

Caspian R1100 Edge Storage Blade

Product Brief

The Astute Networks Caspian R1100 Edge Storage Blade is the industry's first 10Gb Advanced Telecommunications Computing Architecture (ATCA) iSCSI storage blade.

Designed to meet edge storage requirements for telecom, defense and other mission-critical applications, the Caspian R1100 provides a foundation for high-performance, sharable, scalable storage capacity across a wide range of ATCA chassis configurations.



Deployment Simplified

The Caspian R1100 can be installed in any ATCA-compliant shelf – from a compact two-slot chassis to fully-populated, 14-slot configurations. When basing a storage platform on Caspian Edge Storage Blades, users can create an easily deployed, managed and scalable storage infrastructure. A true storage-on-demand solution can be achieved by simply adding blades, while maintaining the same easy-to-use management interface regardless of capacity and performance point.

For simplified storage management, Caspian is bundled with the Edge Storage Foundation Suite which includes an enhanced graphical user interface (GUI). The secure web-based GUI enables users to easily monitor the status of disk drives, network connections and storage volumes as well as configure RAID arrays, partition volumes, assign iSCSI targets and configure NAS file sharing through NFS or SMB.

Performance Leadership

The Caspian R1100 provides Fibre Channel performance in an ATCA blade form factor by leveraging 10Gb iSCSI, hardware RAID and custom offload ASIC technology. Astute Networks' patent-pending TCP/IP and iSCSI offload ASIC enables a combination of performance and low power consumption features that are not available in any other ATCA storage solution. The result is a high performing iSCSI storage solution that runs fast, stays cool and provides the features and performance required by emerging applications.

With up to four drives per slot with the Caspian R1100 and six drives per slot (with the optional Caspian E1112), the Astute Networks Edge Storage architecture offers high storage density in an ATCA form factor. The system supports SAS, SATA and

Solid State disk drives which enables system designers to hit the desired price/performance points for a wide range of customer applications. All Caspian Edge Storage Blades use the identical disk drive FRUs which greatly simplifies spares management.

Built on open standards such as iSCSI, Ethernet and SNMP and compatible with leading carrier grade operating systems, the Caspian R1100 has been designed from the ground up for demanding edge storage deployments.

Benefits

- Right-size storage for edge applications
- High-density design frees chassis space for CPU blades
- Standards-based, scalable architecture grows with application requirements
- Consumes far less power than rack mount alternatives

Highlights

- First 10Gb ATCA iSCSI edge storage blade
- Supports four (4) SAS, SATA or Solid State disk drives
- NAS file sharing (SMB/CIFS)
- System scales to 60 disk drives
- RAID 0, 1, 10, 5, 6
- iSCSI boot
- Full SNMP management
- 650 MB/s throughput
- 70K IOPS
- 150W typical power dissipation
- NEBS Level 3 certified
- Mil-Spec certified

High-performance RAID Subsystem

- Hardware RAID 0, 1, 10, 5, 6
- Hot swap small form factor drive bays
- SAS, SATA and Solid State disk drive support
- Hot spare capable
- Auto rebuild
- 512MB RAID cache: read-ahead, write-through, write-back
- Up to 64 volumes
- Up to 60 disk drives

Storage Access

- 10Gb iSCSI block
- SMB NAS file sharing
- NFS NAS file sharing

Management Interfaces

- Secure Web-based GUI
- SNMP
- IPMI
- Command Line Interface (CLI)
- SOAP API

Popular OS Support

- Windows
- Windows 2003 Server
- Linux
- Red Hat
- Wind River PNE
- Monta Vista
- SUSE
- Solaris
- Solaris 10 – x86
- Solaris 10 – SPARC
- VMware ESX

Open Standards

Ethernet

- Jumbo frames (9000 bytes)

iSCSI

- iSCSI RFC3720, RFC5048
- iSCSI MIB, RFC4544
- iSCSI Boot, RFC4173
- iSNS
- CHAP

TCP/IP

- Complete state-based TCP/IP offload, RFC791
- Transmission Control Protocol (TCP) Specification, RFC1122
- SACK, RFC3517

Advanced TCA (PICMG)

- PICMG 3.0 R2
- PICMG 3.1 Option 1 (1Gb Fabric)
- PICMG 3.1 Option 9 (10Gb Fabric)

Environmental

Operating

- 5°C to 40°C (41°F to 104°F) 5-85% relative humidity, non-condensing
- Short-term -5°C to 55°C (23°F to 131°F) 5-90% relative humidity, non-condensing

Non-Operating

- -40°C to 70°C (-40°F to 158°F), up to 93% relative humidity, non-condensing

Measured Power

- 150W typical, 175W max.

Weight

- 8.2 lbs (3.7 Kg) (with four disk drives)

Regulatory Compliance

- NEBS Level 3 Certified
- Class A FCC
- RoHS 6/6
- WEEE
- MIL-STD-810G Environmental Engineering Considerations and Laboratory Tests
- MIL-STD-740-1 Airborne Sound Measurements and Acceptance Criteria of Shipboard Equipment
- MIL-S-901D Shock Test, High-Impact Shipboard Machinery, Equipment, and Systems, Requirements for
- MIL-STD-167-1A Mechanical Vibrations of Shipboard Equipment

Available Drive Configurations

- 500GB 7.2K RPM SAS drives
- 600GB 10K RPM SAS drives
- 300GB 10K RPM SAS drives
- 146GB 10K RPM SAS drives
- 146GB 15K RPM SAS drives
- SSD drives available upon request

ISO Certification

- Astute Networks is an ISO 9001:2008 certified company.



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