

Enterasys® SecureStack™ B3 Switch

Secure Gigabit Ethernet Stackable L2/L3/L4 Edge Switch with Optional Policy Support



High Availability design assures reliable network operations

Granular QoS capabilities support converged multimedia networks

Aligns network resource utilization with business goals and priorities

PoE and IPv4 routing support a variety of networks and devices

Investment protection via Limited Lifetime Warranty

1.15Tbps capacity and 571.2Mpps

Product Overview

Enterasys' leadership position in the switching market is further enhanced by the Enterasys® SecureStack™ B-Series stackable enterprise switches. The SecureStack B3 is a high-performance Gigabit Ethernet edge switch that provides scalable, wire-rate performance in support of the bandwidth-intensive and delay-sensitive requirements of today's demanding applications. With support for 16,000 MAC addresses, the B3 is an excellent choice for environments that require complete multilayer switching capabilities and support for high density 10/100/1000 Ethernet ports and static routing capabilities. The B3 is well suited for Gigabit Ethernet networks as well as 100Base-T networks that may migrate to a predominantly Gigabit Ethernet network. In addition to its complete multilayer switching capabilities, the B3 also provides static routing features, including RIP, static IPv4 routing, and an IPv6 address for management connectivity. Along with a switch capacity of 144Gbps, the B3 provides up to 48 10/100/1000 Ethernet ports as well as 4 10/100/1000 Ethernet uplink combo ports. As many as 8 B3s can be interconnected in a single stack to create a virtual switch that provides 1.15Tbps of capacity and up to 384 10/100/1000 Ethernet ports as well as 32 10/100/1000 Ethernet uplink combo ports.

Robust quality of service (QoS) features enable strong support for integrated multimedia networks, including Voice over IP, video, as well as all types of data-intensive applications. In addition to supporting Diffserv, the B3's optional policy license enables its highly customizable Layer 2/3/4 packet classification capabilities to work together with the 8 hardware-based priority queues associated with each Ethernet port to support a suite of differentiated services with as many as 8 distinct priority levels. The intelligent queuing mechanisms ensure that mission-critical applications receive prioritized access to network resources.

The B3 provides a secure network by utilizing its authentication and security features, which can be applied at the port level or at the user level. Making use of the NetSight® Policy Manager or a standard CLI, the SecureStack role-based architecture enables a network administrator to define distinct roles or profiles that represent operational groups within a business (e.g., employee, executive, guest, etc). Up to 3 discrete users/devices per port are authenticated via IEEE 802.1X, MAC address, or web authentication, and then assigned a predefined operational role. Network operations can be easily tailored to meet business-oriented requirements by providing each role with individualized access to network services and applications (e.g., a guest should have different network access privileges than an employee).

Benefits

Business Alignment

- Granular QoS capabilities support converged multimedia networks
- Aligns network resource utilization with business goals and priorities
- Reliable network operation for mission critical applications

Operational Efficiency

- Scalable architecture supports continued growth of network capacity
- Consolidated management capabilities reduce network operational expenses
- Security capabilities without the high overhead

Security

- Network resources securely allocated according to user roles
- Network security maintained concurrently with user mobility
- Architecture designed with integral network security

Support and Service

- Industry leading customer satisfaction and first call resolution rates
- Personalized services
- Limited Lifetime Warranty

There is nothing more important than our customers.

The SecureStack product line provides high port density in a 1u footprint and is environmentally friendly by design. By maximizing port density within a given amount of rack space, the B3 minimizes its cooling requirements. The B3's overall electrical requirement is further reduced by a low current draw and an extreme tolerance for high environmental temperatures. A highly scalable architecture and a Limited Lifetime Warranty ensures that an B3 network investment will sustain a secure, feature rich and cost-effective network well into the future.

Reliability and Availability

The B3 design incorporates redundancy and failure protection mechanisms complete with automatic failover and recovery capabilities to provide a reliable, high availability network. An integral power supply is the primary source of power for the B3 and complete power redundancy is provided by an optional external power supply. In addition to the standard version of the B3, there is also a redundant Power over Ethernet (PoE) version of the B3 which supports network devices that require external power such as wireless access points, VoIP phones and network cameras. A virtual switch can be created by interconnecting as many as 8 B3s in a single stack, which can be managed via a single IP address with redundant management connections. The B3's closed-loop stacking (CLS) capability utilizes bidirectional switch interconnects to maintain connectivity within the virtual switch despite any physical switch-level failure. Up to 8 Ethernet ports can be grouped together to create 8Gbps link aggregation group (LAG). A LAG's Ethernet ports can be collocated on a single B3 or they can be distributed across multiple B3s within a stack to prevent a switch-level failure from disrupting data communications.

Advanced Quality of Service

Robust quality of service (QoS) features enable strong support for integrated multimedia networks, including Voice over IP, video, as well as all types of data-intensive applications. With an optional policy license, the B3 provides highly customizable Layer 2/3/4 packet classification capabilities, which can be based upon physical port ID, MAC address, IP subnet, IP address, IP protocol type, IP type of service (ToS), differentiated service code point (DSCP), and TCP/UDP port. The B3 provides 8 hardware-based priority queues per Ethernet port, which work together with its packet classification capabilities to support a suite of differentiated services with as many as 8 distinct priority levels. The strict and weighted round robin queuing algorithms ensure that mission-critical applications receive prioritized access to network resources.

Security

The B3 provides a secure network by utilizing its authentication and security features, which can be applied at the port level or at the user level. Making use of the NetSight® Policy Manager or a standard CLI, the SecureStack role-based architecture enables a network administrator to define distinct roles or profiles that represent operational groups within a business (e.g., employee, executive, guest, etc). Up to 3 discrete users/devices per port are authenticated via IEEE 802.1X, MAC address, or web authentication, and then assigned a predefined operational role. In addition, the B3 also supports both standard and extended access control lists (ACLs) for supplementary network security. Network operations can be easily tailored to meet business-oriented requirements by providing each role with individualized access to network services and applications (e.g., a guest should have different network access privileges than an employee).

Investment Protection

The B3 is a cost-effective, feature-rich, stackable switch that provides a broad set of features today and will continue to deliver benefits well into the future. Customers can grow and/or enhance their networks while protecting their investment by adding B3s into existing B-Series networks and/or stacks. When multiple B3s are stacked together, each switch in the stack assumes the feature set that is common to all switches in the stack to ensure operational compatibility. All SecureStack products include a Limited Lifetime Warranty that continues for 5 years after the date of product discontinuation. For more information regarding warranty terms and conditions please go to <http://www.enterasys.com/support/warranty.aspx>.

Performance & Scalability

The B3 provides scalable, wire-rate performance in support of the bandwidth-intensive and delay-sensitive requirements of today's demanding applications. Along with a switch capacity of 144Gbps, the B3 provides up to 48 10/100/1000 Ethernet ports as well as 4 10/100/1000 Ethernet uplink combo ports. Leveraging the B3's wire-rate stacking capability, up to 8 B3s can be interconnected in a single stack to create a virtual switch that provides 1.15Tbps of capacity and up to 384 10/100/1000 Ethernet ports as well as 32 10/100/1000 Ethernet uplink combo ports. The B3 supports as many as 768 distinct policies (rules) that enable granular definition of network access capabilities for each role, thus aligning network resource utilization with business goals and priorities.

Standards and Protocols

MAC Address Table Size

16,000

VLANs

4,096 VLAN IDs

1,024 VLAN entries per stack

Embedded Services

Ingress Rate Limiting

IP TOS Rewrite

Layer 2/3/4 classification

Multilayer Packet Processing

Switching Services

IEEE 802.1D – MAC Bridges

IEEE 802.1s – Multiple Spanning Trees

IEEE 802.1t – 802.1D Maintenance

IEEE 802.1w – Rapid Spanning Tree

Reconvergence

IEEE 802.3 – 10Base-T

IEEE 802.3ab – 1000Base-T GE over

Twisted Pair

IEEE 802.3ad – Link Aggregation

IEEE 802.3af – PoE

IEEE 802.3u – 100Base-T

IGMP Snooping v1/v2

Jumbo Frame support (9,216 bytes)

One-to-One and Many-to-One Port Mirroring

Port Description

Protected Ports

Per-Port Broadcast Suppression

Spanning Tree Backup Root

STP Pass Thru

VLAN Support

Generic Attribute Registration Protocol (GARP)

Generic VLAN Registration Protocol (GVRP)

IEEE 802.1p – Traffic Management/ Mapping to 8 queues

IEEE 802.1q – VLAN tagging

IEEE 802.1v – Protocol-based VLANs

IEEE 802.3ac – VLAN tagging extensions

Port-based VLAN (private port / private VLAN)

Tagged-based VLAN

VLAN Marking of Mirror Traffic

Quality of Service

8 priority queues per port

802.3x Flow Control

IP DSCP – DiffServ Code Point

IP precedence

IP protocol

Queuing Control – Strict and Weighted

Round Robin

Source/Destination IP address

Source/Destination MAC address

Security

Dynamic and Static MAC Locking

EAP Pass Thru

IEEE 802.1x Port Authentication

IP Helper Address - Forward up to

6 manual settings

MAC-Based Port Authentication

RADIUS Accounting for MAC Authentication

RADIUS Client

RFC 3580 – Dynamic VLAN Assignment

RFC 3580 – Multi-user authentication per gigabit port

Password Protection (encryption)

Secure Networks policy license

Secured Shell (SSHv2)

Secured Socket Layer (SSL)

User and IP Phone Authentication

Web-Based Port Authentication

IPv4 Routing & Multicast

ARP & ARP Redirect

DCHP/BOOTP Relay

DVMRP

IP Helper Address - Forward up to

6 manual settings

RFC 826 – Ethernet ARP

RFC 1058 – RIP v1

RFC 1256 – ICMP Router Discovery Messages

RFC 1724 – RIPv2 MIB Extension

RFC 2236 – IGMPv2

RFC 2338 – IP Redundancy VRRP

RFC 2362 – PIM-SM

RFC 2453 – RIP v2

RFC 2787 – VRRP MIB

RFC 2863 – The Interfaces Group MIB

RFC 2933 – IGMP MIB

RFC 2934 – PIM MIB for IPv4

RFC 3046 – DHCP/BootP Relay

RFC 3768 – VRRP – Virtual Router

Redundancy Protocol

Static Routes

Telnet Support

RFC and MIB Support

Enterasys Entity MIB

Enterasys Policy MIB (Optional License)

Enterasys VLAN Authorization MIB

IEEE 802.1X MIB – Port Access

IEEE 802.3ad MIB – LAG MIB

RFC 826 – ARP and ARP Redirect

RFC 951, RFC 1542 – DHCP/BOOTP relay

RFC 1213 – RFC 1213-MIB/MIB II

RFC 1493 – BRIDGE-MIB

RFC 1643 – Ethernet-like MIB

RFC 2131, RFC 3046 – DHCP client/relay

RFC 2233 – IF-MIB

RFC 2271 – SNMP Framework MIB

RFC 2618 – RADIUS Authentication Client MIB

RFC 2620 – RADIUS Accounting Client MIB

RFC 2668 – Managed Object Definitions for

802.3 MAUs

RFC 2674 – P-BRIDGE-MIB

RFC 2674 – QBRIDGE-MIB VLAN Bridge MIB

RFC 2737 – Entity MIB (physical branch only)

RFC 2787 – VRRP-MIB

RFC 2819 – RMON-MIB

RFC 2863 – IF-MIB

RFC 2933 – IGMP MIB

RFC 3289 – DiffServ MIB

RFC 3413 – SNMP Applications MIB

RFC 3414 – SNMP Usn MIB

RFC 3415 – View-based Access Control Model for SNMP

RFC 3580 – IEEE 802.1X Remote

Authentication Dial In User Service (RADIUS)

Usage Guidelines

RFC 3584 – SNMP Community MIB

RFC 3621 – Power over Ethernet MIB

Management

Alias Port Naming

Command Line Interface

Configuration Upload/Download

Editable Configuration File

FTP/TFTP client

Multi configuration File Support

NetSight Automated Security Manager

NetSight Console

NetSight Inventory Manager

NetSight Policy Manager

Node/Alias Table

RFC 854 – Telnet

RFC 1157 – SNMP

RFC 1901 – Community-based SNMPv2

RFC 2271 – SNMP Framework MIB

RFC 3413 – SNMPv3 Applications

RFC 3414 – User-based Security Model for SNMPv3

RFC 3415 – View-based Access Control Model for SNMP

RMON (Stats, History, Alarms, Events)

Simple Network Time Protocol (SNTP)

Syslog

Telnet with SSH

Text-based Configuration Upload/Download

Webview via SSL Interface

Switch Model Specifications

	B3G124-24	B3G124-24P	B3G124-48	B3G124-48P
Performance				
Throughput Capacity wire-speed Mpps (switch / stack)	35.7Mpps /285.7Mpps	35.7Mpps /285.7Mpps	71.4Mpps /571.2Mpps	71.4Mpps /571.2Mpps
Switching Capacity (switch / stack)	48Gbps / 384Gbps	48Gbps / 384Gbps	96Gbps / 768Gbps	96Gbps / 768Gbps
Stacking Capacity (switch / stack)	48Gbps / 384Gbps	48Gbps / 384Gbps	48Gbps / 384Gbps	48Gbps / 384Gbps
Aggregate Throughput Capacity (switch / stack)	96Gbps / 768Gbps	96Gbps / 768Gbps	144Gbps / 1.15Tbps	144Gbps / 1.15Tbps
Electrical Specifications				
PoE Class 3	N/A	369.6 watts	N/A	375 watts
PoE Class 2	N/A	N/A	N/A	7.5 watts (Class 2)
PoE per port	N/A	15.4 watts (Class 3)	N/A	7.8 watts (Class 3)
802.3af Compliance	N/A	Yes	N/A	Yes
Miscellaneous	N/A	System power monitor Per Port: <ul style="list-style-type: none"> • Enable/disable • Priority safety • Overload & short circuit protection 	N/A	System power monitor Per Port: <ul style="list-style-type: none"> • Enable/disable • Priority safety • Overload & short circuit protection
Physical Specifications				
Dimensions (H x W x D)	H: 4.4 cm (1.73") W: 44.1 cm (17.36") D: 36.85 cm (14.51")	H: 4.4 cm (1.73") W: 44.1 cm (17.36") D: 36.85 cm (14.51")	H: 4.4 cm (1.73") W: 44.1 cm (17.36") D: 36.85 cm (14.51")	H: 4.4 cm (1.73") W: 44.1 cm (17.36") D: 36.85 cm (14.51")
Net Weight	5.05 kg (11.11 lb)	6.25 kg (13.75 lb)	5.35 kg (11.77 lb)	6.55 kg (14.41 lb)
MTBF	162,308 hours	115,324 hours	110,509 hours	81,176 hours
Physical Ports	<ul style="list-style-type: none"> • (24) 10/100/1000 auto-sensing, auto-negotiating, MDI/MDI-X RJ45 ports • (4) mini-GBIC combo ports • (2) dedicated stacking ports • (1) DB9 console port • (1) RPS port 	<ul style="list-style-type: none"> • (24) 10/100/1000 PoE auto-sensing, auto-negotiating, MDI/MDI-X RJ45 ports • (4) mini-GBIC combo ports • (2) dedicated stacking ports • (1) DB9 console port • (1) RPS port 	<ul style="list-style-type: none"> • (48) 10/100/1000 auto-sensing, auto-negotiating, MDI/MDI-X RJ45 ports • (4) mini-GBIC combo ports • (2) dedicated stacking ports • (1) DB9 console port • (1) RPS port 	<ul style="list-style-type: none"> • (48) 10/100/1000 PoE auto-sensing, auto-negotiating, MDI/MDI-X RJ45 ports • (4) mini-GBIC combo ports • (2) dedicated stacking ports • (1) DB9 console port • (1) RPS port
Power Requirements				
Nominal Input Voltage	100 – 240 VAC	100 – 240 VAC	100 – 240 VAC	100 – 240 VAC
Input Frequency	50 – 60Hz	50 – 60Hz	50 – 60Hz	50 – 60Hz
Input Current	0.577A @ 110V, 0.291A @ 220V	4.37A @ 110V, 2.483A @ 220V	1.06A @ 110V, 0.526A @ 220V	5.09A @ 110V, 2.882A @ 220V
Power Consumption	63.5 watts	481 watts	116.6 watts	559.9 watts
Temperature				
IEC 6-2-1 Standard Operating Temperature	0° to 40° C (32° to 104° F)	0° to 40° C (32° to 104° F)	0° to 40° C (32° to 104° F)	0° to 40° C (32° to 104° F)
IEC 6-2-14 Non-Operating Temperature	-40° to 70° C (-40° to 158° F)	-40° to 70° C (-40° to 158° F)	-40° to 70° C (-40° to 158° F)	-40° to 70° C (-40° to 158° F)
Heat Dissipation	294 BTUs/Hr	1,451 BTUs/Hr	441 BTUs/Hr	1,670 BTUs/Hr
Humidity				
Operating Humidity	5% - 95% non-condensing	5% - 95% non-condensing	5% - 95% non-condensing	5% - 95% non-condensing
Vibration				
	IEC 68-2-6, IEC68-2-36	IEC 68-2-6, IEC68-2-36	IEC 68-2-6, IEC68-2-36	IEC 68-2-6, IEC68-2-36
Shock				
	IEC 68-2-29	IEC 68-2-29	IEC 68-2-29	IEC 68-2-29
Drop				
	IEC 68-2-32	IEC 68-2-32	IEC 68-2-32	IEC 68-2-32

Switch Model Specifications (cont.)

	B3G124-24	B3G124-24P	B3G124-48	B3G124-48P
Agency and Regulatory Standard Specifications				
Safety	UL 60950-1, CSA 22.1 60950, EN 60950-1, and IEC 60950-1	UL 60950-1, CSA 22.1 60950, EN 60950-1, and IEC 60950-1	UL 60950-1, CSA 22.1 60950, EN 60950-1, and IEC 60950-1	UL 60950-1, CSA 22.1 60950, EN 60950-1, and IEC 60950-1
EMC	FCC Part 15 (Class A), ICES-003 (Class A), BSMI, VCCI V-3, AS/NZS CISPR 22 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, and EN 61000-3-3	FCC Part 15 (Class A), ICES-003 (Class A), BSMI, VCCI V-3, AS/NZS CISPR 22 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, and EN 61000-3-3	FCC Part 15 (Class A), ICES-003 (Class A), BSMI, VCCI V-3, AS/NZS CISPR 22 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, and EN 61000-3-3	FCC Part 15 (Class A), ICES-003 (Class A), BSMI, VCCI V-3, AS/NZS CISPR 22 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, and EN 61000-3-3

Redundant Power Supply Equipment Specifications

C2RPS-CHAS2 SecureStack Power Shelf

Power Supply Slots

2

Dimensions (H x W x D)*

48.2 cm (19.0") x 5.5 cm (2.2") x 18.0 cm (7.0")

Weight

0.95 kg (2.09 lbs)

Note: dimensions include integrated rack mount ears

Operating Relative Humidity

10% to 90%

AC Input Frequency Range

50-60 Hz

AC Input Voltage Range

100 - 240 VAC

Maximum Output Power

156 W continuous

C2RPS-CHAS8 SecureStack Power Shelf

Power Supply Slots

8

Dimensions (H x W x D)*

44.0 cm (117.3") x 22.26 cm (8.77") x 26.4 cm (10.4")

Weight

5.27 kg (11.6 lbs)

C2RPS-POE Power Supply

Dimensions (H x W x D)*

4.45 cm (1.75") x 44.5 cm (17.5") x 16.5 cm (6.5")

Net Weight (Unit Only)

3.47 kg (7.63 lbs)

Gross Weight (Packaged Unit)

4.95 kg (10.89 lbs)

MTBF

589,644 hours at 25° C (77°F)

Operating Temperature

5° C to 40° C (41° F to 104° F)

Storage Temperature

-30° C to 73° C (-22° F to 164° F)

Operating Relative Humidity

10% to 90%

AC Input Frequency Range

50-60 Hz

AC Input Voltage Range

100 - 240 VAC

Maximum Output Power

500 W continuous

C2RPS-PSM Power Supply

Dimensions (H x W x D)

19.6 cm (7.7") x 5.2 cm (2.04") x 25.7 cm (10.1")

Net Weight (Unit Only)

1.75 kg (3.85 lbs)

Gross Weight (Packaged Unit)

3.20 kg (7.04 lbs)

MTBF

300,000 hours

Operating Temperature

5° C to 40° C (41° F to 104° F)

Storage Temperature

-30° C to 73° C (-22° F to 164° F)

Ordering Information

SecureStack B3 Switches	
Part Number	Description
B3G124-24	SecureStack B3 with (24) 10/100/1000 RJ45 ports, (4) mini-GBIC combo ports, and (2) dedicated stacking ports. Total active ports per switch: (24) Gigabit ports.
B3G124-24P	SecureStack B3 with (24) 10/100/1000 PoE RJ45 ports, (4) mini-GBIC combo ports, and (2) dedicated stacking ports. Total active ports per switch: (24) Gigabit ports.
B3G124-48	SecureStack B3 with (48) 10/100/1000 RJ45 ports, (4) mini-GBIC combo ports, and (2) dedicated stacking ports. Total active ports per switch: (48) Gigabit ports.
B3G124-48P	SecureStack B3 with (48) 10/100/1000 PoE RJ45 ports, (4) mini-GBIC combo ports, and (2) dedicated stacking ports. Total active ports per switch: (48) Gigabit ports.
Optional Software Licenses	
B3POL-LIC	SecureStack B3 policy license (per switch)
B3POL-LIC25	SecureStack B3 policy licenses – Qty of 25
B3POL-LIC50	SecureStack B3 policy licenses – Qty of 50
Cables	
C2CAB-SHORT	SecureStack stacking cable for connecting adjacent switches (30cm)
C2CAB-LONG	SecureStack stacking cable for connecting top switch to bottom switch (1m)
C2CAB-2M	SecureStack stacking cable for all B3/C3 models (2m)
C2CAB-5M	SecureStack stacking cable for 48-port B2/C2 models and all B3/C3 models (5m)
SSCON-CAB	SecureStack Console Cable (for use on all A2, B2, B3, C2, and C3 switches)
MGBIC Modules	
MGBIC-02	Mini-GBIC with 1000Base-T via RJ45 Connector
MGBIC-08	Mini-GBIC with 1000Base-LX/LH (70KM Long Haul) SMF via LC Connector
MGBIC-LC01	Mini-GBIC with 1000Base-SX via LC Connector
MGBIC-LC03	Mini-GBIC with 1000Base-LX/LH (2KM Long Haul) MMF via LC Connector
MGBIC-LC09	Mini-GBIC with 1000Base-LX via LC Connector
MGBIC-MT01	Mini-GBIC with 1000Base-SX via MTRJ Connector
SecureStack Redundant Power Supply Equipment	
C2RPS-CHAS2	SecureStack 2-slot RPS chassis (supports up to 2 C2RPS-PSMs)
C2RPS-CHAS8	SecureStack 8-slot RPS chassis (supports up to 8 C2RPS-PSMs)
C2RPS-PSM	SecureStack 150-watt redundant Non-PoE power supply with one DC cable
C2RPS-SYS	SecureStack 8-slot RPS chassis plus 1 C2RPS-PSM (chassis supports up to 8 C2RPS-PSMs)
C2RPS-POE	SecureStack 500-watt redundant PoE power supply with one DC cable

Warranty

As a customer-centric company, Enterasys is committed to providing quality products and solutions. In the event that one of our products fails due to a defect, we have developed a comprehensive warranty that protects you and provides a simple way to get your products repaired or media replaced as soon as possible.

SecureStack B3 switches come with a Limited Lifetime Warranty against manufacturing defects. Software warranties are ninety (90) days, and cover defects in media only. For full warranty terms and conditions please go to: <http://www.enterasys.com/support/warranty.aspx>.

Service and Support

Enterasys Networks provides comprehensive service offerings that range from Professional Services to design, deploy and optimize customer networks, customized technical training, to service and support tailored to individual customer needs. Please contact your Enterasys account executive for more information about Enterasys Service and Support.

Contact Us

For more information, call Enterasys Networks toll free at **1-877-801-7082**, or +1-978-684-1000 and visit us on the Web at enterasys.com



© 2008 Enterasys Networks, Inc. All rights reserved. Enterasys Networks reserves the right to change specifications without notice. Please contact your representative to confirm current specifications. Please visit <http://www.enterasys.com/company/trademarks.aspx> for trademark information.

