

LANCOM R&S® Unified Firewalls

Network security by design

LANCOM R&S® Unified Firewalls offer small and medium-sized enterprises a customized complete solution for state-of-the-art security and Unified Threat Management (UTM). The next-generation Firewalls provide reliable cyber security, either stand-alone or operated via the LANCOM Management Cloud (LMC). Thanks to the setup wizard and the graphical user interface, intuitive operation and a clear overview of all secure areas in your company are possible.

- › Protection against spam, viruses, malware, and complex cyber attacks
- › State-of-the-art security technologies such as R&S®PACE2 deep packet inspection
- › Protection against zero-day threats due to integrated sandboxing and machine learning
- › Integration into the LANCOM Management Cloud
- › Setup wizard for intuitive step-by-step initial setup
- › Intuitive network visualization enabling easy implementation of security and compliance policies
- › Detailed filtering and validation of applications and protocols
- › IT security "Made in Germany" and guaranteed without backdoors
- › Also available as virtual, software-based firewall (LANCOM vFirewall)
- › Term-based license model (1, 3 or 5 years)

LANCOM R&S® Unified Firewalls

Highest security “Made in Germany”

The increasing cyber risks lead to higher requirements on company security, data protection and the availability of complex IT systems. LANCOM R&S® Unified Firewalls are next-generation firewalls that are developed and programmed in Germany. Thanks to Unified Threat Management (UTM) functions, they optimally complement existing LANCOM network infrastructures with the aspect of IT security. This also includes the use of state-of-the-art cybersecurity technologies such as sandboxing and machine learning. In addition, thanks to the use of clustering and redundant hardware, the company’s IT remains available at all times, which means future-proof protection for company networks and “no backdoors”.

Intuitive operation via setup wizard and web interface

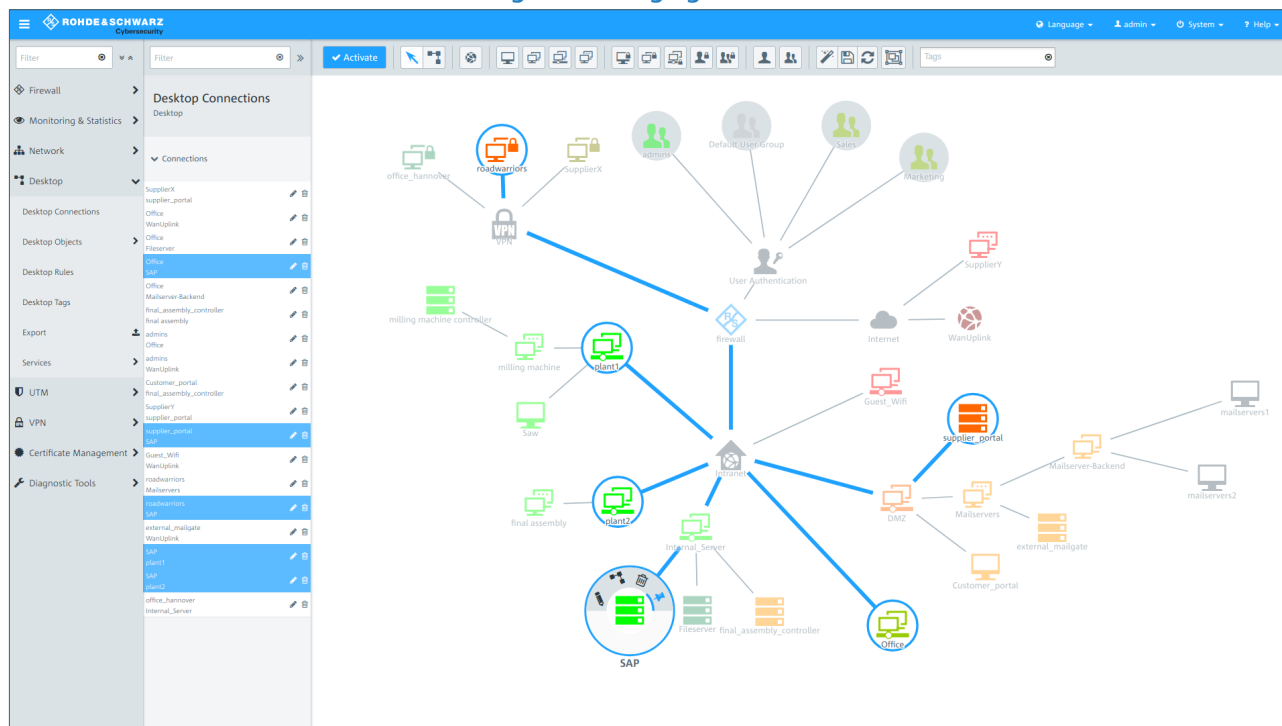
An intuitive installation wizard allows easy initial configuration with just a few mouse clicks in less than five minutes. The user-friendliness of the Web interface of the LANCOM R&S® Unified Firewalls supports the user in providing

maximum cyber security. Human errors in the configuration of the firewall can greatly be reduced, as all the firewall rules of the network are displayed clearly and graphically. This browser-based centralized management GUI enables granular fine tuning while also providing a comprehensive overview of the secured devices and connections in the network. This not only facilitates the implementation of compliance policies, but also saves time by simplifying the process of combining rules. Comprehensive audit and compliance reports also ensure maximum transparency.

Cloud-managed Firewall

The firewalls are now cloud-ready. Devices are paired to the LANCOM Management Cloud (LMC) by a convenient yet secure PIN- or activation code-based pairing procedure. They then appear in the device overview, which offers clearly structured monitoring of the device status and also features an alerting function. A web tunnel provides access to the firewall management interface for remote configuration from the LMC.

Screenshot of the web interface for creating and managing firewall rules



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Cloud-based protection against viruses and malware

Effective defense against malware and viruses is ensured by the firewall, which reliably detects suspicious files. To protect against as-yet unknown threats (zero-day exploits), suspicious files are first loaded into a protected cloud. In this isolated sandbox environment, the files can be securely and reliably tested. Analyses using third-generation machine learning based on billions of samples scan and proactively block threats based on their behavior. The cloud is hosted in Germany and complies with the European General Data Protection Regulation (“GDPR”).

SSL inspection: Defense against complex cyber attacks through encrypted channels

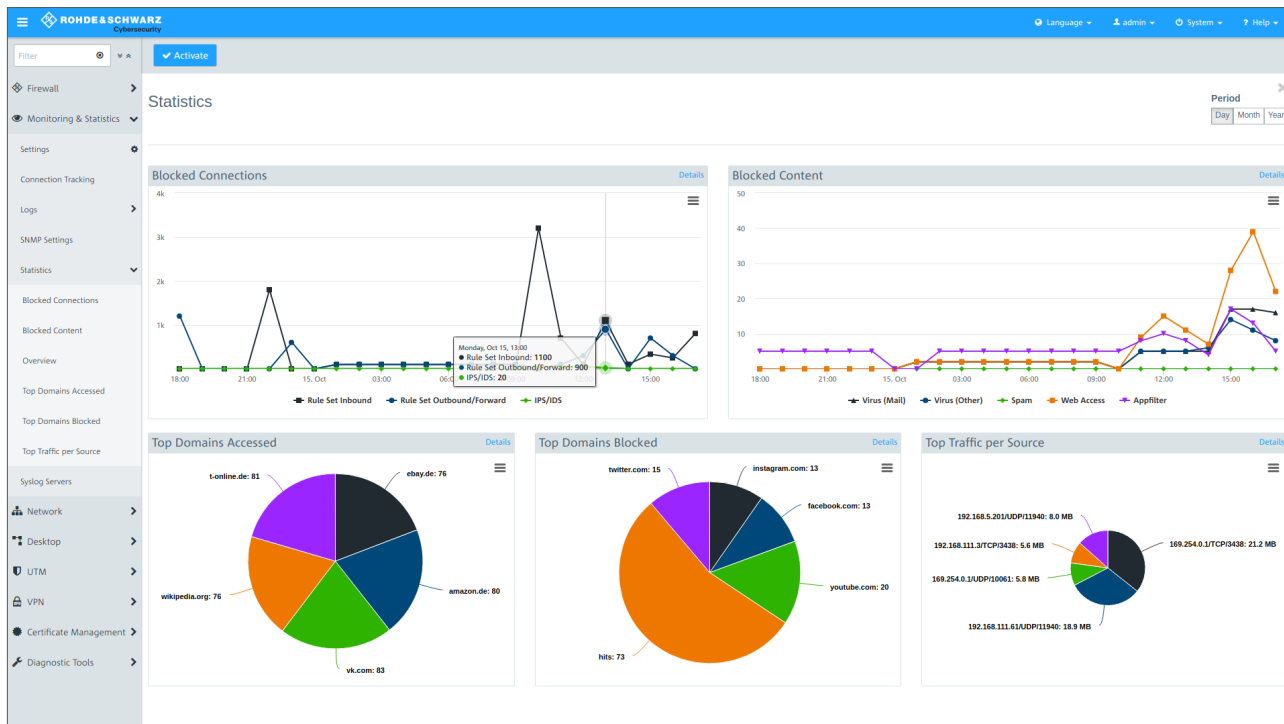
Data-traffic encryption is increasingly widespread and, although this is welcome from the privacy point of view,

there is the risk that malware enter systems via encrypted channels. Thanks to SSL inspection, even encrypted data packets can be scanned and filtered, applications detected, and compliance policies successfully implemented.

Deep packet inspection: Subtle filtering and validation of applications and protocols

To protect against complex cyber attacks, the firewalls use deep packet inspection (DPI) providing insights into encrypted data traffic. Utilizing the industry-leading R&S®PACE2 DPI engine, UTM firewalls enable accurate classification of network traffic, protocols and applications. Fine-grained security policies actively regulate the use of certain applications, such as streaming services or browsers.

Screenshot of the statistics in the web interface



LANCOM R&S® Unified Firewalls

| Features: Appliances | | | | | | |
|-------------------------------|---------------------------|---------------------------|---------------------------|----------------------------|----------------------------|---|
| LANCOM R&S® Unified Firewalls | UF-50 | UF-100 | UF-200 | UF-300 | UF-500 | UF-900 |
| Network interfaces | | | | | | |
| Ports | 4x GE copper | 4x GE copper | 4x GE copper | 8x GE copper | 14x GE copper | 8x GE copper (two slots for additional plug-in modules for 1G-ETH, 1G-SFP, and 10G-SFP+) |
| System performance | | | | | | |
| IPS/IDS throughput (Mbps) | - | - | 550 | 635 | 1,295 | 3,780 |
| Firewall throughput (Mbps) | 2,600 (UDP) | 3,800 (UDP) | 3,800 (UDP) | 7,700 (UDP) | 13,400 (UDP) | 60,000 (UDP) |
| VPN throughput (Mbps) | 200 (IPSec) | 430 (IPSec) | 430 (IPSec) | 620 (IPSec) | 1,260 (IPSec) | 4,280 (IPSec) |
| Concurrent sessions | 520,000 | 1,000,000 | 1,000,000 | 1,000,000 | 2,000,000 | 16,700,000 |
| New sessions per second | 8,000 | 11,000 | 11,000 | 13,000 | 33,000 | 130,000 |
| Number of users | recom. for up to 10 users | recom. for up to 30 users | recom. for up to 30 users | recom. for up to 100 users | recom. for up to 300 users | recom. for up to 500 users |
| Power | | | | | | |
| Input voltage (V) | 100-240 | 100-240 | 100-240 | 100-240 | 100-240 | 100-240 |
| Power consumption (W) | 36 | 36 | 36 | 150 | 150 | max. 300 W per active power supply module |
| Operating environment | | | | | | |
| Operating temperature (°C) | 0-40 | 0-40 | 0-40 | 0-40 | 0-40 | 0-40 |
| Relative humidity (%) | 10-90 | 5-90 | 5-90 | 20-90 | 20-90 | 5-90 |
| Dimensions | | | | | | |
| WxHxD (mm) | 225 x 44 x 150 | 220 x 44 x 176 | 220 x 44 x 176 | 438 x 44 x 292 | 431 x 44 x 305 | 431 x 44 x 468 |

For dimensioning and calculating the maximum number of effective UTM users see LANCOM Techpaper [LANCOM R&S® Unified Firewall Sizing Guide](#).

LANCOM R&S® Unified Firewalls

| Features | Basic License | Full License | Feature description |
|---|---------------|--------------|--|
| Content Filter | UF-50 only | ✓ | <ul style="list-style-type: none"> URL and content filter Customizable rules for users Blacklists / whitelists Import / export of URL lists Category-based website blocking (individually definable) Online scan technology HTTP(S) proxy support Override function |
| Application control* | | ✓ | <ul style="list-style-type: none"> Layer-7 packet filter (DPI) Filter by applications (e.g. Facebook, YouTube, BitTorrent, etc.) Blacklists / whitelists Protocol validation HTTP and IEC 104 decoder R&S@PACE 2 (Protocol and Application Classification Engine) <p>*) available for LANCOM R&S®Unified Firewall UF-200, UF-300, UF-500, and UF-900</p> |
| Antivirus* | | ✓ | <ul style="list-style-type: none"> HTTP/S, FTP, POP3/S, SMTP/S Configurable exceptions Multi-level scanning (local and cloud-based) Sandboxing Fast classification of zero-day threats through AI technologies (machine learning) <p>*) available for LANCOM R&S®Unified Firewall UF-100, UF-200, UF-300, UF-500, and UF-900</p> |
| Antispam* | | ✓ | <ul style="list-style-type: none"> POP3/S, SMTP/S Configurable scan levels GlobalView Cloud using Recurrent Pattern Detection (RPD) – spam detection based on the e-mail distribution patterns Blacklists / whitelists Automatic e-mail rejection/deletion <p>*) available for LANCOM R&S®Unified Firewall UF-100, UF-200, UF-300, UF-500, and UF-900</p> |
| IDS (Intrusion Detection System) / IPS (Intrusion Prevention System)* | | ✓ | <ul style="list-style-type: none"> Protection from DoS, port scans, malware, botnets, exploits, and vulnerabilities More than 40,000 active signatures Configurable exceptions Scans all interfaces <p>*) available for LANCOM R&S®Unified Firewall UF-200, UF-300, UF-500, and UF-900</p> |
| Proxies | HTTP VoIP | ✓ | <ul style="list-style-type: none"> HTTPS, FTP, POP3/S, SMTP/S, SIP HTTP (transparent/non-transparent) Reverse proxy Supports Active Directory and local users Time-controlled |
| LAN/WAN support | ✓ | ✓ | <ul style="list-style-type: none"> Ethernet 10/100/1,000/10,000 Mbps Configurable MTU (Ethernet/DSL) xDSL Multi-WAN (weighted policy-based routing/failover) Load balancing Time restrictions for Internet connections Multiple, dynamic DNS support DHCP DMZ SNAT |
| VLAN | ✓ | ✓ | <ul style="list-style-type: none"> 4096 VLANs per interface 802.1q header tagging (packet-based tagged VLANs) Compatible with bridging |
| Bridge mode | ✓ | ✓ | <ul style="list-style-type: none"> Layer-2 firewall Spanning Tree (bridge ID, port costs) Unlimited number of interfaces per bridge |
| Monitoring & statistics | ✓ | ✓ | <ul style="list-style-type: none"> Statistics (IDS/IPS, application control, surf control, antivirus/antispam) Logging to external syslog servers Export as CSV and XLS files SNMP/v2c and v3 Connection tracking |
| Administration | ✓ | ✓ | <ul style="list-style-type: none"> Object-oriented configuration Role-based administration Command-line interface (SSH) Saves desktop as PDF and HTML IP-based access restriction for SSH and web client |
| Web interface | ✓ | ✓ | <ul style="list-style-type: none"> Self-explanatory functions Practical wizard for initial setup Overview of the entire network Overview of all active services Browser-based, platform-independent View filtering based on custom tags |

LANCOM R&S® Unified Firewalls

| Features | Basic License | Full License | Feature description |
|-------------------------|---------------|--------------|--|
| QoS | ✓ | ✓ | Guaranteed QoS bandwidth configurable for Internet connections QoS with ToS flags QoS in VPN connections |
| X.509 certificates | ✓ | ✓ | CRL (Certificate Revocation List) OCSP (Online Certificate Status Protocol) – network protocol for X.509 certificate status validation Multi-CA support Multi-host certificate support |
| VPN | ✓ | ✓ | User authentication High availability Wizards for VPN and certificates Site-to-site and client-to-site Client configuration packages |
| IPSec | ✓ | ✓ | Full-tunnel mode IKEv1, IKEv2 PSK (pre-shared key) / certificates DPD (Dead Peer Detection) NAT-T XAUTH, L2TP Port configuration |
| SSL-VPN | ✓ | ✓ | Routing mode VPN Bridge mode VPN TCP/UDP Specification of WINS and DNS servers |
| Backup and restore | ✓ | ✓ | Local or remote access Automatic import during installation Automatic and scheduled backups Automatic upload (FTP, SCP) Disaster recovery from USB drive |
| User authentication | ✓ | ✓ | Active Directory import Local user administration Authentication via web or client Single sign-on (Kerberos) Multiple logins Captive portal Terminal Server Support (via Remote Desktop IP Virtualization) |
| HA (High availability)* | ✓ | ✓ | A second Unified Firewall of the same type is required Stateful failover Active/passive Hot standby Link aggregation *) available for LANCOM R&S® Unified Firewall UF-200, UF-300, UF-500, and UF-900 |

LANCOM R&S® Unified Firewalls

| Warranty | |
|---|--|
| Warranty claim | 3 years |
| LANCOM Management Cloud | |
| License category B | LANCOM R&S®Unified Firewall UF-50, UF-100, UF-200 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. Available with validity periods as follows: > 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 | LANCOM R&S®Unified Firewall UF-300 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. Available with validity periods as follows: > 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 | LANCOM R&S®Unified Firewall UF-500, UF-900 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. Available with validity periods as follows: > 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 |
| Accessories | |
| LANCOM Firewall Rack Mount UF-50 | Rack Mount for LANCOM R&S®Unified Firewall UF-50 item no. 55119 |
| LANCOM Firewall Rack Mount UF-100/200 | Rack Mount for LANCOM R&S®Unified Firewall UF-100 & UF-200 item no. 55120 |
| LANCOM Firewall 8x 1G RJ45 Module UF-900 | Plug-in module for LANCOM R&S®Unified Firewall UF-900, 8x 1G ETH / RJ45 item no. 55121 |
| LANCOM Firewall 4x 1G SFP Module UF-500/900 | Plug-in module for LANCOM R&S®Unified Firewall UF-500 & UF-900, 4x 1G SFP item no. 55122 |
| LANCOM Firewall 4x 10G SFP+ Module UF-500/900 | Plug-in module for LANCOM R&S®Unified Firewall UF-500 & UF-900, 4x 10G SFP+ item no. 55123 |
| Options | |
| LANCOM Warranty Basic Option | Option for extending the manufacturer warranty from 3 to 5 years item no. 10710 |
| LANCOM Warranty Advanced Option | Option for extending the manufacturer warranty from 3 to 5 years, and advanced replacement by the next working day on hardware failure item no. 10715 |
| Hardware Appliances | |
| LANCOM R&S®Unified Firewall UF-50 | Next-generation firewall, 4x GE, Maximum 10 concurrent users, 3 years warranty; UF-50 Basic License mandatory for operation item no. 55001 |
| LANCOM R&S®Unified Firewall UF-100 | Next-generation UTM firewall, 4x GE, Maximum 30 concurrent users, 3 years warranty; UF-100 Basic License or Full License mandatory for operation item no. 55011 |
| LANCOM R&S®Unified Firewall UF-200 | Next-generation UTM firewall, 4x GE, Maximum 30 concurrent users, 3 years warranty; UF-200 Basic License or Full License mandatory for operation item no. 55021 |
| LANCOM R&S®Unified Firewall UF-300 | Next-generation UTM firewall, 8x GE, Maximum 100 concurrent users, rack mount included; 3 years warranty; UF-300 Basic License or Full License mandatory for operation item no. 55031 |
| LANCOM R&S®Unified Firewall UF-500 | Next-generation UTM firewall, 14x GE, Maximum 200 concurrent users, rack mount included; 3 years warranty; UF-500 Basic License or Full License mandatory for operation item no. 55041 |
| LANCOM R&S®Unified Firewall UF-900 | Next-generation UTM firewall, 8x GE, 2 slots for optional plug-in modules (8x GE, 4x SFP, 4x SFP+), Maximum 500 concurrent users, rack mount included; 3 years warranty; UF-900 Basic License or Full License mandatory for operation item no. 55051 |
| Licenses (Basic) | |
| LANCOM R&S®UF-50-1Y Basic License (1 Year) | License for activating firewall functionalities of the R&S UF-50, SSL Insp., Content Filter, incl. all software updates, runtime 1 year item no. 55098 |
| LANCOM R&S®UF-50-3Y Basic License (3 Years) | License for activating firewall functionalities of the R&S UF-50, SSL Insp., Content Filter, incl. all software updates, runtime 3 years item no. 55099 |
| LANCOM R&S®UF-50-5Y Basic License (5 Years) | License for activating firewall functionalities of the R&S UF-50, SSL Insp., Content Filter, incl. all software updates, runtime 5 years item no. 55100 |

LANCOM R&S® Unified Firewalls

| Licenses (Full) (continued) | |
|---|---|
| LANCOM R&S®UF-500-5Y Full License (5 Years) | License for activating UTM- and firewall functionalities of the R&S UF-500, sandboxing, machine learning, AV/Malware Protection, DPI, IDS/IPS, SSL Insp., incl. all software updates, runtime 5 years item no. 55112 |
| LANCOM R&S®UF-900-1Y Full License (1 Year) | License for activating UTM- and firewall functionalities of the R&S UF-900, sandboxing, machine learning, AV/Malware Protection, DPI, IDS/IPS, SSL Insp., incl. all software updates, runtime 1 year item no. 55113 |
| LANCOM R&S®UF-900-3Y Full License (3 Years) | License for activating UTM- and firewall functionalities of the R&S UF-900, sandboxing, machine learning, AV/Malware Protection, DPI, IDS/IPS, SSL Insp., incl. all software updates, runtime 3 years item no. 55114 |
| LANCOM R&S®UF-900-5Y Full License (5 Years) | License for activating UTM- and firewall functionalities of the R&S UF-900, sandboxing, machine learning, AV/Malware Protection, DPI, IDS/IPS, SSL Insp., incl. all software updates, runtime 5 years item no. 55115 |