



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 - Delivers 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.

- **SONET-like reliability for non-stop operation**
- **Bandwidth by the slice for incremental service provisioning**
- **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**
- **Switch and route jumbo frames**

Summit1i Product Specifications

General

True QoS via ExtremeWare and policy-based bandwidth control and application prioritization
 Eight queues per port
 Auto-negotiating 100/1000BASE-T
 Up to 128,000 Layer 2 addresses
 Up to 128,000 Layer 3 addresses
 4,096 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

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, Simpung, 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 93,352 hrs MTBF with 1 PSU to Mil HDBK 217F Notice 1, Parts Stress Method
 Minimum 103,393 hrs MTBF with 2 PSUs 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
11102	Summit1i with 6 fixed 100/1000BASE-T ports (RJ-45) and two unpopulated GBIC-based 1000BASE-X ports (SC), Full Layer 3 Software License, dual power supply
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

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

For more product information from Extreme Networks, please call 1.888.257.3000. 3585 Monroe Street, Santa Clara, CA 95051-1450 Phone 408.579.2800 Fax 408.579.3000 Email info@extremenetworks.com Web www.extremenetworks.com



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