

Catalyst 3000 and Catalyst Matrix

Catalyst 3000 Highlights

- **Performance:** Features wire speed performance (media rate for 24 Ethernet segments) with low-latency using adaptive cut-through switching technology.
- **Expandability:** Two optional module links per device provide additional interfaces for low- or high-speed expansion, including up to eight switched Ethernet or two Fast Ethernet, VG, or ATM ports. Optional Stack Port module provides 280-Mbps "pipe" to connect two Catalyst™ 3000s. Optional Catalyst Matrix supports up to 192 Ethernet, 16 Fast Ethernet, or 16 ATM interfaces in a stack of Catalyst 3000s.
- **Cisco IOS:** The Catalyst 3000's software architecture delivers "plug-and-play" manageable stackable switching. The distributed stacking software automatically reconfigures switch parameters whenever Catalyst 3000s are added or removed. Switch reconfigurations are also automatically reported to network management applications which manage the stack as single logical entity.
- **Cisco IOS/VLAN:** Offers Cisco Internetwork Operating System (Cisco IOS™) software and virtual LAN (VLAN) support, both intra- and interswitch. Supports a total of 64 VLANs; includes external traffic monitoring capability that allows network managers to monitor traffic within and between VLANs.
- **End-to-end network management offerings:** Includes integrated device, VLAN, and traffic management with Simple Network Management Protocol (SNMP), 802.1d spanning-tree, filtering options, SPAN, and Cisco management applications support.
- **Flexibility:** The Catalyst 3000 can be combined with Catalyst 3100s and Catalyst 3200s to create a stack that fit a variety of applications.

Figure 1 Stackable Switching Platform Delivers Layer 2 and Virtual LAN Switching for Growing Workgroup Applications



Catalyst 3000 Applications

The Catalyst 3000 cost-effectively addresses small workgroup switching applications but has the flexibility of built-in switch stackability to accommodate large-scale applications as well. Applications include:

Scalability for Growing Workgroups

In smaller configurations, the Catalyst 3000 can connect from 16 to 24 Ethernet segments with up to four high-speed Fast Ethernet or two ATM uplinks connecting servers or routed backbone resources. The Catalyst 3000 can also be used as a wiring closet switch, supporting up to 192 ports feeding workgroup traffic into Catalyst 5000 multilayer-capable switches or Cisco's LightStream® series ATM switches. By using the Catalyst 3000's stacking capability through the Catalyst Matrix, network managers can increase switching capacity as needed for bandwidth and dedicated connectivity growth. Correct configuration and packet receipt are ensured without console reconfiguration as the Catalyst 3000 stack is increased.

By employing the CiscoWorks™ and CiscoView™ management tools, network managers provide network manageability of an entire enterprise network, from home office to branch office.

Switched VLAN Feeder

The Catalyst 3000 can provide effective LAN capabilities as well segregate workgroup traffic across the switched internetwork. Using the InterSwitch Link (ISL) protocol on the two port Fast Ethernet modules, the Catalyst 3000 can trunk over 1000 configurable VLANs across the switched internetwork. Similarly, the Catalyst 3000 employs ATM LAN Emulation (LANE) for switched workgroup traffic across ATM.

Features/Benefits

Exceptional throughput and low-latency for applications that demand high-performance, wire-speed switching supports up to 192 (with Catalyst Matrix) Ethernet ports with only 40 microsecond latency between ports. Features error-free, cut-through switching. Combines the low-latency of cut-through switching with the data-checking capabilities of store-and-forward switching in one device.

Extensive Traffic/Network Management

- Entire stack formed with Catalyst Matrix can be managed as one entity, simplifying use and minimizing reconfigurations and troubleshooting
- Supports the Ethernet MIB, allowing users to characterize each port's broadcast packets, collisions, octets, utilization, and other key statistics
- Supports up to 64 internal VLANs for easy creation and maintenance of multiple broadcast domains
- Catalyst Switch Probe Analyzer (SPAN) port allows users to connect network analyzer or Cisco remote monitoring (RMON) probe to Catalyst 3000 to simplify collection of switch port statistics
- Filtering database supports up to 10,000 stations; database is automatically aged and updated
- Supports IEEE 802.1d spanning-tree for network loop detection and disabling (particularly useful in larger networks) and for fault-tolerant connectivity
- Supports Telnet, remote dial-up modem, out-of-band administrative interface. New software releases can be downloaded either locally or over the network
- Cisco Discovery Protocol (CDP) support, allowing devices to discover other Cisco devices on the network. This aids in efficient construction of VLANs across the internetwork
- Provides CiscoView GUI-based comprehensive network management support, allowing easy point-and-click discovery of device status, statistics, and comprehensive per-port configuration and performance information

Ease of Use

- Variety of connectors and media types allows use of the Catalyst 3000 in a variety of network topologies and cabling plants
- Media types and connectors include: 100BaseTX (RJ-45); ATM (SC); 10BaseFL (ST); 100BaseFX (ST); 10BaseT (RJ-45); VGAnyLan (RJ-45) and VGAnyLAN (SC)
- Power-up diagnostics to aid troubleshooting
- FLASH PROM for easy installation of new software features as they become available

Specifications

Hardware

Physical Dimensions

- Catalyst 3000
 - Width: 17 in (43 cm)
 - Height: 3.5 in (8.76 cm)
 - Depth: 13.4 in (34 cm)
 - Weight: 17 lbs. (7.7 kg)
- Catalyst Matrix
 - Depth: 13.4 in (34 cm)
 - Width: 17 in (43 cm)
 - Height: 3.5 in (8.76 cm)
 - Weight: 14 lbs. (6.35 kg)

Environmental Ranges

- Operating temperature: (10 to 40 C)
- Operating humidity: Operating 8% to 80%, no condensing
- Storage temperature: (-25 to 75 C)
- Storage altitude: 40,000 ft.
- Power: 90 to 264 VAC autosensing
- Frequency: 47 to 63 Hz
- AC current rating: 1.5 A @ 120v; .75A @220V

Buffers and Addressing

- Buffers: 192 KB per 10 Mbps port; 256 KB per 100 Mbps port
- Addresses: 1700/port, 6000/system (10,000 optional)

Network Management Support

- Telnet
- SNMP MIB II (RFC 1213)
- Bridging MIB (RFC 1493)
- 802.1D spanning-tree MIB
- Ethernet MIB
- CiscoView

Regulatory Approvals

Emissions

- Electromagnetic Emissions Certifications
 - FCC Class A (Part 15)
 - EN 55022 A
 - VCCI Class 1

Safety

- Safety Certifications
 - UL 1950
 - UL-C
 - EN 60950



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