Summit48*si*

Extreme Networks' Summit48si™ sets the new standard for Layer 3 switching at the edge by maximizing 10/100 port density, architecting unparalleled levels of reliability while maintaining leadership in Layer 3 software features and performance. The Summit48si's unsurpassed software features, capacity, and performance enable customers to provide more Layer 3 services to more users while using less space and at a lower cost than ever before.

At an incredible one rack unit (1.75") in height, the Summit48si packs a whopping 48 10/100 Ethernet ports and 2 Gigabit Ethernet ports–with non-blocking capacity to support *every* port at full line rate. This compact yet powerful package is capable of supporting two hot-swappable load sharing power supplies–a reliability first in a 1 rack unit Layer 3 switch. And the Summit48si reliability is enhanced even further with dual Gigabit Ethernet uplinks, both of which are active and can be aggregated for enhanced throughput *and* increased redundancy.

Extreme Networks' advanced Layer 3 software feature set, ExtremeWare®, combined with the new 1 rack unit, dual power supply form factor makes the Summit48si an unbeatable solution at the edge of the network. Featuring the same Inferno ("i") series chipset that powers Extreme's award-winning Alpine™ and BlackDiamond® modular switches, the Summit48si supports the most comprehensive set of Layer 3 switched services in the industry–including OSPF, prioritization and bandwidth management quality of service (QoS), access control lists (ACLs), denial of service protection (DoS), and many more features.

This unique combination of high performance, reliability and extensive Layer 3 switched services enables the Summit48si to support redeployment of Layer 3 edge services right to the edge of the network–saving the customer money and improving overall network functionality and performance.

Summit48si Industry-Leading Feature Set

Hardware Features
- 48 10/100 auto-negotiating Ethernet ports in a 1 RU footprint allow more network connections per inch of rack space
- 2 mini-GBIC Gigabit Ethernet ports provide duplicate active uplinks for greater throughput and redundant paths
- Capable of supporting redundant hot-swappable power supplies to maximize uptime and network availability

ExtremeWare Software Features
- Security features, including Network Login, SSH2, Access Control Lists (ACLs), RADIUS, TACACS+, VLANs, and thorough Denial of Service (DoS) protection, provide a secure armor
- SmartRedundancy™, Ethernet Automatic Protection Switching (EAPS), and Spanning Tree and Extreme STP extensions for enhanced network availability
- OSPF for large scalable meshed fault-tolerant networks
- Full-featured BGP4 for Internet peering

Performance Features
- Extreme Networks' award-winning "i" series chip set-based performance
- Full line rate bandwidth on every port
- 17.5 Gbps non-blocking switch fabric
- 4,096 VLANs and 128,000 MAC or Layer 3 addresses
- Policy-Based Quality of Service (QoS), with 8 hardware queues per port, and bidirectional rate shaping delivering bandwidth-by-the-slice
- ACLs for optimal security and diverse traffic classification
- Jumbo frame support for special high-throughput applications

Management Features
- Extensive management through HTTP, SNMP, RMON and command line interface
- Serial management port on the front panel for ease of installation

extreme networks™

Protocols and Standards

General Routing
RFC 1812 Router requirements
RFC 1519 CIDR
RFC 1256 IRDP router discovery
RFC 783 TFTP
RFC 951 BootP
RFC 1542 BootP
RFC 2131 BootP/DHCP helper
RFC 1591 DNS (client operation)
RFC 1122 Host requirements
RFC 768 UDP
RFC 791 IP
RFC 792 ICMP
RFC 793 TCP
RFC 826 ARP
RFC2338 Virtual Redundant
    Router Protocol (VRRP)
ESRP Extreme Standby Router
    Protocol, with Groups, Host attach
    and Domain features

RIP
RFC 1058 RIPv1
RFC 2453 RIPv2

OSPF
RFC 2328 OSPFv2
RFC 1587 OSPF NSSA Option
RFC 2154 OSPF with Digital
    Signatures (password, MD-5)

BGP4
RFC 1771 Border Gateway Protocol 4
RFC 1965 Autonomous System
    Confederations for BGP
RFC 1966 BGP Route Reflection
RFC 1997 BGP Communities Attribute
RFC 1745 BGP/OSPF interaction

IP Multicast
RFC 2362 PIM-SM
PIM-DM Draft IETF PIM Dense
    Mode v2-dm-03
RFC 1122 DVMRP Host req
DVMRP v3 draft IETF DVMRP v3-07
RFC 2236 IGMP v2
IGMP Snooping with configurable router
    registration forwarding

Quality of Service
IEEE 802.1D - 1998 (802.1p) packet priority
RFC 2474 DiffServ Precedence
RFC 2598 DiffServ Expedited Forwarding
RFC 2597 DiffServ Assured Forwarding
RFC 2475 DiffServ Core and Edge
    router functions

IEEE General
IEEE 802.1D Spanning Tree Protocol (STP),
    with multiple domains
IEEE 802.1Q VLAN tagging
IEEE 802.3ad draft - static config
IEEE GVRP (Generic VLAN
    Registration Protocol)
Port-based
MAC-based
Protocol-sensitive

Management
RFC 1157 SNMPv1/v2c
RFC 1907 SNMPv2
RFC 1757 RMON 4 groups: Stats, History,
    Alarms & Events
RFC 2021 RMON2 (probe config)
RFC 2668 MAU
RFC 1493 Bridge MIB
RFC 1213 MIB-II
RFC 2037 Entity MIB
RFC 2233 Interface MIB
RFC 2096 IP Forwarding
RFC 1724 RIPv2 MIB
ExtremeWare private MIB (includes ACL,
    QoS policy and VLAN config)
RFC 1866 HTML
RFC 2068 HTTP
RFC 854 Telnet
HTML and telnet management
Configuration logging
Multiple images, multiple configs
Multiple Syslog servers
999 local messages, criticals stored across reboots
RFC 1769 Ver 3 Simple Network Time Protocol

Security
FIPS-186 (Federal Information Processing
    Standards Publication 186) Secure
    Shell 2 (SSH2).
RFC 1851 3DES-CBC cipher

RFC 2792 DSA key exchange
TACACS+
RFC 2138 RADIUS
RFC 2139 RADIUS Accounting
RADIUS per-command Authentication
Access Profiles on all routing protocols
Access Profiles on all management methods

Denial of Service Protection
RFC 2267 Network Ingress Filtering
RPF (Unicast Reverse Path
    Forwarding) control
Wire-speed ACLs
Rate Limiting by ACLs
Server Load Balancing with Layer 3,
    4 protection of Servers
SYN attack protection
Uni-directional session control
CERT and "rootshell" immunity
    testing including:
CERT (http://www.cert.org)
• CA-97.28.Teardrop_Land - Teardrop
    and "LAND" attack
• IP Options Attack
• CA-98-13-tcp-denial-of-service
• CA-98.01.smurf
• CA-96.26.ping
• CA-96.21.tcp_syn_flooding
• CA-96.01.UDP_service_denial
• CA95.01.IP_Spoofing_Attacks_and_
    Hijacked_Terminal_Connections
*Host Attacks (http://www.rootshell.org/
    beta/exploits.html)*
• Syndrop
• Nestea
• Latierra
• Newtear
• Bonk
• Winnuke
• Simping
• Sping
• Ascend
• Stream
• Raped

Physical and Environmental
Summit48si Dimensions
(H) 1.75 in x (W) 17.25 in (D) x 18.25 in
    (Including PSU handle)

(H) 4.45 cm (W) 43.87 cm x (D) 46.41 cm
Weight: 14 lbs (6.35 Kg) (1 PSU)
PSU Weight: 2 lbs (0.9 Kg)
Operating Temperature: 0° C to 40° C
    (32° F to 104° F)
Storage Temperature: -10° C to 70° C
    (14° F to 158° F)
Humidity: 10% to 95% non-condensing
Power: 100-240 VAC, 50-60 Hz, 1.5-3.0 A max.
Heat Dissipation: 631 BTU/hr (185 watts)

Regulatory
Safety
UL 1950 3rd Edition, listed
EN60950:1992/A1-4:1997 plus
    ZB/ZC Deviations
IEC 950CB
Low Voltage Directive (LVD)
CSA 22.2#950-95
AS/NZS 3260
EN60825-1
FCC CFR 21

EMI/EMC
FCC Part 15 Class A
ICES-0003 A/C108.8-M1983 Class A
VCCI Class A
AS/NZS 3548
EN55022 Class A
CISPR 22 Class A
EN50082 -1:1997 include ENV 50204
EN55024:1998 includes IEC
    61000-4-2, 3, 4, 5, 6, 8, 11
EN 61000-3-2, 3
CNS 13438 Class A

Environmental
EN60068 to Extreme IEC68 schedule

Reliability
Minimum 93,350 hrs MTBF with 1 PSU
    to Mil HDBK 217F Notice 1, Parts
    Stress Method
Minimum 103,390 hrs MTBF with 2 PSU
    to Mil HDBK 217F Notice 1, Parts
    Stress Method
Fan redundancy, resilient up to 2 fan failures

Ordering Information

Order Number	Description
15601	Summit48si with 48 10/100BASE-TX Ethernet ports, two mini-GBIC-based 1000BASE-X slots (unpopulated), Basic Layer 3 switching, single AC power supply. Includes power cord for US and Japan.
15603	Summit48si AC power supply. Second power supply or spare.
15605	ExtremeWare Full Layer 3 Software License Voucher

For the latest Summit48si product specifications, check out www.extremenetworks.com/products/datasheets/summit48si.asp