

# Synchro104

SDLC/HDLC Communications Controller



The Synchro104 is an eight-channel synchronous serial communication controller on a single PC/104 card. It provides an unprecedented level of communication port integration, performance and flexibility.



Synchro104 is a cost-effective means to provide up to eight synchronous SDLC/HDLC ports on a PC/104 system. Synchro104 utilizes an ultra-high performance industry standard SCC with enhanced features resulting in improved flow control and extremely high data rates.

Each of the 8 channels may be individually configured for RS232, RS422 or RS485 operation at speeds up to 10/Mbits/sec. Interrupt control

Versatile  
Synchronous  
Communications  
Controller



# Synchro104

## SDLC/HDLC Communications Controller



hardware and flexible address decoding allow Synchro104 to occupy only a single IRQ line on a PC/104 system. Two 8-bit on-board parallel ports provide 16 I/O pins for custom interfacing with external devices.

Synchro104 is provided with software drivers for the most popular operating systems including Windows, Linux and RTOS such as QNX.

### **Applications**

ISDN Routing

LAN Gateway or Bridge

Serial Protocol Conversion

Embedded WAN applications

Main Frame Communications

HDLC/SDLC Communications

Remote Instrumentation and Metering

Vending Machines, POS, ATM Systems

Synchronous Terminal Cluster Controller

Extensive

Windows and

Linux

drivers



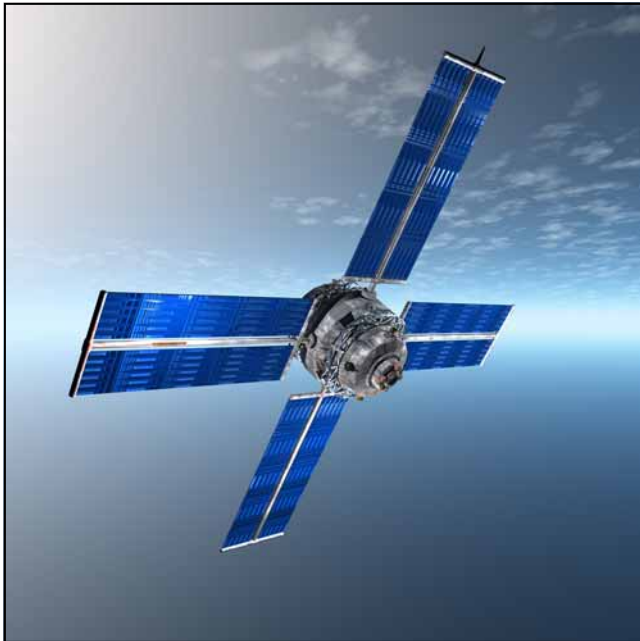
# Synchro104

SDLC/HDLC Communications Controller



**Advanced Micro  
Peripherals**

THE EMBEDDED VIDEO EXPERTS



Up to  
10Mbits/sec  
transfer rate

## Features

Uses single IRQ

Single +5V power supply

128-Byte FIFO per channel

Standard PC/104 form factor

Up to 10Mbits/sec (single channel)

Supports SDLC, HDLC, IBM BISYNC

Extensive Windows and Linux Support

Eight independent synchronous channels

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### Comms Controller

SAB82538 Enhanced Serial Communication Controller  
128Bytes FIFO per channel  
BISYNC, SDLC, HDLC, CCIT-X.25  
NRZ, NRZI, FM and Manchester encoding  
8 independent full-duplex channels

### Synch/Isosynch

10Mbits/sec maximum transfer rate (single channel)  
Up to 1Mbit/sec multiple channels (depends on CPU)  
External Data Clocking (option)

### Character Synchronous

Internal or External character synchronisation  
1 or 2 synch characters  
Automatic CRC generation

### SDLC/HDLC

Abort sequence generation and checking  
Automatic zero bit insertion/deletion  
Automatic flag insertion between messages  
Address field recognition  
CRC generation/checking

### Universal Parallel Ports

Two 8-bit parallel ports.  
Each line can be independently controlled for input/output

### Bus Interface

16-bit PC/104 Interface (stack through)  
Single IRQ - one of IRQ 10 or 11  
Flexible memory-mapping to PC/104 memory space

### Physical Interface

Eight independent RS232/422/485  
Supporting TX-Data, RX-Data, CTS, RTS  
2 off 40-pin 0.1inch pitch headers

### Miscellaneous

Single +5V at less than 600mA  
Operating temp 0°C to 60°C or -40°C to +85°C (extended temp option)  
Standard 3.6 x 3.8in PC/104plus form factor

### Software Support

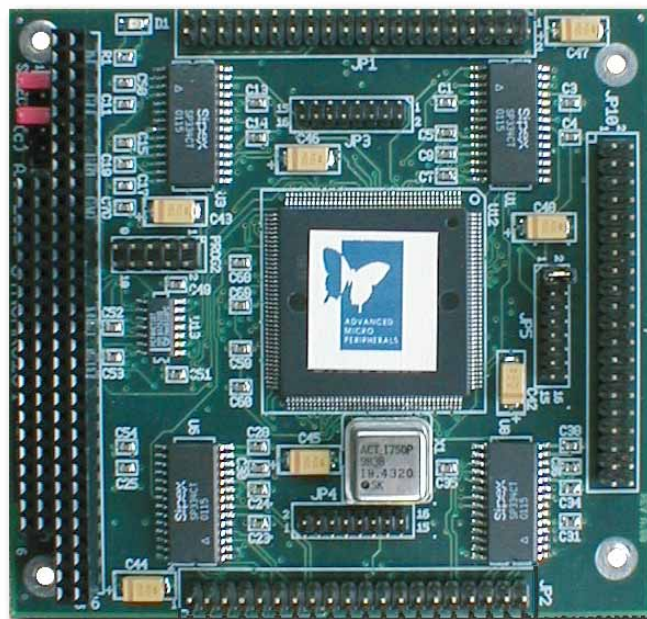
Windows 2000/XP  
Linux, QNX, MSDOS  
Other operating systems can be supported

**Ordering Information**

|                  |  |
|------------------|--|
| Synchro104-8     | 8 channel PC/104 HDLC/SDLC Controller (0 to 60°C)      |
| Synchro104-8-Ext | 8 channel PC/104 HDLC/SDLC Controller (-40°C to +85°C) |

**Related Products**

|            |  |
|------------|--|
| Tiny886ULP | Ultra low power PC/104+ computer with 100Mbit Ethernet |
| Tiny-C3    | High Performance PC/104+ Computer                      |
| LANSwitch  | 5-port Ethernet Switch for PC/104+                     |

**Synchro104**