



## LANCOM 831A

Small business router with integrated ADSL2+ modem for a secure Internet access for single site businesses

The LANCOM 831A is the right choice for smaller businesses which require an Internet connection as well as professional network functionalities. Thanks to the integrated multimode modem for ADSL2+ the router can be directly connected with a common DSL line – without additional hardware. It thus meets maximum requirements for a secure Internet access with LANCOM quality “made in Germany”.

- › Small-business router with integrated ADSL2+ modem for single site businesses
- › Integrated stateful-inspection firewall with intrusion detection and Denial-of-Service protection
- › Network virtualization with up to 2 networks on one device (ARF)
- › Security Made in Germany
- › Maximum future compatibility, reliability, and security

# LANCOM 831A

## Professional router with ADSL2+ modem

Thanks to the integrated multimode modem for ADSL2+ the router can be directly connected with a common DSL line and thus enables professional Internet access for access for single site businesses.

## Stateful inspection firewall

Equipped with a stateful inspection firewall, the LANCOM 831A protects the entire network. With features such as intrusion prevention and Denial-of-Service protection, this business router provides optimal protection and secures all of the data on the network.

## Advanced Routing & Forwarding

The LANCOM 831A provides up to 2 securely isolated IP contexts, each of which has its own separate routing. This is an elegant way of operating IP applications with one central router and keeping the different communication channels securely separated from one another.

## Security Made in Germany

In a market with a strong presence of American and Asian products, LANCOM offers maximum security "Made in Germany". The entire LANCOM core product range is developed and manufactured in Germany, and tested according to the highest standards of security, data protection and quality. The company's own "closed-source" operating system LCOS is developed at the company headquarters in Germany. Our in-house team of developers works in a highly secure environment as certified by the BSI (German Federal Office for Information Security), all of which is subject to the highest standards of security, encryption, and quality.

## Maximum future-proofing

LANCOM products are based on professional expertise, years of experience in IT, and high-quality materials. All of our devices are equipped with hardware that is dimensioned for the future and, even reaching back to older product

generations, updates to the LANCOM Operating System—LCOS—are available several times a year, free of charge. This guarantees a long service life while staying technically up to date, which represents a true protection of your investment.

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LCOS 9.24

Layer 2 features	
VLAN	4.096 IDs based on IEEE 802.1q, dynamic assignment, Q-in-Q tagging
Multicast	IGMP-Snooping
Protocols	ARP-Lookup, LLDP, ARP, Proxy ARP, BOOTP, DHCP
Layer 3 features	
Firewall	Stateful inspection firewall including packet filtering, extended port forwarding, N:N IP address mapping, packet tagging, user-defined rules and notifications
Quality of Service	Traffic shaping, bandwidth reservation, DiffServ/TOS, packet size control, layer-2-in-layer-3 tagging
Security	Intrusion Prevention, IP spoofing, access control lists, Denial of Service protection, detailed settings for handling reassembly, session-recovery, PING, stealth mode and AUTH port, URL blocker, password protection, programmable reset button
PPP authentication mechanisms	PAP, CHAP, MS-CHAP, and MS-CHAPv2
High availability / redundancy	VRRP (Virtual Router Redundancy Protocol), analog/GSM modem backup
Router	IPv4-, IPv6-, NetBIOS/IP multiprotokoll router, IPv4/IPv6 dual stack
Router virtualization	ARF (Advanced Routing and Forwarding) up to separate processing of 16 contexts
IPv4 services	HTTP and HTTPS server for configuration by web interface, DNS client, DNS server, DNS relay, DNS proxy, dynamic DNS client, DHCP client, DHCP relay and DHCP server including autodetection, NetBIOS/IP proxy, NTP client, SNTP server, policy-based routing
IPv6 services	DHCPv6 client, DHCPv6 server, DHCPv6 relay
IPv6 compatible LCOS applications	WEBconfig, HTTP, HTTPS, SSH, Telnet, DNS, TFTP, firewall, RAS dial-in
Dynamic routing protocol	RIPv2
IPv4 protocols	DNS, HTTP, HTTPS, ICMP, NTP/SNTP, NetBIOS, PPPoE (server), RADIUS, RADSEC (secure RADIUS), RTP, SNMPv1,v2c,v3, TFTP, TACACS+
IPv6 protocols	NDP, stateless address autoconfiguration (SLAAC), stateful address autoconfiguration (DHCPv6), router advertisements, ICMPv6, DHCPv6, DNS, HTTP, HTTPS, PPPoE, RADIUS, SMTP, NTP, Syslog, SNMPv1,v2c,v3
WAN operating mode	VDSL, ADSL1, ADSL2 or ADSL2+ additional with external DSL modem at an ETH port, UMTS/LTE
WAN protocols	PPPoE, Multi-PPPoE, ML-PPP, GRE, EoGRE, PPTP (PAC or PNS), L2TPv2 (LAC or LNS) and IPoE (using DHCP or no DHCP), RIP-1, RIP-2, VLAN, IPv6 over PPP (IPv6 and IPv4/IPv6 dual stack session), IPv6 over Ethernet (autokonfiguration, DHCPv6 or static)
Tunneling protocols (IPv4/IPv6)	6to4, 6in4, 6rd (static and over DHCP), Dual Stack Lite (IPv4-in-IPv6-Tunnel)
Security	
Intrusion Prevention	Monitoring and blocking of login attempts and port scans
IP spoofing	Source IP address check on all interfaces: only IP addresses belonging to the defined IP networks are allowed
Access control lists	Filtering of IP or MAC addresses and preset protocols for configuration access and LANCAPI
Denial of Service protection	Protection from fragmentation errors and SYN flooding
General	Detailed settings for handling reassembly, PING, stealth mode and AUTH port
URL blocker	Filtering of unwanted URLs based on DNS hitlists and wildcard filters. Extended functionality with Content Filter Option
Password protection	Password-protected configuration access can be set for each interface
Alerts	Alerts via e-mail, SNMP traps and SYSLOG
Authentication mechanisms	PAP, CHAP, MS-CHAP and MS-CHAPv2 as PPP authentication mechanism
Anti-theft	Anti-theft ISDN site verification over B or D channel (self-initiated call back and blocking)
Adjustable reset button	Adjustable reset button for 'ignore', 'boot-only' and 'reset-or-boot'
High availability / redundancy	
VRRP	VRRP (Virtual Router Redundancy Protocol) for backup in case of failure of a device or remote station.
FirmSafe	For completely safe software upgrades thanks to two stored firmware versions, incl. test mode for firmware updates
ISDN backup	In case of failure of the main connection, a backup connection is established over ISDN. Automatic return to the main connection

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High availability / redundancy	
Analog/GSM modem backup	Optional operation of an analog or GSM modem at the serial interface
Load balancing	Static and dynamic load balancing over up to 2 WAN connections. Channel bundling with Multilink PPP (if supported by network operator)
Line monitoring	Line monitoring with LCP echo monitoring, dead-peer detection and up to 4 addresses for end-to-end monitoring with ICMP polling
Performance	
Routing-Performance	Data regarding the overall routing performance can be found inside the LANCOM tech paper "Routing-Performance" on <a href="http://www.lancom-systems.eu">www.lancom-systems.eu</a>
VoIP	
SIP ALG	The SIP ALG (Application Layer Gateway) acts as a proxy for SIP communication. For SIP calls the ALG opens the necessary ports for the corresponding media packets. Automatic address translation (STUN is no longer needed).
Interfaces	
WAN: ADSL2+	<ul style="list-style-type: none"> <li>■ Compliant to: ADSL2+ as per ITU G.992.5 Annex A/Annex B/Annex J/Annex M with DPBO, ADSL2 as per ITU G.992.3 Annex A/Annex B/Annex J/Annex M, ADSL as per ITU.G.992.1 Annex A/Annex B</li> <li>■ Supports one virtual ATM circuit (VPI, VCI pair) at a time</li> <li>■ Compliant to: Deutsche Telekom U-R2 (1TR112)</li> </ul>
WAN: Ethernet	10/100/1000 Mbps Gigabit Ethernet
Ethernet ports	4 individual 10/100/1000 Mbps Ethernet ports; up to 1 ports can be operated as additional WAN ports with load balancing. Ethernet ports can be electrically disabled within LCOS configuration. The ports support energy saving according to IEEE 802.3az
Port configuration	Each Ethernet port can be freely configured (LAN, DMZ, WAN, monitor port, off). LAN ports can be operated as a switch or separately. Additionally, external DSL modems or termination routers can be operated as a WAN port with load balancing and policy-based routing. DMZ ports can be operated with their own IP address range without NAT
USB 2.0 host port	USB 2.0 hi-speed host port for connecting USB printers (USB print server), serial devices (COM port server), USB data storage (FAT file system); bi-directional data exchange is possible
ISDN	ISDN BRI port (S0 bus)
Serial interface	Serial configuration interface / COM port (8 pin Mini-DIN): 9,600 - 115,000 baud, suitable for optional connection of analog/GPRS modems. Supports internal COM port server and allows for transparent asynchronous transmission of serial data via TCP
Management and monitoring	
Management	LANconfig, WEBconfig, WLAN controller, LANCOM Layer 2 management (emergency management)
Management functions	Alternative boot configuration, voluntary automatic updates for LCMS and LCOS, individual access and function rights up to 16 administrators, RADIUS and RADSEC user management, remote access (WAN or (W)LAN, access rights (read/write) adjustable separately), SSL, SSH, HTTPS, Telnet, TFTP, SNMP, HTTP, access rights via TACACS+, scripting, timed control of all parameters and actions through cron job
FirmSafe	Two stored firmware versions, incl. test mode for firmware updates
Monitoring	LANmonitor, WLANmonitor, LSM (LANCOM Large Scale Monitor)
Monitoring functions	Device SYSLOG, SNMPv1,v2c,v3 incl. SNMP-TRAPS, extensive LOG and TRACE options, PING and TRACEROUTE for checking connections, internal logging buffer for firewall events
Monitoring statistics	Extensive Ethernet, IP and DNS statistics; SYSLOG error counter, accounting information exportable via LANmonitor and SYSLOG
ISDN remote maintenance	Remote maintenance over ISDN dial-in with calling-number check
LANCAPI	Available for all LANCOM routers with integrated ISDN interface. LANCAPI provides CAPI 2.0 features for Microsoft Windows to utilize ISDN channels over the IP network
CAPI Faxmodem	Softmodem for Microsoft Windows that makes use of LANCAPI to send and receive faxes via ISDN
iPerf	iPerf is a tool for measurements of the bandwidth on IP networks (integrated client and server)
SLA-Monitor (ICMP)	Performance monitoring of connections
*) Note	Not for use with All-IP connection

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Hardware	
Power supply	12 V DC, external power adapter (230 V) with bayonet cap to protect against accidentally unplugging
Environment	Temperature range 5–40° C; humidity 0–95%; non-condensing
Housing	Robust synthetic housing, rear connectors, ready for wall mounting, Kensington lock; 210 x 45 x 140 mm (W x H x D)
Fans	None; fanless design without rotating parts, high MTBF
Power consumption (max)	Approx. 10 Watts
Declarations of conformity*	
CE	EN 60950-1, EN 55022, EN 55024
IPv6	IPv6 Ready Gold
*) Note	You will find all declarations of conformity in the products section of our website at <a href="http://www.lancom-systems.eu">www.lancom-systems.eu</a>
Scope of delivery	
Manual	Hardware Quick Reference (EN, DE), Installation Guide (DE/EN)
CD/DVD	Data medium with management software (LANconfig, LANmonitor, WLANmonitor, LANCAPI) and documentation
Cable	1 Ethernet cable, 3 m
Cable	ADSL cable, 3m
Cable	ISDN cable, 3m
Power supply unit	External power adapter (230 V), NEST 12 V/1.5 A DC/S, coaxial power connector 2.1/5.5 mm bayonet, temperature range from -5 to +45° C, LANCOM item no. 111301 (EU)/LANCOM item no 110829 (UK)
Support	
Warranty	3 years support via hotline and Internet KnowledgeBase
Software updates	Regular free updates (LCOS operating system and LANCOM Management System) via Internet
Options	
LANCOM Content Filter	LANCOM Content Filter +10 user, 1 year subscription, item no. 61590
LANCOM Content Filter	LANCOM Content Filter +25 user, 1 year subscription, item no. 61591
LANCOM Content Filter	LANCOM Content Filter +10 user, 3 year subscription, item no. 61593
LANCOM Content Filter	LANCOM Content Filter +25 user, 3 year subscription, item no. 61594
LANCOM Warranty Basic Option S	Option to extend the manufacturer's warranty from 3 to 5 years, item no. 10710
LANCOM Warranty Advanced Option S	Option to extend the manufacturer's warranty from 3 to 5 years and replacement of a defective device on the next working day, item no. 10715
LANCOM All-IP Option	Upgrade option for the operation of the LANCOM 1781 series, 1631E, and 831A with All-IP connections, support of ISDN PBX systems and telephony devices as well as ISDN voice & fax services, incl. Voice Call Manager, All-IP (TAE/RJ45) and cross-over adapters (TE/NT), item no. 61422
LANCOM VoIP +10 Option	Upgrade for LANCOM VoIP router with 10 additional internal VoIP numbers (additionally up to 40), item no. 61423
Accessories	
19" Rack Mount	19" rack mount adaptor, item no. 61501
LANCOM Wall Mount	For simple, theft-proof mounting of LANCOM devices with plastic housings, item no. 61349
LANCOM Wall Mount (White)	For simple, theft-proof mounting of LANCOM devices with plastic housings, item no. 61345
LANCOM Serial Adapter Kit	For the connection of V.24 modems with AT command set and serial interface for the connection to the LANCOM COM interface, incl. serial cable and connection plug, item no. 61500
Item number(s)	
LANCOM 831A (EU)	61086

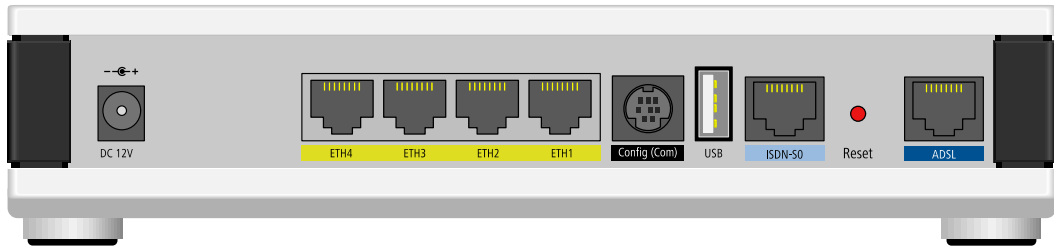
# LANCOM 831A

LCOS 9.24

Item number(s)

LANCOM 831A (UK)

61087



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