



LANCOM LMC Private Appliance

Cloud management for private environments

The LANCOM LMC Private Appliance is the ideal solution for observing corporate security policies that require the operation of a private cloud without missing out on the features and convenience of the LANCOM Management Cloud. This solution allows companies to operate the LANCOM Management Cloud at their own data center or on-premises, without sharing an infrastructure with other client organizations. The solution package consists of a redundantly engineered hardware appliance, an installation service, and software maintenance by LANCOM Systems.

- Dedicated hardware for operating the LANCOM Management Cloud in proprietary environments
- Suitable for operating up to 1,000 LANCOM devices (separate licenses required)
- Easy to operate thanks to software-defined networking of all components (SD-WAN, SD-LAN, SD-WLAN)
- Rollout and operation of LANCOM components without preconfiguration (zero-touch deployment, auto-configuration)
- Integrated monitoring and alerting
- Redundant power supply units and redundant memory system
- Installation, software maintenance and updates by LANCOM Systems (separate maintenance contract required)

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dated August 2020

Product variants	
Private Cloud (Appliance)	A variant of the LANCOM Management Cloud operated by LANCOM customers on their own premises based on the LANCOM LMC Private Appliance. Internet access required (for maps, alerting and redirect)
Scope of services – network management	
SD-WAN	Automatic networking of sites via VPN, including network virtualization across the wide area network (WAN)
SD-LAN	Convenient configuration and graphical assignment of networks to switch ports with automatic, continuous VLAN switching
SD-WLAN	Automatic configuration of all access points and Wi-Fi routers including multi-SSID, Active Radio Control (Band Steering, Adaptive RF Optimization), Fast Roaming, VLAN, and authentication
Firmware management	Central distribution of firmware versions to single, multiple, or all devices
Wi-Fi hotspot	Convenient setup of a simple hotspot
Scope of services – monitoring	
Wi-Fi / LAN project dashboard	Aggregate monitoring information about sites, floor plans, devices, error states, clients, and applications (layer 7) for a project A complete list of LANCOM devices supporting Layer-7 application detection is available on the LANCOM Systems website .
WAN / VPN project dashboard	Overview of all VPN connections including status (active/inactive)
Security & Compliance project dashboard	Clear overview if all network devices are configured according to corporate security policies.
Organization dashboard	Convenient overview of all projects, location-aware placement of projects on a map, traffic-light indicators of device status
Device lists	Filtering or sorting of the devices according to criteria such as device type, serial number, firmware version, and configuration status, etc.
Single device monitoring	Detailed display of device-specific information such as: <ul style="list-style-type: none"> > Wi-Fi channel > Wi-Fi quality > Total throughput > Cloud latency > CPU load > Switch usage
Scope of services – logging	
Logging system	Detailed logging of configuration changes and error states at project and device levels
Scope of services – device management	
Zero-touch deployment	When being integrated into a network, access points and switches are automatically detected by the LANCOM Management Cloud and included into the administration. Routers and gateways generally need to be set up with Internet access in advance, e.g. with the LANCOM setup wizards or have to be connected per Ethernet WAN- or LAN port to a DHCP network with Internet access (operation behind a network termination router or with already existing Internet access)
Easy port config	The LANCOM Management Cloud allows simple configuration rollout for all switches of a location. Since network configurations are usually not created from identical trunk and port configurations, it is now possible to set the desired networks and properties for each port individually via single device monitoring of the switch. A graphical interface offers the highest level of transparency and ease of use!
Scripting	Self-expandability of the system by freely definable LCOS scripts, which can be activated on device-, location-, and network level and thus provide automated full access to all device parameters. These scripts themselves can access self-defined and system variables and can contain input screens for user-defined values. Scripting is available on request for system administrators; the resulting GUI elements are available on user level.
Auto configuration	Automatic assignment of configurations to new devices that are added at a site
Individual device configuration	Full, detailed configuration of all parameters for individual devices
LMC Config Sync	Local configuration adjustments on individual devices are automatically adopted, detected and logged, or immediately reset by the LMC.
Password management	Central management of all device passwords
Flexible device handling	Devices are easily moved between organizations and projects
Scope of services – project management	
Projects	Area for creating and managing multiple, independent projects
Roles and rights	Support of different roles for users in organizations and projects: <ul style="list-style-type: none"> > Organization Administrator (all rights across projects) > Project administrator (all rights within a project) > Project member (rights to conduct network, site and device management and monitoring within a project) > Project observer (read-only rights within a project) Administrators can temporarily enable or disable users. Any number of users can be added to each project. Users can be active in multiple projects.

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Scope of services – project management (continued)

Organization	<p>Project administration area for specialist resellers, system vendors, and system integrators; any number of projects per organization</p> <p>Key features:</p> <ul style="list-style-type: none"> > Live project status as a map view > Device pool, from which you can move devices into projects > Freely definable organisation and project properties, i.e. customer number, contact person, etc.
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Scope of services – help systems

Live chat	Live chat functionality for administrators of registered LANCOM partners with direct access to LANCOM Cloud experts for all questions about the LANCOM Management Cloud; accessible on workdays between 09.00 am and 05:00 pm.
Info area	Centralized info area containing all LANCOM Management Cloud resources, e.g. system status, video tutorials, guided tour, FAQs, system requirements and scenarios

System properties - LMC Private Appliance

System properties (Appliance)	<p>1HU 19" server for the support of up to 1.000 LANCOM devices Pre-configured, setup and maintenance by LANCOM (remote)</p> <ul style="list-style-type: none"> > Hardware 2 redundant power supply units redundant memory system (RAID-1) with 2x 240 GB and 4x 64GB 10-Core 2,4 GHz Intel Xeon processor, 64 GB main memory Dedicated 3rd network module for access to KVM Over LAN and Hardware Health Monitoring Dimensions 43 x 437 x 503 mm (HxWxD) > Rack mounting Mounting rails included, rail length 660 - 845 mm Over all length server front to end of mounting rail 705 mm, maximum extension 710 mm Recommended space min. 75 mm > Environmental requirements Recommended ambient temperature (acc. to German Federal Office for Information Security) 20 - 22 °C Recommended humidity (acc. to German Federal Office for Information Security) max. 40 % > Recommended operating site To grant optimum system cooling, we recommend operating the server in an appropriate server rack in an air-conditioned server room. Due to extensive noise generation, the server is not designated for being operated in office environments.
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System requirements – browser to access the LANCOM Management Cloud

Supported browsers	<p>Supported Internet browsers:</p> <ul style="list-style-type: none"> > Google Chrome > Mozilla Firefox > Apple Safari > Microsoft Edge <p>All browser specifications are platform independent (PC, laptop, Mac, tablet). We recommended you use the latest browser version. Recommended screen resolution of 1400 pixels wide</p>
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System requirements – supported LANCOM devices

Devices & software versions	<p>The LANCOM Management Cloud is supported by all LANCOM routers, access points and fully managed switches as from software version LCOS 10 (10.12 for private variants), resp. LANCOM Switch OS 3.30. Complete overview of the supported devices and software versions: Devices supporting the LMC</p>
Cloud starter license	<p>Automatic start-up license (valid for 30 days) for all devices that are newly integrated into the LANCOM Management Cloud by LANCOM resellers and system house partners. After the 30 days have expired, devices without valid license will no longer be able to be configured, but remain autonomous, fully operational and will be monitored concerning their operational status by the LMC via a simple status monitoring (online / offline) in the map view. For the full scope of functionalities you are invited to choose one of our license models.</p>

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System requirements – supported LANCOM devices (continued)

Access Points	<p>License category A</p> <ul style="list-style-type: none"> > LANCOM L-151gn, L-151E > LANCOM L-320agn (R2), L-321agn (R2), L-322agn (R2), L-322E, L-330agn > LANCOM L-451agn, L-452agn, L-460agn > LANCOM LN-630acn > LANCOM L-822acn, LN-830acn, LN-830E, LN-830U > LANCOM L-1302acn, L-1310acn > LANCOM LN-860, LN-862 > LANCOM LN-1700, LN-1702 > LANCOM IAP-321, IAP-322 > LANCOM IAP-821, IAP-822 > LANCOM OAP-321, OAP-322 > LANCOM OAP-821, OAP-822, OAP-830
Gateways / Routers	<p>License category A</p> <ul style="list-style-type: none"> > LANCOM 730-4G > LANCOM 730VA, 831A > LANCOM 1631E > LANCOM 1640E > LANCOM 883 VoIP, 884 VoIP <p>License category B</p> <ul style="list-style-type: none"> > LANCOM 1780EW-4G > LANCOM 1780EW-4G+ > LANCOM 1781-4G > LANCOM 1781EW+ > LANCOM 1781A, 1781AW > LANCOM 1781A-4G > LANCOM 1781EF+ > LANCOM 1781VA, 1781VAW, 1781VA-4G > LANCOM 1783VA, 1783VAW, 1783VA-4G > LANCOM 1784VA > LANCOM 1790-4G > LANCOM 1793VA, 1793VA-4G > LANCOM IAP-321-3G, IAP-3G, IAP-4G > LANCOM OAP-3G, OAP-321-3G > LANCOM vRouter 10, 50, 250, 500, 1000, and unlimited <p>License category C</p> <ul style="list-style-type: none"> > LANCOM 1900EF > LANCOM 1906VA > LANCOM 1906VA-4G <p>License category D</p> <ul style="list-style-type: none"> > LANCOM ISG-1000, ISG-4000 > LANCOM 7100+ VPN, 9100+ VPN
WLAN Controllers	<p>Device category B</p> <ul style="list-style-type: none"> > LANCOM WLC-4006+ <p>License category D</p> <ul style="list-style-type: none"> > LANCOM WLC-1000 > LANCOM WLC-4025+, WLC-4100
Switches	<p>License category A</p> <ul style="list-style-type: none"> > LANCOM GS-2310, GS-2310P(+) <p>License category B</p> <ul style="list-style-type: none"> > LANCOM GS-2326, GS-2326+, GS-2326P, GS-2326P+ > LANCOM GS-2328, GS-2328P, GS-2328F <p>License category C</p> <ul style="list-style-type: none"> > LANCOM GS-2352, GS-2352P

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Security	
Secure device communication	HTTPS- / TLS-secured communication between all managed devices, certificate-based authentication, secure and unambiguous assignment of equipment and projects (claiming & pairing)
Security auditing	Security auditing of the LANCOM Management Cloud by a BSI-accredited test laboratory
IT security "Made in Germany"	<p>LANCOM Systems bears the quality seal "IT security made in Germany" from TeleTrust for compliance with the following requirements:</p> <ul style="list-style-type: none"> > The company is headquartered in Germany. > The company offers trusted security solutions. > The products contain no hidden access paths. > Research and development in IT security takes place in Germany. > The company is committed to satisfying the requirements of German data protection regulations.
Device licenses	
License category A	<p>LANCOM Management Cloud license for the management & monitoring of a category A device. Specification of the LMC project ID and project information needed, incl. support & updates</p> <p>Available with validity periods as follows:</p> <ul style="list-style-type: none"> > 1 year, item no. 50100 - LANCOM LMC-A-1Y > 3 years, item no. 50101 - LANCOM LMC-A-3Y > 5 years, item no. 50102 - LANCOM LMC-A-5Y
License category B	<p>LANCOM Management Cloud license for the management & monitoring of a category B device. Specification of the LMC project ID and project information needed, incl. support & updates</p> <p>Available with validity periods as follows:</p> <ul style="list-style-type: none"> > 1 year, item no. 50103 - LANCOM LMC-B-1Y > 3 years, item no. 50104 - LANCOM LMC-B-3Y > 5 years, item no. 50105 - LANCOM LMC-B-5Y
License category C	<p>LANCOM Management Cloud license for the management & monitoring of a category C device. Specification of the LMC project ID and project information needed, incl. support & updates</p> <p>Available with validity periods as follows:</p> <ul style="list-style-type: none"> > 1 year, item no. 50106 - LANCOM LMC-C-1Y > 3 years, item no. 50107 - LANCOM LMC-C-3Y > 5 years, item no. 50108 - LANCOM LMC-C-5Y
License category D	<p>LANCOM Management Cloud license for the management & monitoring of a category D device. Specification of the LMC project ID and project information needed, incl. support & updates</p> <p>Available with validity periods as follows:</p> <ul style="list-style-type: none"> > 1 year, item no. 50109 - LANCOM LMC-D-1Y > 3 years, item no. 50110 - LANCOM LMC-D-3Y > 5 years, item no. 50111 - LANCOM LMC-D-5Y
Items	
LANCOM LMC Private Appliance	<p>Hardware appliance for the operation of a Private LMC, supporting up to 1,000 LANCOM devices, Private Cloud License included, device licenses and installation fee in addition</p> <p>Separate Private Cloud contract necessary</p> <p>Item no. 50210</p>
LANCOM LMC Private Appliance Maintenance	<p>LANCOM LMC Private Appliance maintenance fee for 1 year. Includes up to 2 updates of the LMC Appliance per year. Service will be done remotely via LANCOM</p> <p>Separate Private Cloud contract necessary</p> <p>Item no. 50212</p>
LANCOM LMC Private Remote Installation Service	<p>Remote installation and setup for one LMC Private Cloud by LANCOM employees (per server)</p> <p>Only available on request directly via LANCOM</p> <p>Item no. 50205</p>
Alternative to LANCOM LMC Private Remote Installation Service:	
LANCOM LMC Private On-Site Installation Service	<p>On-site installation and setup for one LMC Private Cloud by LANCOM employees (per server)</p> <p>Only available on request directly via LANCOM</p> <p>Item no. 50202</p>
LANCOM LMC Private On-Site Installation Service - Travel EU / CH / UK	<p>Travel expenses for LMC on-site installation within EU / CH / UK</p> <p>Only available on request directly via LANCOM</p> <p>Item no. 50203</p>
LANCOM LMC Private On-Site Installation Service - Travel ROW	<p>Travel expenses for LMC on-site installation outside EU / CH / UK</p> <p>Only available on request directly via LANCOM</p> <p>Item no. 50204</p>