



Summit 1i

The Summit1i™ is the ideal switch for mid-tier aggregation in enterprise, basement customer premise equipment (CPE) for metro area networks, and for server load balancing/web cache redirection in server co-location and hosting environments. With a compact 2U factor, the Summit1i switch integrates non-blocking Wire-Speed IP/IPX Routing and Layer 2 switching with advanced capabilities like Policy-Based Quality of Service, server load balancing, web cache redirection and access control lists- all at wire speed on every port.

Summit1i - Available in two configurations with six 100/1000BASE-T or 1000BASE-SX ports plus two GBIC-based 1000BASE-X ports, the Summit1i also comes with built-in redundant power supplies for increased fault tolerance.

Point of Presence (POP) The shift from narrowband technologies to gigabit level services has dramatically changed the networking requirements of the customer premise equipment portion of metro area networks, as well in Internet data centers fed by high-capacity connections. The Summit1i provides an ideal integrated platform to meet these new requirements.

Broadband Access POP - an integrated platform for providing transport and service termination at the CPE location. Features wire-speed switching and routing, filtering, virtual metropolitan area networks (vMANs), and bidirectional bandwidth controls.

Broadband Services POP - Provides a single aggregation point for the basic service delivery mechanisms necessary for an Internet data center- scalability, security, access policies, wire-speed access control lists, and server load balancing combined with both high availability and web cache redirection configurations.

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.

- **IP TDM bounded latency transport of voice and video traffic**
- **SONET-like reliability for non-stop operation**
- **Bandwidth by the slice for service provisioning in 500 Kbps increments**
- **Usage-based billing to recoup the service provider's investment**
- **Virtual MAN (vMAN) services for virtual private networks over a single MAN**
- **BGP4 for Internet peering**
- **Medium- and long-reach optics for metro and regional area networks**
- **Non-blocking 17.5 Gbps switch fabrics yields 12 million packets per second**
- **Wire-Speed IP/IPX Routing at Layer 3 with wire-speed Layer 2 switching**
- **Policy-Based Quality of Service with bandwidth management and prioritization**
- **Bandwidth provisioning per port**
- **Advanced resiliency and fault tolerance; fully redundant, load-sharing power supplies**
- **Dual switch configurations and ExtremeWare images**
- **Extreme Standby Router Protocol (ESRP™) for ultra-fast fail-over**
- **OSPF equal cost multipath routing**
- **1,024 IEEE 802.1Q VLANs**
- **IEEE 802.1ad compatible link aggregation**

Summit1i Product Specifications

General

True QoS via ExtremeWare and policy-based bandwidth control and application prioritization
Eight queues per port
Autosensing 100/1000BASE-T
Up to 128,000 Layer 2 addresses
Up to 128,000 Layer 3 addresses
1,024 VLANs

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
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)

BGP-4:

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

Ordering Information

Order Number	Description
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11102	Summit1i with 6 fixed 1000BASE-T ports (RJ-45) and two unpopulated GBIC-based 1000BASE-X ports (SC), Full Layer 3 Software License, dual power supply
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11104	Summit1i with 6 fixed 1000BASE-SX ports (MT-RJ) and two unpopulated GBIC-based 1000BASE-X ports (SC), Full Layer 3 Software License, dual power supply
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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, Nестea, Latierra, Newtear, Bonk, Winnuke, Sipping, Raped, Spring, Ascend, Stream

Physical and Environmental

Summit1i Dimensions:

(H) 3.50 in x (W) 17.25 in x (D) 19.0 in
(H) 8.90 cm (W) 43.87 cm x (D) 48.31 cm
Weight: 22 lbs (9.90 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: 85-250 VAC, 50-60 Hz, 1.4 A max.
Heat Dissipation: 556 BTU/hr (163 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

For the latest Summit1i product specifications, check out www.extremenetworks.com/products/datasheets/summit1i.asp

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