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Find the *RadiSys SP-6040* at our website: ***Click HERE***

ORDERING INFORMATION

Call for pricing and availability.
Refer to the order codes below.

SP-6040E-C – Compact PCI-based quad ‘C62x, Hot Swap, H.110, i960RD (66 MHz), Quad E1/T1, Dual Ethernet PMC
MODEL • SP-6040E-C

SPECIFICATIONS

FEATURE	FUNCTION	DESCRIPTION
Dimensions		6U x 160 mm, single-slot CompactPCI
Hot Swap		Yes (PICMG 2.1 R1.0, ECTF H.110 R1.0)
DSP Resources		Up to four Texas Instruments TMS320C6201B at 200 MHz (revision 3.0)
DSP Memory		100MHz SDRAM; 100MHz SBSRAM (optional)
	Size	SDRAM: 4MB, SBSRAM: 512KB - 1MB
I/O Processor		66MHz Intel i960RD
IOP Memory		EDO DRAM; EDO, 72-pin SODIMM module (optional)
	Size	16MB each
IOP Flash Memory		Flash ROM
	Size	4MB base configuration, 1MB and 2MB optional
IOP Serial port	Debug and Application Use	RS-232 compatible UART
H.110 I/F and Time Slot Interchange	Time Slot Connections	Up to 256 connections between local and any of the 4096 H.110 time slots. Up to 1024 connections between local time slots.
H.110 TDM Bus	Telephony Bus	On CompactPCI J4 H.110 connector
I/O Options	RadiSys	Quad E1/T1 - HDLC - Dual Ethernet PMC module
	Other Vendors	Any compliant 32-bit PMC module
Audio Monitor		On header
JTAG Emulator		Separate ‘C6x and i960 chains
Host Interface		32-bit PCI (CompactPCI J1 connector)
Power Requirements	Typical (current may vary depending on algorithms running on DSP)	+5V @ 0.5 A +3.3V @ 4.6 - 5.4A (based on preliminary ‘C6x revision 3.0 silicon power estimates) +/-12V @ 0.002 A

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DATA SHEET

SPIRIT-6040E

SINGLE BOARD VOICE GATEWAY ON COMPACTPCI*



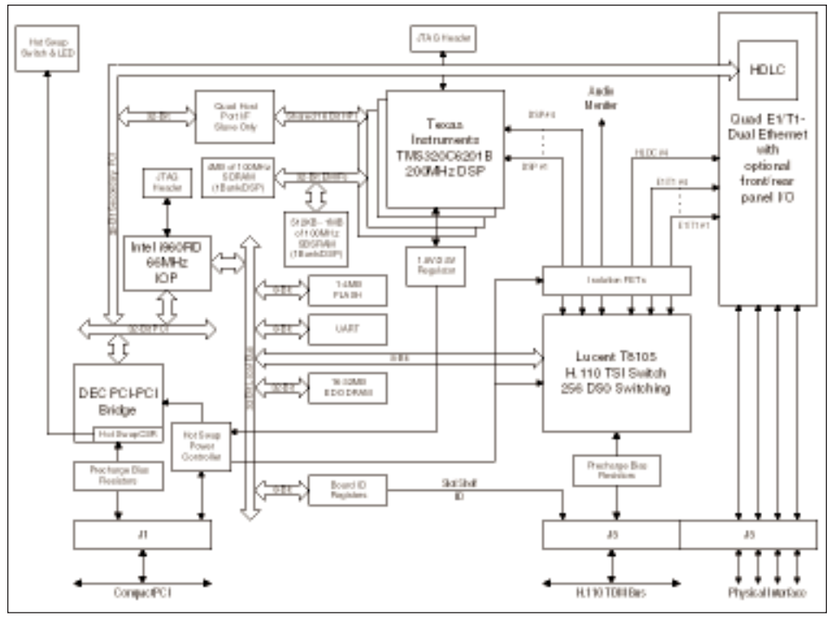
FEATURE SUMMARY

- Up to four Texas Instruments TMS320C62x DSPs
- 1600 MIPS at 200 MHz for unsurpassed processing power
- Targeted for high density voice gateway and CTI applications including VoIP, VoFR, VoATM
- Hot swappable for high availability
- Open standards hardware for compatibility
- CompactPCI, H.110, PMC I/O
- 4096 channel switch compatible with MVIP/SCSA H.110 for TDM packets
- On-board i960 intelligent I/O processor for data formatting and routing
- Automatic multi-channel, multi-algorithm processing with TASK-6000 for fast application development
- Up to four full-duplex E1/T1 ports, 128 channel HDLC, and dual Ethernet supported for high bandwidth applications
- Supported by G.729, G.729A, G.726, G.723.1, G.165, G.711, DTMF, MF-R1/R2, AGC/VOX, CPM, CNG and V.17 Fax algorithms for telecom applications
- Integrated with RadiSys VGP-200 for system development

The SPIRIT-6040E CompactPCI board is a high performance intelligent I/O subsystem designed for telecom and datacom applications. Based on the most powerful generation of Texas Instruments devices, the SPIRIT-6040E CompactPCI board is a 200MHz DSP engine with an I/O connector that provides an interface to digital network interfaces (DNI) such as E1/T1 and Ethernet. The scaleable options of the SPIRIT-6040E address a broad range of applications, from smaller environments to large enterprises. No additional software development is required to gain the benefits of RadiSys’ telecom kernel and optimized algorithms.

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DSP Solutions Texas Instruments ©1999 TI



SPIRIT-6040E Block Diagram

SCALEABLE ARCHITECTURE

The SPIRIT-6040E features up to four TMS320C62x ('C6x) DSPs, with Texas Instruments' VelociTI advanced VLIW architecture. The 'C6x is ideal for the demands of high density and long life telecom applications, with an architecture that allows the DSP to execute multiple operations in a single-clock cycle.

The SPIRIT-6040E is designed with the essential elements for telecom processing, including an H.110 TDM bus and an Intel i960 as the on-board PCI controller. The i960 is ideal for implementing protocol stacks or for performing data packetization. The VxWorks RTOS on the i960 provides a TCP/IP stack for access to Ethernet, making the SPIRIT-6040E a complete and self-contained single board voice gateway with both telephony and data interfaces on the DSP resource, as well as support for protocol stacks for implementing RTP/RTCP, ATM, ISDN and H.323.

The ECTF compliant H.110 bus provides thirty-two 64kbps TDM streams, and a Lucent T8105 Ambassador switch provides access between the TDM channels and the DSPs or the I/O. In addition, the T8105 allows switching of up to 1,024 time slots among the local board resources, providing the speed and expandability required by deterministic telecom applications.

The SPIRIT-6040E provides on-board quad E1/T1 and dual Ethernet access for LAN and WAN I/O. The dual Ethernet allows voice traffic on one line while the other is free to manage QoS parameters or to link with other gateways on the system. This independent architecture reduces data traffic to and from the host via the PCI bus, improving system performance. Furthermore, the I/O ports on the SPIRIT-6040E board can be populated to provide physical layer access to other application specific interfaces.

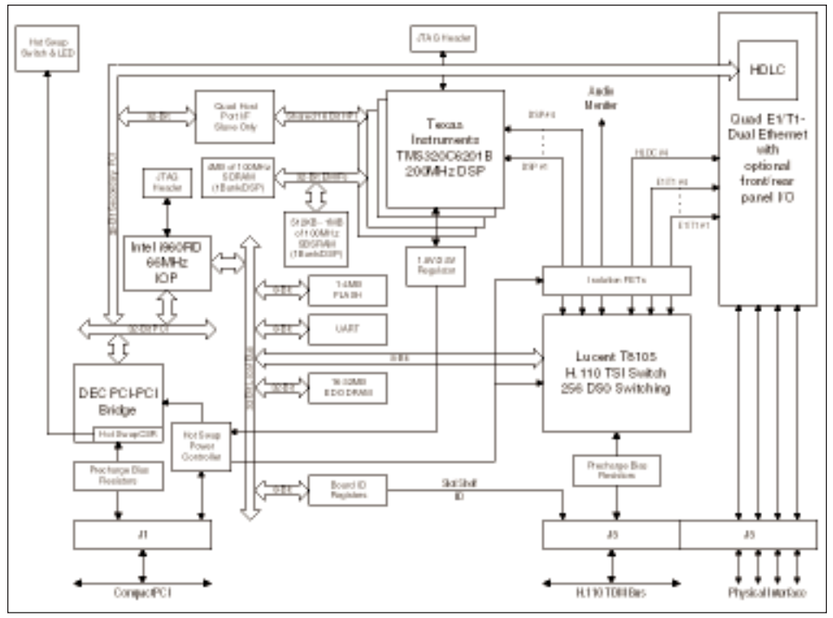
The SPIRIT-6040E supports hot swap on both the CompactPCI and H.110 bus interfaces for use in high availability applications. The PCI interface employs a "Hot Swap Friendly" device which allows for portability between hot swap platforms.

APPLICATION SUPPORT

The SPIRIT Series of DSP boards is fully supported by a library of algorithms that include vocoders such as G.729, G.729A, G.726, G.723.1, G.165 Echo Canceller, G.711, DTMF, MF-R1/R2, AGC/VOX, CPM, CNG and V.17 Fax. To help in programming the 'C6x and to allow the execution of multiple channels and multiple algorithms on the 'C6x, RadiSys also offers a Telecom Application Specific Kernel (TASK-6000) which simplifies integration of applications and algorithms on the 'C6x. RadiSys also offers integrated application development platforms.

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