Lucent Technologies
Bell Labs Innovations



F A Q

Lucent APX™ 8000 Multiservice Access Switch

1. What is the APX 8000 switch?

The APX 8000 Multiservice Access Switch is the newest member of Lucent's access product suite, complementing the successful MAX TNT™ Access Switch and the entire MAX™ family of products. The APX 8000 switch targets carriers and large ISPs that are deploying high-capacity multiservice networks. It is the highest density, best performing and most versatile access platform of its kind on the market.

2. What is the port density of the APX 8000 switch?

In Phase I (available today), the APX 8000 switch supports up to 2,688 ports or simultaneous user sessions in a single chassis/shelf. This is twice the per-shelf density of the closest competitor.

3. Why is the APX 8000 switch described as "carrier class"?

The APX 8000 hardware design maximizes network uptime and availability by eliminating any single point of failure. This is an important requirement for large-scale carrier networks. In addition, the highly reliable True Access Operating System (TAOS) software that runs on the APX 8000 was designed specifically for access equipment and is currently operating in a majority of the world's largest data access networks (based on market share data).

4. What is the "universal port"?

The APX 8000 switch's universal port functionality enables it to automatically sense the type of incoming call—dial-up (V.90 modem or ISDN), Voice-over-IP (VoIP), fax-over IP, or virtual private network (VPN)—accommodate it on any available port, and process it for transport over a packet-based IP network.

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5. What VoIP functionality does the APX 8000 switch support?

The MultiVoice™ products, including the APX 8000 switch, are standards-based VoIP gateways that support toll-quality VoIP and fax-over-IP service. Operating in a network with gatekeepers such as Lucent's high-performance MultiVoice Access Manager (MVAM) H.323-based product or the Lucent Softwitch for integration with the SS7 infrastructure, the MultiVoice solution offers service providers transparent integration with the public telephone network.

6. What VPN functionality does the APX 8000 switch support?

The APX 8000 switch supports VPN tunneling, or encapsulation, which enables service providers to benefit from the security, versatility and cost-effectiveness offered by private networks and the public network infrastructure. Using a variety of market-proven protocols such as Layer Two Tunneling Protocol (L2TP), PPTP, ATMP, and IPSec, as well as virtual routing capability, the APX 8000 switch provides a robust and flexible-edge VPN solution.

7. What types of applications does the APX 8000 switch support?

The versatility of the APX 8000 switch makes it suitable for a variety of diverse service applications, including high-density data (dial modem or ISDN), VoIP and fax-over-IP, VPN tunnel aggregation, or any combination of these access services. In addition, large service providers and carriers can combine the APX 8000 switch with NavisAccess™ v5.0 network management software for a complete port wholesaling solution.

8. What type of ingress and egress interfaces does the APX 8000 switch support?

On the ingress, the system supports channelized T1 or E1 (eight-port modules) as well as a one-port channelized T3 module. For egress WAN/LAN connectivity, the APX 8000 switch supports ATM and frame relay DS3/E3, ATM OC3/ STM1, 10/100 Ethernet, and serial.

9. Does the APX 8000 switch replace the MAX TNT?

Not at all. The MAX TNT access switch meets the needs of many ISPs and carriers, making it a vitally important part of Lucent's total solution. In fact, the two platforms share a common operating system (TAOS). Any new software-based features added to the APX 8000 will also available on the MAX TNT, allowing carriers and ISPs to grow their businesses as simply and cost-effectively as possible.

10. How does the APX 8000 switch compare to the MAX TNT?

The primary difference between the two platforms is port density. The MAX TNT switch is optimized for Internet points-of-presence (POPs) in the range of 672 ports (1 DS3). The APX 8000 switch is ideally suited for "Mega-POP" environments that have up to 2,688 ports (4 DS3s) today, and may require even more scalability in the future.

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11. What will the Phase II release of the APX 8000 switch include?

The Phase II release will support even greater port density (up to 8064 ports/calls per shelf) as well as new, higher-speed ingress and egress interfaces.

12. When will the Phase II release be available?

The APX 8000 Phase II release is planned for Q1 2001.

13. How does the APX 8000 switch complement Lucent's other carrier solutions, specifically Softswitch and the 7R/E™ packet solution?

The APX 8000 switch answers the immediate need for a carrier-class gateway product that provides the port density and versatility required to complement Lucent's industry-leading Softswitch. For example, the two products can combine to provide a scalable Internet Call Diversion (ICD) solution or to create Lucent's VoIP-based Toll/Tandem alternative offer.

In addition, APX 8000 switch technology is being integrated within the 7R/E family of solutions to offer carriers a seamless migration path to an IP/packet-based network infrastructure.

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