



Omni Switch/Router



Product Description

Alcatel's Omni Switch/Router (OS/R) is an advanced, multi-layer switching platform equipped with a distributed switching fabric to support the most demanding backbone requirements. A full breadth of interface options are available including Ethernet, Fast Ethernet, Gigabit Ethernet, token ring, ATM uplinks, and WAN uplinks.

Features

The OS/R provides a high performance switching solution for heterogeneous networks that require high-speed connectivity. It supports connectivity between Ethernet, Fast Ethernet, Gigabit Ethernet, token ring, ATM uplinks, and WAN uplinks in a single switch. The architecture allows data packets to travel between the desktops and network servers and even across dissimilar networks.

The switching fabric interconnects a management processor module with up to eight network interface modules. The fabric is organized as eight high-performance frame buses, one dedicated for transmit by each module, allowing all modules to receive data from all links simultaneously, and has a capacity of 22 Gbps.

Various forms of failure protection and redundancy are supported within the OS/R architecture, including management module redundancy, network interface module hot-swapability, power supply load sharing, power supply redundancy, power supply hot-swap, dual AC/DC inputs, redundant cooling fans, temperature alarm, and SNMP trap support.

The network interface modules support local on-board switching between ports (u-turns). This provides high-performance port-to-port switching and ensures optimal use of the fabric bandwidth. In addition, all of the Ethernet ports have the ability to support full-duplex transmission. Full duplex support offers distinct advantages over half-duplex providing users with double the available bandwidth on any link, and allowing an increased link distance of up to three kilometers.

Each of the network interface modules is equipped with extensive input and output buffers, providing the ability for the OS/R architecture to maintain a large amount of high-speed ports without data loss.

The OS/R uses the same Alcatel XOS operating system and network management system software as Alcatel's OmniSwitch ATM, OmniAccess, and OmniStack families. There are no new user interfaces to learn, and all product sets can be mixed and matched within a single network. Switching capacity and supported interfaces can be seamlessly integrated into a comprehensive, cost effective network solution.



Benefits

Network security – OS/R offers integrated authentication for network security. Network users are placed into secure user groups or subnets during their network login. This ensures that data access is secure for a specific group of users and users are not required to pass through a slow firewall to access resources.

Network availability – The OS/R offers redundancy for all critical components. This includes redundant power and Management Processor Modules and a distributed architecture that keeps the chassis running even if a single module fails. These components, along with the OS/R's next-generation design ensure maximum uptime for each switch and the entire network.

Adaptive networking, scalable layer 3 switching – All modules are available with the optional Hardware Routing Engine (HRE-X) providing layer 3 switching for both IP and IPX traffic. This ensures that as more modules are added to the chassis, the chassis' routing performance scales to support the additional ports. An OS/R chassis routing performance scales from 1.5 Mpps to 12 Mpps.

WAN uplinks – The OS/R offers a selection of WAN uplink modules, which includes ISDN-BRI, and serial interfaces. This allows users in geographically disperse locations to connect directly into the corporate backbone switch without the need for a separate external router.

Specifications

Chassis technical specifications

Physical dimensions

OS/R-5: 12.25" high, 17.14" wide, 13.00" deep
 OS/R-9: 24.50" high, 16.60" wide, 13.25" deep

Weight

OS/R-5: 53 lbs fully populated
 OS/R-9: 96 lbs fully populated

CAM size

OS/R-5: 32K
 OS/R-9: 32K

Slot count

OS/R-5: 5
 OS/R-9: 9

Humidity

Relative humidity operating range from 0 to 95 percent non-condensing

Voltage range

90-265 VAC, 47 to 63 Hz auto-ranging and auto-sensing

Temperature operating range

0°C to 45°C, 32°F to 113°F

Interfaces supported

Ethernet, Fast Ethernet, Gigabit Ethernet, token ring, ATM uplinks, and WAN uplinks

Layer 3 switching

12 Mpps max. aggregate throughput

Backplane speed

OS/R: 22 Gbps distributed switching fabric

MPX technical specifications

Uplinks supported: Fast Ethernet, Gigabit Ethernet, ATM, and WAN

CAM size: 4,096 addresses

DRAM: 32 MB

Flash memory: 8 MB

HRE-X

Hardware Routing Engine to provide layer 3 hardware switching, 1.5 Mpps per HRE-X and scalable to 12 Mpps. Plugs into any OS/R module.

Agency listings

UL 1950, CSA-C22.2, EN60950, FCC Part 15 (Subpart B - Class A), EN55022, 1987/EN50081, FCC Class B, C.I.S.P.R.22 —1985, EN50082-1 —1992, IES 801-2 — 1991, IES 801-3 —1984, IES 801-4 —1988, VCCI V-3/94.04 (Class 1)

www.alcatel.com/enterprise

Alcatel

26801 West Agoura Road
Calabasas, CA 91301 USA

Contact Center

(800) 995-2612 US/Canada
(818) 880-3500 Outside US

www.alcatel.com/enterprise

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