

ALCATEL-LUCENT OMNIACCESS 5720

ENTERPRISE SERVICES ROUTERS

Alcatel-Lucent OmniAccess™ 5720 Enterprise Services Routers can offer Metro Ethernet, leased line and LTE communication services in corporate offices, providing maximum reliability, security and intelligence for data and voice applications. Everything is seamlessly integrated with the current VPN service.



The OmniAccess 5720 has multiple WAN options, plus optional LTE connectivity. Either interface can be used as a main line, backup link or simultaneous connection. The OmniAccess 5720 also features a four-port gigabit switch and an IEEE 802.11b/g/n access point. In small and medium-sized branch offices, high connectivity is a key requirement. With the OmniAccess 5720 LTE backup, connectivity can be maintained even in the event of disruption of service with the WAN connection.

The rate at which the Wireless WAN (WWAN) networks have evolved means that cellular communications can now be offered at

speeds comparable to those provided by land lines. Those speeds, together with low transmission delay (link latency at around 10 ms in commercial LTE networks) and enormous stability, satisfy even the most demanding corporate applications (voice and video streaming traffic and business-critical data applications).

Corporate management features are fully supported (SNMPv1/2/3 fully parameterized complying with MIB-2, FTP, TFTP, RADIUS, Syslog), simplifying seamless integration in the company's existing communications management platform.

| FUNCTIONS | FEATURES |
|--------------------------|---|
| Corporate services | <ul style="list-style-type: none"> • Border router for different dynamic routing domains (RIP, OSPF, BGP), administrative distance in IP routes, route filtering based on maps and policy-based routing (PBR) favor the implementation of corporate convergent services, which combine WWAN and land-line access. • Multi-HSRP and Multi-VRRP for network resilience and load balance applications • Link quality monitoring through the NSM/NSLA system. Routing policy based on link quality (RTT, erroneous frame rate and UDP jitter) • QoS application for flow priority, tagging and traffic classification means efficient use of the network resources and an accurate definition of the service level agreements (SLAs). |
| WAN connectivity | <ul style="list-style-type: none"> • Independent Gigabit-Ethernet 10/100/1000M port for connecting to WAN-Ethernet lines (requires a license) • High processing capacity for maximum performance for Ethernet transmission • Full VLAN support in the GigE port and Fast Ethernet ports (trunking, filtering and QinQ) • Leased line support with E1/T1 and universal serial port (synchronous) (V.35, X.21, V.24). |
| Secure communications | <ul style="list-style-type: none"> • Encryption processor incorporated; optimizes device performance in scenarios with IPSec tunnels • Fully parameterized IPSec Client/Server. Advanced IPSec features such as PKI encryption (Digital Certificates), extended authentication and Reverse-Route Injection providing compatibility with other commercial VPN solutions • Latest generation meshed topology VPN networks (Dynamic Multipoint VPN technology) • IP filtering, MAC filtering and the SPI firewall protect the router from DoS attacks. |
| Integrated VoIP solution | <ul style="list-style-type: none"> • Call rerouting over the main VoIP link or through the GSM telephony line enabled in the router's 4G interface • Universal B2B-UA SIP Server, compatible with Unified Communications and with survival functionality residing in the router itself (does not require IP terminals with survival) • IP switchboard features (IP-PABX): Ring groups, hunt groups, capture groups, double dialing, local message recording, blind and attended transfers |

| FUNCTIONS | FEATURES |
|-----------------------|---|
| High-performance WLAN | <ul style="list-style-type: none"> Embedded WLAN module (IEEE 802.11b/g/n) with double external antenna connector (2x2 MIMO), activated by license Configurable “Access Point” and “Client” operation mode, either to reroute from the Wi-Fi terminals to the mobile network (access to Internet or to corporate VPN, depending on the service specifications, operating as “Access-Point”), or to connect the router to the branch Wi-Fi network to access certain applications in the branch (“Client” mode) |
| High-performance WWAN | <ul style="list-style-type: none"> 4G interface fully integrated in the router’s Internetworking protocol architecture (CIT features), thus providing high quality and efficient 4G/VPN services. Three backup options for the main 4G service: Through the secondary SIM card, the external USB/4G modem or by connection to an alternative APN (double PDP context; optional). Improved 4G signal stability in areas with poor WWAN coverage: Up to three SMA ports for external 4G antennas (Rx Diversity). Passive WWAN monitoring mechanisms (unnecessary to transmit polling traffic): <ul style="list-style-type: none"> Constant monitoring of signal coverage, connection to the mobile network and the IP connection Detailed monitoring of branch traffic over the WWAN link Minimize time communications service is unavailable Audio GSM calls supported, simultaneously with 4G data transmission for emergency telephony services |

Alcatel-Lucent OmniAccess 5720 models

The standard OmniAccess 5720 router has four GigE switched ports and 1 GigE WAN port. The OmniAccess 5720 also has one slot that supports WAN modules (E1/T1, serial, GigE SFP). All 5720 routers have WLAN capability, which can be activated by software license. The WWAN options include 4G-specific services for Verizon, AT&T and global 4G and 3G.

DETAILED PRODUCT FEATURES

Ethernet switch

- 10/100/1000Base-T automatic detection
- Duplex/half duplex automatic negotiation
- MDI/MDI-X crossover detection
- Ethernet V2/IEEE 802.3
- LLC (IEEE 802.2), ARP
- IEEE 802.1Q (VLAN)
- IEEE 802.1X
- Managed switch:
 - EtherLike-MIB (RFC 2665)
 - SNMP-REPEATER-MIB (RFC 2108)
 - MAU-MIB (RFC 2668)
- two status LEDs per port

Synchronous serial

- V.35, X.21 or V.24 physical interfaces
- DTE or DCE mode
- Data rates from 64 kHz to 2 Mb/s
- Max MTU 1500 bytes
- HDLC, PPP, FR encapsulations

E1/T1

- Configurable as E1 or T1 operation
- Clear-channel
- Fractional
- HDLC, PPP, FR encapsulation

WLAN

- IEEE 802.11b/g/n
- Two detachable external antennas (SMA ports)

Wireless-specific features

- Selectable transmission power
- Automatically selected speed
- IEEE 802.11i, WPA, WPA2
- EAP, EAPOL
- Authentication (open, shared, WPA)
- Encryption (AES, TKIP, WEP)
- ESSID
- MAC Filtering
- Quality of Service (QoS) AIFS, CWmin, CWmax

Embedded 4G

- Automatic handover
- Passive detection of WWAN network failure based on monitoring IP traffic in progress
- Active detection of IP/WWAN service degradation, based on IP traffic poll (monitoring delay, jitter and packet error rate)
- Real-time monitoring on radio parameters
- Local storing of radio statistics for WWAN service evolution reports on console
- Automatic management of operating SIM tray, with multiple selection criteria:

- Signal level
- WWAN technology available in cell (EGPRS, WCDMA)
- Link quality (availability, latency, jitter, error rate)
- Based on time schedule
- Dual PDP context (optional)
- 4G firmware remote upgrading (FTP transfer)

Protocols and features

IPv4

- IP, ARP, Proxy ARP
- Static IP Routing
- RIP I, RIP II, OSPFv2 and BGP-4
- Bidirectional Forwarding Detection (BFD)
- Compatible with HSRP
- RFC 2281 VRRP – Virtual Router Protocol
- Policy Routing
- Multi-VRF
- Quality of backup: Routing based on network quality measurements
- Multi-path per IP packet (with static and dynamic routing)
- Weighted balancing per TCP/IP session
- Multicast: IGMP, IGMP-proxy, MOSPF
- DHCP client, server and relay
- NTP client
- DNS client and proxy
- DNS cache

- DNS dynamic updating (RFC 2136)
- DynDNS client
- NAT/PAT/Port Mapping/NAT exceptions
- PAT firewalling
- Multiple addresses per interface
- Loopback interfaces

PPP and PPOE

- PPP (RFC 1661), PAP/CHAP, IPCP
- Multilink PPP
- Multi-Class Extension
- Multi-Link PPP (RFC 2686)
- PPPoEoE, PPPoE Bridge + routing (PPPoE pass-through)
- Multilink PPP over PPPoE
- Renegotiation based on PADT

Quality of Service (QOS)

- Packet labeling (DiffServ) depending on the interface, sub-interface, protocol, port and MAC and size
- Congestion control: FIFO, queuing priority, BRS proprietary system, WFQ
- Low Latency Queuing (LLQ)
- Traffic shaping: proprietor (over BRS), ATM traffic shaping, Frame Relay traffic shaping
- Fragmentation in Frame Relay (FRF.12), PPP and MPPP

Data Compression

- X.25 and PPP compression
- IPHC compression
- Van Jacobson and STA LZS compression algorithms

Security and VPNs

- IPSec client and server. Fully parameterized, compatible with third-party IPSec peers
- IPSec security services: ESP and AH
- IPSec operation modes: tunnel and transport
- Encryption: RC4, DES, 3DES & AES
- Authentication: SHA-1 and MD5
- IKE Protocol
- ISAKMP configuration method. Oakley groups 1, 2, 5, 15
- NAT-Traversal
- Reverse Route Injection (RRI)

- Digital certificates X.509v3, LDAP, PKIX, PEM, DER
- SCEP Protocol
- TED Protocol
- IPSec PMTU Discovery
- GRE and multi-GRE encryption. GRE RC4
- NHRP Protocol
- Dynamic Multipoint IPSec VPNs (DMVPN)
- Gateway Encryption Transport VPN (GET VPN - GDOI) RFC 3547
- RADIUS Access Control (RFC 2138)
- L2TP client (LAC), L2TP initiation and L2TP server (LNS)
- L2TP/IPSec Server, compatible with Microsoft clients
- Advanced IP filters
- Advanced Firewall System (AFS)
- Stateful Firewall
- Advanced packet classification and marking
- URL and content filtering

Bridging

- Bridge over PPP (BCP)
- Spanning Tree Protocol (STP) (IEEE 802.1d)
- Rapid Spanning Tree Protocol (RSTP) (IEEE 802.1w)
- Multiple bridge domains
- Simultaneous bridging and routing
- IEEE 802.1p Class of Service (CoS)
- Per VLAN Spanning Tree Protocol (PVST)*
- Source Routing, MAC filtering and NetBIOS

Management

- Command line interface (CLI) on console, Telnet and Secure Shell (SSH)
- SNMP: MIB-2, Private-MIB
- Events Logging System
- Netflow V5 and V9
- Syslog Client
- NTP protocol
- DynDNS client
- FTP and TFTP software, BIOS and configuration upgrading
- Internal Protocol Analyzer, compatible with Ethereal/WireShark
- Default configuration reset knob
- RADIUS Accounting (RFC 2139)

TECHNICAL SPECIFICATIONS

OmniAccess 5720 specifications

- Four Integrated Switched 10/100/1000 Mb ports
- One Integrated WAN 10/100/1000 Mb port
- Wi-Fi option
- LTE option
- One multipurpose slot
- One console
- Physical measurements:
 - Width: 24.5 cm
 - Depth: 21 cm
 - Height: 4.5 cm
 - Weight 1.4Kg
- Environmental specifications:
 - Operating temperature: 0°C to 45°C (32°F to 113°F)
 - Storage temperature: 10°C to 70°C (14°F to 158°F)
 - Humidity (operating): 5% to 80% non-condensing
 - Humidity (storage): 5% to 90% non-condensing

WAN Expansion modules:

- One E1/T1 port
- One GigE SFP port
- One serial port

Interfaces

- 1 x 10/100/1000M interface GigE, RJ-45F
- 1 x 10/100/1000M interface GigE, SFP
- 1 x synchronous serial (V.35, X.21, V.24)
- 1 x E1/T1 (fractional)
- 4 x 10/100/1000M GigE switch, RJ 45F
- 1x WLAN interface: IEEE 802.11bgn with two external antenna ports (optional)
- 1 x embedded interface LTE/HSPA+/HSPA/UMTS/EDGE/GPRS
- Double connector for external 4G antenna (SMA connectors)
- 1 x USB Host 2.0 interface
- 1 x console port, RJ-45F

OmniAccess 5720 ordering information

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|--------------|--|
| OA5720-xx | OA5720 ESR base model has 1 x GigE WAN port, 4 x GigE LAN ports and 1 x MIC slot. HW ready for 802.11bgn (activated by license). See SW licenses available. See part number suffix for power cord plug type. |
| OA5720-4A-US | OA5720 ESR with 4G/LTE for NA and others (LTE AWS & B17 MIMO, fallback to HSPA+/UMTS 850/AWS/1900/2100 MHz and GPRS). See base model for ports. HW ready for 802.11bgn (act by license). See SW licenses available. See part number suffix for power cord plug type. |
| OA5720-4V-US | OA5720 ESR with 4G/LTE for Verizon (LTE B13 MIMO, fallback to CDMA 850/1900 MHz and HSPA+/UMTS 850/900/1900/2100 MHz and GPRS). See base model for ports. HW ready for 802.11bgn (act by license). See SW licenses available. See part number suffix for power cord plug type. |
| OA5720-4G-xx | OA5720 ESR with 4G/LTE for Global (LTE at 800/900/1800/2100/2600 MHz, fallback to HSPA+/UMTS 900/2100 MHz and EDGE/GPRS 900/1800/1900 MHz). See base model for ports. HW ready for 802.11bgn (act by license). See SW licenses available. See part number suffix for power cord plug type. |
| OA5720-H+-xx | OA5720 ESR with 3.7G for Worldwide (HSPA+ at 850/900/1900/2100 MHz, fallback to EDGE/GPRS 850/900/1800/1900 MHz). See base model for ports. HW ready for 802.11bgn (act by license). See SW licenses available. See part number suffix for power cord plug type. |

MODULES

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| ESR-MIC-1E1T1 | 1-port E1/T1 mini interface card for OA5720 ESR compact router |
| ESR-MIC-1SFP | 1-port GigE SFP mini interface card for OA5720 ESR compact router |
| ESR-MIC-1SS | 1-port Sync Serial mini interface card for OA5720 ESR compact router |

SOFTWARE

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| OA5720-WLAN-SL | WLAN 802.11bgn AP activation license for OA5720 ESR compact router |
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Warranty

Standard Hardware warranty