The HDLC-cPCI is a four channel HDLC communications controller on a 3U CompactPCI card. The HDLC-cPCI uses high performance, industry standard serial communication controllers to provide 4 independent channels that can be configured for either HDLC-Synchronous or Asynchronous communication.

The HDLC-cPCI has been designed for demanding transportation and industrial applications. The HDLC-cPCI supports an extended temperature operation range of –40 to +85°C. All 4 ports feature galvanic isolation up to 2000V_RMS_.

Each of the 4 serial channels can be individually configured for operating with a RS-232, RS-422 or RS-485 electrical interface. Each channel has independent receive and transmit FIFOs that allow high speed serial data rates.

The HDLC-cPCI is available with software drivers for Linux and Windows.

Rev A.00
Subject to change without notification
Applications

Serial protocol conversion
Mass-Transit / Transportation
Vending Machines
POS and ATM systems
Remote instrumentation
LAN Gateway or Bridge
Embedded WAN
Locomotive Communications
HDLC-cPCI
HDLC Communications Controller for CompactPCI

Features

4 channel concurrent operation
Individually configurable for HDLC / Asynchronous operation
2000Vrms galvanic isolation for each port
Selectable RS-232/422/485 electrical interface
Rugged, Locking I/O connectors
Extended temperature operation (-40C to +85C)
Communications Controller
32Bytes FIFO per channel
HDLC synchronous, Asynchronous operation

HDLC
HDLC protocol support
Wide range of serial encoding methods:
  - NRZ, NRZI, Biphasic Mark (FM1), Biphasic Space (FM0), Biphasic Level (Manchester),
  - Biphasic Differential (Manchester Differential)
Up to 1MBit/sec multiple Ports (depends on host CPU)
Supporting differential TX-Data and RX-Data
Full-duplex operation
Abort Sequence generation and checking
Automatic zero bit insertion/deletion
Automatic flag insert

Asynchronous
Programmable baud rates up to 115200bps
Full-duplex operation
1, 1.5, or 2 stop bits
Odd or Even parity

Physical Interface
Independent RS-232/RS-422/RS-485 ports
2000Vrms galvanic isolation
Supporting TX-Data, RX-Data, CTS, RTS

Bus Interface
CompactPCI® Core Specification PICMG-2.0 Rev 3.0
32-bit bus width, 33.33 MHz bus speed
Peripheral Slot

System Requirements
X86 PC-compatible CompactPCI host computer
3.3V and 5V from CompactPCI backplane

Mechanical
Standard 3U compactPCI form factor

Operational characteristics
Operating temp -40°C to +85°C
Extended temp -40°C to +85°C (option)

Software Support
Linux
Windows

Ordering Information
HDLC-cPCI
4-port HDLC Controller (-0 to 60°C)
HDLC-cPCI-EX
4-port HDLC Controller (-40 to 85°C)