DATA PATTERNS

DP-cPCI-5211 — cPCI IP Carrier Module With Front And Rear I/O

KEY FEATURES AND BENEFITS

• Four industry standard IP module slots

• 150 rear I/O points & 50 front I/O points

• High density rear connectors

• Two interrupts per IP module

• Individually filtered power to each IP

• Optional temperature sensors per IP

• Hot swap compliant

• 6U cPCI single slot

• Windows 2000 drivers provided

• RT Linux drivers provided

APPLICATIONS

• Reconfigurable systems

• Automatic test equipment

• Rugged military systems

• Simulators

DESCRIPTION
DP-cPCI-5211 IP carrier board provides electrical and mechanical interface for four industry standard IP modules. The board provides full data access to the IP modules I/O, ID and memory spaces. The programmable registers are used for configuring and controlling the operation of IP modules.

INTERRUPTS
Each IP module supports two interrupt requests. The eight IP interrupts from the four IP modules are mapped to the two local bus interrupts.

The carrier board supports four single size IP modules or two double size IP modules. I/O lines from one IP slot is routed to front panel facia connector. The other I/O lines from three IP slots are routed to I/O J3 and J5 connectors.

IP memory space accesses are supported with 256 KB of memory for each IP module by default. Upto 8MB per module can be supported as a factory options.

POWER REQUIREMENTS
Filtered +5V, +12V and -12V DC power supplies are provided to the IP modules via passive filters present on each supply line serving IP. This provides optimum filtering and isolation between the IP modules and the carrier board and allows analog signals to be accurately measured or reproduced on IP modules without signal degradation from the carrier board logic signal noise.

Optional temperature sensors are provided to detect the temperature above 70°C. If the temperature exceeds 70°C, it can interrupt the normal operation for host initiated shutdown procedures.

This IP carrier is used to provide flexible expansion of IP based I/O resources in a cPCI chassis. Various types of IP modules are available from many vendors. Typical IP modules provide ADC,DAC,TTL,Discrete, MIL-STD-1553B, ARINC-429, RS422 / RS485 and other custom functionalities.
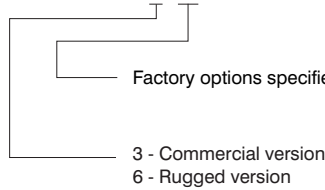
SOFTWARE SUPPORT
The module is supplied complete with device drivers in Windows 2000 and RT Linux. Please contact factory for support in any other operating system such as VxWorks, QNX, INTime, Lynx etc.

DP-cPCI-5211

SPECIFICATIONS

IP compliance | Meets IP specifications per ANSI / VITA4-1995

ELECTRICAL / MECHANICAL

Interface | Single or double size IP modules at 8MHz
32-bit IP modules are not supported
I/O space and ID space are supported
Memory space | 256KB per IP module
Interrupts | Two interrupt requests per IP module
cPCI bus compliance | Meets cPCI specification PICMG 2.0 R3.0 and cPCI hot swap

SPECIFICATION

PICMG | 2.1 R1.0 03/08/1998

POWER | +5V @ 412mA, +12V @ 24mA, -12V@ 20mA,+3.3V @ 151mA
Power availability for four | +5V, 4.5A
IP Modules | +12V, 1.47A
-12V, 1.48A

MECHANICAL

Board | 233mm (H) x 160mm (D)
Module | 6U (H), 4T (W) cPCI-6U

CONNECTORS

Backplane Interface | cPCI interface
J1 cPCI backplane interface | cPCI 32 bit PCI interface
 | J1 Type A, 25 Position, Right Angle Female
J3 & J5 cPCI rear I/O | J3 Type B, 19 Position, Right Angle Female
interface | J5 Type B, 25 Position, Right Angle Female
IP logic interface | 50 Pin Male Plug Header (P1, P3, P5, P7)
IP field I/O interface | 50 Pin Male Plug Header (P2, P4, P6, P8)
Front IO Connector | 68 pin SCSI type Female

ENVIRONMENT | Commercial and Rugged versions

ORDERING INFORMATION

DP   cPCI   5211   3 0 0

Factory options specified based on applications

3 - Commercial version
6 - Rugged version

BLOCK DIAGRAM OF DP-cPCI-5211