



WS/1611+

VPN Router
with ISDN



VPN router/firewall with ISDN backup and 3-port switch

- 5 IPSec VPN channels integrated; optional: 25 channels
- High security firewall with intrusion detection
- VoIP-ready with extensive Quality-of-Service functions

LANCOM 1611+ is the entry-level model of LANCOM's highly integrated range of VPN networking components. This compact, cost effective device makes no compromises in offering all of the functions necessary for securely connecting external locations and smaller branch offices that use ADSL or SDSL Internet access..

High performance.

With up to 2 Fast Ethernet WAN connectors for broadband ADSL or SDSL connections, the LANCOM 1611+ provides ample capacity for the Internet connections and site coupling of SME's. Performance increases through load balancing and IPCOMP data compression through VPN tunnels make sure that there are capacities in reserve. The standard equipment of 5 IPSec VPN channels can be upgraded to 25 VPN channels.

Highest security and availability.

The LANCOM high-security firewall with stateful inspection, intrusion detection, and denial-of-service protection will screen your network safely and reliably from attacks from the Internet. Satisfaction is guaranteed with encrypted remote configuration via the high-security 3 DES or AES IPSec encryption with up to 256 bits, and the support for X.509 digital certificates.

Comprehensive backup, high-availability and redundancy functions guarantee trouble-free operations around the clock.

Professional, easy management.

The management programs LANconfig and LANmonitor, are included and offer not only cost-effective remote maintenance of entire installations and highly convenient setup wizards, but also full real-time monitoring and logging. Further, there is a broad range of scripting methods and professional access for administrators with individual access rights via IPSec, SSH, HTTPS, SNMP, TFTP and ISDN dial-in.

More benefits.

Thanks to a wide variety of functions for address translation and routing, there is no problem in interconnecting several networks via common infrastructure. The integrated ISDN interface allows remote field installations, dial-up access and CAPI featured functions such as fax services for all connected PCs. The integrated broadband management with traffic shaping, packet-size management and data prioritization is ideally suited to the needs of VoIP transmission via VPN.

Wireless & Security

WS/1611 + SPECIFICATIONS

Firewall	Stateful inspection, IP packet filter with port ranges; masquerading (NAT/PAT/Multi-NAT/N:N) of TCP, UDP, ICMP, FTP, PPTP, H.323, NetMeeting IRC and IPSec; DNS forwarding; inverse masquerading for IP services from the Intranet such as web server; support of 2 local networks; e.g. DMZ with own IP address range without NAT, port mapping	
Quality of Service	Dynamic bandwidth management with IP traffic-shaping/limiting with dynamic, absolute or per connection transfer limits or guaranteed minimum bandwidths, separated from send or receive site, TOS or DiffServ priority queuing, automatic packet size adaption incl. PMTU adjustment or fragmentation.	
Security	Intrusion detection (IP spoofing, login attempt, port scans), denial-of-service protection (fragmentation error, SYNflooding, automatic closing of ports/connections). DNS hitlist as well as wild card filter (URL blocking). Highavailability with ISDN dial backup for Internet access or VPN connections. Email alerting, SNMP traps and SYSLOG. PAP, CHAP and MS-CHAP as PPP authentication, password-protected configuration remote access per interface, access control list (IP, MAC and protocol filter) for configuration access and LANCAP, ISDN remote access list, FirmSafe with two firmware versions for secure software upgrades.	
VPN/IPSec	5 IPSec sessions parallel, 25 sessions configurable, optional 25 IPSec sessions parallel, encryption methods: 3-DES (168 bit) and AES (128, 192 and 256 bit), Blowfish (128 - 448 bit), CAST (128 bit), MD-5 or SHA-1 Hashes, IKE with Preshared Keys or digital certificate, IKE config mode, redundant gateway operation via dynamic routing (RIPv2 propagation), IPCOMP data compression with deflate and LZS	
PKI	X.509 digital certificates, e.g. compatible to Microsoft server / Enterprise server and OpenSSL, upload from PKCS#12-files with HTTPS interface	
LANCOM Dynamic VPN	Connection to dynamic IP addresses: transfer of the dynamic IP address via ISDN B or D channel, IKE main mode. Connection from dynamic to static IP addresses: encrypted transfer of the dynamic IP address via ICMP or UDP packet, IKE Main Mode.	
Router modes, services and interfaces	IP, IPX and NetBIOS/IP multi protocol router, HTTP and HTTPS server (WEBconfig), DNS client, DNS server, DNS relay, DNS proxy, DHCP client, DHCP relay and DHCP server incl. auto detection, Dynamic DNS client, NTP client, SNTp server, NetBIOS/IP proxy, TFTP-server, telnet and telnet/SSL, SSH Policy-based routing based on routing tags, tagging with firewall rules, dynamic routing with RIPv2	
Load balancing	Automatic load balancing on 2 WAN connections, ML-PPP support, line management with Policy-based routing	
Backup / Redundancy	DSL, ISDN and analog. Management from redundant VPN gateways through dynamic routing (RIPv2 propagation). Up to 8 redundant destination addresses per VPN connection. Backup list for connection. Line monitoring with LCP echo monitoring, dead peer detection and up to 4 addresses for ICMP polling.	
LAN protocols	IP: ARP, Proxy ARP, IP, ICMP, UDP, TCP, TFTP, RIP-1, RIP-2, DHCP, DNS, SNMP, HTTP, HTTPS, BOOTP, NTP/SNTP, NetBIOS, RADIUS, LANCAP IPX: RIP, SAP, IPX and SPX watchdogs, NetBIOS watchdogs	
WAN protocols (Ethernet)	PPPoE/Multi-PPPoE, PPTP (PAC or PNS) and Plain Ethernet (with and without DHCP)	
WAN protocols (ISDN)	D channel: 1TR6, DSS1 (Euro ISDN) B channel: PPP (asynchronous/synchronous), X.75, HDLC, ML PPP for channel bundling, V.110/GSM/HSCSD, CAPI 2.0 via LANCAP, Stac data compression, optional leased line support for D64, D64S2, D64SY	
Interfaces	WAN: 10/100 Mbps Fast Ethernet LAN / DMZ: 3 separable switch ports, 10/100 Mbps Fast Ethernet, one LAN port can be used as an additional WAN port ISDN (RJ-45): ISDN S ₀ bus, COM port (8 pol. Mini DIN): 9.600-115.000 baud, optional for analog/GPRS modem backup	
Data rate I	PSec: max. 8 Mbps (AES) and 4 Mbps (3DES)	
Management	Outband Inband Tools	command line interface, serial V.24/V.28 port (8 pol. mini-DIN) LANconfig (Windows configuration program), incl. setup wizard; LANmonitor (Windows status monitor); WEBconfig (integrated Web server); telnet SNMP management via SNMP V2; remote maintenance via ISDN or Dynamic DNS; RADIUS user management for dial in (PPP/PPTP and ISDN CLIP); browser (HTTP/HTTPS), SSH, VPN tunnel, WAN or LAN access separately activatable; simultaneous remote configuration and management of several devices with LANconfig/LAN monitor, supervisor alarm via SNMP traps, SYSLOG and email; scheduled events of all parameters and actions (e.g. firewall filter or connections) via CRON service, individual access control for up to 16 administrators TFTP Client and server with variable file names (name, MAC/IP address, serial number), scripting function for batch programming of all command line parameters and for transfer of configuration files over different software versions and devices incl. test mode for changing of different parameters LANconfig (Windows program), LANmonitor (Windows status display), WEBconfig (integrated Web-server)
Statistics	Extensive Ethernet, IP and DNS statistics; SYSLOG error counter, connecting and online time as well as transfer quantity per station; accounting information exportable via LANmonitor and SYSLOG	
Diagnosis	Extensive LOG and TRACE mechanism, integrated PING and TRACEROUTE, LANmonitor status, logging-buffer for SYSLOG and firewall events, monitor mode for Ethernet ports	