

Alcatel-Lucent OmniAccess 5725R

Enterprise Services Routers

Rugged wireless 4G routers for industrial-grade environments

The [Alcatel-Lucent OmniAccess® 5725R](#) comes with an integrated Ethernet switch and is capable of serving a large number of intelligent electronic devices at a remote site without additional equipment. Its embedded managed switch includes full support of VLANs and other advanced switching features.



The OmniAccess 5725R can guarantee optimal performance and maximum security in communications among multiple services in IP networks. The router multiplexes remote site communications using embedded cellular broadband or ADSL links, or flexible external modems. Maximum reliability communication is guaranteed thanks to a full range of management, supervision and backup functions.

The ruggedized router also comes with the intelligence required for efficient implementation of highly secured, scalable and permanently available communications services based on broadband links. Communications cyber-security is supported with state-of-the-art, low-latency hardware encryption and a complete stack of VPN protocols and firewalling techniques.

Features

- Reliable LTE wireless WAN performance
- WAN connectivity
- Advanced security features
- Integrated VoIP solution
- High-performance WLAN
- High-performance wireless WLAN

Benefits

- Ensures optimal availability and reliability
- Provides maximum security
- Lowers CAPEX because of integrated Ethernet switch and scalability

Table 1 shows the detailed features of the OmniAccess 5725R.

Table 1. OmniAccess 5725R detailed features

Functions	Features
Reliable LTE wireless-WAN (WWAN) performance	<ul style="list-style-type: none"> Two 4G cellular interfaces provide uninterrupted vehicle connectivity and application continuity when travelling through poor coverage areas, for example from a private city wireless network onto a commercial carrier service Automatic selection of the best available connection, based on network availability, signal reception level, quality of service (QoS), time of the day, cost, speed or position Passive link supervision: Permanently controls signal coverage, technology availability, IP transmission service status and transmission activity Poll-based link supervision: Detects and corrects failures and degradations on the 4G communications; the router controls error rate, link latency and jitter to guarantee utmost performance of the streaming transmission (real-time IP-CCTV image transmission or voice) Tight integration of internal cellular modules for shock and vibration resilience, improved radio transmission and reception, protection against theft and advanced monitoring for troubleshooting (instead of the unprofessional USB-based solutions) Up to two antennas per radio interface to maximize coverage at any location WWAN+ proprietary optimization of network protocols for improved communication over cellular networks
WAN connectivity	<ul style="list-style-type: none"> Independent Gigabit Ethernet (GigE)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 and V.24)
Advanced security features	<ul style="list-style-type: none"> Incorporated encryption processor 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 (RRI) guarantee 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, and blind and attended transfers
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 modes, either to reroute from the Wi-Fi terminals to the mobile network (access to Internet or to corporate VPN, depending on the service specifications, when in Access Point mode) or to connect the router to the branch WiFi network to access certain applications in the branch (when in Client mode).
High-performance WWAN	<ul style="list-style-type: none"> 4G interface fully integrated in the router's internetworking protocol architecture (CIT features), thereby 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 and by connecting 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 (making it unnecessary to transmit polling traffic): Through the constant monitoring of signal coverage, the connection to the mobile network, the IP connection and the branch traffic transmitted and received over the WWAN link, the router can accurately and dynamically detect problems with device performance and take the appropriate actions (WWAN backup, trap reports, etc.); this minimizes the time the communications service is unavailable Simultaneous support of audio GSM calls and 4G data transmission for emergency telephony services

Alcatel-Lucent OmniAccess 5725R models

The OmniAccess 5725R comes standard with 6 Fast Ethernet switched ports and 1 WAN VDSL port. The WWAN options include 4G-specific services for Verizon, AT&T and global 4G and 3G.

Table 2. Product matrix

Product Matrix	OA5725R
Integrated switched 10/100 Mb ports	6
WAN VDSL2/ADSL2+/ADSL port	1
Wi-Fi option	No
LTE option	Yes
Power consumption (max. under full traffic load)	12.6 W
Heat dissipation	43 BTU/h
Height	4.7 cm (1.8 in.)
Width	18.6 cm (7.3 in.)
Depth	20.3 cm (7.9 in.)
Approximate weight	680 g (1.4 lb)
Operating temperature	-10°C to +70°C (14°F to 158°F)
Humidity operating)	5% to 95% non-condensing

Technical Specifications

Interfaces and connectors

- Up to 6 x 10/100 Fast Ethernet, RJ-45F
- Up to 2 wireless broadband modules
- 2 x internal SIM trays (easy to access)
- 2 x SMA connectors for external antennas
- 1 x port for local console, RJ-45F
- 1 VDSL/ASDL2+ port, RJ-11 H

Hardware architecture

- 2 status/speed LEDs per Ethernet port
- 2 wireless status/coverage LEDs
- 1 system LED (configurable)
- 1 on/off switch

Local console

- RS-232 at 9600 bps (configurable max. 115,200 bps)
- IEEE 802.1X

- Managed switch
 - EtherLike-MIB (RFC 2665)
 - SNMP-REPEATER-MIB (RFC 2108)
 - MAU-MIB (RFC 2668)

Power

Input power

- 40-75 V DC
- Power consumption (max): 12.6 W

Mounting options

- DIN rail
- Wall mounted

Internal 3G interfaces

- Passive detection when interface drops (analyzing received traffic)
- Active detection when interface drops (poll)
- Management protocol through SMS
- Advanced monitoring in the RF interface
- Simultaneous context to double APN (dual PDP)

- Remote upgrading of module firmware over the air
- Automatic handover
- Internal SIM trays

ADSL2+ interface

- Selected through the configuration of the following standards:
 - ANSI T1.413 Issue 2
 - ITU G.992.1 (G.DMT) - Annex A
 - ITU G.992.2 (G.Lite) “LiteADSL over POTS”
 - ITU G.992.3 (ADSL2) - Annex A, L & M
 - ITU G.992.5 (ADSL2+) - Annex A & M
- Downstream speeds: Up to 27Mb/s (ADSL2+ Annex A)
- Upstream speeds: Up to 3 Mb/s (ADSL2+ Annex M)
- Single Ended Line Testing (SELT) diagnostics
- Dying Gasp
- Annex B on demand; contact your dealer

Serial ports

- Asynchronous
- Up to 115,200 bps
- RTS/CTS flow control
- PPP, M-PPP
- SCADA (Modbus, IEC 101/102, IEC 101/104, DNP3/ DNP3 NET and HNZ)

Protocols

- IP, ARP and Proxy ARP
- Static IP routing, RIP I, RIP II, OSPFv2, BGP-4 and policy routing
- BFD Protocol

- Compatible with HSRP
- RFC 2281 VRRP – Virtual Router Protocol
- VRF-Lite
- 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 and PIM-SM
- DHCP client, server and relay
- DNS client and proxy, DNS cache, dynamic upgrades in DNS (RFC 2136)
- SNAT/DNAT/NAPT: Visible subnets, Port Mapping
- PAT fire-walling
- Multiple addresses per interface
- Loopback interfaces
- IEC101 encapsulation
- IP over asynchronous PPP on serial ports