



LANCOM All-IP Option

Extension for professional telephony management

The LANCOM All-IP option upgrades your LANCOM router with effective telephony features. These include conventional telephony management with the Voice Call Manager, the secure separation of external and internal networks with the Session Border Controller or, when using a router with ISDN interface, the continued operation of existing ISDN components following the migration to All-IP. The LANCOM All-IP option enhances the functionality of your routers without having to invest in additional hardware.

- Professional telephony features with integrated LANCOM VCM (Voice Call Manager) and SBC (session border controller)
- Supports up to 10 internal phone numbers / ISDN MSNs
- Supports voice and fax connections
- Supports Clearmode for ISDN data connections
- For routers with an ISDN interface: Allows ISDN terminal equipment and ISDN PBXs with an ISDN bus to operate at All-IP connections
- Including All-IP adapters (TAE/RJ45) and ISDN cross-over adapters (TE/NT) (not with LANCOM All-IP License Option)

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Professional telephony with the LANCOM Voice Call Manager

The LANCOM All-IP Option includes the Voice Call Manager, which enhances LANCOM routers with a comprehensive range of telephony functions. It handles all of the classic tasks of telephony and controls all of the components and functions connected to it. It is configured either by means of a web-based user interface accessed from any browser, or directly by means of LANconfig.

For LANCOM routers with an ISDN interface: Operate VoIP terminal equipment and ISDN PBXs

When upgraded with the LANCOM All-IP option, LANCOM routers equipped with an ISDN interface connect directly to your existing ISDN equipment and ISDN PBX systems. The router then handles the conversion between ISDN and the new VoIP-based All-IP network. This cost-effective and professional solution allows you to keep existing ISDN components in Operation. Please note that the necessary ISDN cross adapter is included with the LANCOM All-IP Option, but not with the LANCOM All-IP License Option.

Integrated session border controller

The LANCOM All-IP Option equips you with the functionality of a session border controller: Among other things this guarantees the reliable separation of internal and external networks, and it provides professional management tools along with the secure encryption of the signaling and voice data.

Easy upgrades

The LANCOM software options turn a simple network into a customized and cost-efficient solution that meets your individual needs. Simply install them on your existing hardware and you upgrade your network with the desired feature. The advantage: No additional hardware components are required. The costs and the administration overhead of

the entire network are reduced. Genuine added value comes in terms of the system's future viability, because the options transform a network into a customized and scalable networking solution.

LANCOM All-IP Option

VoIP	
Number of local subscribers	10 (up to 40 with VoIP +10 Option)
Number of local ISDN subscribers	max. 10
Number of external VoIP numbers	max. 25 (up to 55 with VoIP +10 Option)
Number of simultaneous VoIP connections	Up to 60 external VoIP connections depending on code conversion, echo canceling and load
Number of simultaneous ISDN connections	1 internal ISDN bus with 2 parallel channels. Multi-terminal or system access.
Functionality	Hold/Request, Swap, Transfer, Call Forwarding (CFU, CFB, CFNR), number display/suppression (CLIP, CLIR), suppression of second call (Busy on Busy), immediate outgoing line, hunt groups, call diversion, overlap dialing
Hunt groups	Hunt group cascades, Call diversion, simultaneously or sequentially. Automatic forwarding after timeout or when busy/unreachable
Multi login	Registration of several local VoIP terminal devices with the same number/ID.
Call router	Central switching of all incoming and outgoing calls. Number translation by mapping, numeral replacement and number supplementation. Configuration of line and route selection incl. line backup. Routing based on calling and called number, SIP domain and line. Blocking of telephone numbers or blocks of telephone numbers. Inclusion of local subscribers into the number range of an upstream PBX. Supplement/remove line-related prefixes or switchboard numbers.
SIP registrar	Management of local VoIP users/VoIP PBXs, registration at VoIP providers/upstream VoIP PBXs. Service location (SRV) support. Line monitoring for SIP trunk, link, remote gateway and SIP PBX line
SIP proxy	Up to 25 SIP-provider accounts (up to 55 with VoIP +10 Option), up to 4 SIP PBXs incl. line backup. SIP connections from/to internal subscribers, SIP providers and SIP PBXs. Automatic bandwidth management and automatic configuration of the firewall for SIP connections.
SIP gateway	Conversion of ISDN telephone calls to VoIP calls, and vice versa. Local ISDN subscribers register as local VoIP users, and local ISDN subscribers automatically register as VoIP users at upstream VoIP PBXs/with VoIP providers. Number translation between internal numbers and MSN/DDI
SIP trunk	Call switching based on extension numbers to/from VoIP PBXs/VoIP providers (support of the VoIP-DDI functions compliant with ITU-T Q.1912.5). Mapping of entire VoIP telephone number blocks
SIP link	Call switching of any numbers to/from SIP PBXs/SIP providers. Mapping of entire SIP telephone number blocks
Media proxy	Termination and interconnection of multiple media streams. Control of media sessions. IP address and port translation for media stream packets. Connection of parties at media stream level where a call transfer in SIP (REFER) is not possible
Session Border Controller (SBC)	Separation of insecure and secure networks, QoS, management of signaling and voice data, transcoding
Media protocols	RTP, SIPs and SRTP
Supported providers	German Telekom, QSC, Ecotel and Sipgate
Audio properties	Echo canceling (G.168) with automatic deactivation during fax transmission, automatic adaptive jitter buffer. Inband tone signaling compliant with EU standards and country-specific. Voice encoding with G.711 μ -law/A-law (64 kbps)
SIP-Codec support	SIP only: G.711 μ -law/A-law (64 kbps), G.722, G.723, G.726, G.729, iLBC, PCM (16, 20 and 24 Bit, Mono und Stereo), OPUS, AAC (LC, HE HEv2), MPEG Layer II, ADPCM 4SB. DTMF support (Inband, RFC2833, SIP-INFO)
Fax transmission	Transmission of fax via SIP on the LAN/WAN side with T.38 or G.711. Conversion of SIP fax with T.38 and break-in/break-out at the outside line to ISDN G.711 with service signalisation. Connection and conversion to SIP T.38 or G.711 for SIP or ISDN fax machines. Compatible to SwyxFax on true G.711 SIP lines.
Data transmission	64 kbit/s ISDN transmission via clearmode (RFC 4040)
Auto QoS	Automatic dynamic bandwidth reservation per SIP connection. Voice packet prioritization, DiffServ marking, traffic shaping (incoming/outgoing) and packet-size management of non-prioritized connections compared to VoIP. Independent settings for DiffServ marking of signaling (SIP) and media streams (RTP)
VoIP monitoring	Reporting of Call Data Records (CDR) via SYSLOG or e-mail. Status display of subscribers, lines, and connections. Logging of VoIP Call Manager events in LANmonitor. SYSLOG and TRACE for voice connections. Active monitoring even with SNMP
Autoprovisioning	Automatic network and VoIP integration of LANCOM DECT 510 IP base station
Scope of delivery	
Adapter	ISDN cross-over adapter for S0 bus (not with LANCOM All-IP License Option)
Adapter	ISDN cross-over adapter terminated for S0 bus (not with LANCOM All-IP License Option)
Adapter	All-IP adapter (TAE to RJ45) (not with LANCOM All-IP License Option)

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Scope of delivery

License key	A license key is used to activate the LANCOM All-IP Option on your router. For this purpose, the license key has to be registered at the following website: http://www.lancom-systems.com/en/service-support/registrations/router-options/
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Suitable for

LANCOM All-IP Option	<ul style="list-style-type: none"> > LANCOM 1781EF (EU) > LANCOM 1781EF+ (EU) > LANCOM 1781EW (EU) > LANCOM 1781EW+ (EU) > LANCOM 1781A (EU) > LANCOM 1781AW (EU) > LANCOM 1781VA (EU) > LANCOM 1781VAW (EU) > LANCOM 1781A-3G (EU) > LANCOM 1781A-4G (EU) > LANCOM 1781VA-4G (EU) > LANCOM 1781-4G (EU) > LANCOM 831A (EU) > LANCOM 1631E (EU)
LANCOM All-IP License Option	<ul style="list-style-type: none"> > LANCOM 1790EF (EU) > LANCOM 1790-4G (EU) > LANCOM 1790VA (EU) > LANCOM 1790VAW (EU) > LANCOM 1790VA-4G (EU) > LANCOM 1780EW-4G+ (EU) > LANCOM 1640E (EU)

Requirements

Software	LCOS & LCMS 9.04 or higher
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Item number(s)

LANCOM All-IP option	61422
LANCOM All-IP License Option	61419