



OmniAccess 512

Enterprise Branch Office Solution

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The OmniAccess 512 is a multi-service branch office communications platform designed to provide cost effective, secure, and fully integrated solutions to address the LAN switching, WAN routing, and voice requirements of the converged enterprise branch office.

Features

The OmniAccess 512 was designed to connect branch offices over carrier networks to corporate sites. It combines LAN switching, WAN routing, and voice connectivity supporting the needs of the next generation branch office.

The OmniAccess 512 offers a rich set of data features such as multicast routing protocol support, VLANs, WAN routing, traffic shaping, integrated authentication, and firewall services while supporting a variety of WAN interfaces to connect branch offices to the company's headquarters. It also has a comprehensive set of voice features that provide voice over IP (VoIP) functionality, as well as analog and digital voice ports.

Access

OmniAccess offers field-upgradable features for the branch network. When migrating to VoIP, a field upgradable VoIP module can be added through the expansion slot.

- **(12) 10/100 Ethernet Ports**
- **VoIP cards**
 - **VSD: up to 60 digital channels (T1/E-1)**
 - **VSA: up to 8 analog channels (FXS/FXO)**
 - **VSB: up to 8 digital channels (ISDN BRI S/T)**

Uplinks

OmniAccess allows you to standardize your branch access switches throughout the enterprise. It offers a variety of modular uplinks (FT1/E1, USP and ISDN BRI) that allow you to connect lower bandwidth branches over USP, for example, and higher bandwidth branches over FT1/E1.

- | | |
|---------------------------|-------------------------|
| • T1/E-1 CSU/DSU | • Frame relay |
| • ISDN-BRI | • PPP |
| • Universal serial | • Multi-link PPP |

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Services

The OmniAccess 512 comes with a standard tool set, management, integrated security, and authentication, bringing simplified management and security to the enterprise.

- Packet filtering firewall/NAT/NAT traversal
- Multicast
- Authenticated VLAN
- RIP/OSPF/VRRP
- RMON

Alcatel CrystalSec

Alcatel extends security beyond the perimeter by integrating its Alcatel CrystalSec network security solutions with the Omni family of switching and routing products. CrystalSec is Alcatel's security framework and is comprised of the following elements:

- Device hardening
- Secure management
- Enabled security
- Certifications
- Partnerships

The OmniAccess 512 is a key element within the CrystalSec framework.

All-in-one branch office routers, such as the OmniAccess 512, fit into any existing network infrastructure providing security services for enterprise site-to-site or client-to-site intranets, extranets, and ISP/NSP branch access.



Benefits

Voice flexibility

The OmniAccess 512 flexible voice features allow for multiple connectivity options. The FXS/FXO analog connectivity option allows the branch to connect directly to the PSTN and avoid costly Centrex line charges. Depending on the geographic region, monthly savings in Centrex line charges can be significant. The VSD connectivity option allows a digital connection to legacy key systems or PBXs, providing investment protection for the branch's current infrastructure with migration options for future technology.

Voice resiliency

The OmniAccess 512 was designed specifically to provide branch offices resiliency features in the event the corporate WAN connection fails. The primary and secondary WAN connectivity option provides the branch maximum uptime in the event of WAN failures. The local voice routing feature on the OmniAccess 512 allows the branch to configure calls to be routed over the corporate WAN connection or the local PSTN providing the ability to determine the most cost effective telecommunications avenue.

Flexible modular design

The OmniAccess 512 provides flexibility through WAN and voice modules that can be replaced with other compatible modules to suit the needs of the branch. Modularity is investment protection. A branch does not have to buy an expensive unit with extra features they will never use, or have to replace the unit when the needs of the branch change. The flexible design of the OmniAccess allows you to buy only what you need now and upgrade later to meet the changing needs of the branch.

Security

Authenticated VLANs allow the OmniAccess 512 to logically segment and authenticate users. Authentication can be provided through RADIUS and LDAP or through authenticated VLANs at the port, MAC address, and even protocol levels. The OmniAccess 512 also has a "red phone" security feature that allows a phone number, such as 911 or the police, be hardwired to a specific phone such that when the receiver is picked up the number is automatically dialed and the connection made with no user intervention.

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Ease of use

The OmniAccess 512 data connectivity can be managed from a centralized headquarters office via SNMP/RMON. The integrated LAN switch and CSU/DSU can both be managed effectively from the corporate office allowing the branch to operate without the need for local MIS involvement. The network administrators will have one device to monitor and manage allowing simplified operations and less training costs.

Quality of Service

QoS, when used in a converged environment, prioritizes voice and video transmissions while ensuring critical data is preserved, regardless of the amount of traffic on the corporate LAN. The OmniAccess 512 provides efficient bandwidth management through flexible queuing algorithms.

Resiliency

The resiliency of the OmniAccess 512 allows it to operate reliably for years without failure due to its solid construction and design. The OmniAccess operates at higher temperatures allowing it to be placed in environments where most networking equipment would fail, such as under the counter of a cash register. If the primary WAN link goes down, the OmniAccess 512 automatically re-routes traffic over an active secondary link.

*Contact for availability

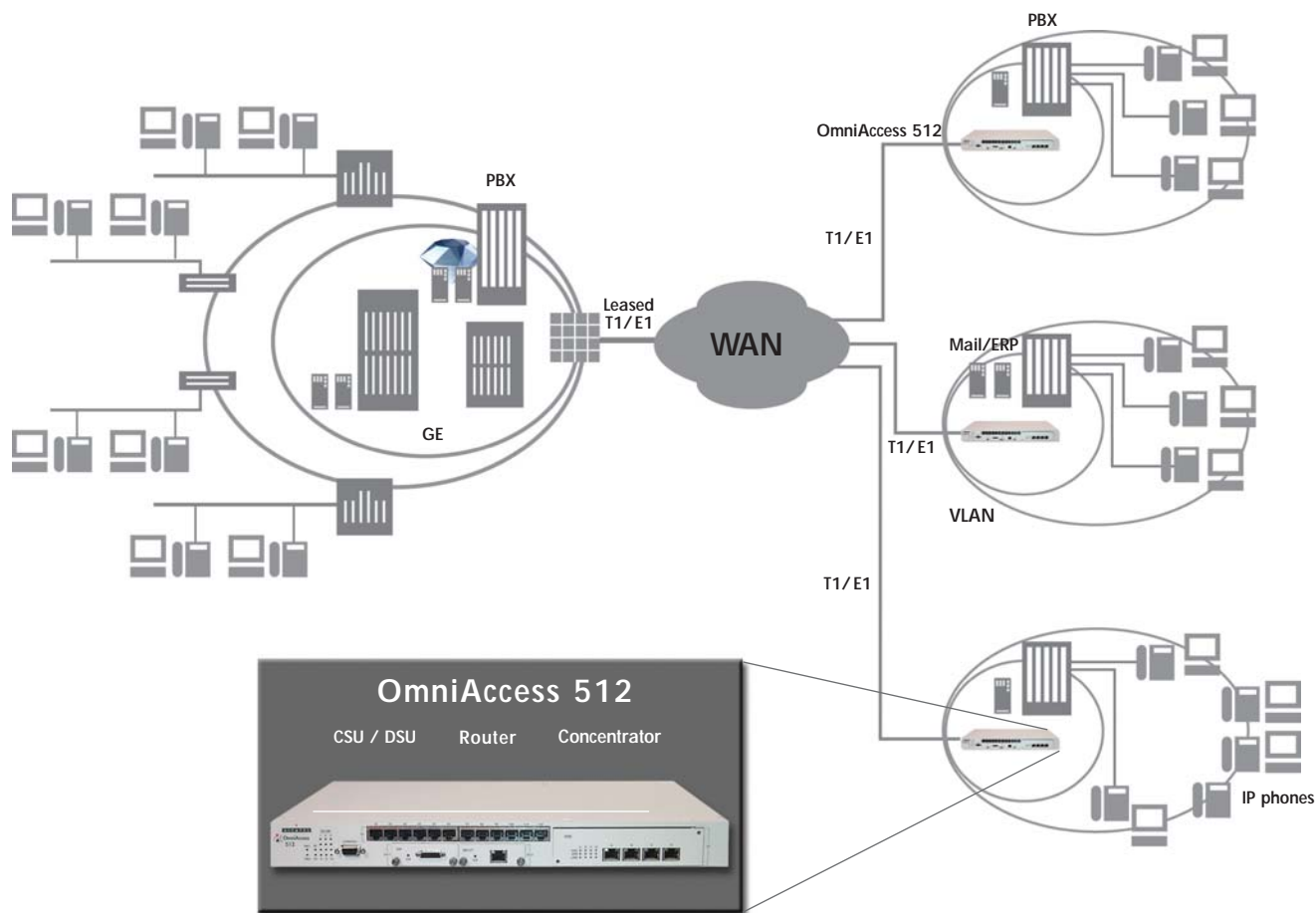


Branch Office Applications

Reduced networking complexity

The OmniAccess 512 is the first integrated LAN / WAN / VoIP / packet filtering firewall switch designed to meet enterprise remote office connectivity needs. From simple access for new branch offices to legacy network infrastructure upgrades, the OmniAccess 512 streamlines network management and saves money by reducing the number of devices needed to provide the same service.

The OmniAccess 512 offers full-featured routing and wire-speed switching to support legacy and new income producing or cost saving applications. A rich set of IP and IPX routing features and advanced WAN functionality connects remote offices with full routing, multicast support, QoS, packet filtering firewall effectively to manage bandwidth-intensive data and voice traffic.



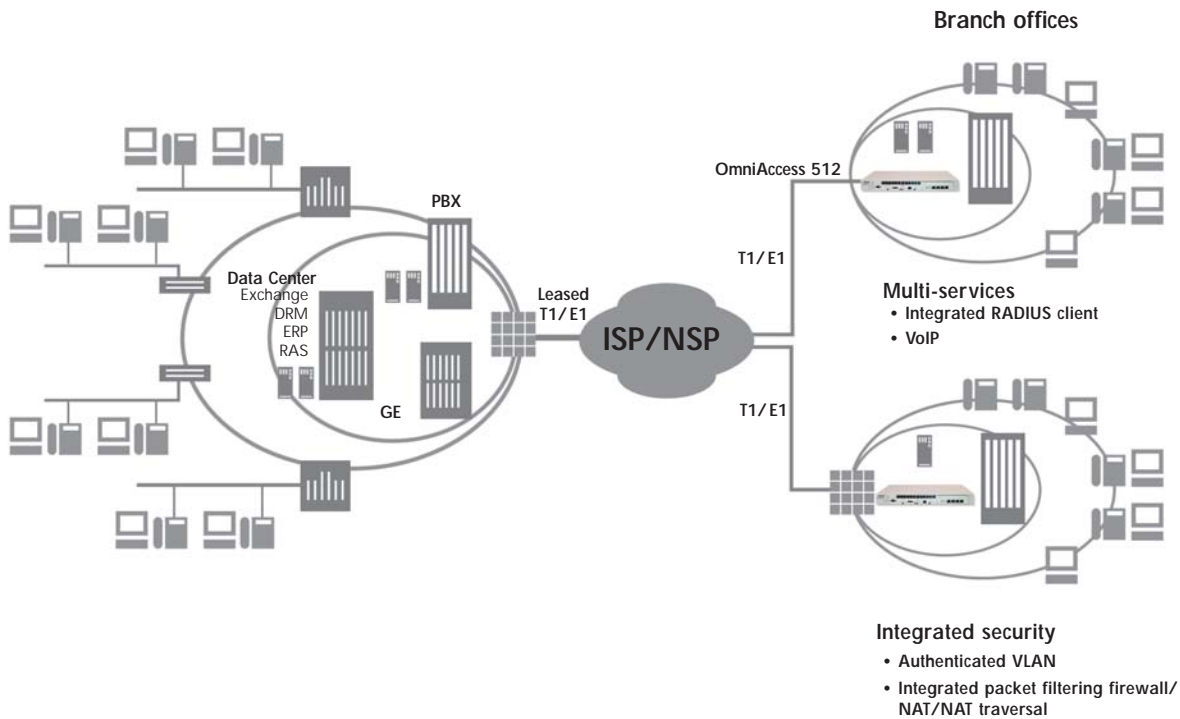
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Network security

Corporate subscribers need additional WAN services — but only if the services have guaranteed security. Secure access to services is possible by setting up 802.1Q-compliant VLANs. Logically grouped users such as separate VLANs for engineering and finance, ensures the data integrity within each VLAN. Each enterprise is assured the highest security for their WAN connections through Alcatel's VLAN technology and integrated security – NAT, packet filtering firewall, and authentication services.

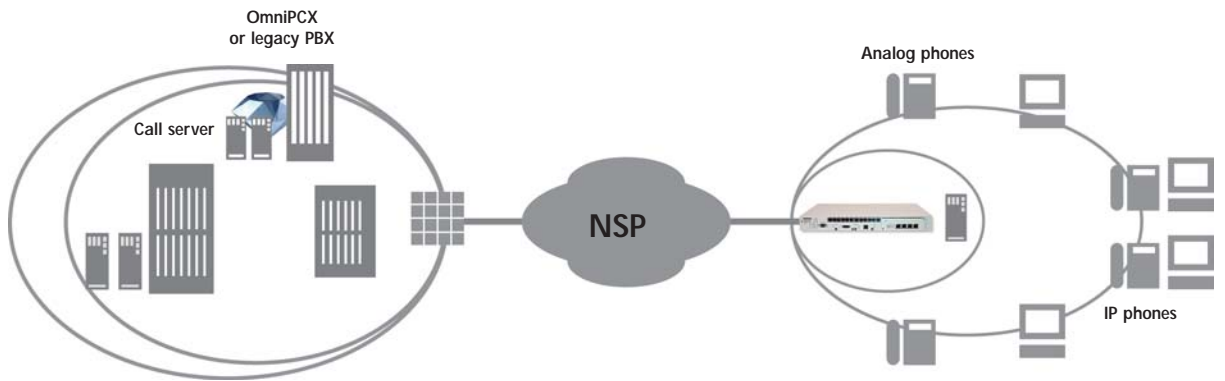
Enterprise security is traditionally centralized at the perimeter firewall. But as independent studies show, unauthorized access occurs more frequently within the firewall. Network managers must respond by increasing and extending internal security. Alcatel OmniAccess 512 delivers consistent security solutions to manage internal and external threats by integrating common AVLAN technology used in other Alcatel switching and routing products.





Adaptive networking

Alcatel has combined its global leadership in data and voice communications with its innovative approach to deliver integrated networking products that meet the needs of the enterprise. When enterprise businesses require converged data and voice in a single network infrastructure, a flexible, cost-effective, integrated services device like the OmniAccess 512 is available to adapt the application. OmniAccess 512 integrates four technologies in a single box – LAN switching, WAN data and voice routing, packet filtering firewall service for intelligent performance!



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OmniAccess 512 Specifications

Physical characteristics

Dimensions

19 in (482.6 mm) rack mountable
17.76 in (L) x 12.4in (W) x 1.76 in (H)
444 mm (L) x 310mm (W) x 44 mm (H)

Weight

10.1 lbs / 4.6 Kg

Input power

Internal power supply
100 to 240 VAC, 50/60 Hz
-48 VDC power supply

Power consumption

50W typical, 170 BTU / hr

Operating temperature

32-122F / 0-50C

Operating humidity

10%-95% (non-condensing)

Certification

FCC Class A, CE (EMI, EMS, LVD), UL, CSA, VCCI

WAN summary

IP/IPX routing

RIP, RIPv2, OSPF, VRRP IP multicast routing and DHCP relay

VLAN

User-authenticated, trunking, policy-based (802.1Q, port, MAC address, protocol, subnet address, multicast address, user-defined)

WAN ports (up to 2 modules)

Supports routing and bridging over frame relay, PPP or multilink PPP, T1/E-1, fractional T1/E-1, universal serial ports RS232, RS449, RS530, V35, V11/X21, ISDN BRI

Frame relay

Multi-protocol over FR (RFC 1490), FRF.3, inverse ARP (RFC 1293), UNI (FRF.1) LMI Rev 1.0, ANSI T1.617 Annex D CCITT / ITU-T Q.933 Annex A 256 DLCI

ISDN

Standards supported: Q.921, Q.931

ISDN interface: S/T and U

BRI support: 2B+D channels, PPP

Switch types: National ISDN-1, AT&T 5ESS, Northern Telecom DMS100, ETSI Euro-ISDN NET3, dial-on-demand and dial-up backup

PPP

PPP (RFC 1661), multilink PPP (RFC 1990), PPP HDLC, framing (RFC 1662)

Compression

LZS hardware assisted data compression (RFC 1974, FRF.9)

**Security (WAN)**

PPP authentication, protocols PAP (RFC 1334) and CHAP (RFC 1989)

Network management

SNMP, RMON, RFC 1213, RFC 1215, RFC 1253, RFC 1315, RFC 1389, RFC 1406, RFC 1407, RFC 1643, RFC 1695, RFC 1696

Voice summary

Voice over IP (VoIP) cards

VSD: Up to 60 digital channels (T1 / E-1)

VSA: Up to 8 analog channels (Fx0, FxS)

VSB: Up to 8 digital channels (ISDN, BRI S/T)

Fully standard VoIP

H323v2, G.711, G.723.1, G.729a, echo cancellation G.165, G.168, silence suppression, fax handling

Authentication

x.509 certificates, shared secret, RADIUS, NT domain, TACACS+, LDAP CRL retrieval, two factor authentication support



Ordering Information

Model Number	Description
Base Models	
OA-512:	OmniAccess 512. Provides 12-port 10/100 baseT switch, 2 expansion slots for optional wide area uplinks, 1 expansion slot for Voice over IP module. includes 16MB of Flash (voice ready). CD-manual is included. Capable of supporting advanced routing, IPSec-based VPNs, IP firewall, and A-VLAN optional software.
OA-512-DC	OmniAccess 512 DC version (internal -48V DC Supply). Provides 12-port 10/100 baseT switch, 2 expansion slots for optional wide area uplinks, 1 expansion slot for voice over IP module. Includes 16MB of Flash (voice ready). CD-Manual is included. Capable of supporting advanced routing, IPSec-based VPNs, IP firewall, and A-VLAN optional software.
WAN Uplinks	
OA-512-FT1/E1:	1FT1 / E-1 port with integral CSU. Supports routing and bridging over frame relay, PPP or multilink PPP. Field installable.
OA-512-BRI:	1 ISDN BRI port. Support U or S/T interfaces. Field installable.
OA-512-USP:	1 Universal serial port. Field installable. External cable required. External cables support V.35, RS-232, X.21, RS-530, RS-449, DTE or DCE.
Voice Switching Modules	
OA-512-VSD-12:	T1 or E-1 Digital voice ports, 12 compressed channels of voice over IP
OA-512-VSD-24:	T1 or E-1 Digital voice ports, 24 compressed channels of voice over IP
OA-512-VSD-36:	T1 or E1 Digital voice ports, 36 Compressed channels of voice over IP
OA-512-VSD-48:	T1 or E1 Digital voice ports, 48 compressed channels of voice over IP
OA-512-VSD-60:	T1 or E1 Digital voice ports, 60 compressed channels of voice over IP
VSA-2FXO-EU:	2 FXO ROW analog compressed voice over IP ports. Field installable.
VSA-2FXO-US6:	2 FXO US 600 ohms analog compressed voice over IP ports. Field installable.
VSA-4FXO-EU:	4 FXO ROW Analog compressed Voice over IP ports. Field installable.
VSA-4FXO-US6:	4 FXO US 600 ohms analog compressed voice over IP ports. Field installable.
VSA-4FXS-EU:	4 FXS analog compressed voice over IP ports (rest of world version). Field installable.
VSA-4FXS-US:	4 FXS analog compressed voice over IP ports (North American version). Field installable.
VSA-8FXS-EU:	8 FXS analog compressed voice over IP ports (rest of world version). Field installable.
VSA-8FXS-US:	8 FXS analog compressed voice over IP ports (North American version). Field installable.
VSA-MIX-EU:	4 FXS + 2 FXO ROW analog compressed voice over IP ports. Field installable.
VSA-MIX-US6:	4 FXS US + 2 FXO 600 ohms US analog compressed voice over IP ports. Field installable.
OA-512-VSB-8:	4 ports BRI S/T. 8 compressed channels of Voice over IP. Field installable.
Compression Summary	
OA-512-HWE	OmniAccess 512 Hardware Engine. Field upgradable. Required for hardware assisted operations: Frame Relay compression (FRF.9) and PPP compression (STAC-LZS defined by RFC 1974), and IPSec-based VPN (requires OA-512-SW-VPN)

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