X-Pedition™ 2400-256 Workgroup Switch Router

- Expanded system memory capacity provides superior functionality
- Delivers LAN backbone, server loading balancing and workgroup remote site connectivity
- Flexible expansion slots accomodate 100Base-FX, 1000Base-SX/LX/LH, WAN or ATM

Data Sheet

- **Application-aware desktop enterprise switch router**
  - — Layer 2, 3, 4 switching; wire-speed, IP/IPX routing
  - — 8 Gbps non-blocking switching; 6 Mpps routing throughput
  - — 180,000 Layer 2 MAC addresses; 220,000 Layer 3 routes; 180,000 Layer 4 application flows; 4,096 VLANs
  - — Provides 256 MB system memory
  - — Flexible expansion for 100Base-FX, 1000Base-SX/LX/LH, WAN and ATM
- **Full application support**
  - — Wire-speed Layer 4 application flow switching
- **Pinpoint control**
  - — Wire-speed, application-level QoS
  - — Application load balancing and content verification
  - — Supports Strict Priority or Weighted Fair Queuing and Rate Limiting (CAR)
- **Advanced security features**
  - — Up to 20,000 Layer 2, 3, 4 wire-speed security/access control filters
  - — ACLs applied at Layer 2, 3 or 4 without affecting performance
- **Superior fault tolerance**
  - — Supports Spanning Tree, Per-VLAN Spanning Tree, rapid reconvergence of Spanning Tree, load sharing, link aggregation, policy-based and multi-path routing
  - — Supports VRRP

Robust Connectivity and Industry-Leading Features in a Workgroup Switch Router

Designed to accommodate multiple enterprise networking functions—including LAN backbone, server load balancing, and workgroup or remote site connectivity—the X-Pedition 2400-256 supports 16 fixed 10/100 ports and flexible expansion slots to accommodate 100Base-FX, 1000Base-SX/LX/LH, WAN or ATM for high-density, wire-speed 10/100/1000 Mbps switching and routing with throughput in excess of 6 Mpps.

The X-Pedition 2400-256's expansion slots enable support of multiple Gigabit Ethernet modules to meet the requirements of large, campus-style networks where Gigabit Ethernet connectivity is needed inside and between buildings, or support for ATM OC-3c connectivity to provide lower-cost ATM WAN functionality to the remote site.

The X-Pedition 2400-256 also offers an expanded system memory capacity of 256 MB to support more than 200,000 routes, as well as system configurations including Access Control Lists, Quality of Service and multicasting tables. This larger memory capacity allows the X-Pedition 2400-2 5 6 to provide the functionality enterprise customers require.

In addition to performance and capacity, the X-Pedition 2400-256 provides pinpoint application control and superior routing capacity, as well as seamless interoperability with previous generations of networking equipment.

The X-Pedition 2400-256 features full Layer 2 switching, full-function routing, and Layer 4 application switching. Layer 4 application switching provides pinpoint control of network traffic through extensive security, port-level accounting and comprehensive Quality of Service (QoS)—all at the application level, and all without sacrificing wire-speed performance.

Powered by custom ASICs, the X-Pedition 2400-256 routes packets at wire speed based on conventional source/destination data and application-level information. This provides network managers with the performance they need, while extending their control to the application level.

The X-Pedition 2400-256 is easily configured and managed through NetSight Atlas. The X-Pedition switch router is fully standards-based and completely interoperable with existing networking equipment.

Unmatched Performance with Wire-Speed Routing and Switching

The X-Pedition 2400-256 minimizes network congestion by switching and routing more than 6 million packets per second (pps). The switching fabric in the X-Pedition delivers full-function unicast and multicast IP/IPX routing.

The X-Pedition 2400-256's custom ASICs switch or route traffic based on Layer 2, Layer 3 and Layer 4 information at wire speed. These ASICs also store QoS policies and security filters, providing wire-speed performance even when QoS and security filters are enabled. As a result, network managers no longer need to make c o mpromises when it comes to performance and functionality; the X-Pedition switch router delivers both.

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Application-Level QoS and Access Control—at Wire Speed

Based on Layer 2, Layer 3 and Layer 4 information, the X-Pedition allows network managers to identify traffic and set QoS policies, without compromising wire-speed performance.

The X-Pedition can guarantee bandwidth on an application-by-application basis, thereby accommodating high-priority traffic even during peak periods of usage. QoS policies can be broad enough to encompass all the applications in the network, or relate specifically to a single host-to-host application flow.

Unlike conventional routers, the X-Pedition's performance does not degrade when security filters are implemented. Wire-speed security, obtained through 20,000 filters, enables network managers to benefit from both performance and security. Filters can be set based on Layer 2, Layer 3 or Layer 4 information, enabling network managers to control access based not only on IP addresses, but also on host-to-host application flows.

Wire-Speed Multicast to Support Convergence Applications

The X-Pedition's switching fabric is capable of replicating packets in hardware, eliminating performance bottlenecks caused by conventional software-based routers. By providing the necessary infrastructure, the X-Pedition turns the network into an efficient multicast medium, supporting DVMRP, PIM-SM and per-port IGMP.

Large Capacity in a Small Router

Workgroup environments require sufficient capacity to handle routing, VLAN information and security filters. The X-Pedition 2400-256 provides table capacities that are greater than any similar Layer 3 switching solutions available today, supporting up to 220,000 Layer 3 routes, 180,000 Layer 4 application flows and 180,000 Layer 2 MAC addresses.

Full-function IP/IPX routing enables the X-Pedition 2400-256 to satisfy even the most traffic-intensive workgroup environments. The 16 10/100Base-TX ports can be expanded to 32 10/100 ports or with 1000Base-SX/LX/LH, WAN and ATM uplinks. More than 4,000 VLANs, 20,000 security filters and large per-port buffers provide the capacity to handle peak traffic.

Comprehensive Management for Easy Deployment, Changes and Troubleshooting

VLAN Management—The X-Pedition can be configured to support VLANs based on ports and protocols. Network managers can use Layer 2 VLANs with 802.1p prioritization and 802.1Q tagging.

Extensive Performance Monitoring—The X-Pedition paves the way for proactive planning of bandwidth growth and efficient network troubleshooting by providing RMON and RMON 2 capabilities per port.

Easy-to-Use, Java-Based Management—The X-Pedition's rich functionality is made easy to use through NetSight Atlas management applications, which provide extensive configuration and monitoring tools. NetSight Atlas is Java-based, allowing network managers to use most any client station to remotely manage the X-Pedition 2400-256. NetSight Atlas can run on Solaris, Windows NT and Windows 95/98/2000 environments.

Specifications

Technical Specifications

MTBF (predicted)
200,000 hours

In-Band Management
Remote SNMP via NetSight Atlas

Physical Specifications

Dimensions
7.1 cm (2.8") H x 43.2 cm (17") W x 47 cm (18.5") D

Weight
9.07 kg (20 lbs)

Environmental Specifications

Operating Temperature
+5° C to +40° C (41° F to 104° F)

Non-Operating Temperature
-30° C to +73° C (-22° F to 164° F)

Operating Humidity
15% to 90% (non-condensing)

Power Consumption
100 - 125 VAC, 2A max or 200 - 250 VAC, 1A max 50 - 60 Hz

Agency And Standards Specifications

Safety
UL 60950, CSA 60950, EN 60950, EN 60825 and IEC 60950

Electromagnetic Compatibility
47 CFR Parts 2 and 15, CSA C108.8, EN 555022, EN 55024, EN 61000-3-2, EN 61000-3-3, AS/NZS CISPR 22, and VCCI V-3

IP Routing
RIPv1/v2, OSPF, BGP-4

IPX Routing
RIP, SAP

Multicast
IGMP, DVMRP, PIM-SM

QoS
Application level, 802.1p

RFCs/MIBs
IEEE 802.1p
IEEE 802.1Q
IEEE 802.1d Spanning Tree
IEEE 802.3
IEEE 802.3u
IEEE 802.3x
IEEE 802.3z
RFC 1213 - MIB-2
RFC 1493 - Bridge MIB
RFC 2223 - Interfaces MIB
RFC 1643 – Ethernet-Like Interface MIB
RFC 1163 - A Border Gateway Protocol (BGP)
RFC 1267 - BGP-3
RFC 1771 - BGP-4
RFC 1657 - BGP-4 MIB
RFC 1058 - RIP v1
RFC 1723 - RIP v2
RFC 1724 - RIP v2 MIB
RFC 1583 - OSPF v2
RFC 1850 - OSPF v2 MIB
RFC 1812 - Router Requirements
RFC 2096 – IP Forwarding MIB
RFC 1349 – Type of Service in the IP Suite
RFC 1519 – CIDR
RFC 2338 – VRRP
RFC 1634 – IPXWAN
RFC 1483 – LSNAT
RFC 2618 – Radius-Authentication-Client-MIB
RFC 1157- SNMP
RFC 1757 - RMON 1
RFC 2021 - RMON 2
RFC 1332 - PPP IP Control Protocol (IPCP)
RFC 1548 - The Point-to-Point Protocol (PPP)
RFC 1552 - PPP IPX Control Protocol (IPXCP)
RFC 1570 - PPP LCP Extensions
RFC 1717 - PPP Multilink Protocol
RFC 1662 - PPP in HDLC-like Framing
RFC 1661 - PPP (Point-to-Point Protocol)
RFC 1638 - PPP Bridging Control Protocol
RFC 1293 - Inverse ARP
RFC 1315 - MIB for Frame Relay DTEs
RFC 1490 - Multiprotocol Interconnect over FR

Frame Relay Forum and ITU Standards
FRF.1.1, FRF.3.1, Q.922/ANSI T1.618, Q.933, I.122/ANSI T1S1 Annex D/ANSI T1.617

Ordering Information

XP-2400-256
X-Pedition 2400 base unit with 256 MB system memory, 16-port 10/100Base-TX with two expansion slots (Includes redundant power supplies and X-Pedition Router Services software)

XP-2-ATM29-02
2-port ATM module for the X-Pedition 2400 (Requires XP-APHYs, ordered separately)

XP-2-SX-AA
2-port 1000Base-SX expansion module for the X-Pedition 2400

XP-2-LX-AA
2-port 1000Base-LX expansion module for the X-Pedition 2400

XP-2-LX70-AA
1-port 70km 1000Base-LX Gigabit Ethernet module for the X-Pedition 2400 (Build to order)

XP-2-TX-AA
8-port 10/100Base-TX expansion module for the X-Pedition 2400

XP-2-FX-AA
8-port 100Base-FX expansion module with MT-RJ connectors for X-Pedition 2400

XP-2-SER-AA
Dual-port Serial module for the X-Pedition 2400

XP-2-HSSI-CK
2-port HSSI module for the X-Pedition 2400

XP-2-RKMT
Rackmount kit for the X-Pedition 2400 and 2100

Warranty

As a customer-centric company, Enterasys is committed to providing the best possible workmanship and design in our product set.In the event that one of our products fails due to a defect in one of these factors, we have developed a comprehensive warranty that protects you and provides a simple way to get your products repaired as soon as possible.

Service and Support

Enterasys understands that superior service and support is a critical component of ***Networks that Know***.™ The Enterasys **SupportNet Portfolio**—a suite of innovative and flexible service and support offerings—completes the Enterasys solution. SupportNet offers all the post-implementation support services you need—online, onsite or over the phone—to maintain your network availability and performance.

Additional Information

For additional information on the X-Pedition, visit **enterasys.com/products/routing**

Contact Information

Contact Enterasys Sales at **877-801-7082** or **enterasys.com/corporate/contact/contact-sales.html**

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