



The Augmentix A+R200 sets the standard for rugged 1U server solutions – delivering superior performance, enhanced availability, and simplified manageability for space-conscious deployments of mission-critical applications.

**SIMPLIFIED IT; LOWER TOTAL COST OF OWNERSHIP**

Complex IT environments typically mean higher IT costs. A+R200 rugged servers are the first rugged devices that are IT compatible with Dell™ PowerEdge™ R200 commercial products. This means seamless integration with existing IT infrastructures, scalability, and simplified management and maintenance of a single support model – reducing IT complexity, improving efficiency, and maximizing interoperability and value. A+ servers also feature a comprehensive suite of service and support offerings.

**RUGGED. RELIABLE. RIGHT-SIZED.™**

Remote data center and transit case real estate is often at a premium and the A+R200 is the solution for maximizing computing power per square foot. Re-engineered to fit into rack mount and transit case deployments with a depth of less than 20 inches, the rugged 1U form factor of the A+R200 provides maximum performance while requiring minimal space and energy needs.

**UNCOMPROMISING AVAILABILITY THROUGH ENHANCED DURABILITY**

Mission-critical applications require reliable, responsive server performance for maximum uptime, especially in challenging environments. The A+R200 was built with uncompromising availability in mind using our proven Armored Protection System™ (APS):

- **Unique Engineering Designs** - thermal, shock, vibration, and airborne contaminant protection systems
- **Advanced Construction Materials** - corrosion-resistant, industrial-strength steel housings that include stiffener plates and support bars
- **Independent MIL-STD-810F Testing and Certification** – proven reliable in extreme temperatures, varying vibration conditions, humidity, and altitude


**SUPERIOR PERFORMANCE**

The A+R200 provides advanced server technology based on core components from Dell's PowerEdge family of servers and packs advanced computing power into a "right-sized" chassis with:

- Single socket, featuring the latest Quad-Core Intel® Xeon® 3300 Series Processors
- Up to 1333 MHz Front Side Bus
- Up to 8 GB ECC DDR-2 memory
- Optional internal or external RAID
- High-performance SAS or SATA HDDs up to 2 TB in a front-mounted design
- Optimized power consumption through improved power supply units
- Improved network interfaces to enhance crucial network availability

**INTELLIGENT SERVER MANAGEMENT AND MAINTENANCE**

Optional in each A+R200 rugged server is the Dell Remote Access Controller DRAC4. The DRAC4 option provides remote management capabilities of the system over an IP connection. The result is more efficient server management and serviceability with less IT operator intervention.



Augmentix re-engineers and ruggedizes Dell™ PowerEdge™ Servers for customers who require industry-leading server technology, high performance, heightened server management, and enhanced durability for rack dense and transit case deployments in harsh environments.



**PROVEN VERTICAL SOLUTIONS**

- Military (Navy, USMC, Airforce, Army)
- Homeland Security (USCG)
- Telecom
- Industrial





### SUPERIOR PERFORMANCE

Superior, scalable computing performance in a rugged, dense package.

#### PHYSICAL CHARACTERISTICS

1U – 1.68" (H) x 16.7" (W) x 19.6" (D); Weight 26 lbs

#### CPU/PERFORMANCE<sup>1</sup>

- Single-Core Intel® Celeron®, Dual-Core Intel® Pentium®, Dual-Core Intel® Core™ 2 Duo, Dual-Core Intel® Xeon®, or Quad-Core Intel Xeon 3300 Series Processors
- Up to 1333 MHz Front Side Bus
- Up to 2x 6 MB L2 ECC cache

#### SYSTEM MEMORY

- Up to 8 GB ECC DDR-2 memory

#### RUGGED STORAGE CAPABILITIES

- Up to 2 SATA, SCSI, or SAS user-accessible hard drives: maximum storage of 2 TB

#### EMBEDDED ETHERNET

- Dual 10/100/1000 embedded NICs

#### VIDEO AND GRAPHICS CHARACTERISTICS

- Embedded ATI ES1000 with 32 MB of memory

#### I/O INTERFACES

- 2 PCI slots available (2 PCI-E or 1 PCI-E and 1 PCI-X)
- 4 USB 2.0 ports (2 front, 2 rear), 2 video, 9-pin serial, dual GB Ethernet ports, PS/2 keyboard, PS/2 mouse

#### MEDIA BAY

- Slim Line media bay – 1 optional DVD-ROM or DVD-RW

#### POWER SUPPLY

- Single 345W power supply

#### MOUNTS AND CASES

- Variety of industrial grade slides and rails are available for rack mount and transit case implementations.

### OPTIONAL A+ INTELLIGENT SERVER MANAGEMENT

Multi-faceted, triage approach that maximizes application uptime and availability.

#### RAID

- Optional internal RAID with support for RAID 0, 1 or external RAID.
- Either option occupies 1 PCI-E slot.

#### MANAGEMENT OPTIONS (OCCUPIES 1 PCI-X SLOT)

- A+ Server Availability Management System (includes the A+SAMP card and A+Display) provides server status, alerts and alarms via LCD and LEDs, full platform management and capable of recovering from software and transient hardware faults independent of the server operating system or software. Also provides a secure web dashboard.
- Dell™ Remote Access Card (DRAC) provides IP-KVM capabilities, remote media access and server status monitoring and fault alerting.

#### CONFIGURATION OPTIONS

The following table outlines various configuration options and the impact on the utilization of the 2 available PCI slots.

ELEMENT	DETAILS	#1	#2	#3	#4	#5	#6
SATA or SAS Hard Disk Drives (2 max)	Select SATA or SAS HDD	•	•	•	•	•	•
Internal RAID 0, 1 – utilizing SAS or SATA HDDs	Internal or External RAID occupies 1 PCI-E slot				•	•	•
A+SAMP and Programmable A+Display	A+SAMP card and Programmable Front LCD – occupies 1 PCI-X		•			•	
Dell DRAC v.4	Dell Remote Access Card provides IP-KVM feature – occupies 1 PCI-X slot			•			•
Open PCI-E or PCI-X Slots (tied to specific configurations)	Either have 2 PCI-E slots or 1 PCI-E and 1 PCI-X slot available (quoted after configuration)	2-E or 1-E & 1-X	1-E	1-E	1-E or 1-X	None	None

### ENHANCED DURABILITY

Includes A+ Thermal Management, Shock and Vibration Protection, Contaminant Filtration System all housed in a ruggedized mechanical structure which collectively supports A+ Server reliable operation in challenging environments for mission-critical applications.

#### CHASSIS CONSTRUCTION

- External: Heavy-duty, dense, corrosion-resistant industrial steel
- Internal: Industrial strength stiffening bars and structural embossing

#### FRONT PLATE AND BEZEL

- Corrosion-resistant, torque-resistant, industrial-strength front plate and locking bezel

#### A+ THERMAL MANAGEMENT

- Multi-channel forced convection cooling system maximizes air flow

#### A+ SHOCK AND VIBRATION PACKAGE

- Floating, shock isolation HDD carriers and vibration dampening compression layers provide maximum internal system protection

#### A+ CONTAMINATION FILTRATION SYSTEM

- Industrial front bezel with integrated compression gaskets protects the front of the A+ Server and houses integrated framed 1/4" System contaminants filter for maximum protection

#### ENVIRONMENTAL SPECIFICATIONS<sup>2</sup>

Independently-tested to select MIL-STD-810F standards

Operating Temperature	-4°F to 140°F (-20°C to 60°C) continuous operation: MIL-STD-810F, Methods 501.4 and 502.4, Procedure II; UL certified to 131°F (55°C)
Storage Temperature	-40°F to 158°F (-40°C to 70°C): MIL-STD-810F, Methods 501.4 and 502.4
Humidity	5% to 95%, continuous humidity (non-condensing): MIL-STD-810F, Method 507.4
Operating Vibration	Up to 1.04 grms, 10-500 Hz: MIL-STD-810F, Method 514.5, Random Vibration Fig. 5C-15
Non-Operating Vibration	MIL-STD-810F, Method 514.5 Random Vibration, Packaged Material
Operating Shock	20g, 11 m/s, terminal peak saw tooth shock pulse: MIL-STD-810F, Method 516.5
Non-Operating Shock	40g, 11 m/s, terminal peak saw tooth shock pulse: MIL-STD-810F, Method 516.5
Packaged Shock	48" x 8 corners: MIL-STD-810F, Method 516.5 for Packaged Goods in Transit
Altitude	Operational to 15,000 ft., non-operational to 40,000 ft.: MIL-STD-810F, Method 500.4, Procedure 1; UL certified operational to 10,000 ft.

#### REGULATORY COMPLIANCE

Safety	U.S. and Canadian - UL / cUL 60950
EMC	U.S. - ECC 47 CFR, Part 15, Class A
Europe	EN55022 Class A
Canada	ICES-003 Class A

#### COMPATIBILITY WITH DELL POWEREDGE SERVERS

Support for all Dell PE R200 BIOS and firmware, operating systems, system management software, I/O adapters, add-in adapters (RAID, SCSI, FC, SATA, etc.), external storage options (JBOD, tape backup units, etc.), external floppy disk, and bootable USB drives

#### VALIDATED OPERATING SYSTEMS

Microsoft Windows® 2003 Standard Edition, x64 Edition, Web Edition; Red Hat® Enterprise Linux ES 4, v4 for EM64T; SUSE® Linux Enterprise Server 10

#### WARRANTY AND SERVICE

**Standard:** 3 Years, 24/7/365 technical support, Return-to-Depot for repair

**Extended Terms:** Optional 4th and 5th Year of coverage

**On-site Repair:** 3-, 4-, and 5-Year Next Business Day on-site repair options

#### AUGMENTIX COMPANY PROFILE

An innovative provider of mission-critical computing solutions for deployment in extreme environments, Augmentix re-engineers Dell PowerEdge servers to produce technologically-advanced, reliable, and rugged computing systems for the Federal Government, Military, First Responders (Public Safety), Homeland Security, Energy, Telecommunication, Field Service, and other industries.