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Find the *Abaco Systems / SBS HSS-cPCI3U-CC-12* at our website: ***Click HERE***

# HSS-cPCI3U-CC

## High Speed Serial Interface

I/O & COMMUNICATIONS

## Features

**3U cPCI Conduction Cooled**

**Up to twelve ports of high-speed serial data communications**

**Up to six bi-directional user Inputs/Outputs**

**Maximum data rate of 10 Mbit/s (synchronous) and 2 Mbit/s (asynchronous)**

**Applications**

- Data communications
- LAN/WAN networking
- Telecommunications
- Avionics
- Vetronics
- Navtronics

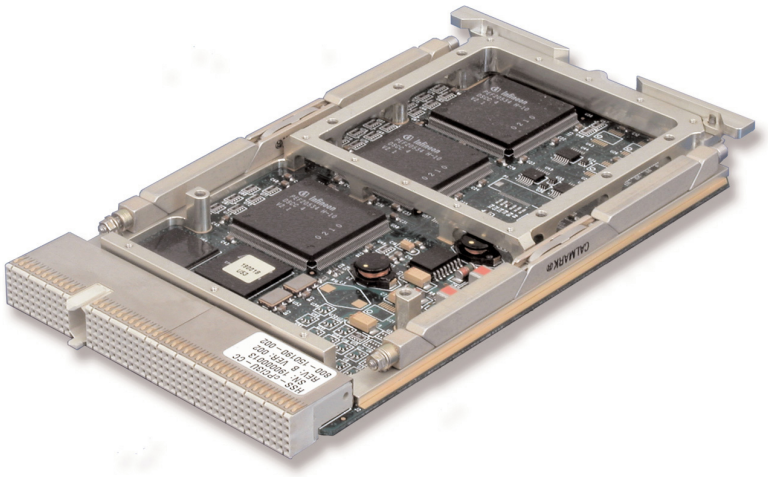
**Communication protocols supported**

- Asynchronous, synchronous HDLC, and SDLC

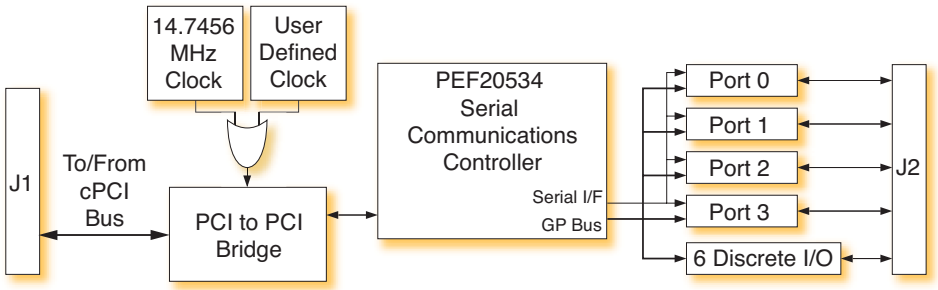
**Interfaces supported**

- RS-232, RS-422/485

**306 x 32-bit total FIFO per serial controller**



**HSS-cPCI3U-CC** card provides twelve ports of high-speed serial data communications on a 3U cPCI card. You can use the HSS-cPCI3U-CC card in many data communications, LAN/WAN networking and telecommunications applications. It supports a maximum data rate of 10 Mbit/sec for synchronous protocols using an external clock. The HSS-cPCI3U-CC card supports up to 2 Mbit/sec for asynchronous protocols and popular baud rates of up to 921.6 Kbaud available using the standard 14.7456 MHz oscillator in the RS-422 interface mode. Each of the twelve ports are fully programmable to support high performance serial communications protocols, such as asynchronous, HDLC, and SDLC. The figure below shows a simplified block diagram of the 4-port HSS-cPCI3U-CC card.




*Simplified Block Diagram of the 4 Port HSS-cPCI3U-CC Card*

Configurable by software, the HSS-cPCI3U-CC card supports RS-232 and RS-422/RS-485 interfaces. Ports can be individually selected as RS-232 or RS-422/RS-485 without hardware reconfiguration. Each port also has handshaking signal pairs available.

In addition to the standard 14.7456 MHz oscillator, a user-defined oscillator can be installed at the time of manufacture for custom baud rate generation. Interrupts are fully supported for each port. Interrupts sources include transmission error, reception error, completions of transmit packets and completions of receive packets.

In the block diagram shown above, a PCI to PCI bridge (TI PCI2050) interfaces the cPCI bus to the HSS-cPCI3U-CC card. Three high performance Siemens/Infineon PEF20534 Serial Communications Controllers are responsible for the twelve ports of serial I/O. Each port can support multiple protocols and uses Maxim's Multi-protocol Transceivers (MAX3160) and analog switches for various termination options.

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# HSS-cPCI3U-CC

## Configurations

| Model Number | Configuration |
|---|---|
| HSS-CPCICC12AR0 | 12 HSS Ports, 6 Discrete I/O. Acrylic Conformal Coating (Not compatible w/cPCI Geographical Addressing Option) |
| HSS-CPCICC12AR1 | 12 HSS Ports, 3 Discrete I/O, Acrylic Conformal Coating |
| HSS-CPCICC08AR0 | 8 HSS Ports, 6 Discrete I/O, Acrylic Conformal Coating |
| HSS-CPCICC04AR0 | 4 HSS Ports, 6 Discrete I/O, Acrylic Conformal Coating |

## Specifications

**Form Factor**
- 3U cPCI

**PCI Interface**
- 33 MHz, 32 bit, master/slave, specification 2.1 compliant
- Bus mastering required

**PCI Interface/Serial Controller**
- Siemens (Infineon) PEF 20534, one for each group of 4 ports

**Number of High Speed Ports**
- Up to Twelve

**Maximum Data Rate**
- Asynchronous: 2 Mbit/s
- Synchronous: 10 Mbit/s

**Physical Levels Supported**
- RS-232, RS-422/485

**Protocols Supported**
- Asynchronous UART, HDLC, SDLC

**RS-232 Signals Supported**
- TxD, RxD, TxC, RxC*, CTS*, RTS*

  * Not available on ports 5-11 on HSS-cPCICC12.

**RS-422/485 Signals Supported**
- TxD±, RxD±, TxC±, RxC±*, CTS±*, RTS±*

  * Not available on ports 5-11 on HSS-cPCICC12.

**FIFOs per DSCC4**
- Local Receive: 17 x 32-bit, per port
- Local Transmit: 8 x 32-bit, per port
- Central Receive: 128 x 32-bit
- Central Transmit: 128 x 32-bit

**On-board Oscillator**
- 14.7456 MHz to support standard asynchronous baud rate
- User-defined oscillator is available for custom baud rate generation
- Each group of 4 ports can be software selected to standard or user-defined oscillator.

**DMA Controllers**
- Eight per DSCC4

**I/O Connector**
- J2

**Discrete I/O**
- Up to Six.

  Note: The HSS-CPCICC12AR0 version should not be used in backplanes supporting Geographical Addressing or the Discrete I/O drivers may be damaged.

**Power Requirements**
- +5.0 VDC (typical 12 ports estimated):
  1290 mA operating EIA-485 mode
  960 mA operating EIA-422 mode
  645 mA operating EIA-232 mode

**Temperature**
- Operating: -40° to 85° C
- Storage: -55 to +105°C

**Humidity**
- 5% to 95%, non-condensing

**Weight**
- Approximately 0.159 kg (0.35 lb.)

**Vibration**
- 5 - 2000 Hz, 14 g maximum force

**Dimensions**
- 3U Euroboard, 100.0 mm x 160.0 mm


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