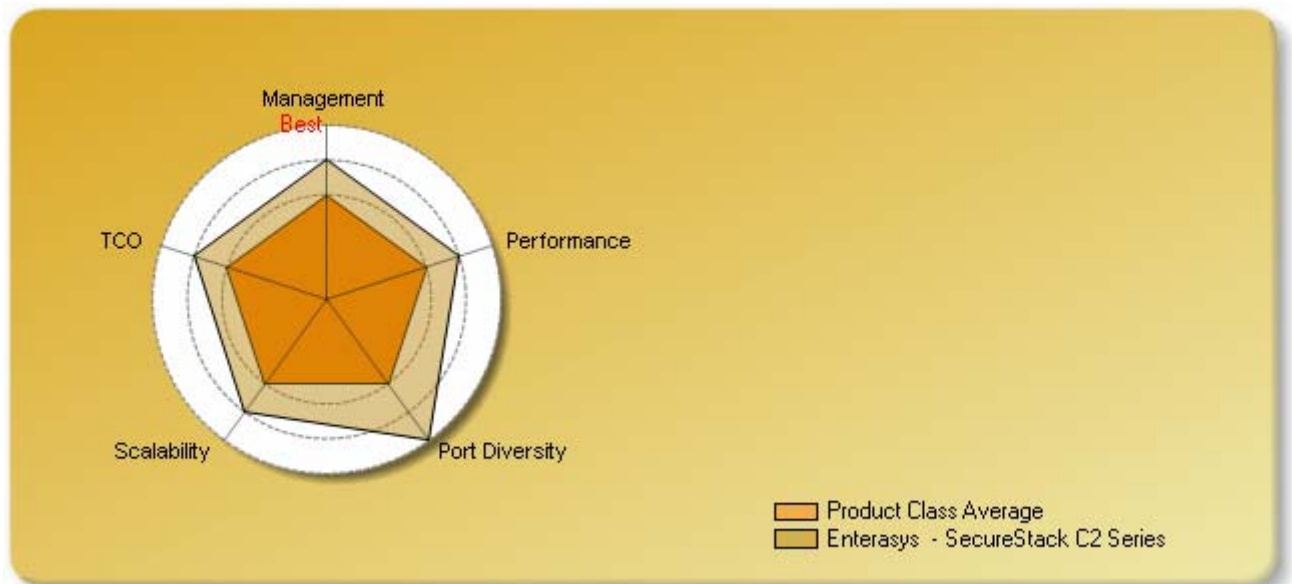


Enterasys SecureStack C2 Series

Type:	Product Assessment
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Product Class:	Fixed Switching in Enterprise Network Systems
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■ Summary

Current Perspective **Threatening**

The Enterasys SecureStack C2 Series is threatening to competitors, because it is an advanced stackable switch that makes a strong market play in the wiring closet with a power over Ethernet (PoE) option, Layer 3 support and support for 10 Gigabit Ethernet, all wrapped up in a single stackable product line. The only real factor that holds back the SecureStack C2 series is Enterasys's own lack of visibility within enterprise IT departments. Enterasys simply does not enjoy the recognition that its predecessor parent company, Cabletron, did. The SecureStack C2 is stackable switch with security, QoS, port flexibility and management features that are equal to or better than competitors' products on the market. The PoE models of the SecureStack C2 Series offer up to 23 PoE ports per switch, but can be expanded to all copper ports on the switch with the addition of an external power supply sold by Enterasys. The only thing lacking in the SecureStack C2 product line is an all 10 Gigabit Ethernet model. The addition of such a model would allow customers that wish to aggregate 10 Gigabit Ethernet to use the C2 series for that purpose as well.

The SecureStack C2 Series has a number of competitive advantages that make it a true next-generation fixed configuration stackable switch. First, there is enough variety in the switches' port configurations to satisfy the majority of customer requirements for switch flexibility. Enterasys has made three of these models power over Ethernet capable, one with Gigabit Ethernet, one with Gigabit via RJ-21 ports and one with Fast Ethernet. This allows for the maximum amount of flexibility for customers deploying wireless access points or a VoIP system. There is also a 24-port Gigabit Ethernet model with two 10 Gigabit Ethernet uplinks, a competitive choice to connect to a 10 Gigabit core and bypass more traditional aggregation layers. The SecureStack C2 Series also has a very rich set of multi-layer features that emphasize the feature weaknesses of many competing in-class products. While many companies have brought forth products in this class, the SecureStack C2 Series was feature-complete at launch, and puts competitors still promising feature upgrades on the defensive.

Target Markets: Small to Medium Enterprises, Large Enterprises, Global 2000

Strengths

- The SecureStack C2 Series has a good selection of configuration options, giving customers and resellers the flexibility they need to make compelling sales and technology arguments. The product also has one of the most complete multi-layer feature sets (and full support for Enterasys' policy-based management), further extending Enterasys' competitive advantage in the sales field.
- The SecureStack C2 Series has a model that supports two 10 Gigabit Ethernet ports, making it a key component for the end-to-end 10 Gigabit uplink capable network.
- The SecureStack C2 Series supports PoE, not just on a 10/100 model, but also on a 10/100/1000 model, and was the first fixed configuration stackable switch on the market to do so.
- The SecureStack C2 Series supports external redundant power supplies for customers that demand additional reliability in the stack. There are two different models of external redundant power supplies, one for the PoE models and one for the standard models. This saves the customer without PoE from having to pay for the PoE-capable external power supply.

Weaknesses

- The pricing of the SecureStack C2 Series is competitive, but not so much that it will give Enterasys a price-driven sales advantage against Alcatel or ProCurve by Hewlett-Packard.
- Enterasys's enterprise profile is low and combined with some jitters over its recent purchase by The Gores Group, customers may hesitate before even considering Enterasys.
- The SecureStack C2 series lacks an all-10 Gigabit Ethernet model, which would be useful for customers at the aggregation layer as well as in data centers that utilize cluster computing.
- There are many switch products on the market right now that closely resemble the SecureStack C2 Series, and this will make it difficult for the product to stand out among the crowd.

- The SecureStack C2 Series can be deployed with its basic Layer 3 functionality, or a license can be purchased to allow fully Layer 3 routing capabilities for the entire stack.

Buying Criteria

Performance

- The SecureStack C2 Series can be stacked up to eight high and the stacking bandwidth is 40 Gbps, aggregate. With eight switches in a stack, the aggregate stacking bandwidth is 8 x 40 Gbps, or up to 320 Gbps. However, Enterasys is claiming its stacking bandwidth to be 640 Gbps in its product documentation.
- The Enterasys SecureStack C2 has a forwarding rate of 35.7 or 71.4 Mpps, depending on the model, which is typical of products in the fixed configuration switch market.
- The SecureStack C2 Series supports line-rate switching and routing, regardless of configuration.

Scalability

- The SecureStack C2 Series can be stacked up to eight units high with configurations of up to 384 ports of 10/100 or 10/100/1000, or 16 10 Gigabit Ethernet ports maximum individual port counts for a single stack.
- The SecureStack C2 Series supports Copper Gigabit Ethernet with PoE, offering a valuable and flexible configuration option for a stackable switch.
- The SecureStack C2 Series can offer up to 32 ports of 1000Base-X ports per stack (not counting the SPF-only model), each port on tri-speed models being dual personality, reducing the maximum number of copper ports available.
- The SecureStack C2 has 48- and 24-port PoE models in Gigabit Ethernet and 48-port in 10/100 models, allowing customers to build out their converged networks as they need.

Management / Ease of Use

- The SecureStack C2 Series supports Enterasys' Secure Networks strategy fully and can be security and policy managed with the same interface as Enterasys' modular switch offerings.
- Switches in a stack of SecureStack C2 Series products can all be managed from a single IP address as a single identity, allowing the network to be scaled upward without increasing management complexity.

- The Netsight Atlas management product can be used to seamlessly manage security, configurations, and QoS on a per-user, end-to-end basis across all Enterasys products including the SecureStack C2 Series.
- The SecureStack C2 Series offers multi-layer (Layer 2/3/4) flow classification support for enhanced quality of service and enhanced security.

Total Cost of Ownership

- The option of 10 Gigabit uplinks and wire-speed Gigabit connections to the desktop provides significant investment protection with excess capacity.
- The significant security features such as 802.1X, Web-based login and tie-ins to Enterasys' Dragon IDS product provide a great amount of unique security functionality.
- Enterasys' policy-based management solution lowers TCO by providing centralized control, administration, and upgrades.
- The SecureStack C2 Series license for full Layer 3 capability is available for the entire stack of switches, as opposed to individual units, cutting down costs and license complexity.
- Enterasys has been diligent in adding software features to the SecureStack C2 as well as putting out regular firmware updates to correct customer issues. By paying close attention to its software, Enterasys is adding value to the C2 series and providing investment protection.

Port Diversity

- The SecureStack C2 Series has sufficient port diversity to allow for almost any wiring closet configuration with a variety of models that cover almost any conceivable wiring closet requirement.
- The SecureStack C2 Series offers an all-fiber model to accommodate customers that have significant investments in fiber infrastructure, or need a Gigabit Ethernet fiber switch at the aggregation layer.
- The SecureStack C2 series has a number of models that support PoE, with varying speeds and density. This allows customers to purchase what they need for their wiring closets, rather than overbuying.
- The SecureStack C2 Series has a model that supports two XFP 10 Gigabit uplinks at wire speed for uplinking to the aggregation layer or network core.

■ Point/Counterpoint

Points

- Competitors can claim that while the SecureStack C2 looks on the surface to be a fine product, Enterasys itself is not financially

Counterpoints

- Enterasys can respond that with its new ownership its financial outlook is much improved as well as its ability to innovate in the

stable and nobody knows what will happen with its new owners.

- Competitors can say that the SecureStack C2’s strong port diversity is merely an illusion, that most customers simply do not need that kind of variety of ports available to them in a simple stackable switch.

- Competitors can claim that at 40 Gbps aggregate on the stacking ports, the SecureStack C2 Series supports only half the bandwidth of many other next-generation stackable products.

- Competitors can claim that the Enterasys SecureStack C2 series lacks any significant features over other similar next-generation stackable switches on the market today.

marketplace.

- Enterasys can counter by saying that it is simpler to go with a supplier that can supply you in any given business situation, rather than one that challenges your needs based on an assessment that “most” do not require that kind of port diversity.

- Enterasys can counter with an explanation of how it counts the bandwidth on the C2 series and why other vendors’ claims of double performance are merely the product of double packet counting and more marketing than truth. The stacking bandwidth of the SecureStack C2 series is equal to that of the Nortel 5500 Series.

- Enterasys can counter by saying that its security offerings are among the most comprehensive in the industry and that the term “Secure Networks” isn’t just marketing speak, but manifests itself through integration with IDS and full policy management, not to mention a commitment to a secure architecture at the core of the product.

■ Product Metrics

Physical Characteristics	Value	Previous Value
Device Class	Layer 3	
Primary Target Market	Wiring Closet	
QoS Features	Value	Previous Value
Total Number of Transmit Queues Per Port	8	
Total Number of Receive Queues Per Port	Data not available	
Strict Priority Queues	Yes	
Rate Limiting Support	Yes	
Rate Limiting Granularity	Data not available	
Classify by IP DSCP/TOS	Yes	
Write/Re-write IP DSCP/TOS	Yes	
Protocol Support	Value	Previous Value
802.1w Fast Spanning Tree	Yes	
802.1s Per-VLAN Spanning Tree	Yes	
802.3ad Trunking	Yes	
802.1x User Authentication	Yes	
Network Login	Yes	

IGMP Snooping	Yes	
IP Routing	Yes	
IP Routing Protocols	RIP, OSPF, VRRP, DVMRP, PIM	
Interface Support	Value	Previous Value
10/100Base-T	48 Port	
10/100Base-T with 802.3af	48 Port	
100Base-FX	None	
10/100/1000Base-T	24-Port, 48-Port	
10/100/1000Base-T with 802.3af	48-port, 24-port RJ-21	
1000Base-X (GBIC or SFP)	4 Port SFP, 24-port SFP	4 Port SFP
10G - Fixed Optics	None	
10G - XENPAC	2-port XFP	None
Other (Specify Type and Port Count)	None	2 10GigE, XFP
Special Modules (Non-line Cards)	None	
PoE Power Budget	23 ports, all models	
High Availability	Value	Previous Value
Redundant Power Supplies	Yes, External	
Non-Stop Code Upgrade	None	
Performance	Value	Previous Value
Aggregate Switch Throughput	160Gbps	
Forwarding Rate	35.7 / 71.4 Mpps	
Non-blocking Wire Speed	Yes	
Switch Forwarding Latency	Data not available	Not documented
Pricing	Value	Previous Value
Switch Price	\$3,273-\$10,679, depending on model	
Expansion Module Pricing	None	
Support	Value	Previous Value
Standard Warranty	Limited lifetime	
Enterprise Maintenance Contract	Various maintenance packages available	
Product Class Ratings	Value	Previous Value
Performance	4	
Scalability	4	
Management	4	
TCO	4	
Port Diversity	5	

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