cSP-4502 Series

UltraSPARC™ Solaris CompactPCI Platform

4U 5 Slots High Performance, Low Profile UltraSPARC™

Carrier Grade 99.999% High Availability Platform Solution



Product Overview

The ADLINK cSP-4502 series 4U UltraSPARC™ Platform is designed for mission-critical applications that require high performance and integration in an innovative, four expansion slots, two HDD cages design. This industrial-standard system is ideal for meeting the demanding needs of today's communications, military, and industrial control applications.

This unique platform, with the 650 MHz UltraSPARC™ IIi processor, up to 4GB of expansion memory, PMC and PIM slot, delivers accelerated performance and expandability for memory-intensive, carrier grade applications. When combined with the robust Solaris™ operating environment, world class real time operating system, leads internet telephony/SS7 offerings, even military, aerospace research, cSP-4502 is your best choice for carrier grade high availability applications.

UltraSPARC Solaris CompactPCI

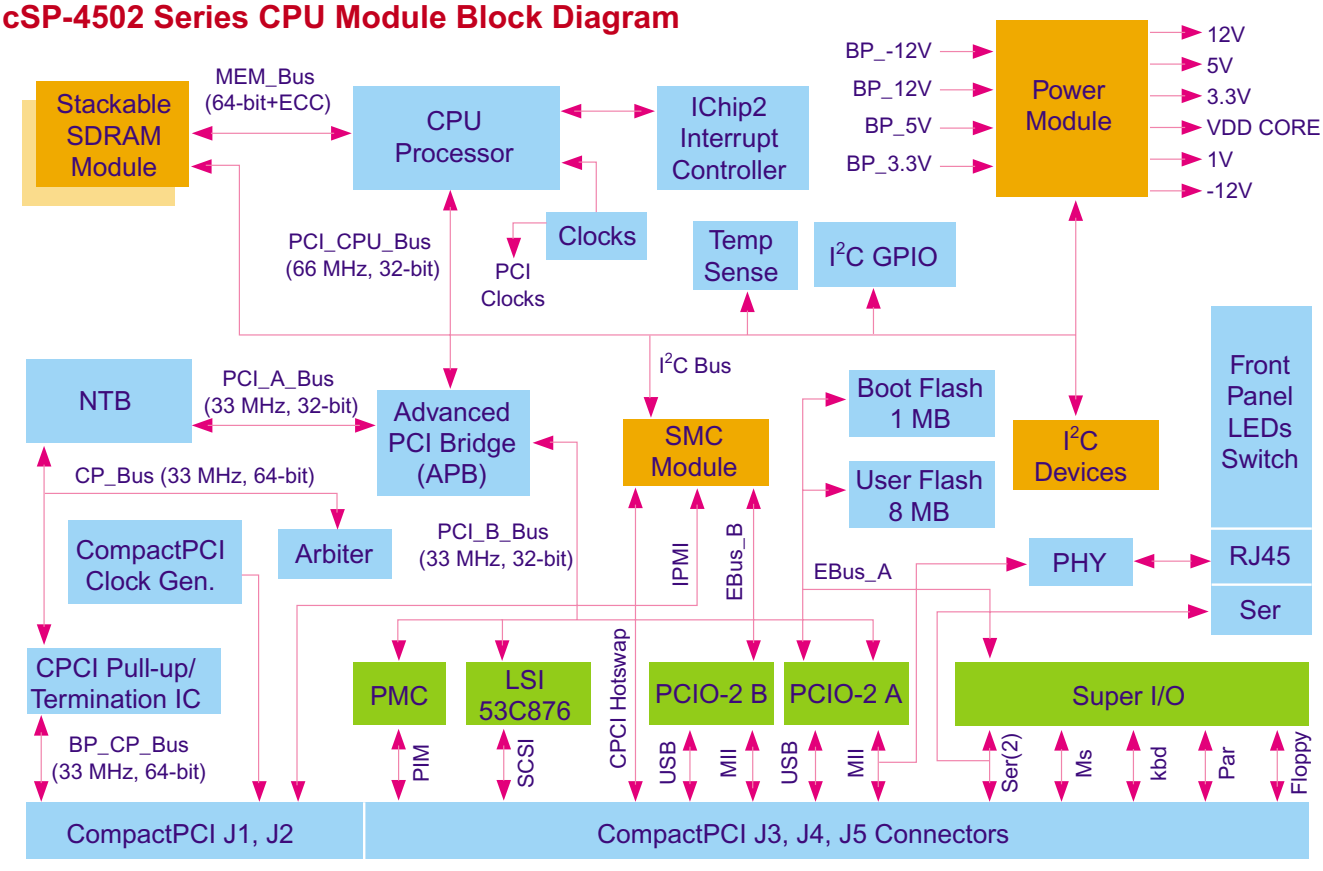
ADLINK TECHNOLOGY INC.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Highlights

- 4U height 19-inch rack-mount enclosure
- 5 slots for standard 6U CompactPCI (4 peripheral slots)
- Supports Sun Solaris 8(2/02),and 9 64-bit OS
- Full software compatibility with cSP-4501 Series and cSP-9801 Series
- Designed for NEBS Level 3 compliant
- Supports Sun Netra High Availability suite 2.0 to achieve 99.999 Reliability
- PICMG2.5 H.110 CT Bus
- UltraSPARC IIi V9 superscalar processor
- Low-profile memory cards for up to 4 GB memory
- Three level watchdog timer
- Integrated dual channel fast Ethernet and Ultra-Wide SCSI
- All rear I/O support
- Supports CompactPCI full hot swap
- PMC and PIM module support, provide more expandability and flexibility
- Redundant Hot-Swappable Modules Fault tolerance
  - N+1 (8 Fans) redundant cooling system for in-take and ventilation
  - Dual Hot Swap HDD cages
  - 2+1 hot swappable 500W+250W redundant power supply

cSP-4502 Series CPU Module Block Diagram

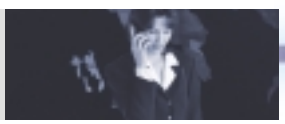


cSP-4502 Series Specification

CPU Module Detail Specifications

Processor	650-MHz UltraSPARC IIi with VIS instruction set,binary-compatible with SPARC application software.
Performance	29 SPECInt95 with 512 KB cache (estimated)
Architecture	Can function as a system controller, satellite, or stand alone processor
Operating System Support	Solaris 8 (2/02) & Solaris 9 Operating Environment
Additional Software Support	Netra High Availability (HA) Suite, Sun Validation Test Suite
Cache	L2: Integrated 4-way 512 KB cache
Expandable Memory	Supports up to 2 Sun mezzanine cards in a single slot; maximum of 4 GB without PMC
Flash Memory	1 MB on-board boot flash, 8 MB user-programmable memory
Bus Interface	
Compact PCI Bus	Interface PICMG 2.1 compliant; 33 MHz at 32/64 bits Support for seven additional cPCI non-system slot boards
Connector	2mm pin and socket
System Management	Sun Microcontroller IPMI interface
Hot Swap	Basic, full and HA hot swap compliance for system controller
I/O Interfaces	
PMC slot	5-volt PMC
Serial Port	Two RS-232C asynchronous, 115.2 Kbaud, one Mini DIN8 to the front panel, two to the rear connector
USB	Dual USB Ports (rear panel)
SCSI Interface	Two Ultra-wide SCSI single-sided 40 MB/sec (rear panel) can be firmware-enabled or disabled
Networking Interface	
Two Ethernet channels	10/100 MB/sec. auto sensing, one RJ45 TP (front panel), two MII (back panel)
Connectors	
Front	One serial port (DIN8), one RJ45 TP (front panel)
Rear (J3)	PMCs, hot swap signals
Rear (J4)	Two serial, SCSI, alarms out, external reset
Rear (J5)	SCSI, two Ethernet (10/100) MII, two USB ports, I2C bus
Supervisory	PICMG 2.9 System Management compliant, 3-level watchdog timer; local alarm capabilities for power, voltage, thermal; FRU ID
Switches	Momentary reset button/switch, abort button/switch (both buttons are recessed from the front panel)
TOD/NVRAM	
Clock/calendar	8 KB of NVRAM (battery-less)
Front Panel LEDs	One Power OK LED, one hot swap LED, one user-defined LED (two colors)
Mechanical Dimensions	
(Eurocard 6U form factor)	233.20 mm (9.2 in.) long, 159.85 mm (6.2 in.) wide, 20.02 mm (.8 in.) high
Power	Less than 20 watts typical, 27 with PMC; input power 3.3, 5, +12, -12v required
Environmental	
NEBS Level 3	GR-63-CORE
Operating temperature	5°C to 40°C; 5% to 85% RH
Non-operating temperature	-40°C to 70°C; 5% to 85% RH
Cooling	300-350 LFM
Operating Humidity	0% RH to 85% relative humidity
Non operating (packaged)	90% to 95% relative humidity
Altitude	60 m below sea level to 4000 m above sea level
CPCI Conformance	PICMG 2.1 cPCI Bus, PICMG 2.1 Hot Swap, PICMG 2.9 System Management Specification, PICMG 2.15 R1.0 PCI Telecom Mezzanine Carrier Card
Regulatory Conformance	FCC Part 15 Class B, ICES 003 Class B, VCCI Class B, EN 55022 & 55024,BSMI Class A approval, MIC, UL 1950, CAN/CSA-C22.2 No. 60950,EN60950, TUV BuART, NEBS level 3 GR-1089-CORE
MTBF	160,000 hours with 512 MB memory
Compatibility With Netra 1500	Full software compatibility
	J4, J5 connectors (USB added on J5 replaces floppy, keyboard, mouse, and parallel interfaces and functionality)
Compatibility With Netra CP2040	100% compatible





System Detail Specifications

CompactPCI Standards	2.0 R3.0; 2.1 R2.0; 2.5 R1.0; 2.9 R1.0; 2.11 R1.0
Form Factor	6U cPCI with 80 mm depth rear I/O
Enclosure	EIA RS-310C 19" 4U high rack-mount enclosure
	Coated metal plate outer covering
	Guarded power switch and reset button
Basic Alarm Module	Monitoring inner chassis temperature, fan status
	Abnormal status will generate alarm and LED warning
	Alarm reset (silence of beeper)
	LED indications show power voltage status on 5V, 3.3V, 12V and -12V
Cooling System	
Front-access hot-swappable fan tray for in-take:	12V DC brush-less, precise dual ball bearing
	One 90 CFM fan for in-take
	Rated speed for each fan: 3100 ± 250 RPM
	Rated power for each fan: 4.8W
Removable fan module for ventilation:	12V DC brush-less, VAPO bearing
	Four 4.9 CFM fans for ventilation
	Rated speed for each fan: 5500 ± 1000 RPM
	Rated power for each fan: 0.6W
Rear-access hot-swappable fan modules for drive bays:	12V DC brush-less, VAPO bearing
	Two 10.8 CFM fan modules for ventilation
	Rated speed for each fan: 8200 ± 1000 RPM
	Rated power for each fan: 1.6W
Rear-access hot-swappable fan modules for ventilation	12V DC brush-less, VAPO bearing
	One 51 CFM fan for ventilation
	Rated speed for each fan: 3600 ± 250 RPM
	Rated power for each fan: 2.8W
Drive Bay	Built-in one slim type floppy
	Dual Hot Swappable 80-pin SCSI HDD rack
Power Supply	Supports 3 in-rack 3U cPCI 8HP 250W power modules
	Supports current sharing on 5V, 3.3V and 12V
	PICMG 2.11 47-pin power interface
Backplane	5-slot 64-bit 6U cPCI CT Bus Backplane
Dimension	482.6 x 177.0 x 296.2 (mm, WxHxD, w/o handle)
Weight	14.5 Kg (including 500W + 250W redundant power supply and backplane)
Operating temperature	0 to 45°C
Storage temperature	-20 to 80°C
Humidity	5% to 95%, non-condensed
Shock	15G peak-to-peak, 11ms duration, non-operation
Vibration	Non-operation: 1.88Grms, 5-500Hz, each axis
	Operation: 0.5Grms, 5-500Hz, each axis
Safety or Certificate	CE, FCC class A

Target Applications

- High Availability Mission Critical Applications
- Telecommunication, network high availability controller
- Network Management Server
- Media Gateways/Media Server
- Signaling Gateways/SCP
- Softswitch
- VoIP Gateways
- Radio Network Controllers (RNC/3G)
- MSC/BSC
- Home/Visitor Location Registers(HLR/VLR)

HA Software Support

- Sun Netra High Availability Suite 2.0
  - Design for Carrier Grade 99.999% High Availability
  - Carrier Grade Transport Protocol
  - Support reliable NFS, reliable boot server and additional HA service

  (For Sun Netra HA Suite 2.0 detail specifications, please refer to ADLINK HA Solution datasheet)

Ordering Information

Model Number	Description
	Base system
cSP-4502/AC-1	4U, 4 I/O slots cPCI system with UltraSPARC IIi 650 MHz CPU, 1GB RAM, Dual LAN, Dual SCSI, 2 H/S HDD Rack,2+1 Redundant (500W+250W) PSU for Universal AC input
cSP-4502/DC-1	4U, 4 I/O slots cPCI system with UltraSPARC IIi 650 MHz CPU, 1GB RAM, Dual LAN, Dual SCSI, 2 H/S HDD Rack ,2+1 Redundant (500W+250W) PSU for DC 48V input
cSP-4502/AC-2	4U, 4 I/O slots cPCI system with UltraSPARC IIi 650 MHz CPU, 2GB RAM, Dual LAN, Dual SCSI, 2 H/S HDD Rack,2+1 Redundant (500W+250W) PSU for Universal AC input
cSP-4502/DC-2	4U, 4 I/O slots cPCI system with UltraSPARC IIi 650 MHz CPU,2GB RAM, Dual LAN, Dual SCSI, 2 H/S HDD Rack ,2+1 Redundant (500W+250W) PSU for DC 48V input
	Optional Modules
Eclipse3/16MB	Eclipse3 6U cPCI graphic module with 16MB SGRAM for SPARC™ Solaris, must order X3538A when use Elipse3/16MB
X3538A	Country Kit- US keyboard & mouse for cSP-9802 and cSP-4502 when use Elipse3/16MB
XCP2000-MEM-1GB	1GB SDRAM memory module for cSP-4502 series and cSP-9802 series
cSP-0201	Sun Netra™ HA suite 2.0 software (An order for Netra™ HA suite 2.0 software must be accompanied by an order for more than 2 sets of UltracSPARC™ Solaris CompactPCI products)

ADLINK TECHNOLOGY INC.
凌華科技股份有限公司
http://www.adlinktech.com
235台北縣中和市建一路166號9樓
Tel: +886-2-82265877
Fax: +886-2-82265717
E-mail: service@adlinktech.com

SINGAPORE
Tel: +65-6844-2261
Fax: +65-6844-2263
E-mail: singapore@adlinktech.com

NORTH AMERICA
Tel: +1-949-727-2077
Fax: +1-949-727-2099
E-mail: usa@adlinktech.com

BEIJING
北京凌華
Tel: +86-10-6296-2789
Fax: +86-10-6296-2796
E-mail: beijing@adlinktech.com

SHANGHAI
上海凌華
Tel: +86-21-6495-5210
Fax: +86-21-5450-0414
E-mail: shanghai@adlinktech.com

SHENZHEN
深圳凌華
Tel: +86-755-2643-4858
Fax: +86-755-2664-6353
E-mail: shenzhen@adlinktech.com

For more information please contact: blade@adlinktech.com

All products and company names listed are trademarks or trade names of their respective companies.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000