

## LANCOM R&S® Unified Firewalls

Network security by design

LANCOM R&S® Unified Firewalls complement your network by the relevant feature of cybersecurity. These easy-to-operate all-round solutions are tailored to the specific security needs of small and medium-sized businesses. Thanks to state-of-the-art security technologies and unified threat management (UTM), these next-generation firewalls provide reliable cybersecurity. A prominent feature is the innovative graphical user interface granting a concise overview of all of the secured areas in the company's network. Formerly complex and time-consuming configurations are greatly simplified since security policies can be systematically designed and enforced.

- Intuitive network visualization enabling easy implementation of security and compliance policies
- Detailed filtering and validation of applications and protocols
- 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
- IT security "Made in Germany" and guaranteed without backdoors
- Option for virtual appliances
- Tried-and-tested procurement and support from LANCOM
- Integration into the LANCOM Management Cloud in preparation

# LANCOM R&S® Unified Firewalls

## Easy to use, maximum security

The rise in cyber threats is leading to increasingly rigorous demands on corporate security, data protection, and the availability of complex IT systems. The LANCOM R&S® Unified Firewalls are next-generation firewalls that offer all-round cyber security thanks to unified threat management (UTM). This includes the use of advanced cyber-security technologies such as sandboxing and machine learning. Furthermore, clustering and the use of redundant hardware ensures that the company's IT remains available at all times (High Availability).

## Intuitive web interface

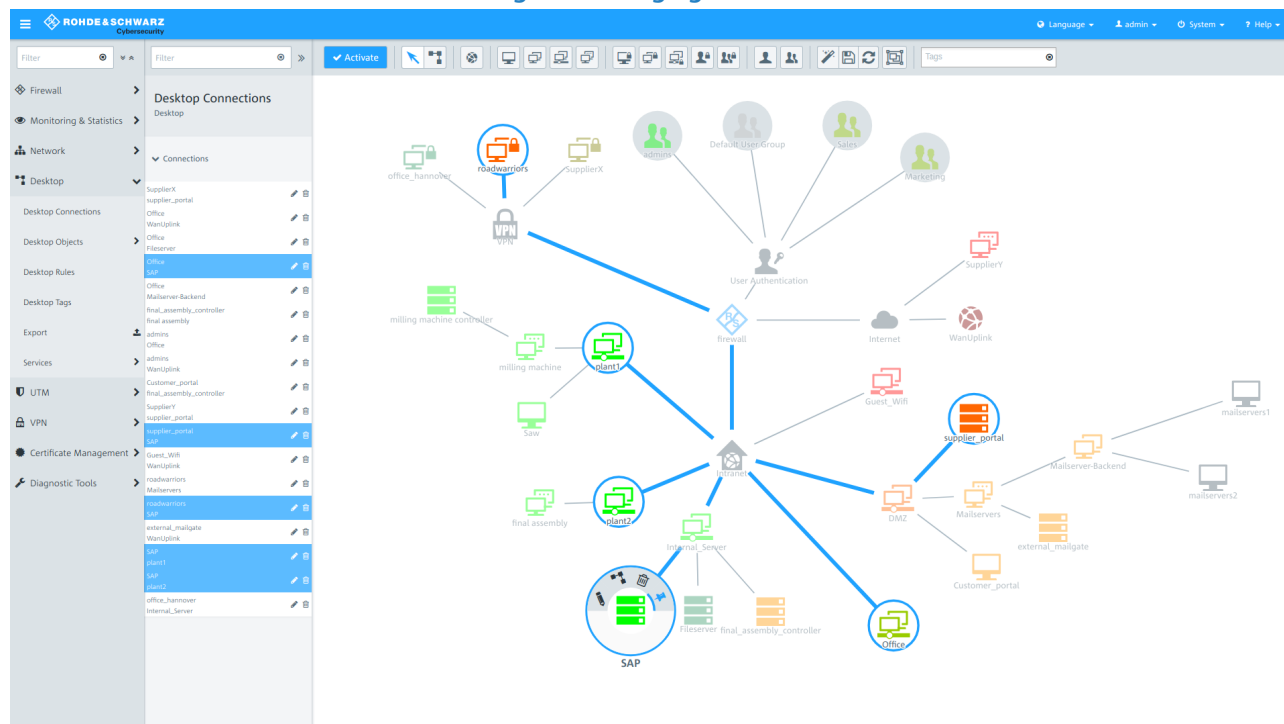
The easy-to-use web-based user interface of the LANCOM R&S® Unified Firewalls empowers users to deliver the highest levels of cyber security. Human error in the configuration of the firewall is greatly reduced as the network firewall rules are clearly and graphically displayed. The browser-based centralized management GUI enables granular fine tuning

while 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 allowing rules to be combined efficiently. The device is easy on resources, which saves on costs and improves productivity. Insights are gained due to comprehensive audit and compliance reports.

## 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").

## Screenshot of the web interface for creating and managing firewall rules



# LANCOM R&S® Unified Firewalls

## 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: Granular filtering and validation of applications and protocols

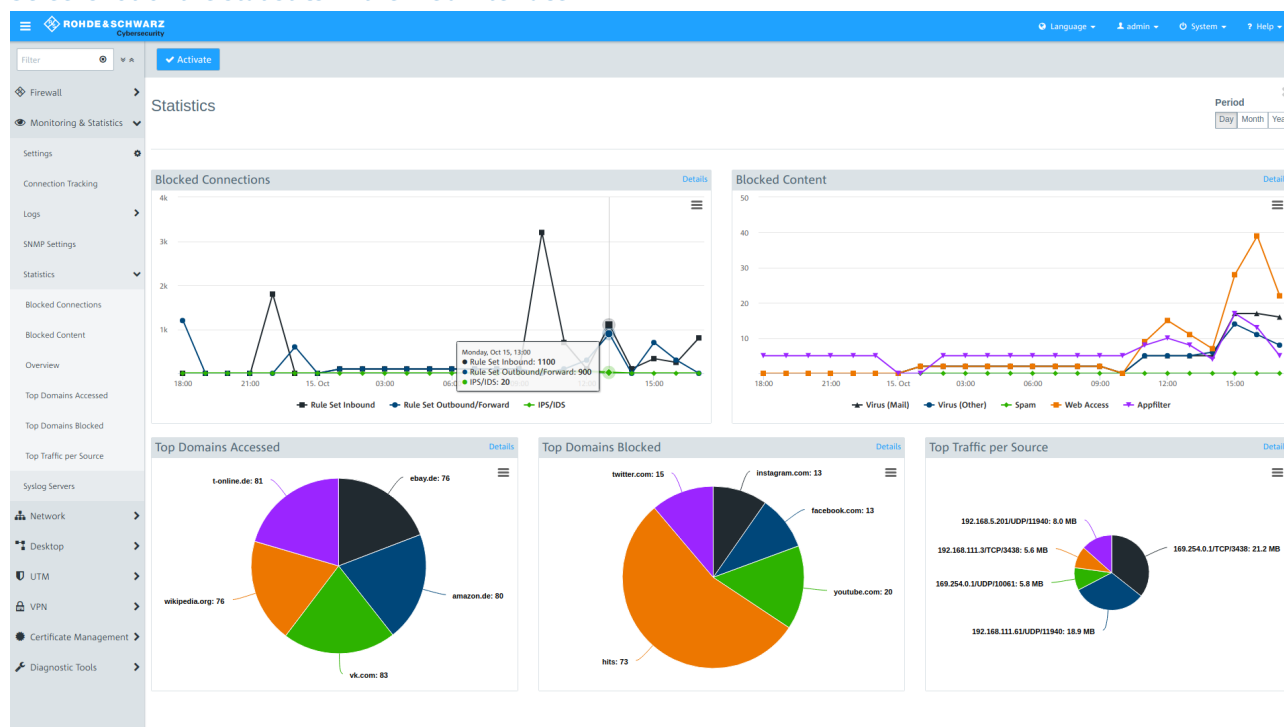
To protect against complex cyber attacks, the firewalls use deep packet inspection (DPI) providing insights into encrypted data traffic. Utilizing the industry-leading

R&S®PACE2 DPI engine, UTM firewalls enable accurate classification of network traffic, protocols and applications, as well as offer data loss prevention (DLP). Fine-grained security policies actively regulate the use of certain applications, such as streaming services or browsers.

## Network & security “Made in Germany”

LANCOM R&S®Unified Firewalls are next-generation firewalls that are developed and programmed in Germany. Their UTM functions ideally complement existing LANCOM network infrastructures in terms of IT security. This constitutes a future-proof protection for corporate networks, guaranteed free of any backdoors.

## 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
<b>Network interfaces</b>						
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+)
<b>System performance</b>						
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
<b>Power</b>						
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
<b>Operating environment</b>						
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
<b>Dimensions</b>						
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](#).

Features: Virtual appliances				
LANCOM R&S® Unified Firewalls	UF-200 Virtual Appliance	UF-300 Virtual Appliance	UF-500 Virtual Appliance	UF-900 Virtual Appliance
<b>Network interfaces</b>				
Configurable switch ports	4	8	14	24

For dimensioning and calculating the maximum number of effective UTM users see LANCOM Techpaper [LANCOM R&S® Unified Firewall Sizing Guide](#). The performance of the virtual appliances depends on the underlying hardware.

# LANCOM R&S® Unified Firewalls

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

# LANCOM R&S® Unified Firewalls

Features	
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	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
Warranty	
Warranty claim	3 years
Accessories	
LANCOM R&S® Unified Firewall Rack Mount UF-50	Rack Mount for LANCOM R&S® Unified Firewall UF-50.
LANCOM R&S® Unified Firewall Rack Mount UF-100/200	Rack Mount for LANCOM R&S® Unified Firewall UF-100, UF-200. Inclusive for UF-300, UF-500 & UF-900.
LANCOM R&S® Unified Firewall 8x 1G RJ45 Module	Plug-in module for LANCOM R&S® Unified Firewall UF-900, 8x 1G ETH / RJ45
LANCOM R&S® Unified Firewall 4x 1G SFP Module	Plug-in module for LANCOM R&S® Unified Firewall UF-900, 4x 1G SFP
LANCOM R&S® Unified Firewall 4x 10G SFP+ Module	Plug-in module for LANCOM R&S® Unified Firewall UF-900, 4x 10G SFP+
Options	
LANCOM Warranty Basic Option	Option for extending the manufacturer warranty from 3 to 5 years
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

Hardware Appliances	
LANCOM R&S®Unified Firewall UF-50	item no. 55001
LANCOM R&S®Unified Firewall UF-100	item no. 55011
LANCOM R&S®Unified Firewall UF-200	item no. 55021
LANCOM R&S®Unified Firewall UF-300	item no. 55031
LANCOM R&S®Unified Firewall UF-500	item no. 55041
LANCOM R&S®Unified Firewall UF-900	item no. 55051
Virtual Appliances	
LANCOM R&S®UF-200 Virtual Appliance	item no. 55022
LANCOM R&S®UF-300 Virtual Appliance	item no. 55032
LANCOM R&S®UF-500 Virtual Appliance	item no. 55042
LANCOM R&S®UF-900 Virtual Appliance	item no. 55052
Licenses	
LANCOM R&S®UF-50-1Y Basic Protection License (1 Year)	item no. 55098
LANCOM R&S®UF-50-3Y Basic Protection License (3 Years)	item no. 55099
LANCOM R&S®UF-50-5Y Basic Protection License (5 Years)	item no. 55100
LANCOM R&S®UF-100-1Y License (1 Year)	item no. 55101
LANCOM R&S®UF-100-3Y License (3 Years)	item no. 55102
LANCOM R&S®UF-100-5Y License (5 Years)	item no. 55103
LANCOM R&S®UF-200-1Y License (1 Year)	item no. 55104
LANCOM R&S®UF-200-3Y License (3 Years)	item no. 55105
LANCOM R&S®UF-200-5Y License (5 Years)	item no. 55106
LANCOM R&S®UF-300-1Y License (1 Year)	item no. 55107
LANCOM R&S®UF-300-3Y License (3 Years)	item no. 55108
LANCOM R&S®UF-300-5Y License (5 Years)	item no. 55109
LANCOM R&S®UF-500-1Y License (1 Year)	item no. 55110
LANCOM R&S®UF-500-3Y License (3 Years)	item no. 55111
LANCOM R&S®UF-500-5Y License (5 Years)	item no. 55112
LANCOM R&S®UF-900-1Y License (1 Year) (+100)	item no. 55113
LANCOM R&S®UF-900-3Y License (3 Years) (+100)	item no. 55114
LANCOM R&S®UF-900-5Y License (5 Years) (+100)	item no. 55115