Alcatel-Lucent OmniAccess 5321 BG

MULTISERVICE/CONVERGED ACCESS BUSINESS GATEWAY

The Alcatel-Lucent OmniAccess™ 5321 Business Gateway (BG) product provides multiservice/converged access gateways for use with broadband or IP networks, enabling converged voice and data at the network edge (the customer's premises). The OmniAccess 5321 BG delivers business and Session Initiation Protocol (SIP) trunking and supports the deployment of IP Multimedia Subsystem (IMS) and IP Centrex solutions. It is suitable for the small office and home office environment as well as for small and medium-sized businesses (SMBs) with up to 50 users.

The OmniAccess 5321 BG is a low-cost, fixed-configuration platform that is easy to deploy, configure and manage. The OmniAccess 5321 BG is targeted to operators and carriers that seek to offer next-generation network (NGN)/IMS/IP Centrex solutions that will include converged access (voice and data) devices to their SMB customer networks.

Key features

- Integrated DSL modem router with four 10/100 Fast Ethernet (FE) ports, four foreign exchange subscriber (FXS) ports or two ISDN BRI ports
- DSL or Ethernet WAN
- All-in-one secure WAN access with routing, switching, security and voice support
- Up to eight IP Security (IPSec) virtual private network (VPN) (site-to-site and client) tunnels
- Provision of "equivalent" voice service over broadband/Voice over Internet Protocol (VoIP) with four voice channels
- Best-in-class quality of service (QoS) for both data and voice
- Auto-provisioning
- Remote management
  - ¬ Simple Network Management Protocol (SNMP)
  - ¬ Telnet
  - ¬ TR-069
- Stateful inspection firewall
- Proven interoperability
- IPv6 support

Key benefits

- Reduced total cost of ownership
  - ¬ Simplified implementation for both customer and operator with "all-in-one-box" solution that is both a gateway and proxy; also delivers routing, switching, POTS, ISDN BRI, VoIP and ADSL
  - ¬ Competitive price that includes high-performance, business-class software
  - ¬ Zero-touch installation through auto-provisioning and auto-configuration
- Increase operator revenue
  - ¬ Converged access gateway for SMB market providing opportunity to address the IMS/Centrex portfolio
  - ¬ Opportunity to address the IMS/Centrex portfolio using business trunking, which provides a smooth migration to IP/IMS and SIP services
  - ¬ Easy network migration to SIP/NGN with a hybrid offer by keeping the existing phones and PBX
- Also suited for remotely managed media gateway inside customer premises equipment (CPE) LAN environment
- Ideal for modern SMB environment – migrating to IP Centrex-managed solution

Table 1. OmniAccess 5321 BG models

MODELS	TELEPHONY	DATA ACCESS	DSL	POWER SUPPLY
OA5321-04aa-EU	Four POTS ports	Four port LAN 10/100Base-T/TX	One port ADSL2+ Annex A	External AC
OA5321-04ab-EU	Four POTS ports	Four port LAN 10/100Base-T/TX	One port ADSL2+ Annex B	External AC
OA5321-02bb-EU	Two ISDN BRI ports	Four port LAN 10/100Base-T/TX	One port ADSL2+ Annex B	External AC

Technical specifications

WAN interface

- ADSL/ADSL2/ADSL2+ ports (RJ-11)
  - ¬ Up to 24 Mb/s downstream
  - ¬ Up to 3.072 Mb/s upstream
  - ¬ G.992.1 (G.dmt)
  - ¬ G.992.2 (G.lite)
  - ¬ G.992.3 (G.dmt.bis) ADSL2
  - ¬ G.992.5 ADSL2+
- Ethernet ports (RJ-45)
  - ¬ 10/100Base-T/TX

User interfaces

- FXS ports (4xRJ-11)
  - ¬ Configurable line impedance 600-ohm or complex (TBR21)
  - ¬ Dual-tone multi-frequency (DTMF) and loop disconnect dialing
  - ¬ Line reversal
  - ¬ REN of 4
  - ¬ CLASS features
  - ¬ Configurable
    - Ring frequency and cadence ring signal = 50 V rms
    - On-hook battery voltage = 48 V
    - DC loop current = 25 mA
- ISDN2/BRI S0 ports (2xRJ-45)
  - ¬ CTR3-compliant
  - ¬ NT mode
  - ¬ Point-to-point and point-to-multipoint
  - ¬ 100-ohm termination
  - ¬ Power source 1 support (NT)
  - ¬ Supplementary service support
  - ¬ Multiple subscriber numbering (MSN)
- LAN ports (4xRJ-45)
  - ¬ 10/100Base-T/TX
- USB 2.0 (1)

WAN

- Eight ATM PVCs on WAN
- Bridged and routed encapsulation – RFC 1483
- Logical Link Control/Sub-network Access Protocol (LLC/SNAP), Virtual Circuit Multiplexing (VC-Mux), High-level Data Link Control (HDLC)
- MAC Encapsulated Routing (MER)
- Point-to-Point Protocol over ATM (PPPoA), Point-to-Point Protocol over Ethernet (PPPoE), Password Authentication Protocol (PAP), Challenge-Handshake Authentication Protocol (CHAP)
- IP over ATM (IPoA) – RFC 2225
- High availability using Ethernet WAN as backup

Routing and switching

- Up to 16 802.1Q virtual LANs (VLANs)
- Port-based VLAN, independent VLAN learning (IVL) and shared VLAN learning (SVL)
- Static Routing and Routing Information Protocol (RIP) v1/v2
- Network address translation (NAT), network address port translation (NAPT), port address translation (PAT)
- IP multicast forwarding
- Internet Gateway Multicast Protocol (IGMP) v1/v2 and proxy
- Dynamic Host Configuration Protocol (DHCP) server, client, relay
- Transparent bridging
- Simple traversal of UDP through NATs (STUN)
- IPv6 support
  - ¬ Dual IP stack
  - ¬ Addressing architecture
  - ¬ Internet Control Message Protocol (ICMP) v6
  - ¬ DHCP v6
  - ¬ Generic Packet Tunneling
  - ¬ Path MTU

Security

- Stateful bidirectional firewall
- IP and Media Access Control (MAC) filtering
- NAT/NAPT
- Intrusion detection system (IDS) – port scan, denial of service (DoS) and spoofing
- DMZ support
- IPSec termination and initiation
- LAN-to-LAN and teleworker-to-LAN VPN
- Manual keys
- Authentication: Null, MD5 and SHA-1
- Internet Key Exchange (IKE) authentication: Pre-shared Key, Digital Signature Algorithm (DSA) and Rivest, Shamir and Adleman (RSA)
- Hardware-accelerated Triple Data Encryption Standard (3DES)/Data Encryption Standard (DES) and Advanced Encryption Standard (AES)
- NAT traversal (NAT-T)
- Password access
- Restricted access

Voice protocols

- SIP: RFC 3261, RFC 2453
  - ¬ Single port registration
  - ¬ Trunking
    - Multiple device registration
    - Single device registration
    - No registration
    - POTS trunking
  - ¬ Tel URI
- Comprehensive ISDN supplementary services
- Media Gateway Control Protocol (MGCP): Network-based Call Signaling (NCS), RFC 2705, RFC 3435

VoIP CODECS

- G.711 a-law, µ-law, 64 kb/s
- G.726/G.721 ADPCM, 32 kb/s
- G.729ab CS-ACELP, 8 kb/s
- G.128 LEX 32 ms
- Silence detection
- Comfort noise generation
- DTMF detection and relay
- Fax and modem detection
- T.38 fax relay
- Variable length dynamic jitter buffer
- Packet loss compensation (PLC)
- RFC 4040 – Clear mode

Quality of service

- ATM: CBR, VBR-rt, VBR-nrt
- UBR, UBR+
- IP: Type of service (TOS)/differentiated services code point (DSCP) bit prioritization
- VLAN tagging and 802.1p
- Differentiated services (DiffServ)
- Packet classifier and metering
- Transmit scheduler
- Optional algorithmic dropping
- VC traffic shaping on AAL5

Configuration and management

- HTTP: Telnet, SNMP, TR-069
- Local or remote access
- Firmware upgrade of HTTP, TFTP, FTP
- Support of TR-69, TR-104 and TR-111
- ICMP ping, syslog, trace route
- Automatic provisioning
- Syslog
- Event log

LED indicators

- Power, DSL, data, voice

Environmental

- Operating temperature: 0°C to 40°C (32°F to 104°F)
- Storage: -10°C to +60°C (14°F to 140°F)
- Relative humidity: 5% to 95%

Mechanical

- Size: 200 mm x 50 mm x 172 mm (7.87 in x 1.97 in x 6.77 in)
- Weight: 0.50 kg (1.1 lb)

Power

- AC/DC adapter
- 110/230 V AC to 12 V DC/10 W max.

Regulatory

- CE marked
- RoHS-compliant
- Safety: EN60950
- RFI: Emissions EN55022
- RFI: Immunity EN55024

Table 2. Ordering information

PART NUMBER	DESCRIPTION
OA5321-04aa-EU	OmniAccess 5321 BG with one port ADSL2+ Annex A (or Ethernet WAN), four ports FXS and four ports 10/100 switch. Includes external AC power supply.
OA5321-04ab-EU	OmniAccess 5321 BG with one port ADSL2+ Annex B (or Ethernet WAN), four ports FXS and four ports 10/100 switch. Includes external AC power supply.
OA5321-02bb-EU	OmniAccess 5321 BG with one port ADSL2+ Annex B (or Ethernet WAN), two ports ISDN BRI and four ports 10/100 switch. Includes external AC power supply.

To learn more, contact your dedicated Alcatel-Lucent representative, authorized reseller, or sales agent. You can also visit our web site at www.alcatel-lucent.com.

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