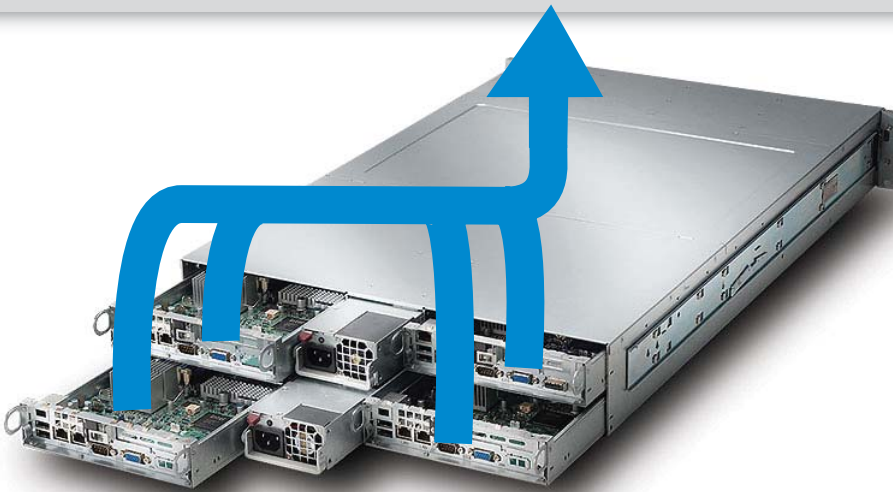
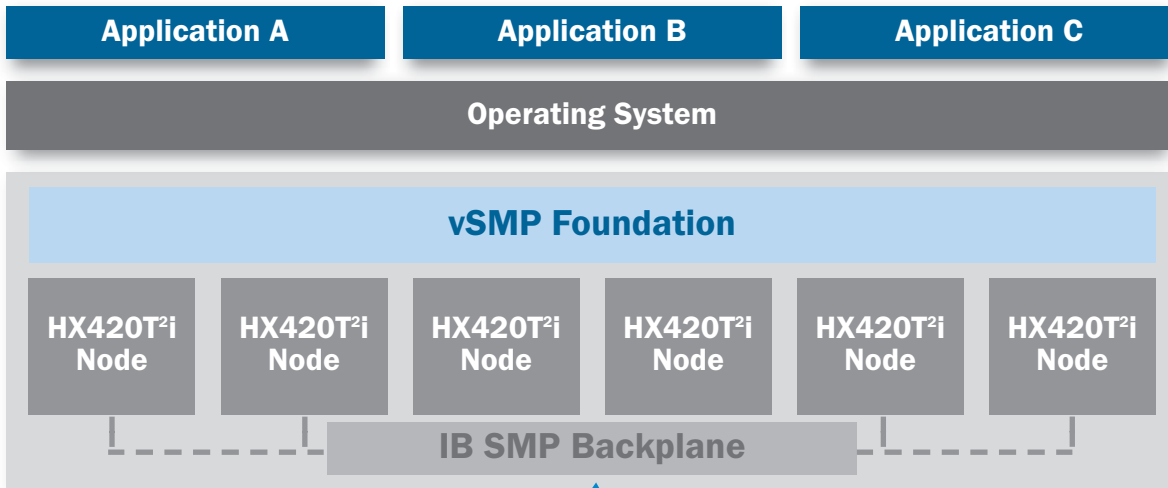




Viglen vSMP Solution

IT's Personal



Dynamic SMP scalability up to 128 cores and 1.5TB of shared, globally addressable memory.

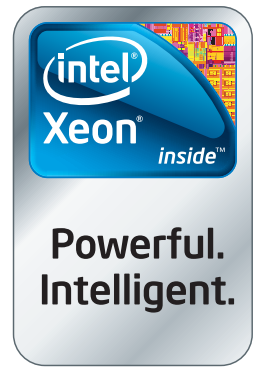
The Viglen vSMP Solution architecture enables the creation of industry-standard, high-end x86-based SMP systems, by aggregating multiple off-the-shelf x86 server boards into a single x86 system.



Great Minds Think



ScaleMP™



VIGLEN vSMP SOLUTION

The solution can be dynamically re-provisioned, providing flexibility by allowing users or the job scheduler to dynamically boot the system up in SMP mode when large jobs are requested, and run as normal compute nodes when there are no large memory requirements¹.

Memory Bandwidth

The Viglen vSMP Solution architecture enables the aggregation of memory-bandwidth across boards, as opposed to traditional SMP architecture where memory-bandwidth decreases as the machine scales. This enables solutions based on the Viglen vSMP Solution to show close-to-linear memory-bandwidth scaling. The Viglen vSMP Solution delivers the world's highest memory-bandwidth for four-sockets and larger x86 systems.

Intel Nehalem Architecture

The Viglen vSMP Solution is built upon the latest generation Intel architecture, taking advantage of Intel Turbo Boost Technology, Intel QuickPath Technology and Intel Hyperthreading technology. The combination of all these technologies produces increased performance across a range of scientific applications, both multi-threaded and single-threaded.

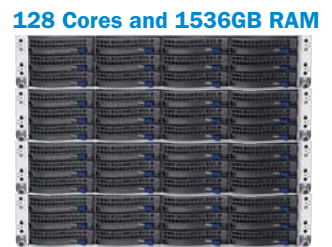
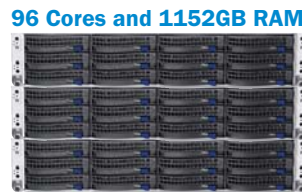
Dynamic Re-provisioning

Dual purpose system that can be used as standard compute nodes when no SMP requirement is present, and then configured as an aggregated SMP system when required¹.

Scale over time in line with requirement

The Viglen vSMP Solution provides a scalable platform that can be increased over time in line with user requirements. Start off your SMP node with a single HX420T²i (up to 32 cores and 384GB RAM) and build this up as the requirement for more computational power and memory increases.

¹ Dynamic re-provisioning of the SMP/Standard mode is achievable through pxe/ipmi controlled by a Viglen headnode with Rocks+



Specification

HX420T²i Specifications: (Up to four HX420T²i systems per virtual SMP system):

<ul style="list-style-type: none"> ◆ Base Board (4 Boards per chassis, up to sixteen boards in total per virtual SMP system) SuperMicro X8DTT-IBQF motherboard (ConnectX QDR*) ◆ ScaleMP versatile SMP (vSMP) Module The Versatile SMP architecture enables the creation of high-end SMP systems (module per board) ◆ Hot-Pluggable Nodes Four low profile AOC slots per chassis (One slot per board) Hot swappable motherboard module ◆ Chipset Intel® 5520 Chipset (Tylersberg) with QPI up to 6.4GT/sec ◆ Processor Quad (Nehalem 55xx) & Dual (5502) Core Intel® 64-bit Xeon Support ◆ Memory (per board, 16 boards max per SMP system) Up to 96GB of DDR3 ECC Reg 1333/1066/800MHz SDRAM in 12 DIMMs ◆ Integrated SATA Interface <ul style="list-style-type: none"> • Intel® ICH10R SATA 3.0Gbps Controller • RAID 0,1,5,10 (Windows) • RAID 0,1,10 (Linux) ◆ Infiniband (SMP Communication Fabric) Mellanox ConnectX DDR Infiniband 20Gbps Controller with QSFP connector 	<ul style="list-style-type: none"> ◆ Network <ul style="list-style-type: none"> • Dual LAN with Intel® 82576 Gigabit Ethernet Controller • Intel® I/OAT 3 support for fast, scaleable and reliable networking • VMDq support for better performance of virtualization • One Realtek RTL8201N PHY (dedicated IPMI) ◆ Display Adaptor Matrox G200eW ◆ PCI Expansion One PCI-E 2.0 x16 support riser card ◆ IPMI Management IPMI 2.0 + KVM with dedicated LAN ◆ External Ports <ul style="list-style-type: none"> • Two stacked USB connectors on rear of chassis • Three RJ45 LAN Ports (two network, one IPMI) ◆ PC Health Monitoring <ul style="list-style-type: none"> • Monitors for CPU Cores,+1.5V, +3.3V, +5V, +12V, +5 Stdby, +3.3 Stdby, VBAT, Memory Voltages. • CPU Core 6-Phase-switching voltage regulator ◆ Thermal Control Overheat LED indication, 4-pin PWM fan speed control ◆ Power Supply 1200W high-efficiency (1+1) redundant power supply (80PLUS Gold Certified) 	<ul style="list-style-type: none"> ◆ System Cooling Total of four 4-pin PWM fans ◆ Drive Bays Twelve 3.5" hot-swap SAS/SATA drives ◆ Server Management Free software tools supplied with the server to allow for easy management via the web allowing you to control and monitor your server from anywhere and anytime. <ul style="list-style-type: none"> • Health Monitoring CPU and System temperatures, System voltages, CPU and Chassis Fans, Chassis Intrusion & Redundant Power Failure • Remote Control Graceful power shutdown and reboot or hard power shutdown and reset without notice ◆ System Dimensions 2U Rackmount – 3.47" x 17.25" x 28.5" ◆ Standard Warranty 3 Years On-Site with a 5 working day response. Additional options are available; please speak to your Account Manager. ◆ Environment Ambient Temperature: Operating 10°C to +35°C Non-operating -40°C to +70°C Relative Humidity: Non-operating 90% @ 35°C
---	---	---

*QDR Infiniband switch required for SMP internal communication