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LANCOM 7111 VPN

Central site VPN gateway for networking up to 100 sites

- Dynamic VPN gateway for up to 100 sites
- 5 freely configurable 10/100 Mbps ports for LAN, WAN, DMZ
- Quality of Service with dynamic bandwidth management and traffic shaping
- Load balancing with up to 4 broadband connections
- ISDN for Dynamic VPN, remote access, remote maintenance and LANcapi
- High availability via Dynamic VPN endpoint and RIP, ISDN, modem and VRRP
- VPN hardware acceleration for 3-DES/AES encryption and decryption

The central-site VPN gateway LANCOM 7111 VPN supports up to 100 simultaneous VPN sessions, making it an ideal networking component for mid-sized sites.

With VPN acceleration in hardware, professional Quality of Service and load balancing for up to 4 WAN connections, this high-performance VPN router has sufficient capacity for broadband site coupling and mobile VPN dial-in connections.

Particularly advantageous is LANCOM Dynamic VPN, the IPSec extension that actively establishes connections to remote sites with dynamic IP addresses—even when the remote site is not always on.

The Fast Ethernet uplink gives the LANCOM 7111 VPN the flexibility to operate at any broadband connection type—ADSL, SDSL or cable.

More Security.

The integrated firewall with the latest security functions such as stateful inspection, intrusion detection and denial-of-service protection is supplemented by dynamic bandwidth management and comprehensive backup, high-availability and redundancy functions over ISDN and VRRP. VPN that uses the IPSec standard provides optimal security for connecting branch offices and telecommuters thanks to the high-security 3-DES or AES encryption, integrated hardware acceleration and support of digital certificates.

More Management.

The management systems 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. What's more, service providers benefit from the broad range of scripting methods and professional access with individual access rights for administrators via SSH, HTTPS, TFTP and ISDN dial-in.

More Benefits.

The versatile functions for address translation and routing allow completely different networks to be connected over common infrastructure. Existing networks at partner companies, home-office workstations or subsidiaries can be integrated into the VPN without problem. With the option of port separation and a separate address range, your own web servers can be securely separated from the LAN.

The integrated ISDN interface allows remote field installations, dial-up access and CAPI featured functions such as fax services for all connected PCs.

More Reliability for the Future.

From the very start, LANCOM products are designed for a product life of several years. They are equipped with hardware dimensioned for the future. Even reaching back to older product generations, updates to the LANCOM Operating System—LCOS—are available several times a year, free of charge and offering major features. LANCOM offers unbeatable protection of your investment!

Firewall	
Stateful inspection firewall	Incoming/Outgoing Traffic inspection based on connection information
Packet filter	Check based on the header information of an IP packet (IP or MAC source/destination addresses; source/destination ports, DiffServ attribute); remote-site dependant, direction dependant, bandwidth dependant
Extended port forwarding	Network Address Translation (NAT) based on protocol and WAN address, i.e. to make internal webservers accessible from WAN
N:N IP address mapping	N:N IP address mapping for translation of IP addresses or entire networks
Tagging	The firewall marks packets with routing tags, e.g. for policy-based routing
Actions	Forward, drop, reject, block sender address, close destination port, disconnect
Notification	Via e-mail, SYSLOG or SNMP trap
Quality of Service	
Traffic shaping	Dynamic bandwidth management with IP traffic shaping
Bandwidth reservation	Dynamic reservation of minimum and maximum bandwidths, totally or connection bases, separate settings for send and receive directions
DiffServ/TOS	Priority queuing of packets based on DiffServ/TOS fields
Packet-size control	Automatic packet-size control by fragmentation or Path Maximum Transmission Unit (PMTU) adjustment.
Layer 2/Layer 3 tagging	Automatic or fixed translation of layer-2 priority information (802.11p-marked Ethernet frames) to layer-3 DiffServ attributes in routing mode. Translation from layer 3 to layer 2 with automatic recognition of 802.1p-support in the destination device.
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
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 and MS-CHAP 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. Enables passive standby groups or reciprocal backup between multiple active devices including load balancing and user definable backup priorities
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
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 4 WAN connections; channel bundling with Multilink PPP (if supported by network operator)
VPN redundancy	Control of up to 16 redundant VPN gateways for high availability or load balancing
Line monitoring	Line monitoring with LCP echo monitoring, dead-peer detection and up to 4 addresses for end-to-end monitoring with ICMP polling.
VPN	
1-Click-VPN Client assistant	One click function in LANconfig to create VPN client connections, incl. automatic profile creation for the LANCOM Advanced VPN Client
1-Click-VPN Site-to-Site	Creation of VPN connections between LANCOM router via drag and drop in LANconfig
Number of VPN tunnels	100 IPSec connections active simultaneously, 250 connections configurable. Configuration of all remote sites via one configuration entry when using the RAS user template or Proadaptive VPN
Hardware accelerator	Integrated hardware accelerator for 3DES/AES encryption and decryption
IKE	IPSec key exchange with Preshared Key or certificate
Certificates	X.509 digital multi-level certificate support, compatible with Microsoft Server / Enterprise Server and OpenSSL, upload of PKCS#12 files via HTTPS interface and LANconfig
Certificate rollout	Automatic creation, rollout and renewal of certificates via SCEP (Simple Certificate Enrollment Protocol)

VPN	
Certificate revocation lists (CRL)	CRL retrieval via HTTP
RAS user template	Configuration of all VPN client connections in IKE ConfigMode via a single configuration entry
Proadaptive VPN	Automated configuration and dynamic creation of all necessary VPN and routing entries based on a default entry for site-to-site connections. Propagation of dynamically learned routes via RIPv2, if required.
Algorithms	3DES (168 bit), AES (128, 192 or 256 bit), Blowfish (128 bit), RSA (128 or -448 bit) and CAST (128 bit); MD-5 or SHA-1 hashes
NAT-Traversal	NAT-Traversal (NAT-T) support for VPN over routes without VPN passthrough
IPCOMP	VPN data compression based on LZS or Deflate compression for higher IPSec throughput
LANCOM Dynamic VPN:	Enables VPN connections from or to dynamic IP addresses. The IP address is communicated via ISDN B- or D-channel or with the ICMP or UDP protocol in encrypted form. Dynamic dial-in for remote sites via connection template
Dynamic DNS	Enables the registration of IP addresses with a Dynamic DNS provider in the case that fixed IP addresses are not used for the VPN connection
Specific DNS forwarding	DNS forwarding according to DNS domain, e.g. internal names are translated by proprietary DSN servers in the VPN; external names are translated by Internet DNS servers.
VPN throughput (max.)*	
1364-byte packet size	61 Mbps
265-byte packet size	12 Mbps
*) Notice	all VPN figures with AES encryption
Firewall throughput (max.)	
1470-byte packet size	93 Mbps
256-byte packet size	23 Mbps
Routing functions	
Router	IP, IPX and NetBIOS/IP multi-protocol router
VLAN	VLAN ID definable per interface and routing context (4094 IDs)
Q-in-Q tagging	Support of layered 802.1q VLANs
Advanced Routing and Forwarding	Separate processing of 64 contexts due to virtualization of the routers. Mapping to VLANs and complete independent management and configuration of IP networks in the device, i.e. individual settings for DHCP, DNS, Firewalling, QoS, Routing etc.
HTTP	HTTP and HTTPS server for configuration by web interface
DNS	DNS client, DNS server, DNS relay, DNS proxy and dynamic DNS client
DHCP	DHCP client, DHCP relay and DHCP server with autodetection
NetBIOS	NetBIOS/IP proxy
NTP	NTP client and SNTP server, automatic adjustment for daylight-saving time
Policy-based routing	Policy-based routing based on routing tags. Based on firewall rules, certain data types are marked for specific routing, e.g. to particular remote sites or lines.
Dynamic routing	Dynamic routing with RIPv2. Learning and propagating routes; separate settings for LAN and WAN. Extended RIPv2 including HopCount, Poisoned Reverse, Triggered Update for LAN (acc. to RFC 2453) and WAN (acc. to RFC 2091) as well as filter options for propagation of routes
LAN protocols	
IP	ARP, proxy ARP, BOOTP, LANCAPI, DHCP, DNS, HTTP, HTTPS, IP, ICMP, NTP/SNTP, NetBIOS, PPPoE (server), RADIUS, RIP-1, RIP-2, RTP, SIP, SNMP, TCP, TFTP, UDP, VRRP
IPX	RIP, SAP, IPX and SPX watchdogs, NetBIOS watchdogs
WAN protocols	
Ethernet	PPPoE, Multi-PPPoE, ML-PPP, PPTP (PAC or PNS) and plain Ethernet (with or without DHCP), RIP-1, RIP-2, VLAN
ISDN	1TR6, DSS1 (Euro-ISDN), PPP, X75, HDLC, ML-PPP, V.110/GSM/HSCSD, CAPI 2.0 via LANCAPI, Stac data compression
Interfaces	
WAN: Ethernet	10/100 Mbps Fast Ethernet
Ethernet ports	4 individual 10/100-Mbps Fast Ethernet ports; up to 3 ports can be switched as additional WAN ports with load balancing
- freely configurable	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
ISDN	ISDN 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

Management	
LANconfig	Configuration program for Microsoft Windows, incl. convenient Setup Wizards. Optional group configuration, simultaneous remote configuration and management of multiple devices over ISDN dial-in or IP connection (HTTPS, HTTP, TFTP). Configuration program properties per project or user
LANmonitor	Monitoring application for Microsoft Windows for (remote) surveillance and logging of the status of LANCOM devices and connections, incl. PING diagnosis and TRACE with filters and save to file
Webconfig	Integrated web server for the configuration of LANCOM devices via Internet browsers with HTTPS or HTTP
Access rights	Individual access and function rights for up to 16 administrators
User administration	RADIUS user administration for dial-in access (PPP/PPTP and ISDN CLIP). Support for RADSEC (Secure RADIUS) for secure communication with RADIUS servers.
Remote maintenance	Remote configuration with Telnet/SSL, SSH (with password or public key), browser (HTTP/HTTPS), TFTP or SNMP, firmware upload via HTTP/HTTPS or TFTP. A remote configuration for devices behind der LANCOM can be accomplished (after authentication) via tunneling of arbitrary TCP-based protocols, e.g. for HTTP(S) remote maintenance of VoIP phones or printers of the LAN
ISDN remote maintenance	Remote maintenance over ISDN dial-in with calling-number check
Security	Access rights (read/write) over WAN or (W)LAN can be set up separately (VPN only, Telnet/SSL, SSH, SNMP, HTTPS/HTTP), access control list
Scripting	Scripting function for batch-programming of all command-line parameters and for transferring (partial) configurations, irrespective of software versions and device types, incl. test mode for parameter changes
SNMP	SNMP management via SNMP V2, private MIB exportable by WEBconfig, MIB II
Timed control	Scheduled control of parameters and actions with CRON service
TFTP	TFTP client and server with variable file names (name, MAC/IP address, serial number)
Diagnosis	Extensive LOG and TRACE options, PING and TRACEROUTE for checking connections, LANmonitor status display, internal logging buffer for SYSLOG and firewall events, monitor mode for Ethernet ports
Statistics	
Statistics	Extensive Ethernet, IP and DNS statistics; SYSLOG error counter
Accounting	Connection time, online time, transfer volumes per station. Snapshot function for regular read-out of values at the end of a billing period.
Export	Accounting information exportable via LANmonitor and SYSLOG
Hardware	
Power supply	Internal power supply unit (110–230 V)
Housing	Robust metal housing, 19" 1 HU, 435 x 45 x 207 mm, with removable mounting brackets, network connectors on the front
Power consumption (max)	ca. 5 Watts
Declarations of conformity	
CE	EN 55022, EN 55024, EN 60950
Package content	
Manual	Printed User Manual (DE, EN) and Quick Installation Guide (DE/EN/FR/ES/IT/PT/NL)
Reference manual	Printed LCOS reference manual
CD	CD with firmware, management software (LANconfig, LANmonitor, LANCAPI) and documentation
Cable	Serial configuration cable, 1.5m
Cable	2 Ethernet cables, 3m
Cable	ISDN cable, 3m
Cable	IEC power cord
Support	
Warranty	3 years Support via Hotline and Internet KnowledgeBase
Software updates	Regular free updates (LCOS operating system and management tools) via Internet
Options	
Service	LANCOM Service Option (24h advance replacement within Germany, 4 year warranty, not for PoE Power Injector), item no. 61401
Accessories	
Modem Backup	LANCOM Modem Adapter Kit, item no. 61500

Accessories	
VPN Client Software	LANCOM Advanced VPN Client for Windows® 2000, Windows® XP, Windows Vista™, single license, item no. 61600
VPN Client Software	LANCOM Advanced VPN Client for Windows® 2000, Windows® XP, Windows Vista™, 10 licenses, item no. 61601
VPN Client Software	LANCOM Advanced VPN Client for Windows® 2000, Windows® XP, Windows Vista™, 25 licenses, item no. 61602
Item numbers	
LANCOM 7111 VPN	61055
LANCOM 7111 VPN UK	61056