Summit48*i*

The Summit48i™ is the ideal advanced 10/100 Mbps aggregation solution switch. Featuring the powerful "i" series chipset, it extends the power of Extreme's Ethernet service provisioning platform to the edge of the network, delivering non-blocking wire-speed IP/IPX routing and switching. With its 2 RU form factor, the Summit48i is perfect for deployment at the edge of advanced enterprises, multi-tenant/multi-dwelling units (MTUs/MDUs), Internet data centers, and co-location environments. In addition, by bringing Ethernet service provisioning to the edge of the network, the Summit48i offers flexibility in network design, allowing multiple subnets at the edge for superior performance and security.

The Summit48i is available with 48 switched 10/100 Mbps auto-negotiating Ethernet ports and two full-duplexed GBIC-based 1000BASE-SX, LX or LX-70 Gigabit Ethernet ports. It has a 17.5 Gbps non-blocking switch fabric with a forwarding rate of 10.1 million packets per second, and is available with an optional integrated dual power supply unit for increased fault tolerance.

Pre-installed on every Extreme Networks switch, the ExtremeWare software suite features industry standard protocols to ensure interoperability with legacy switches and routers, plus Policy-Based Quality of Service (QoS) for bandwidth management and traffic prioritization. ExtremeWare scales performance and increases availability by combining Policy-Based QoS with fully integrated server load balancing, web cache redirection, access control lists, VLAN switching and routing, IETF DiffServ and IEEE 802.1p.

- **Compact, full-featured edge device for Ethernet service provisioning in advanced enterprises, multi-tenant/multi-dwelling units (MTUs/MDUs), Internet data centers, and co-location environments**
- **17.5 Gbps non-blocking switch fabric bandwidth**
- **Full-featured BGP4 for Internet peering**
- **OSPF for large scalable meshed fault-tolerant networks**
- **Policy-Based Quality of Service with bandwidth management and traffic prioritation**
- **Bandwidth by the slice, which provides bidirectional rate shaping**
- **Network login, providing secure user mobility and bandwidth allocation**
- **Access control lists (ACLs) for enhanced security**
- **Wire-Speed IP/IPX Routing**
- **48 auto-negotiating 10/100 Mbps connections and 2 Gigabit Ethernet ports for high-density CPE, switch aggregation, front-end server load balancing and web cache redirection in server farms, or connecting enterprise desktops**
- **Fault tolerant: multiple load-sharing trunks, multiple spanning trees, Extreme Standby Router Protocol™, and redundant, load-sharing power supplies**
- **Switch and route jumbo frames**
- **4,096 IEEE 802.1q VLANs**

extreme networks™

Summit48i Product Specifications

General

True QoS via ExtremeWare and policy-based bandwidth control and application prioritization
Eight queues per port
Up to 128,000 Layer 2 addresses
Up to 128,000 Layer 3 addresses
4,096 VLANs

Prototols 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
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 802.1Q 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, Raped, Spring, Ascend, Stream

Physical and Environmental

Summit48i Dimensions:
(H) 3.50 in x (W) 17.25 in x (D) 20.0 in
(H) 8.90 cm x (W) 43.87 cm x (D) 50.8 cm
Weight: 21.7 lbs (9.90 Kg)
Operating Temperature: 0º C to 40º C (32º F to 104º F)
Storage Temperature: -10º C to 70º C (14º F to 158º F)
Humidity: 10% to 95% non-condensing
Power: 100-240 VAC, 50-60 Hz, 1.2 A max.
Heat Dissipation: 477 BTU/hr (140 watts)

Regulatory

Safety
UL 1950 3rd Edition, Listed
TUV/GS and GOST to EN60825-1 and EN60950: 1992/A3:1995+ZB/ZC Deviations
cUL Listed to CSA 22.2#950-95

EMI/EMC
FCC Part 15 Class A
ICES-0003 Class A
VCCI Class 1
EN55022 Class A
CISPR 22 Class A
EN55024

Environmental
EN60068 to Extreme IEC68 schedule

Reliability
Minimum 50000 hrs MTBF to Mil HDBK 217F Notice 1, Parts Stress Method

Acoustic
58 dB/pW Weighted Sound Power Level to EN27779 and EN29295

Ordering Information

Order Number	Description
15501	Summit48i with 48 10/100 (RJ-45) ports and two active (unpopulated) GBIC-based ports (SC) + two redundant (unpopulated) GBIC-based ports (SC), Basic Layer 3 ExtremeWare Software License, single power supply
15502	Summit48i with 48 10/100 (RJ-45) ports and two active (unpopulated) GBIC-based ports (SC) + two redundant (unpopulated) GBIC-based ports (SC), Basic Layer 3 ExtremeWare, dual internal power supply
15503	Summit48i with 48 10/100 (RJ-45) ports and two active (unpopulated) GBIC-based ports (SC) + two redundant (unpopulated) GBIC-based ports (SC), Full Layer 3 ExtremeWare Software License, single power supply
15504	Summit48i with 48 10/100 (RJ-45) ports and two active (unpopulated) GBIC-based ports (SC) + two redundant (unpopulated) GBIC-based ports (SC), Full Layer 3 ExtremeWare Software License, dual internal power supply
15509	Summit48i Full Layer 3 ExtremeWare Software License Voucher

For the latest Summit48i product specifications, check out www.extremenetworks.com/products/datasheets/summit48i.asp

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