# SUN COBALT™ RaQ XTR - Frequently Asked Questions

WITH ITS CUTTING-EDGE DESIGN, RAQ XTR IS THE FIRST 1RU SERVER APPLIANCE TO OFFER UP TO **FOUR FRONT-REMOVABLE,** RAID HARD DISK DRIVES IN ADDITION TO THE SUPERIOR EASE OF USE & RELIABILITY THAT COBALT SERVERS HAVE BEEN KNOWN FOR.

### Q. WHAT IS THE RAQ XTR AND WHAT DOES IT OFFER?

**A.** The Sun Cobalt RaQ™ XTR is a high performance, high-density server appliance for Service Providers (SPs) and application developers. It has been designed for customers that need systems combining outstanding performance, high reliability and low price with the ease of use of Sun Cobalt server appliances. RaQ XTR facilitates the deployment of large number of virtual sites on shared systems as well as resource intensive layered services (i.e. streaming, interactive database driven content, etc.) on dedicated plat-forms. Like all Cobalt server appliances, RaQ XTR comes with an intuitive Web-based user interface, the Server Desktop, which dramatically simplifies the administration and enables out-of–the-box installations in less than 15 minutes. RaQ XTR's innovative 1RU design makes it the ideal server plat-form for time and resource-constraint Service Providers.

Configured with Apache web server, InterBase 6 SQL Database and RAID 0,1 or 5, the Sun Cobalt RaQ XTR facilitates the quick deployment of business critical applications with high requirements for performance and reliability at a fraction of the cost of traditional general-purpose servers, or "build-it-yourself" alternatives. With only a few simple clicks on the server's web administration interface, administrator's can securely create new internet sites that offer web, email, file transfer, and web publishing services.

### Q. WHAT IS THE DIFFERENCE BETWEEN THE RAQ XTR AND THE RAQ 4?

A. Although from the front view RaQ XTR looks similar to RaQ 4, its depth doubles (23" compared to 12.5") to accommodate its enhanced hardware architecture. The front panel slides forwards and swivels to give direct front access to the four internal removable hard disk drives.

RaQ XTR dramatically advances Cobalt's server appliance technology by integrating powerful tools and applications into a high-performance, highly reliable, easy-to-deploy solution.

• Performance: RaQ XTR provides uncompromising performance needed for dedicated systems running very resource intensive applications or shared plat-forms supporting large numbers of virtual sites.

• Reliability: Today's business critical applications require high reliability plat-forms. The RaQ XTR addresses that by including standard software RAID 0, 1 and 5, a Watchdog Timer and ECC SDRAM memory.

• Ease of use: RaQ XTR comes with a front LCD panel, setup wizards and a re-designed Web-based administration Interface (The Server Desktop) for easy deployment and secure remote administration. All the applications and services are pre-installed and pre-configured, allowing a complete server installation in less than 15 minutes.

• High-density: RaQ XTR comes standard with up to four IDE Ultra-ATA/66 internal hard disk drives removable from the front in a space saving 1 RU format.

All of these features, plus a few more enhancements, make the RaQ XTR the ideal platform for SPs and application developers to quickly deploy their powerful applications and services.

### Q. WHAT'S NEW IN THE RAQ XTR?

*A. INCREASED PERFORMANCE:*

RaQ XTR includes a Pentium III processor (733 or 933 MHz), 256K of Level 2 on-die cache and supports up to 2 GB of PC-133 SDRAM.

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**A. INCREASED RELIABILITY:**
RaQ XTR includes internal RAID 1 and 5, thereby protecting the customer from any disk failure. This increased level of reliability addresses opportunities for the service providers to offer new higher value-add packages to their end-customers. The end-customers, specifically those who have higher reliability requirements because their web sites are becoming business critical (i.e. e-commerce), will now be able use RaQ XTR as their choice of hosting platform.

RaQ XTR's Error Correction Code (ECC) memory protects and ensures data integrity by using parity bits to detect and correct errors.
The Watchdog Timer is a system monitor that ensures system availability. It constantly makes sure the hardware/software hasn't crashed and automatically reboots the system in case of a system lockup. The Watchdog Timer provides enhanced reliability for systems performing mission-critical and real-time applications.

**A. REDUCED TCO (TOTAL COST OF OWNERSHIP)**
RaQ XTR dramatically reduces the Total Cost of Ownership by combining high performance, high reliability and high density with ease of deployment and low price.

**A. SUN COBALT SERVER DESKTOP BROWSER-BASED USER INTERFACE**
The Sun Cobalt Server Desktop is an Intuitive, easy-to-use Web-based Interface for non-technical users. The System administrator has access to the complete system settings while customers have their own Server Desktop interface that allows them to modify only their Virtual Site configuration parameters (users, groups, SSL, FTP, etc.). The new Server Desktop enhances the customers' experience by dramatically reducing the screen display time.

**A. REVISIONS OF THE APPLICATIONS TO THE LATEST STABLE VERSIONS:**
RaQ XTR upgrades the pre-installed / pre-configured applications and the kernel to the latest stable software version.

**A. SUN COBALT BLUELINQ REMOTE SOFTWARE DELIVERY SERVICE**
Keep your server up-to-date with the latest updates and services — download and install directly on your server with a click of a button.

**Q. WHAT THIRD PARTY APPLICATIONS ARE AVAILABLE FOR THE RAQ XTR?**
**A.** The array of solutions available for the RaQ XTR makes it the ideal appliance platform for high-traffic Web portals, e-commerce and hosting of resource intensive application. RaQ XTR customers and developers can build on leading edge Web and Internet technologies from industry leaders including Intershop, Oracle, OpenMarket, Miva, RSA, Sane Solutions, CyberCash, Signio, and Real Networks. Refer to the cobalt solutions page at http://www.cobalt.com/solutions/.

**Q. WHO IS THE TARGET CUSTOMER FOR RAQ XTR?**
**A.** There are four main markets for the RaQ XTR product line.
First and foremost are the existing targets of the Web Hosting Providers of the world. Familiar with Sun Cobalt RaQ server appliances, RaQ XTR is the product that they have been asking for to meet their needs of power and reliability. Bottom line is that they are looking for a solution that offers the following traits: simplicity, high performance, reliability, great economics (low TCO and high ROI) and flexibility. From a toolset perspective, they now have an easy migration for those existing customers running on the Windows NT platform. They also have the ability to offer their customers virtually any website development tool to go to market with. SPs will now have the ability to offer customers the ability to leverage their existing tool knowledge and deploy of a cost effective, reliable Sun Cobalt server appliance platform.

A second target market for the RaQ XTR is the Application Service Provider. For the most part, they are Hosting providers that are looking to offer value-added services through the deployment of 3rd party or custom built applications. The majority of these applications are database driven, so the RaQ offering includes the necessary performance and tools built into the box. These tools include Chili!Soft ASP, PHP, InterBase and PostgreSQL.

A third target for the RaQ XTR line is the developer community. They are focused on getting their applications deployed to the market, and Cobalt has support for the tools and technologies that they are using. Because Cobalt provides support for all of the major Web development tools and environments, Cobalt is the best solution to deploy on.

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A final target for the RaQ XTR line is the enterprises seeking a rapidly deployable, easily manageable dedicated server. The time-constraint IT staff are looking for reliable single purpose servers such as mail, DNS or firewall that come with pre-configured core Internet services and that they can just "plug and forget" in their corporate Data Centers.

**Q. WHAT SOLUTIONS CAN AN ISP DEPLOY WITH A RAQ XTR?**
**A.** The Sun Cobalt RaQ made it's introduction into the space by making the concept of dedicated hosting available to the Global 1,000,000 through it's unique offering of price, performance, and simplicity. RaQ XTR allows quick and easy deployment of highly demanding applications and services requiring performance and reliability. Due to its performance it can also be used to host large numbers of virtual sites on a single shared plat-form.

**Q. WHAT INTERNET SERVICES DOES RAQ XTR PROVIDE?**
**A.** RaQ XTR comes pre-configured with the latest versions of the Apache Web server, ProFTPd FTP server, Sendmail Email services, Bind DNS server, Chili!Soft ASP, InterBase 6 SQL, MySQL, PostgreSQL, PHP, Perl, Python, Front Page 2000 server extensions, Legato NetWorker, Knox Arkeia and Veritas NetBackup backup clients, 128-bit SSL, Telnet server, SNMP agent, and Cobalt's patent pending Bandwidth Management service.

**Q. HOW EASY IS IT TO INSTALL A RAQ XTR SERVER APPLIANCE?**
**A.** It takes less than 15 minutes to setup the server. All it takes is to configure the IP address, netmask, and default gateway address from the LCD console (buttons and LCD screen located on the front panel). Once this information is entered, you work with the Sun Cobalt Server Desktop to complete the configuration process. A single HTML setup wizard screen completes the setup of the RaQ XTR. No Unix knowledge is required to deploy a RaQ XTR Server Appliance.

**Q. WHAT IS INVOLVED IN THE INSTALLATION OF RAQ XTR?**
**A.** It is as simple as connecting the power and the Ethernet Port, configuring the IP address from the LCD screen, and configuring a single setup screen.

**Q. YOU SAY THAT THE RAQ XTR IS EASY TO USE, CAN YOU PROVE IT?**
**A.** Visit Cobalt's demo web site at http://demo.cobalt.com, and check for RaQ family in the "Products" section. The Demo button will lead you to a complete, fully interactive UI demo that will demonstrate the ease of use and functionality of the product.

**Q. WHAT IS BLUELINQ™?**
**A.** Sun Cobalt BlueLinQ is an innovative mechanism that automatically notifies the customer when new product updates or software packages are available for the RaQ XTR. These updates or services can come directly from Sun or, in the future, from third party software developers and service providers.

**Q. HOW DO I TURN MY RAQ XTR ON?**
**A.** The front "C" Logo Badge is the power switch. It glows when the RaQ XTR is powered on.

**Q. WHY DOES THE FRONT "C" LOGO BLINK?**
**A.** The front "C" Logo Badge blinks if there is a RAID or a fan failure.

**Q. HOW CAN I BACK UP MY RAQ XTR?**
**A.** In addition to the standard web-based backup support, the RaQ XTR provides the option to remotely backup the server by using either Legato NetWorker, Knox Arkeia or Veritas NetBackup backup server software. The Legato NetWorker, Knox Arkeia and Veritas NetBackup client software are included with the RaQ XTR. They require a separate network based Legato NetWorker, Knox Arkeia or Veritas NetBackup backup server.

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**Q. HOW DIFFICULT IS IT TO USE CHILI!SOFT ASP TO CONNECT AND USE CONTENT FROM A DATA-BASE?**
**A.** Not difficult at all.  Since the Chili!Soft ASP application is integrated into the Sun Cobalt RaQ XTR, it follows the simplicity value of the Appliance.  Simply go to the Chili!Soft configuration page in the user interface and use the wizard to connect to the database of choice (InterBase, PostgreSQL, MySQL, SequeLink, Oracle 8, Sybase, Informix, etc.)

**Q. DOES THE RAQ XTR SUPPORT NAME BASED VIRTUAL HOSTING?**
**A.** Name based virtual hosting means that the server can host multiple web sites on a single IP address. Along with IP based virtual hosting, the RaQ XTR does support this feature through the Web-based user interface, the Server Desktop. RaQ XTR can be used as a shared server to host hundreds of virtual sites.

**Q. CAN COBALT PRODUCTS BE USED AS A SECURE (SSL) WEB SERVER AS WELL?**
**A.** Yes, the RaQ XTR comes standard with 128-bit SSL and is manageable through the browser-based interface.

**Q. CAN I MANAGE RAQ XTR REMOTELY?**
**A.** Yes, the Cobalt Server Desktop uses SSL 128-bit encryption for secure remote administration.

**Q. CAN THE FRONT PANEL BE LOCKED?**
**A.** Yes, the front LCD panel can be locked with a password to prevent unauthorized access.

**Q. WHAT ABOUT SERVER AUTHENTICATION?**
**A.** Authentication is provided by Thawte Certification, a global leader in the digital certificate market place, will be the preferred provider of SSL certificates to Cobalt Servers. Please visit Thawte at: http://www.thawte.com

**Q. WOULD IT BE CHEAPER TO BUILD MY OWN BOX?**
**A.** No. You will find that the price of the build your own box is very comparable to Sun Cobalt RaQ servers. Also, the RaQ XTR comes pre-configured with all the Internet service software wrapped in a very easy to use browser based interface that takes the hassles out of adding and configuring the software. Moreover, Sun provides ongoing support and continuous product enhancements.

**Q. ARE NT, NETWARE, MACINTOSH OR UNIX LICENSES NEEDED TO USE RAQ XTR?**
**A.** No, there is no additional software license required to run or use the RaQ XTR.

**Q. WHAT NETWORK PROTOCOLS DOES THE RAQ XRT SUPPORT?**
**A.** TCP/IP.

**Q. CAN I UPGRADE THE KERNEL, FIRMWARE OR SERVICES?**
**A.** Sun provides updates and patches to the software via BlueLinQ as well as through the Sun website at http://www.cobalt.com/support/download/index.htm

**Q. DOES RAQ XTR HAVE ANY SLOTS FOR EXPANSION?**
**A.** Yes, one half-length (6.875-inch / 174.63 mm) 64-bit/33 MHz PCI slot is available for expansion.

**Q. WHAT IS THE STANDARD DRIVE CONFIGURATION OF THE RAQ XTR?**
**A.** RaQ XTR comes standard with up to four front-removable IDE internal hard drives.

**Q. DOES THE RAQ XTR SUPPORT RAID?**
**A.** Yes.  The RaQ XTR comes standard with RAID 0, 1 and 5 software technologies, allowing for data redundancy over two or more disks.

**Q. WHAT IS THE MAXIMUM STORAGE CAPACITY OF RAQ XTR?**
**A.** RaQ XTR comes standard with up to four removable IDE internal Hard Disk Drives. It supports virtually any **size** of Ultra-ATA/66 7200 RPM Hard Disk Drives. The disks have to have the same capacity in order to use RAID.

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**Q. ARE THE HARD DISKS HOT SWAPPABLE?**
**A.** No, RaQ XTR contains up to four internal removable Hard Disks placed in the front for easy access but the system requires to be rebooted before recognizing a new drive.

**Q. HOW MUCH MEMORY CAN I PUT IN?**
**A.** The RaQ XTR's RAM is expandable to 2GB using 4 DIMM sockets. Each one of the four memory slots supports 32 to 512 MB memory modules.

**Q. WHAT TYPE OF RAM DOES THE RAQ XTR USE?**
**A.** The memory type is PC-133, 168-pin, 3.3V, ECC SDRAM DIMM. The DIMM modules have to be less than 0.158 inches (4.0 mm) thick. Contact Cobalt Technical Support to receive a listing of approved memory vendors and the appropriate part numbers.

**Q. WHAT DOES ECC STAND FOR?**
**A.** Error Correction Code (ECC) memory modules use multiple Parity bits per byte (an advanced form of Parity detection) to detect double-bit errors. They also will correct single-bit errors without creating an error message. ECC memory protects and ensures data integrity on systems running mission-critical applications.

**Q. HOW MUCH POWER DOES THE RAQ XTR DRAW?**
**A.** The typical operating power consumption is 100 watts (130 watts max).

**Q. DOES THE RAQ XTR FIT IN A STANDARD 19-INCH RACK CABINET?**
**A.** Absolutely! The RaQ XTR ships with mounting ears, so it's very easy to install. Thanks to its high density (1U high), you can stack up to 42 RaQ XTRs in a standard 19-inch equipment rack.

**Q. WHAT ARE THE DIMENSIONS OF THE RAQ XTR?**
**A.** 17.50 in.x 22.75 in.x 1.75 in (44.5 cm x 57.8 cm x 4.5 cm).

**Q. WHAT IS RAQ XTR'S WEIGHT?**
**A.** RaQ XTR weights from 23.5 lbs (10.7 kg) for a 1 HDD system to 28.0 lbs (12.7 kg) for a 4 HDDs system.

**Q. WHAT ABOUT RAQ XTR'S WARRANTY AND SUPPORT?**
**A.** 30-day consulting, 1-year parts and labor. Additional warranty and support are available. For more information on Cobalt support packages, please visit the website at http://www.cobalt.com/support

**Q. HOW DO I BUY RAQ XTR?**
**A.** RaQ XTR will be available in January 2001 from select Sun resellers. For more information, please contact Sun at (888) 702-6225 or visit the Sun Web site at http://www.cobalt.com/shop/

**Q. WHAT RAQ XTR CONFIGURATIONS ARE AVAILABLE?**
**A.**

| SKU NUMBERS | DESCRIPTION |
| --- | --- |
| RRA GL7 UIU | 733MHZ CPU, 256MB of RAM, two 30 GB hard drives and RAID. |
| RRB HL8 UIU | 933MHZ CPU, 512MB of RAM, three 30 GB hard drives and RAID. |