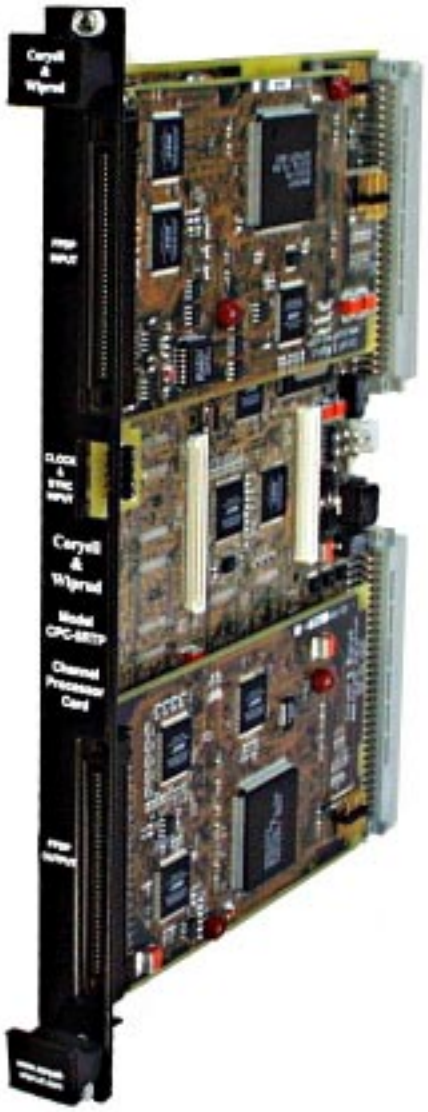
Coryell & Wiprud CPC

(Channel Processor Card Architecture)



CPC Overview

The Coryell & Wiprud Channel Processor Card (CPC) Architecture is designed to receive and transmit narrow-band data using small, fast, and flexible hardware and software. A single CPC can process up to 64 real or 32 complex channels on a single slot 6U VME (or stand-alone) card and can handle up to 50 MHz input bandwidths at 125 MSPS.

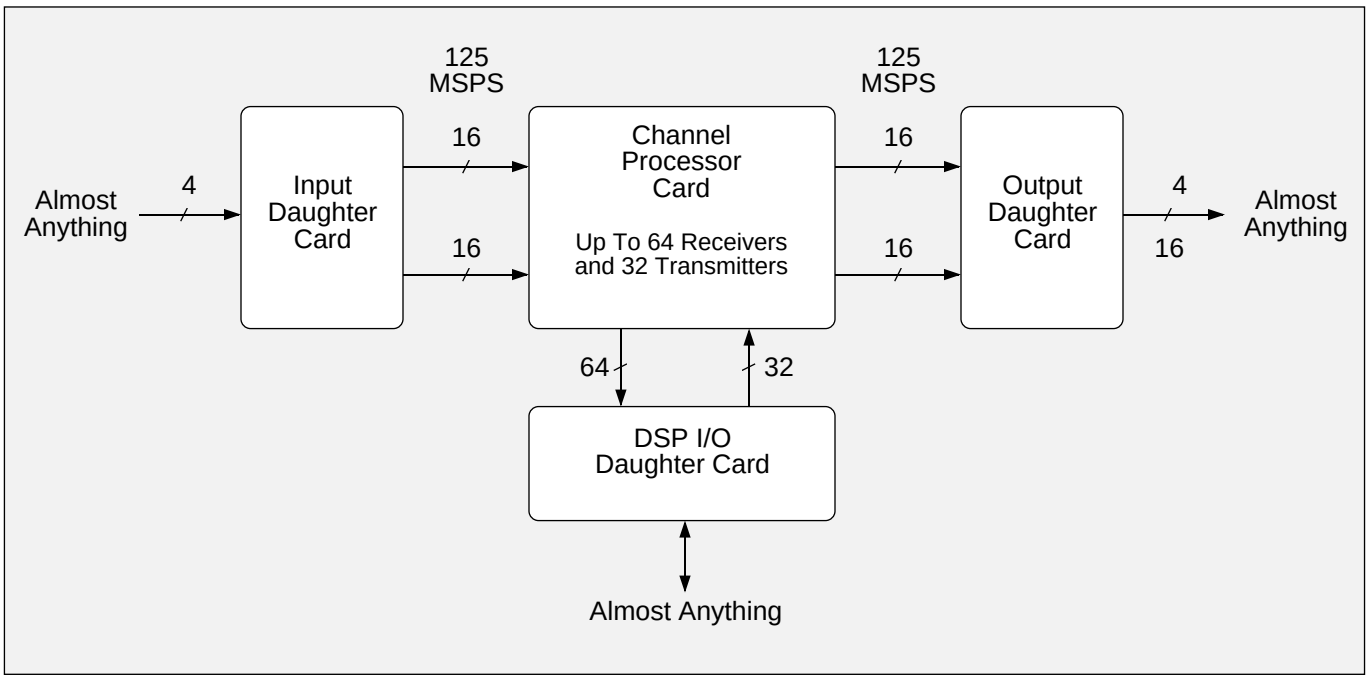
The CPC is flexible both in its configuration and its control. Both the input and output can interface to virtually any format using interchangeable daughter cards. CPC motherboards can contain receivers only, transmitters only, receivers and transmitters, or an FDM switch/ restacker. Control of the CPC can be accomplished through the VME interface, through an independent RS-232 port, or it can operate in stand-alone mode using on-board flash memory. Through any of the control interfaces the CPC can be configured to provide a large number of channels or a large signal bandwidth.

In any of its configurations, the CPC will provide up to 16 bit real or complex inputs, at least 16 bit processing, and up to 16 bit real or complex outputs. It has a maximum channel bandwidth of 1.5625 MHz and a minimum full rate input channel bandwidth of less than 1.5 KHz. In its double rate mode where the CPC will provide up to 32 receive, 32 transmit, or 16 receive and transmit channels, the maximum input sample rate is 125 MSPS with a maximum input bandwidth of 50 MHz. In normal mode where the CPC will provide up to 64 receive, 64 transmit, or 32 receive and transmit channels, the maximum input sample rate is 62.5 MSPS with a maximum input bandwidth of 25 MHz.

CPC Key Features

- Array of All–Digital Transmitters and Receivers
- Up to 64 Receive and 32 Transmit Channels
- Configurations Include Receiver, Transmitter, Transceiver, and FDM Restacker
- Up to 4 Real or Complex Wideband Inputs and up to 4 Real or Complex Wideband Outputs (up to 16 Bit I/O)
- Interfaces to Just About Anything Using Flexible Input, Output, and DSP I/O Daughercards
- Up to 1.5625 MHz Channel Bandwidths
- 6U, 1 Slot VME or Stand-alone
- Controlled Over VME or Using RS-232
- Source Code for a VME Driver is Available

CPC Architecture Block Diagram



Channel Processor Cards

CPC–16R, 32R, & 64R	16, 32, and 64 Channel Receivers
CPC–16T & 32T	16 & 32 Channel Transmitters
CPC–16RT & 32RT	16 & 32 Channel Receiver/Transmitter (or FDM Restacker)
CPC–Custom	Custom to Your Requirements

Input Daughercards

IDC–FPDP	Front Panel Data Port
IDC–DECL	Differential ECL
IDC–DPECL	Differential PECL
IDC–AD62	Four 62.5 MSPS A/Ds
IDC–AD100	Two 100 MSPS A/Ds
IDC–Custom	Custom to Your Requirements

DSP I/O Daughtercards

IODC–FPDP	Multiplexed Data on Front Panel Data Port
IODC–Comm	Array of Comm Ports
IODC–Link	Array of Link Ports
IODC–Serial	Array of DSP Serial Ports
IODC–Demod	Array of Demodulators
IODC–Mod	Array of Modulators
IODC–Custom	Custom to Your Requirements

Output Daughtercards

ODC–FPDP	Front Panel Data Port
ODC–DECL	Differential ECL
ODC–DPECL	Differential PECL
ODC–DA62	Four 62.5 MSPS D/As
ODC–DA125	Two 125 MSPS D/As
ODC–Custom	Custom to Your Requirements

For More Information

Additional information is available for downloading at our web site (www.coryell-wiprud.com).

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