RELIANCE

Reliance APR Series Server

Key Features

- 3U Rackmount Chassis
- Intel® E7520 Chipset
- Intel® 64-bit Xeon™ w/ EM64T, Dual Processor
- 2.8 GHz to 3.6 GHz CPU, 800 MHz FSB
- 16 GB/32 GB DDR333/266 Registered SDRAM
- Intel® x4 Single Device Data Correction (x4 SDDC)
- Two Channel Serial ATA and Integrated RAID
- Adaptec AIC-7902 Dual Channel Ultra320 SCSI
- Broadcom® BCM5721 Gigabit Controller
- One PCI Express x8 (x4 Electrical)
- Four PCI-X 64-bit/100MHz
- Two PCI-X 64-bit/133MHz
- Intelligent Platform Management Interface 2.0
- Dual Redundant 650W PFC 2 + 1, Hot Swap, Hot Plug VAC Power
- Dual Redundant 550W PFC 1 + 1, Hot Swap, Hot Plug VAC & VDC Power (Optional)

Encased in heavy-duty cold-rolled steel, the Reliance APR Series industrial server, in a 3U rack mount chassis, delivers unsurpassed headroom, reliability, and scalability. Specifically built to function in any back-end departmental multithreading or front line mobile command server environments, the Reliance Series will effortlessly facilitate high productivity no matter what the demand load may be. Whether hosting specific purpose mission-critical applications or deploying Internet infrastructure programs, the dual processing power of the Reliance APR Series, utilizing the latest Intel® 64-bit Xeon™ processors, coupled with a 800 MHz system bus, will instill an immeasurable level of confidence for operational performance. Topmost redundancy features such as hot-swap VAC and VDC power, as well as integrated dual channel Ultra320 SCSI RAID with Zero Channel RAID support and Serial ATA RAID, enables the Reliance Series to have the highest level of data integrity. Other features of the Reliance APR include: dual Gigabit LAN, 16 GB or 32 GB two-way interleaved ECC DDR SDRAM usage, Serial ATA, and three independent PCI bus segments. For front-end infrastructure mission-sensitive tasking, or back-end productivity workloads, the Reliance APR Series is the ideal hardware solution to suit every need.

Model AX3-S290 Reliance APR Series Server

Chipset
Intel® E7520 Chipset
Intel® E7520 Memory Controller Hub (MCH)
Intel® 80332 I/O Processor with Intel® XScale Technology (IOP332)
Intel® 82801ER I/O Controller Hub 5 (ICH5-R)
Intel® 6700 PXH PCI-X Controller Hub (PXH)
Intel® 82802AB Firmware Hub (FWH)
PCI Local Bus Specification Revision 2.3 and PCI-X 2.2 Compliant

Processor
Intel® Xeon™ Processor, One or Two Processor Ready
Intel® 64-bit Xeon™ Processor w/ Intel® EM64T, One or Two Processor Ready
Intel® Netburst® Micro-architecture
Intel® Hyper Threading Technology
Demand Based Switching (DBS) w/ Enhanced Intel® Speedstep® Technology
604-pin FC-mPGA4 Socket
2.8 GHz to 3.6 GHz CPUs, 800 MHz Front Side Bus (FSB)

BIOS
8 Mbit Flash EEPROM w/ Phoenix® BIOS
Multi Boot BBS (BIOS Boot Specification) 1.4 Compliant
IDE Drive Autoconfigure, SIMBIOS 2.3, PnP
Built-in Password and Hardware BIOS Virus Protection
Supports IDE CD-ROM or SCSI Bootup
Enhanced Advanced Configuration and Power Interface (ACPI)

Cache
12k µop and 16 KB Data, Level 1 Execution Trace Cache
1 MB or 2 MB Advanced Transfer Cache (On-die, full speed Level 2 Cache) w/ 8-way Associativity & Error Correcting Code (ECC)

System Memory
Intel® x4 Single Device Data Correction (x4 SDDC) for Memory Fault Tolerance
Eight 184-pin (Two-way Interleaved) DIMM Sockets
Supporting Buffered (Registered) ECC DDR 333 MHz SDRAM
256 MB, 512 MB, 1 GB, and 2 GB DIMMs
Maximum Memory Capacity of 16 GB, OR
Supporting Buffered (Registered) ECC DDR 266 MHz SDRAM
256 MB, 512 MB, 1 GB, 2 GB, and 4 GB DIMMs
Maximum Memory Capacity of 32 GB

Server Management
ACPI/ACPM Power Management
Main Switch Override Mechanism
CPU Core 4-Phase-switching
Power Supply Voltage Monitoring and Alert
Chassis Intrusion Alarm and Logging
Fan Status/Temperature Monitoring and Alert
System Resources: Memory & Hard Disk Drive Utilization Monitoring & Alert
IPMI (Intelligent Platform Management Interface 2.0 (Optional)

Integrated Super I/O
One Floppy Controller, 1.44 MB, 2.88 MB
Two PS/2 Ports: Keyboard and Mouse
Five USB 2.0 Ports: Two Ports Rear Stacked and Three via Internal Headers
Two Fast UART 16550 Serial Ports

Integrated PCI IDE/Serial ATA
Two Enhanced IDE Channels Supporting Four IDE Devices
Supports Bus Master UDMA Mode 5, PIO Mode 4 & ATA/100 (100 MB/sec maximum)
Intel® 6300ESB I/O Controller Hub (ICH5-R) SATA Controller w/ Integrated RAID
Two Independent Chanels Supporting Two Serial ATA Devices
Supports First Party DMA (150 MB/sec maximum)

Integrated Gigabit LAN Interface
Broadcom® 10/100/1000Base-T Controller w/ Integrated Transceiver:
Broadcom® Dual Port Gigabit via Broadcom® BCM5721 Controller for 10/100/1000 Ethernet LAN Supporting Full and Half Duplex Operation

Integrated Graphics Adapter
ATI® Rage® XL SVGA PCI Video Controller with 8 MB Video Memory
Supporting up to 1600 x 1200 in 8/16/24/36 bbp Mode under 2D
Supporting up to 1024 x 768 in 8/16/24/36 bbp Mode under 3D

SCSI/RAID
Adaptec® AIC-7902 Dual Channel PCI-X-to-Ultra320 SCSI Single-Chip Host Adapter
Maximum Data Transfer 320 MB/sec on each Ultra320/LVD Channel

Expansion Slots
One PCI Express x8 (x4 Electrical)
Four PCI-X 64-bit/100MHz
Two PCI-X 64-bit/133MHz

Bus Architecture
PCI Express x8, 64-bit/100 MHz PCI-X, 64-bit/133MHz PCI

Housing Configuration
3U Rackmount Chassis

Dimensions (d) x (w) x (h) mm/inch
533.4 x 482.6 x 133.35 / 21" X 19" X 5.25"

Power and Drive Bays
Drive Bays: Six 5.25" External, One 3.5" External, and One 3.5" Internal
Power Supply Bay: One 650W PFC 2 + 1 VAC Redundant, or
One 550W PFC 1 + 1 VDC & VAC Redudant

Power Supply Features
Dual Redundant 650W 2 + 1 VAC Power Supply:
Input Voltage: 90~264 VAC Full Range
Output Characteristics:

Output Voltage	Output Current		Regulation		Output Ripple & Noise Max. [P-P]
	Min.	Max.	Load	Line	
+5V	3A	60A	±5%	±1%	50mV
-5V	0.05A	1A	±10%	±1%	150mV
+12V	2A	40A	+6%	±1%	100mV
-12V	0.05A	1A	±10%	±1%	150mV
+3.3V	1A	40A	±5%	±1%	50mV
+5VSB	0.1A	2.5A	±5%	±1%	50mV

Dual Redundant 550W 1 + 1 Dual VAC & VDC Power Supply (Optional):
Input Voltage: 90~264 VAC Full Range, 20~60 VDC
Output Characteristics:[1, 2]

Output Voltage	Output Current		Regulation		Output Ripple & Noise Max. [P-P]
	Min.	Max.	Load	Line	
+5V[3]	3.5A	30A	±5%	±1%	70mV
-5V	0.05A	0.7A	±5/-10%	±1%	120mV
+12V	2A	36A	+6%	±1%	120mV
-12V	0.05A	0.7A	+5/-10%	±1%	120mV
+3.3V[3]	1A	24A	±5%	±1%	70mV
+5VSB	0.1A	2A	+5/-6%	±1%	70mV

1. Total Output Power Not Exceed 550W
2. Total Output Power Not Exceed 500W with DC Input at 20 ~ 36 VDC
3. Total Current of +5V and +3.3V Not Exceed 40 A

Environmental
Operating Temperature: -5° to +55° C / -41° to 131° F
Storage Temperature: -40° to +70° C / -42° to +158° F
Relative Humidity: 90% RH @ +35° C / +95° F

NCS Technologies, Inc.
9490 Innovation Drive
Manassas, VA 20110
www.ncst.com
Voice: (703) 621-1700
Toll-Free: 1 (888) RING-NCS
Fax: (703) 621-1701