



# Relion™ 1701 | 2701

## Enterprise Servers Based on Intel Xeon 5500 “Nehalem”

*Versatile Enterprise Servers with Reliability, Availability and Serviceability*

### Features

- » 1U/2U rack mount servers
- » Up to two Intel Xeon 5500 Quad Core Processors
- » Up to 96GB of RAM using DDR3-1333 modules
- » SAS and SATA storage options
- » Integrated IPMI 2.0 management capabilities

### Benefits

- » Latest quad core processing power
- » Low latency, high performance memory subsystem for memory intensive HPC code
- » PCI Express expansion slots to accommodate high-performance messaging and storage interconnects.
- » Reliability, Availability and Serviceability to support critical enterprise applications

### Application Areas

- » Cluster Head Node
- » Web services
- » Enterprise Computing
- » Database Server
- » File Server

### Latest High-Performance Architecture - Intel Nehalem

Penguin's new Relion 1701 and 2701 are based on the all new Intel Xeon 5500 series 'Nehalem' CPUs and accompanying 'Tylersburg' chipset. This latest Intel dual processor, quad core platform is a complete redefinition of the x86 architecture. The new platform moves system RAM closer to the processors, making data readily available to the CPU cores. The Nehalem architecture also introduces substantially upgraded I/O capabilities, which meet or exceed the performance of current high performance cluster interconnect fabrics and storage backends.

### Penguin RAS – Reliability, Availability, Serviceability

The Relion 1701/2701 servers are designed to support critical enterprise applications yet ruggedness and resiliency is highly applicable to High Performance Computing cluster environments as well. Redundant, high-efficiency power supplies and integrated hardware health monitoring are there to both maximize the uptime and to reduce the operating cost. Should problems occur, systems are fully serviceable in-rack, with all components designed for toolless replacement. Storage options include economical yet 24/7 rated high capacity SATA as well as mission critical, high performance SAS drives with optional hardware RAID.

### Options for Enterprise and Clustering

Penguin Computing's Relion servers are available with a gamut of I/O options and supporting infrastructure for both enterprise data center and High Performance Computing environments. Our particular strength is integrated solutions consisting of Penguin servers, associated communications, storage infrastructure and necessary power and cooling solutions. Penguin has in-depth expertise on InfiniBand fabrics, including the latest QDR generation. Fiber channel host connectivity, SAN switches and storage backends are also readily available.

### Designed for Linux

All Penguin servers have been tested for compatibility with major commercial and free Linux distributions. Relion servers are available with Red Hat Enterprise Linux, SuSE Linux Enterprise Server or CentOS preinstalled. HPC clusters built from Relion servers can be effectively provisioned and managed by Scyld ClusterWare software from Penguin. Scyld ClusterWare is a fourth generation cluster management platform designed to make a cluster as easy to manage as a single system. Scyld ClusterWare has been architected by the 'father' of Linux clustering, Penguin Computing's CTO Donald Becker.



## Technical Specifications - Relion 1701 / 2701 Servers

	<b>Relion 1701</b>	<b>Relion 2701</b>
<b>Form Factor</b>	1U rackmount	2U rackmount server
<b>Processors</b>	Up to two Intel Xeon 5500 series quad core processors	
<b>Bus Speed</b>	Intel QuickPath Interconnect, up to 6.4GT/s depending on CPU option selected	
<b>Cache</b>	8MB level 3 cache	
<b>Chipset</b>	Intel 5520 'Tylersburg'	
<b>Memory</b>	DDR3-1333, 12 DIMM slots, up to 96GB	
<b>Expansion Slots</b>	3 x PCI Express gen2 x16, full height Expansion slot for optional RAID controller	3 x PCI Express x8, full height Expansion slot for optional RAID controller
<b>Internal Storage</b>	4 hot swap drive bays for 3.5" drives Enterprise class 7200rpm SATA drives High performance 10/15krpm SAS drives Optional hardware RAID	8 hot swap drive bays for 3.5" drives Enterprise class 7200rpm SATA drives High performance 10/15krpm SAS drives Optional hardware RAID
<b>Network Interfaces</b>	Integrated dual Intel 10/100/1000Mbps Ethernet	
<b>Ports</b>	4 x USB 2.0 PS2 keyboard and mouse 2 x LAN serial port VGA	
<b>Management</b>	IPMI 2.0 management processor with support for remote power control, remote console and server health monitoring	
<b>Power Supply</b>	Redundant 2 x 650W Power Supplies	Redundant 2 x 700W Power Supplies
<b>Dimensions</b>	1.70" H x 16.93" W x 27.38" D	3.44" H x 16.93" W x 27.38" D
<b>Warranty</b>	Standard 3-year warranty included with every Penguin Computing server	

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