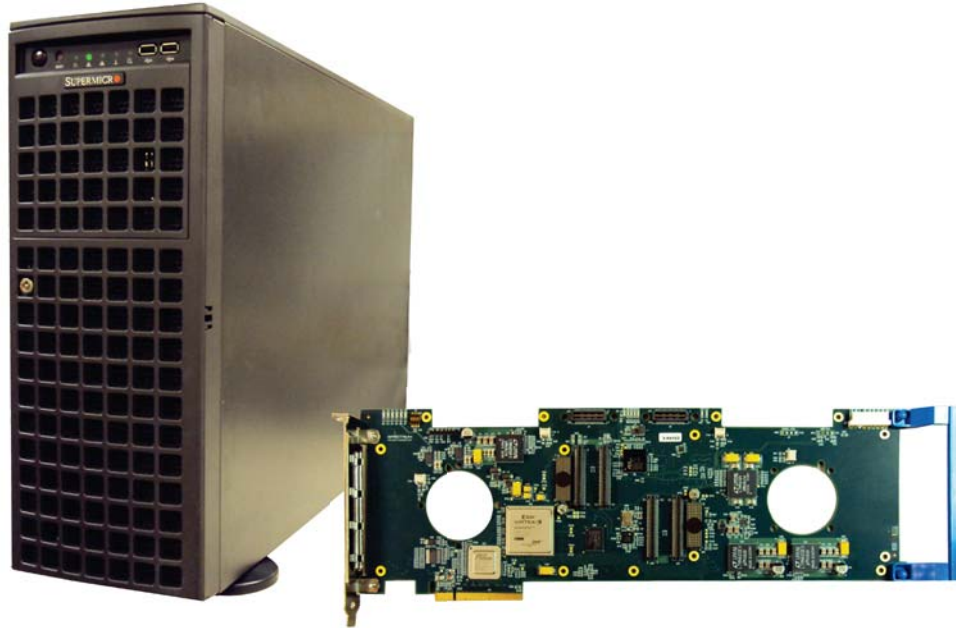




Description

The SDR-2010 is a high-performance Intel server containing the Spectrum PRO-2910 PCI Express-based carrier cards, each with dual XMC/PMC sites. This unique configuration gives all the flexibility and processing power of an embedded signal processing system while using an Intel® 64 Architecture server as the host. The PCI Express carrier card allows numerous combinations of FPGA, DSP and GPP processing devices to be hosted on this platform, enabling an extremely powerful and flexible signal processing platform.



Features

- Multiple 8-lane PCIe Gen1 interfaces to the PC motherboard
- Two XMC sites per carrier that support:
 - Spectrum Solano-based XMC modules
 - Third-party PMC modules via a PCIe-to-PCI bridge
- Two Solano links from each XMC site provide a data rate of up to 400 MB/s between the PRO-2910 and an XMC module
- Two Solano links via external connectors provide a data rate of up to 400 MB/s between two PRO-2910 boards in a system independent of the PCIe backplane
- High-speed communications fabric FPGA allows data routing between XMC Solano links, external Solano links, and the external PCIe bus
- Customizable peripherals for server (RAM, disk options, CPU speed, etc)
- Ruggedized rackmount chassis available for use in deployment scenarios

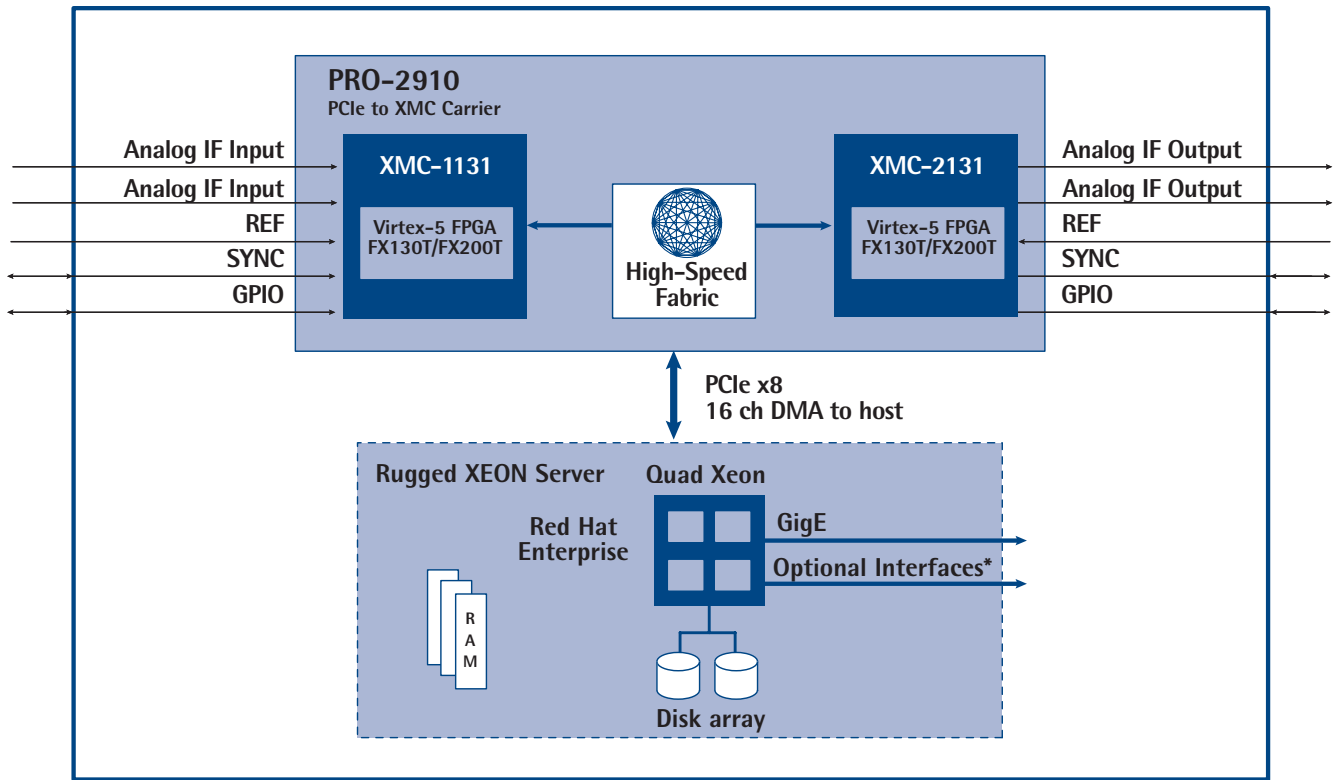
Benefits

- Provides a low-cost, high-performance software-defined radio (SDR) solution for communications, Signals Intelligence (SIGINT), and Electronic Warfare (EW)
- Supports applications requiring high-speed, low latency, deterministic data paths
- Modular architecture supports multiple combinations of processing and I/O mezzanine cards
- Suitable for use in a Linux or Windows®* desktop environment
- Scalable for future system expansion
- Provides software re-use for code developed for Spectrum's Solano-based XMC modules

Applications

- Signals Intelligence (COMINT & ELINT)
 - Wideband Spectral Analysis
 - Multi-channel Direction Finding
 - Channelized Receiver
- Military Satellite Communications (MILSATCOM)
 - Satellite earth stations
 - Land and mobile systems
- Electronic Warfare (EW)

* See future options section of this datasheet.



Block Diagram

Specifications

[general]	Form Factor	Intel 64 XEON server with customer specified peripherals Full-length 8-lane PCIe carrier card
[local buses]	XMC Solano Interface	2 Solano interfaces between each primary XMC connector and the fabric FPGA (200 MB/s each)
	Fabric FPGA PCIe Interface	8-lane PCIe Gen1 between the fabric FPGA and the PCIe switch (up to 2.0 GB/s each)
	Module Control Bus	Local PCIe bus (32-bit/33MHz) via PCIe-to-PCI bridge
[external interfaces]	Motherboard Interface	8-lane PCIe Gen1 (up to 2.0 GB/s)
	Inter-board Solano Interface	2 Solano interfaces between external connectors and the fabric FPGA (200 MB/s each)
[host requirements]	Operating System	Linux (RedHat 5.3)
[mechanical]	Size	Full-length 8-lane PCIe card
[environmental]	Temperature	Operating temperature range of 10 to 35 degrees C Storage temperature to be announced
	RoHS	5 of 6 compliant (Pb in solder exemption). For RoHS ordering information, other RoHS compliance options or certificates of compliance, please contact Spectrum Sales
[custom configurations]		Contact Spectrum Sales
[mezzanine options]	XMC	Dual XMC
	XMC-1131	Analog-to-digital converter module
	XMC-2131	Digital-to-analog converter module
	XMC-3321	Dual transceiver module and external clock module
	XMC-3311	High-speed transceiver module
	XMC-8131	FPGA processing engine XMC module
	ePMC-8311	TI DSP-based multiprocessing engine
[*future options]	Operating System	Windows 7, Red Hat MRG Realtime
	Interfaces	10 GbE, additional GbE ports, Fiber channel, SAS, Firewire, eSATA
	Storage	RAID array Solid state disks



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