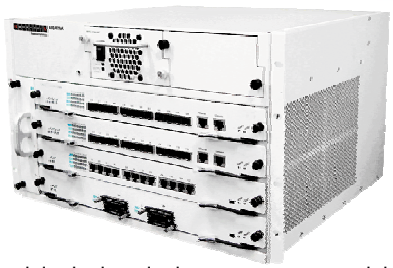
Edge-corE
Powered by Accton

ES4704BD

Chassis Core Routing Switch



Product Overview

The Edge-Core ES4704BD is a high performance, 4-slot, Layer 3 chassis switch. It can work in dual or single management module mode. Slot configuration can be any combination of network interface modules and 1 or 2 management modules. Furthermore, management modules also include network interfaces so total port density and slot usage is increased.
With redundant power supply, fans, and management modules, the Edge-Core ES4704BD ensures continuous operation and is a fully redundant system. Moreover, all parts are hot swappable. They can be added or exchanged without interrupting the whole system.
The ES4704BD is ideal for the core layer of campuses, enterprise networks and the aggregation layer of IP metropolitan networks..

Key Features and Benefits

Performance and Scalability

The ES4704BD supports up to 6 10G ports or 84 Gigabit ports Support IEEE-802.3, IEEE-802.3u, IEEE-802.3ab providing flexibility and high port density. The ES4704BD delivers Wire-speed and Non-blocking switching performance on all ports.

10G modules support 1 or 2 ports for link to L3 Gigabit switches or L2 Gigabit switches, aggregating them to the core layer, and preventing bottlenecks in Gigabit switches. Furthermore, the optional 10Gigabit Ethernet XFP transceivers can be chosen for different distance fiber uplinks.

Every module is hot swappable, ensuring continued operation of the system while adding or removing a module.

Firmware & configuration are automatically upgraded from master to backup management module for management simplicity.

Intensive protocol support is included for MPLS, MPLS-VPN, MPLS-TE and IPv6 policy routing ensuring future investment protection. Check for the availability.

Broadcast Storm Control prevents faulty end stations from degrading overall system performance.

Continuous Availability

IEEE 802.1w Rapid Spanning Tree Protocol provides a loop-free network and redundant links to the core network with rapid convergence.

IEEE 802.1s Multiple Spanning Tree Protocol runs STP per VLAN base, providing Layer 2 load sharing on redundant links.

IEEE 802.3ad Link Aggregation Control Protocol (LACP) increases bandwidth by automatically aggregating several physical links together as a logical trunk and providing load balancing and fault tolerance for uplink connections.

IGMP snooping prevents flooding of IP multicast traffic, and limits bandwidth intensive video traffic to only the subscribers.

L3 Features

The ES4704BD delivers high-performance hardware based IP routing.

RIP and OSPF provide dynamic routing by exchanging routing information with other Layer 3 switches or routers.

DVMRP, PIM-DM Multicast Routing Protocols send IP multicast traffic from one subnet to another.

VRRP prevents your system from failing by dynamically backing up multiple L3 switches for routing.

Comprehensive QoS

8 egress queues per port enable differentiated management of up to 8 traffic types.

Traffic is prioritized according to 802.1p, DSCP, IP precedence and TCP/UDP port number, giving optimal performance to real-time applications such as voice and video.

Bidirectional rate-limiting, per port or traffic class, preserves network bandwidth and allows full control of network resources.

Enhanced Security

IEEE 802.1x port-based access control (Login)ensures all users are authorized before being granted access to the network. Filter or limits the total number of devices from using a switch port and protects from MAC flooding attacks.
Access Control Lists (ACLs) can be used to restrict access to sensitive network resources by denying packets based on L2/L3/L4 headers.
SSL, Web Management Encryption, RADIUS and TACACS+ authentication protect data communication and ensure data privacy.

Simple Management

Industry standard Command Line Interface (CLI) via console port or Telnet can be used for switch management.
Embedded user friendly web interface helps users quickly and simply configure switches.
Backup and restore firmware and configuration files via TFTP.

Ethernet Switch

ES4704BD Product Specifications

Features

Physical Ports

4 open slots
1 AC power supply and 1 additional open slot for optional power supply
Max. number of 10 Gigabit ports: 6
Max. number of Gigabit ports: 84

Performance

Backplane Capacity: 80Gbps
Forwarding Rate: 59.52Mpps
Mac Address Table Size: 16K

L2 Features

Auto-negotiation for port speed and duplex mode
Flow Control: Store & Forward switching methods
- Provides IEEE 802.3x for full duplex mode
- Back-Pressure flow control for half duplex mode

Spanning Tree Protocol:
- IEEE 802.1D Spanning Tree Protocol (STP)
- IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
- IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)

VLANs:
- Supports 4K IEEE 802.1Q VLANs
- Port-based VLANs
- Private VLAN
- GVRP

Link Aggregation:
- Static Trunk
- IEEE 802.3ad Link Aggregation Control Protocol
- Load Balancing for both Unicast and Multicast
- Number of port trunks : 6 per module
  Number of ports per trunk: 2~8 ports

IGMP Snooping:
- IGMP v1/v2/v3 snooping
- IGMP Query

L3 Features

IPv4/IPv6 Routing
Routing Table
- EM4704BD-M12GX-SFP: 64K
- EM4704BD-M24TX4GC: 16K

ARP
Multi-netting, Multi-casting
Super-netting (CIDR)
BGP4+
RIPv1/v2, RIPng
OSPF v2/v3
DVMRP, PIM-DM，PIM-SM
VRRP
DHCP/BootP relay, DHCP server
DNS proxy

QoS Features

Priority Queues: 8 hardware queues per-port
Traffic classification based on IEEE 802.1p CoS, IP Precedence, DSCP, TCP/UDP port number, Access Control List
Supports Marking and Re-marking
Supports WRR and Strict scheduling
Bandwidth Control:
- Egress rate limiting, Ingress rate limiting

Security

Supports IEEE 802.1x port-based and MAC-based access control
RADIUS authentication
TACACS+*Authentication
Access Control List
SSH (v1.5/v2.0), SSL

Management

Switch Management:
- CLI via console port or Telnet
- WEB management
- SNMP v1, v2c, v3

Firmware & Configuration:
- Dual firmware images
- Firmware upgrade via TFTP server
- Multiple configuration files
- Configuration file upload/download via TFTP server

Support Port Mirroring
Supports RMON (groups 1, 2, 3 and 9)
Supports BOOTP, DHCP for IP address assignment
Supports SNTP
Event/Error Log/Syslog

Mechanical

Dimensions (H x W x D): 266 x 445 x 421 mm (6RU)
19”rack-mount metal case
AC Power Input:
- 90 ~ 264VAC, 50 ~ 60Hz
- Built-in Universal Power Supplies
- Power Output for single power Supply : 400W (max)

LED Indicators: Power, Diagnostic, Link/Act, 1000M

Safety

CSA/NRTL (UL60950, CSA 22.2.No 60950-00)
TUV/GS (EN60950)
CB

Electromagnetic Compatibility

CE Mark
FCC Class A
VCCI Class A

Environmental Specifications

Temperature:
- IEC 68-2-14
- 0℃ to 40℃ (Standard Operating)
- -40℃ to 70℃ (Non-Operating)

Humidity: 10% to 90% (Non-condensing)

Warranty

3 years warranty

Ordering Information

Modules

EM4704BD-AC	220V AC Power Supply (Hot Swap)
EM4704BD-M12GX-SFP	12 1000Base-X ports management module (SFP interface)
EM4704BD-M24TX4GC	24 10/100Base-T ports and 4 Combo G ports management module (RJ-45/SFP)
EM4700BD-12GT-RJ45	12 10/100/1000Base-Tx ports module (RJ-45 interface)
EM4700BD-12GX-SFP	12 1000Base-X ports module (SFP interface)
EM4700BD-8GC16GX	8 Comb G ports(RJ-45/SFP) with 16 1000Base-X ports (SFP interface)
EM4700BD-8GC16GX2XG	8 Comb G ports(RJ-45/SFP) with 16 1000Base-X ports (SFP interface) and 2 10G XFP ports
EM4700BD-48GT	48-port 10/100/1000Base-T (RJ-45)
EM4700BD-4GX-XFP	4-port 10G Module (XFP interface)

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