communication parameters (i.e. 9600, n, 8, 1). Synchronous communications defines each bit cell length on an additional clock signal that is provided by the transmitting node, receiving node or an independent clock source. This method allows the source of the clock to control the data rate on both the transmitter and receiver.

Specifications

SCC	8530-6
Number of Ports	Dual RS-232
IRQ Requirements	8 I/O Addresses
IRQ Selection	2-5
Maximum Data Rate	Limited by RW-232 Specification Typically 64K bps
DMA Channels	1 or 3
Maximum Data Distance	Up to 100ft.
Operating Temperature	0-50° C
Storage Temperature	-20-70° C
Humidity Range	0-90% R.H.
Current Specifications	+5V @ 275 mA, $\pm$12V @ 50mA ea.
Connector(s)	DB-25P