PRODUCT OVERVIEW

- Network Connectivity
- Wireless LAN
- Management
- Services
“Networking” with LANCOM Systems

When it comes to implementing professional network infrastructure solutions, it is LANCOM that – from development to support – stands out in this field through quality, expertise, and reliability. For more than ten years, we have been establishing ourselves as the leading German manufacturer of network components such as routers or access points. We apply our know-how in designing stable networks – across locations, wired or wireless – to different industry sectors, tailoring our solutions to the very needs of our customers. To keep up with the pace of technological development, our customers benefit from regular software updates free of charge of our LANCOM Operating System (LCOS) as well as from comprehensive features. LANCOM products, therefore, offer long-term investment protection.

Security comes first

Amongst others, we at LANCOM build our successful business relationships on experience and expertise. Our customer base of renowned companies, located in Germany and throughout Europe, rely on us especially when high demands are placed on security. Our entire core product range is developed and manufactured in Germany. Therefore, we are truly in control of all processes involved, making sure our customers’ expectations on security are fully met: We guarantee that all LANCOM products are free of backdoors. Flip over to the next page and find your LANCOM solution!

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**1781 series:**
**The right model for your company**

The LANCOM 1781 series of routers is the right solution even for complex scenarios. This high-performance series of routers enables professional Internet access for small and midsize companies as well as branch and home offices.

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**Gigabit routing performance**
Due to the support of hardware NAT, the routers LANCOM 1781EF+, 1781EW+, 1781VA, 1781VA-4G, and 1781VAW achieve Gigabit routing performance of up to 930 Mbps. The powerful hardware platform guarantees strong power reserves even when they are extended by software options.

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**IPv6**
IPv6 stands for Internet Protocol version 6 and is the successive standard of IPv4. The business routers of the 1781 series support both address standards (dual stack).

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**The right model for any connection**
This 1781 series of business routers is compatible with ADSL connections based on Annex A / B / J / M, or VDSL. Models for fiber optic cables or with the aid of an external cable, modem and SDSL connections also provide maximum flexibility.

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**High-speed 4G connections**
The LANCOM 1781 series of business routers backup your primary connection by means of the cellular network by selecting a model with an integrated 4G modem with full backwards compatibility to 2G/3G.

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**More security for VPN connections**
The powerful routers of the LANCOM 1781 series guarantee maximum security thanks to up to 25 IPSec VPN connections and extensive support of digital certificates. On top of that, LANCOM offers special CC variants for highest demands for security.

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**Power-saving Gigabit Ethernet**
The integrated Ethernet switch enables high data rates and energy efficiency based on IEEE 802.3az: Inactive ports are switched off automatically.

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</tr>
</tbody>
</table>
LANCOM business routers of the 1700, 1600, and 800 series offer professional and secure Internet access for small and midsized infrastructures. The VPN-capable models additionally allow the secure inter-networking of multiple sites.

LANCOM 1780EW-4G – the “mobile conference room” with LTE
Easy, secure access to company networks via cellular and WLAN from any location – thanks to LTE cellular networking and VPN, the LANCOM 1780EW-4G offers wireless VPN connectivity with up to 100 Mbps.

LANCOM 1631E – entry-level router with VPN
- For external DSL or cable modems
- 4-port Gigabit Ethernet switch with power saving functions (IEEE 802.3az)
- VPN site-to-site connectivity with 3 simultaneous IPSec VPN channels
- Network virtualization for 2 networks (ARF)
- Stateful inspection firewall with intrusion detection and denial-of-service protection
- High availability with optional 3G/4G backup via USB

LANCOM 831A – ADSL Internet access
- Suitable for all ADSL connections
- Energy-saving 4-port Gigabit Ethernet switch
- Load balancing with up to 2 WAN connections
- Stateful inspection firewall with intrusion detection and denial-of-service protection
- High availability with optional 3G/4G backup via USB

Business routers for professional applications
LANCOM business routers of the 1700, 1600, and 800 series offer professional and secure Internet access for small and midsized infrastructures. The VPN-capable models additionally allow the secure inter-networking of multiple sites.

The following applies to all models:
- Comprehensive IPv6 support with professional firewall for IPv4 and IPv6 with stateful inspection, intrusion detection, and denial-of-service protection
- Optional Content Filter to block undesired Internet content (58 categories, e.g. for protection of minors, productivity, security)

- High-speed LTE Internet access as a true alternative to DSL broadband connections
- WLAN based on IEEE 802.11n with up to 450 Mbps and Gigabit Ethernet PoE port
- PoE support (IEEE 802.3at) for a comfortable operation without separate power supply
- Secure wireless access to company networks via VPN with IPSec over HTTPS – suitable for all cellular networks
Industrial and outdoor 3G routers
Stand-alone, solar-powered video surveillance via webcam, the supply of WLAN hotspots in locations without DSL, or VPN-secured mobile data communications – especially for operations in harsh environments or public locations, LANCOM offers specific 3G routers with VPN, metal housing, and anti-theft protection.

LANCOM IAP-3G
3G VPN router for harsh indoor environments
- Integrated HSPA+ module, data rates up to 21 Mbps
- GPS for device positioning
- IPSec VPN with integrated firewall
- Robust full-metal housing
- Temperature range -20° to +50°C
- 10 - 28V DC universal power connector
- Suitable for pole, wall, or top-hat rail mounting
- Anti-theft protection by securing the device to the mounting plate
- Vibration-proof based on EN 61373

LANCOM IAP-321-3G
3G VPN router with WLAN for harsh indoor environments
- Like the LANCOM IAP-3G with additional WLAN based on IEEE 802.11a/b/g/n
- Optional hotspot functionality

LANCOM OAP-3G
Outdoor 3G router for extreme conditions
- Like the IAP-3G, however:
- IP66 weatherproof outdoor housing
- Extended temperature range of -33° to +70°C
- 230 V power supply via optional OAP-320 PSU

LANCOM OAP-321-3G
Outdoor 3G VPN router with WLAN
- Like the LANCOM OAP-3G with additional WLAN based on IEEE 802.11a/b/g/n
- Optional hotspot functionality

Central Site VPN Gateways
More and more companies are using encrypted Internet connections to handle business-critical applications operating at multiple sites. LANCOM central site VPN gateways support the implementation of large multi-service IP network structures that offer security, high performance, and utmost reliability.

LANCOM 9100+ VPN
Central site VPN gateway for large-scale VPN projects
- VPN gateway with 200 VPN channels, optionally upgradable to 500 or 1,000
- 4 x Gigabit Ethernet interfaces
- Integrated AES/3-DES hardware accelerator
- Network virtualization with up to 256 VLAN / IP contexts (ARF)
- TACACS+ management
- Routing performance with up to 990 Mbps and VPN throughput (AES) with up to 600 Mbps
- Optional upgrade with Clustering functionality

LANCOM 7100+ VPN
Central site VPN gateway for midsize to large-scale VPN projects
- Like the LANCOM 9100+ VPN, however featuring 100 VPN channels, optionally upgradable to 200
- Routing performance with up to 790 Mbps and VPN throughput (AES) with up to 450 Mbps
Software Options

The LANCOM software options* upgrade your LANCOM routers, central site VPN gateways, access points, and WLAN controllers. These cost-effective software upgrades give your existing devices entirely new functions – exactly according to your demands!

**LANCOM WLC Basic Option**
- Upgrades a LANCOM router into a WLAN controller
- Management of 6 to 12 access points or WLAN routers
- Applies to all LANCOM 1781 routers without WLAN

**LANCOM WLC Upgrade Option**
- Increases the number of access points and WLAN routers managed by the controller
  - Available as +6, +10, +25, +100, and +500 Option

**LANCOM Fax Gateway Option**
- Professional reception and transmission of faxes
  - Available for the LANCOM 1781 series (2 faxes simultaneously)

**LANCOM Clustering Option**
- Enables the grouping of WLAN controllers or central site VPN gateways for a centralized management and a comfortable configuration alignment (Config Sync)
  - Available as LANCOM VPN Clustering XL Option and LANCOM WLC Clustering XL Option

**LANCOM VPN Option**
- Upgrades the number of available VPN tunnels
  - Available as VPN-25, VPN-200, VPN-500, and VPN-1000 Option

* Options vary per product, please refer to the list of options in the annex.

LANCOM Content Filter

Private surfing at the workplace is a very costly factor to the economy. In order to prevent misuse of your network, LANCOM provides the Content Filter to be installed in a router, a WLAN controller or a central site VPN gateway. The filter blocks access to undesirable websites which may contain illegal or other undesired contents.

**LANCOM Content Filter**
- Category-based analysis of webpages
- Time- and profile-based configuration
- Additive licenses for 10, 25 or 100 concurrent users

The Content Filter from LANCOM Systems provides companies with a solution that provides critical advantages:

**Protection of business integrity due to:**
- Increased employee productivity
- Blockage of undesirable/illegal Internet content
- Minimization of corporate liability risk

**Network integrity due to protection against:**
- Inappropriate use of bandwidth and storage capacity
- Spyware, phishing, viruses, etc.
Flexible hotspot solutions with the LANCOM Public Spot Option

Whether on the train, at work, in the restaurant or on their holiday – people like to use WLAN hotspots to get information or contact family and friends spontaneously. With the LANCOM Public Spot Option you provide your guests with a comfortable hotspot – with flexible access options.

LANCOM Public Spot Option
- Flexibly configurable login procedures
- Smart Ticket for a self-authentication via SMS or e-mail
- Comprehensive design options regarding the time of use or validity period of the guest access
- Voucher layout can be individually adapted to the corporate design
- Secure separation of guest and internal corporate network
- Connection to external servers via XML or RADIUS interface
- Available in two variants: Public Spot Option (suitable for LANCOM routers and access points) and Public Spot XL Option (suitable for central site VPN gateways and WLAN controllers without already integrated Public Spot Option)

LANCOM Public Spot PMS Accounting Plus Option
- Connects your hotspot solution to the hotel’s Property Management System (PMS)
- Simple and automatic authentication for guests
- Internet fees can be charged to the room bill
- Suitable for PMS with FIAS interface, such as MICROS-Fidelio and protel
- Operates with many LANCOM Public Spot features
- LANCOM Public Spot Option is required in addition

The hotspot solution by LANCOM – individual as your demands!
A hotspot solution is convincing if it is effortlessly configurable, guests get an easy access to the Internet, and the hotspot provider is ensured that his own network and his guest network are securely separated. The user-friendly configuration wizard helps setting up a secure hotspot solution.

Hotspot 2.0 – The next-generation hotspot
WLAN as simple as cellular networking!
The new WLAN standard IEEE 802.11u (Hotspot 2.0) allows for a seamless finding and selection of the right WLAN. Authentication methods using SIM card information, certificates or username and password, enable an automatic, encrypted login to WLAN hotspots of roaming partners – without the need of manually entering login credentials!
VPN Software Client

Even while traveling or at their home office, employees can securely dial-in to the corporate network at any time:

The LANCOM Advanced VPN Client provides secure, convenient data communication via Internet. The LANCOM Advanced VPN Client is available for the operating systems Microsoft Windows and Mac OS X.

LANCOM Advanced VPN Client Windows*
- Secure, encrypted corporate access whilst traveling
- Integrated stateful inspection firewall
- Supports all IPSec protocol extensions
- Integrated installation wizard and "1-Click-VPN"
- Roaming cost control via budget manager
- Integrated WLAN configuration
- Seamless roaming – VPN connection remains intact despite brief interruptions, and even during a media change from WLAN hotspot to 3G/4G
- IPv4/IPv6 firewall
- Supports high-speed LTE cellular modem cards

New as of version 3.0:
- Always-on mode for Windows 8.1 particularly for tablets
- Firewall functionality "reject" for outbound, blocked data traffic
- Software distribution via MSI installer

LANCOM Advanced VPN Client Mac OS X*
- Secure, encrypted corporate access whilst traveling
- Integrated stateful inspection firewall
- Supports all IPSec protocol extensions
- Integrated installation wizard and "1-Click-VPN"

Available for the following Mac OS X versions:
- Mac OS 10.8 Mountain Lion, Mac OS 10.9 Mavericks and Mac OS 10.10 Yosemite (version 2.05)
- Mac OS X versions as of 10.5 Leopard (version 2.02)

* Mac and Mac OS are trademarks of Apple Inc. registered in the U.S. and other countries.

Your benefits:
- Universally applicable: Secure VPN access to the corporate network whilst traveling
- Highest flexibility: Access via mobile networks, WLAN or wired access via DSL, ISDN or external modem
- Test without commitment: Free-of-charge 30-day demo version available at www.lancom-systems.eu

* Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the U.S. and/or other countries.
LANCOM App World

“Bring Your Own Device” has become common for many modern enterprises. With the growing importance of smartphones and tablet PCs in everyday business, the demands on their applications and their connectivity are also increasing.

LANCOM myVPN

- Highly secure, mobile VPNs made easy
- Handles the complex VPN configuration of the VPN client integrated into iOS* devices and of the LANCOM router
- Secure access to corporate e-mails, data, and calendars
- LANCOM myVPN user management and automatic detection of myVPN-enabled LANCOM gateways
- Available free-of-charge in the Apple App Store

LANCOM Product Guide

- LANCOM products and solutions at a glance
- Automatic update and offline functions
- LANCOM news channels
- Project management
- Available free-of-charge in the Apple App Store

LANCOM Rack Mount (19”)
LANCOM Rack Mount Mini (10”)
- For front or rear device mountings
- For all LANCOM devices with indoor housing

LANCOM Rack Mount Plus (19”)
- Forward-facing ports enable comfortable access and a view at the status LEDs at the same time
- For all LANCOM devices with indoor housing

LANCOM Wall Mount
Wall mounting for all LANCOM indoor access points and routers with plastic housings
- Devices are easily mounted by latching them into the wall mount
- Theft-protection due to padlock
- Available colors: “classic” and “white”
- Also available as LANCOM Wall Mount (Rail) for mounting on top-hat rails (only in “classic” color)

LANCOM SFP-SX-LC1 / SFP-LX-LC1 / SFP-SX-LC10*
- SFP modules for usage of high-speed fiber connections with 1 - 10 Gbps of LANCOM devices
- Available standards: 1000Base-LX, 1000Base-SX, and 10GBase-SR

* Appropriate SFP modules vary per product, please refer to the table in the annex.

LANCOM provides a comprehensive portfolio of accessories for multiple applications. With practical options for rack or wall mounting and SFP modules for fast fiber connections you adapt your LANCOM product exactly according to your needs.

**iOS, iPad, and iPhone are trademarks of Apple Inc., registered in the U.S. and other countries.**
Gigabit Ethernet Switches

Gigabit Ethernet switches from LANCOM are fully compatible to all LANCOM routers and access points. They are integrated into the LANCOM Management System, offering extensive security and QoS functionalities, and are ideal for implementing virtualized networks.

IEEE – Energy Efficient Ethernet

Latest generation LANCOM Gigabit Ethernet switches provide comprehensive power-saving mechanisms of the latest standard (IEEE 802.3az).

IPv6-ready


Security and management at the highest level

The LANCOM managed switches of the 2300 series offer an extensive range of security and management features – such as IEEE 802.1X, SSH/SSL, and TACACS+.

For all LANCOM switches with 10 or more ports:

- 5-year warranty on all components
- Port-based access control based on IEEE 802.1X (Single, Multi, Port-based, MAC-based) on all ports
- Port-based QoS, IEEE 802.1p or TOS/DiffServ
- Suitable LANCOM SFP modules available

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<td>48 x Gigabit Ethernet + 4 x 10 GE SFP+</td>
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<td>24 x Gigabit Ethernet + 2 x SFP</td>
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<td>8 x Gigabit Ethernet</td>
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<td>Fully managed L2 switch</td>
<td>Fully managed L2 switch</td>
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<tr>
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<td>IPv6 + IPv4 dual stack, 4 x 10 Gigabit, EEE</td>
<td>IPv6 + IPv4 dual stack, EEE</td>
<td>IPv6 + IPv4 dual stack, EEE</td>
<td>fanless, optimal price/performance ratio</td>
<td>IPv6 + IPv4 dual stack, EEE</td>
<td>fanless</td>
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<td>VLAN, LACP, QoS, 802.1X, SSL/SSH, SNMPv3, TACACS+, and more</td>
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<td>Floor switch</td>
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<td>FCC/CE</td>
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<td>FCC/CE</td>
</tr>
</tbody>
</table>
Certified high-security
The LANCOM CC portfolio has been awarded by the German Federal Office for Information Security as a trustworthy and secure IT infrastructure based on Common Criteria EAL 4+. This officially recognized quality seal guarantees independently tested security according to the high standards of the Common Criteria.

**LANCOM 1781EF (CC)**
- High-performance VPN router with Gigabit Ethernet and SFP port

**LANCOM 1781A (CC)**
- High-performance VPN router with ADSL2+ modem

**LANCOM 1781-4G (CC)**
- High-performance VPN router with LTE modem

**LANCOM 1781A-4G (CC)**
- High-performance VPN router with ADSL2+ and LTE modem

The following applies to all CC models:
- 5 simultaneous IPSec VPN tunnels (optionally 25)
- Network virtualization with up to 16 networks on one device (ARF)
- Powerful firewall with intrusion detection and denial-of-service protection

Benefits of LANCOM CC products
- Highly secure VPN site-connectivity based on highly integrated, field-proven network components
- Comprehensive scope of interfaces and functionalities
- Certified protection against cyber attacks
- All LANCOM routers are guaranteed free of backdoors
- Development and manufacturing of all products “Made in Germany”

**LANCOM 9100+ VPN (CC)**
- Central site VPN gateway for a highly secure connection of up to 1,000 sites
- Incl. 200 VPN channels, upgradable to up to 1,000
- Advanced Routing & Forwarding with 256 VLAN/IP contexts
- 4 x Gigabit Ethernet

**LANCOM 7100+ VPN (CC)**
- Central site VPN gateway for a highly secure connection of up to 200 sites
- Incl. 100 VPN channels, upgradable to up to 200
- Advanced Routing & Forwarding with 256 VLAN/IP contexts
- 4 x Gigabit Ethernet

**LANCOM CC Start-up Kit**
- For a certified start-up of LANCOM CC products according to CC EAL 4+
- Scope of delivery: Card reader for reading out contactless smart cards (BSI-certified), serial configuration cable, USB-to-Serial adapter, and contactless smart card (BSI-certified)

For further information on the topic “High-security Networking” please visit the website [www.lancom.eu/en/high-security](http://www.lancom.eu/en/high-security)
LANCOM Wireless ePaper Solutions

Give your facility an attractive look, automate your processes, and improve transparency as well as the flow of information.

With the LANCOM Wireless ePaper solutions we offer a world’s first combination of radio-controlled displays and professional WLAN in only one infrastructure! Ideal for room labeling and many other innovative applications.

LANCOM L-322E Wireless

- Two integrated IEEE 802.11n WLAN radio modules for the operation at 2.4 and 5 GHz with up to 300 Mbps
- Integrated radio module for updating LANCOM Wireless ePaper Displays
- Integrated iBeacon technology
- Power supply via Power over Ethernet based on IEEE 802.3af

LANCOM L-151E Wireless

- Like LANCOM L-322E Wireless, but with one IEEE 802.11n WLAN radio module for the operation at 2.4 GHz with up to 150 Mbps

Ideal ...

... for the active room signage
... for visitor passes or table reservations at meetings and conferences
... for menu cards and reservations in gastronomy
... for Electronic Shelf Labeling in the retail sector

For further information on LANCOM Wireless ePaper Displays, please visit: www.lancom.eu/en/epaper

LANCOM Wireless ePaper Displays

- Comfortable, wireless updates
- Available in three sizes: 7.4”, 4.4”, and 2.7”
- Daylight-optimized and fully graphics-compatible
- Battery lifetime of up to 5 – 7 years

LANCOM Wireless ePaper Server

- Application programming interface (API) for the connection to external calander management and ERP systems
- Comfortable image upload
- Monitoring of online / offline statuses, battery charge level, signal quality, and last tasks
- Available as additive licenses for any installation size

LANCOM Wireless ePaper Starter Set

- Entry set for small Wireless ePaper infrastructures
- Scope of delivery: 1x LANCOM L-322E Wireless, 1x LANCOM WDG-1 2.7”, 1x LANCOM WDG-1 4.4”, 1x LANCOM WDG-1 7.4”, 1x LANCOM Wireless ePaper Server for the management of one access point and up to five Wireless ePaper Displays

LANCOM Wireless ePaper Conference Set

- All-in-one package for the implementation of innovative room signage
- Scope of delivery: 1x LANCOM L-322E Wireless, 5x LANCOM WDG-1 7.4”, 1x LANCOM Wireless ePaper Server for the management of one access point and up to 50 Wireless ePaper Displays
The new WLAN standard IEEE 802.11ac combines wireless freedom with the speed of wired networks. With a gross data rate of up to 1.3 Gbps, the path is paved to modern corporate applications with high demands for bandwidth and the integration of an increasing number of mobile devices.

LANCOM L-1310acn dual Wireless
Dual radio access point with internal antennas for Gigabit WLAN in exclusive premises
- 1 x Gigabit WLAN based on IEEE 802.11ac (5 GHz) with up to 1300 Mbps
- 1 x WLAN based on IEEE 802.11n (2.4 or 5 GHz) with up to 450 Mbps
- Parallel radio operation at 2.4 and 5 GHz for heterogeneous client environments
- Support of 3x3 MIMO, 80 MHz channels, and 256-QAM
- Support of DFS channels of the 5 GHz frequency band

LANCOM L-1302acn dual Wireless
Dual radio access point for Gigabit WLAN in modern enterprise environments
- Like LANCOM L-1310acn dual Wireless, however with external antennas and in classic housing

LANCOM L-460agn dual Wireless
Dual radio access point with internal antennas for high-speed WLAN with up to 450 Mbps in exclusive premises
- Parallel operation at 2.4 and 5 GHz for heterogeneous client environments
- Separation of user groups by Multi-SSID and VLAN
- Improved signal coverage and range with 3x3 MIMO technology

LANCOM L-452agn dual Wireless
Dual radio access point for high-speed WLAN with up to 450 Mbps in modern enterprise environments
- Like LANCOM L-460agn dual Wireless, however with external antennas and in the color variant “classic”

LANCOM L-451agn Wireless
Single radio access point for intelligent high-speed WLAN with up to 450 Mbps
- Operates optionally at 2.4 or 5 GHz
- Separation of user groups by Multi-SSID and VLAN
- Improved signal coverage and range with 3x3 MIMO technology

More performance for modern applications
In comparison to its direct predecessor IEEE 802.11n, the standard IEEE 802.11ac transmits exclusively at the high-performance frequency band 5 GHz. This and other extensions, such as 80 MHz wide channels, lead to a gain of performance of close to 300%.
Wireless LAN Indoor Access Points

The intelligent wireless LAN solutions from LANCOM are easy to install and have an extensive range of security mechanisms. LANCOM offers access points for operations in harsh environments or public areas, too. These are equipped with metal housings and anti-theft mechanisms. There are also models with integrated antennas for unobtrusive installations.

LANCOM L-330agn dual Wireless
Dual radio access point with WLAN based on IEEE 802.11a/b/g/n for up to 300 Mbps in exclusive premises
- Simultaneous operation at 2.4 and 5 GHz
- 1 x Gigabit and 1 x Fast Ethernet port
- Integrated antennas

LANCOM L-322agn dual Wireless
Dual radio access point with WLAN based on IEEE 802.11a/b/g/n for up to 300 Mbps
- Simultaneous operation at 2.4 and 5 GHz
- 1 x Gigabit and 1 x Fast Ethernet port
- Connection of external antennas optional

LANCOM L-321agn Wireless
Single radio access point with WLAN based on IEEE 802.11a/b/g/n for up to 300 Mbps
- Operation at 2.4 or 5 GHz
- Gigabit Ethernet connector
- Connection of external antennas optional

LANCOM L-320agn Wireless
Single radio access point with WLAN based on IEEE 802.11a/b/g/n for up to 300 Mbps
- Operation at 2.4 or 5 GHz
- Gigabit Ethernet connector
- Integrated antennas
- Available in the housing colors “classic” and “white”
- Also available for the Israeli market

LANCOM L-151gn Wireless
Single radio entry access point with WLAN based on IEEE 802.11b/g/n for up to 150 Mbps
- Operation at 2.4 GHz
- Fast Ethernet connector with Power over Ethernet based on IEEE 802.3af
- Connection of external antennas optional

LANCOM IAP-322
Dual radio access point with WLAN based on IEEE 802.11a/b/g/n for up to 300 Mbps
- Robust, dust-proof full-metal housing (temperature range -20° to +50°C)
- Four external antennas for a parallel radio operation at 2.4 and 5 GHz
- Power supply via 12V power supply unit, multi power supply or Power over Ethernet based on IEEE 802.3af
- PoE connectors for Gigabit Ethernet and Fast Ethernet

LANCOM IAP-321
Single radio access point with WLAN based on IEEE 802.11a/b/g/n for up to 300 Mbps
- Robust, dust-proof full metal housing (temperature range -20° to +50°C)
- Two external antennas for an radio operation at 2.4 or 5 GHz
- Power supply via 12V power supply unit, multi power supply or Power over Ethernet based on IEEE 802.3af
- PoE connectors for Gigabit Ethernet and Fast Ethernet
- Vibration-proof based on EN 61373
LANCOM Active Radio Control
With the WLAN optimization concept LANCOM Active Radio Control (ARC) you sustainably increase the performance of your WLAN. The intelligent combination of complementary features is included in the LANCOM operating system LCOS and is hence absolutely free of charge.

RF Optimization
Due to reduced channel overlaps, WLAN clients benefit from an improved data throughput. In controller-based installations, an automatic selection of optimal channels can be conducted for all managed access points.

Band Steering
Due to an automatic steering towards the 5 GHz frequency band, your WLAN performance is doubled since mostly only here a sufficient number of channels for channel bonding is available.

Client Steering
Thanks to an active steering of WLAN clients by the WLC towards the most suitable access point, the WLAN performance is significantly increased. Client Steering is ideal for an optimal load balancing especially in WLAN scenarios with a high number of end devices.

Adaptive Noise Immunity
With Adaptive Noise Immunity WLAN clients benefit from significantly more data throughput, thanks to a trouble-free WLAN coverage. With Adaptive Noise Immunity the access point dismisses interferences in the radio field and focuses only on WLAN clients with sufficient signal strength.

Spectral Scan
With LANCOM Spectral Scan you have a professional tool for an efficient WLAN troubleshooting. By scanning the entire RF spectrum, interferences in the WLAN can be identified and graphically illustrated.

For further information, for instance on the feature support of individual LANCOM devices, please visit www.lancom.eu/en/arc

Wireless LAN Controllers
Who would not wish for an even more secure WLAN infrastructure and greater efficiency in its administration? Make this a reality by operating a WLAN controller for the central management of WLAN network infrastructures. The LANCOM WLAN controllers are suitable for all LANCOM access points and WLAN routers.

LANCOM WLC-4100
- Centralized management for 100 access points and WLAN routers (upgradable for up to 1,000 devices)
- Highest operational reliability without “single-point-of-failure”
- Optional upgrade with hotspot functionality
- Optional upgrade with Clustering functionality

LANCOM WLC-4025+
- Centralized management for 25 access points and WLAN routers (upgradable for up to 100 devices)
- Highest operational reliability without “single-point-of-failure”
- Optional upgrade with hotspot functionality
- Optional upgrade with Clustering functionality

LANCOM WLC-4006+
- Centralized management for 6 access points and WLAN routers (upgradable for up to 30 devices)
- Integrated hotspot functionality
Wireless LAN Outdoor Access Points

As a quick way of inter-connecting buildings, for point-to-point links over several kilometers, an outdoor WLAN hotspot, or a high-speed “last mile” broadband connection – for these and similar applications, LANCOM has a comprehensive portfolio of WLAN solutions with professional 2.4 and 5 GHz WLAN access points, outdoor antennas, and a wide range of accessories.

LANCOM OAP-322
Dual radio outdoor access point with WLAN based on IEEE 802.11a/b/g/n for up to 300 Mbps
- 4 external antennas for a parallel operation at 2.4 and 5 GHz
- Connectors for Gigabit Ethernet with Power over Ethernet based on IEEE 802.3af and Fast Ethernet
- Connectors for external power supply for 10 - 28V
- Robust IP66 protective housing (-33° to +70°C)
- Support of PRP (Parallel Redundancy Protocol)

LANCOM OAP-321
Single radio outdoor access point with WLAN based on IEEE 802.11a/b/g/n for up to 300 Mbps
- Integrated 5 GHz MIMO antenna, up to 17 dBi gain
- External connectors for 2.4 and 5 GHz antennas
- Robust IP66 protective housing (-33° to +70°C)
- Also available as “Bridge Kit”

LANCOM OAP-320 PSU
- Outdoor power supply unit for LANCOM OAP-322, OAP-3G, and OAP-321-3G
- 230V AC / 24V DC
- 15 meter cable length

AirLancer Extender SA-5L
- For application between an external antenna and an access point/WLAN router as a central component for surge protection
- Low signal attenuation
- N jack (protected side) / N plug

AirLancer Extender SA-LAN
- Symmetrical surge arrestor for Ethernet cable
- PoE-compatible

LANCOM GE PoE Injector
- 1-port PoE Injector, IEEE 802.3af
- Gigabit Ethernet

All LANCOM outdoor access points provide:
- VLAN, Multi-SSID, and optional hotspot functionality
- Extended temperature range
- Robust, weather-resistant outdoor housing (IP66)
- Wide range of mounting accessories supplied as standard
- Applicable accessories: Antennas, cables, surge arrestors
External Antennas
LANCOM Systems offers a comprehensive portfolio of indoor and outdoor wireless LAN antennas for the 2.4 and 5 GHz frequency bands, as well as antennas for cellular routers. Each antenna is supplied with a kit that includes cables and mounting materials. Necessary adapters are included in the scope of delivery or are available as LANCOM accessories.

2 x 2 MIMO outdoor WLAN antennas
- **AirLancer Extender O-D80g**
  - 80° sector antenna for 2.4 GHz, polarization diversity (8.5 dBi)
- **AirLancer Extender O-D60a**
  - 60° sector antenna for 5 GHz, polarization diversity (10 dBi)
- **AirLancer Extender O-D9a**
  - 9° directional antenna for 5 GHz, polarization diversity (23 dBi)

1 x 1 MIMO outdoor WLAN antennas
- **AirLancer Extender O-360ag**
  - 360° omnidirectional antenna for 2.4 GHz and 5 GHz bands with 6 dBi or 7 dBi gain
- **AirLancer Extender O-70**
  - 70° sector antenna for 2.4 GHz (8.5 dBi)
- **AirLancer Extender O-30**
  - 30° directional antenna for 2.4 GHz (14 dBi)
- **AirLancer Extender O-18a**
  - 18° directional antenna for 5 GHz (18 dBi)
- **AirLancer Extender O-9a**
  - 9° directional antenna for 5 GHz (23 dBi)

WLAN indoor antennas
- **AirLancer Extender I-D180agn**
  - 180° MIMO antenna for ceiling mounting, for 2.4 GHz and 5 GHz, 2x2 / 3x3 MIMO
- **AirLancer Extender I-180**
  - 180° indoor antenna for ceiling mounting
  - 2.4 GHz with 4 dBi antenna gain
- **AirLancer Extender I-60ag**
  - 60° indoor dualband antenna for 2.4 and 5 GHz
  - 6 dBi (for 2.4 GHz) and 8 dBi (for 5 GHz)
- **AirLancer Extender I-360**
  - 360° indoor antenna for ceiling mounting
  - 2.4 GHz with 4 dBi antenna gain
- **AirLancer Extender I-360-4G**
  - Omnidirectional indoor multiband LTE antenna, fully backwards compatible
- **AirLancer Extender O-360-4G**
  - Omnidirectional outdoor multiband LTE antenna, fully backwards compatible
- **AirLancer Extender I-360-3G**
  - Omnidirectional indoor antenna for HSPA, UMTS/3G, EDGE, and GPRS
- **AirLancer Extender O-360-3G**
  - Omnidirectional outdoor antenna for HSPA, UMTS/3G, EDGE, and GPRS

UMTS/3G and LTE antennas
- **AirLancer Extender I-360-4G**
  - Omnidirectional indoor multiband LTE antenna, fully backwards compatible
- **AirLancer Extender O-360-4G**
  - Omnidirectional outdoor multiband LTE antenna, fully backwards compatible
- **AirLancer Extender I-360-3G**
  - Omnidirectional indoor antenna for HSPA, UMTS/3G, EDGE, and GPRS
- **AirLancer Extender O-360-3G**
  - Omnidirectional outdoor antenna for HSPA, UMTS/3G, EDGE, and GPRS

Antenna cables
- **AirLancer cable NJ-NP**
  - N-plug to N-jack cable (3m, 6m or 9m)
  - Suitable for all LANCOM OAPs
- **AirLancer cable NP-NP**
  - Connects external AirLancer antennas to LANCOM OAP-321 series
LCMS – LANCOM Management System
LANCOM customers do not just buy a product – they receive an all-round solution. An important part of this package is LCMS, the free LANCOM Management System, our software for management and real-time monitoring of all LANCOM routers, access points, and WLAN controllers.

A professional solution for demanding applications:
- Comprehensive, user-friendly set for managing LANCOM products
- Simple configuration and monitoring
- High usability with intuitive design
- Simultaneous management of multiple devices

LANconfig
From the easy commissioning of a single device with setup wizards to the comprehensive management of large-scale installations – LANconfig has a wide spectrum of applications:
- Automatic detection of new devices
- All-round setup wizards
- Remote configuration over IP or ISDN
- Support of Telnet, SSH, and HTTPS configuration
- Context-sensitive help system
- Graphical trace module for recordings and troubleshooting
- QuickFinder, the quick way to find devices, parameters, and settings
- Comfortable rule configuration of IPv4 and IPv6 firewall
- QuickLinks for intuitive user guidance through complex structures
- Extended Data Budget Control - for full control over your data volume

LANmonitor
LANmonitor is the ideal program for a convenient and structured monitoring of networks. SNMP-trap-based, it offers nearly real-time monitoring of all connections and device statuses.

Basic functions of LANmonitor:
- Connection and interface status display
- Monitoring of Transfer rates, protocols and IP addresses
- Display of software version, CPU load, and memory usage
- Logging of online times and transfer volumes
- Firewall event display and device SYSLOG
- Graphical trace module for recordings and troubleshooting
- Spectral Scan to identify sources of interference in the WLAN

WLANmonitor
LANCOM WLANmonitor can centrally monitor the status of a wireless network. It presents information about the entire network in general and detailed information about individual access points and clients.

LANCOM WLANmonitor offers the following security functionalities:
- Status monitoring of all clients, access points, and WLAN controllers
- Rogue AP / client detection / intrusion detection system (IDS)
LANCOM Large Scale Monitor

The LANCOM Large Scale Monitor (LSM) is a professional tool for monitoring medium-sized to large-scale networks with large numbers of network components. With LANCOM LSM you have your network under control!

Advantages of LANCOM Large Scale Monitor:

- Professional network operations
- Clearly structured display of WLAN infrastructures and VPN connections – also on floorplans
- Individual configuration options for each user
- Sustainable reduction of IT operating costs

LANCOM LSM – Large Scale Monitor

Powerful monitoring and surveillance system for mid-sized and large-scale networks

- Scalable monitoring of 25 or more devices (upgradeable up to several thousand devices)
- Browser-based solution also supports smartphones
- Adjustable triggers for alerts and notifications, incl. parent/child relationships
- Graphic display of floorplans with active status information
- Grouping of devices into configurable folder structures or topologies
- Users, roles, and rights management; change logs

New as of LSM 1.2:

- Improved scalability due to the use of a microcore
- Synchronization to LSR via the Sync-API
- Integrated SYSLOG server
- Usability improvements (e.g. export options of different views via .csv export)

Comprehensive monitoring:

- Monitoring of all LANCOM routers, access points, and switches
- Access to the WEBconfig on any LANCOM device
- Monitoring and display of VPN connections
- Seamless roaming history of WLAN clients at LANCOM access points, even for complex client movements
- Easy integration of printers, servers, and other MIB devices
LANCOM Large Scale Rollout & Management

Professionalize your network management!

LANCOM Large Scale Rollout & Management is a powerful system for the configuration and management of medium-sized to very large networks with up to several thousand LANCOM network components. It offers you a central place for mastering the demands of large corporate networks.

LANCOM LSR – Large Scale Rollout & Management

Powerful system for rollout- and change management of medium-sized to very large networks

- Commissioning of entire network structures and new devices thanks to innovative rollout concept
- Mass or group updates of firmwares and configurations
- Time-controlled execution of individual functions
- Grouping of devices into configurable folder structures
- Location-independent, browser-based web access
- Users, roles, and rights management
- Comprehensive logging functions
- Freely configurable acceptance tests

Advantages of LANCOM LSR:

- Sustainable, efficient network management
- Proactive error management
- Central management of complex networks
- Freedom of location due to browser-based solution
- Individual configuration options for each user
- Sustainable reduction of IT operating costs

Total Solution Management

With Total Solution Management, we realize our vision of a truly comprehensive network solution that offers fully compatible tools. In perfect interaction, all of the components mesh with one another comprehensively to yield maximum synergies and streamlined IT processes. Our goal is to achieve the efficient operation of large and complex networks with a minimum of staff effort, and also to cater for all of your demands in professional network management.

- Pre-staging – Customer- and project-specific design and pre-configuration
- Rollout management by firmware distribution and detailed configuration of your network
- Change management for constant maintenance and expansion of your network
- Monitoring & troubleshooting for proactive error management
On-site Workshops / Consulting Days
Our LANCOM trainers are coming to you! You can book our LANCOM experts for on-site workshops and training courses at your location. Benefit from both our technical expertise as well as from the convenience of personalized on-site training.

Your benefits
- No need to travel
- No traveling or accommodation costs
- Individual appointments
- Individual combination of topics

Our LANCOM trainers are coming to you.*
* Available for DE/AT/CH/BE/NL/LU

On-site workshops
We arrange our workshops (with certification by request*) at your location. As usual we combine theoretical with practical parts and also bring the technical equipment.

With the right training tailored for your needs, we will make you a LANCOM expert for your network.

* To be taken online

Consulting Day
These contents are available for your Consulting Day:
- Setup and optimization of your configuration
- Setup of configuration templates
- Implementation of a rollout
- Interconnectivity between branch offices and the central site via VPN
- Central access point management via WLAN controller (WLC)
- Embedding layer 3 tunneling into the existing infrastructure

Consulting and booking
We will gladly consult you and make you an offer that fits your needs!
Contact us via +49 2405 49 93 6-220 or training@lancom.eu
Support - we stay by your side!

Products and solutions are only as good as the service that backs them up. This is why consulting and support play a central role at LANCOM.

Support in countries outside of Germany is available directly from LANCOM distribution partners and specialist resellers:
www.lancom.eu/en/how-to-buy

Also visit our international support webpage under
www.lancom.eu/en/support

LANCOM KnowledgeBase
- A full text search will find any documents with relevant terms

LANCOM Partner Support for resellers
As a LANCOM partner you enjoy exclusive benefits – including our support. The LANvantage partner program offers you the following:
- Preferential support – depending on your partner status
- Dedicated phone number and e-mail address
- Access to extended support hours
  (for LANCOM Solution Partners)

For more information on our LANvantage partner program see www.lanvantage.eu/en

Your all-inclusive package:

- Expert advice by telephone
- Our support form at
  www.lancom.eu/en/support-request
- Tailor-made support upgrades
- A wide range of services

More service:
- **LANCOM Warranty Basic Option** – Extension of the manufacturer warranty of a LANCOM device from 3 to 5 years
- **LANCOM Warranty Advanced Option** – Extension of the manufacturer warranty of a LANCOM device from 3 to 5 years and advanced replacement to the next working day

More counsel:
- **LANCOM Config Service** – Professional support for the configuration of individual LANCOM installations directly from the manufacturer

More support:
- **LANCOM Emergency Support**
  - Short-term, solution-oriented emergency support with minimum reaction time
- **LANCOM Extended Support Times**
  - Support availability during extended service times for planned migrations and installations
- **LANCOM Premium Support Access**
  - Premium support access for optimally safeguarded network infrastructures

* Services apply to DE / AT / UK / IRL / ES / FR / IT / BE / NL / LUX