R&S®LANCOM IGS-3510XUP

Rugged, temperature-enhanced 10-port multi-Gigabit access switch with PoE++ (Type 4) and cloud management for harsh industrial environments

As a temperature-enhanced switch with cloud management functions, the 10-port industrial switch R&S®LANCOM IGS-3510XUP is the first choice for realizing reliable and secure networking in demanding industrial environments. Thanks to its hardened aluminum housing and direct DIN rail mounting, the robust switch can be used in harsh application areas, such as production plants or logistics centers, as well as critical infrastructure, such as wind power or photovoltaic systems, at temperatures ranging from -40 °C to +60 °C. Four of the eight Gigabit Ethernet ports support 2.5 Gigabit Ethernet, providing a powerful foundation for operating Wi-Fi 7 access points with LAN connectivity of up to 2.5G, as well as other network components with high-performance requirements. In combination with the R&S®LANCOM Management Cloud, you ensure uniform network management and monitoring with time-saving automation options.

- Industrial multi-Gigabit access switch with 4x 2.5 Gigabit Ethernet, 4x Gigabit Ethernet ports, and 2x SFP+
- PoE support as per IEEE 802.3af/at (1G ports) and IEEE 802.3bt Type 4 (2.5G ports) to power connected devices up to 360 watts
- For direct DIN rail mounting
- Fanless, rugged all-metal housing for reliability in harsh environments and demanding temperatures (-40 °C to +60 °C)
- Basic layer-3 features such as static routing and DHCP server
- Security with configurable access control on all ports as per IEEE 802.1X
- Secure remote management through TACACS+, SSH, SSL, and SNMPv3
- Cloud-managed LAN - configuration, monitoring, and troubleshooting via the R&S®LANCOM Management Cloud

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High performance on 10 ports

The R&S®LANCOM IGS-3510XUP is equipped with 4 2.5 Gigabit Ethernet ports, 4 Gigabit Ethernet ports, and 2 SFP+ ports supporting transfer rates of up to 10 Gbps. In addition, with a data throughput of 68 Gbps on the backplane, it offers full performance even at high workloads. The multi-Gigabit access switch thus forms the powerful basis for modern network infrastructures.

Designed for industrial applications

Designed for use in severe frost or extreme heat (-40 °C to +60 °C), the R&S®LANCOM IGS-3510XUP is optimally tailored to the requirements of the industrial and manufacturing sector. Its fanless and DIN-rail designed aluminum housing offers improved resistance to bumps and vibration. High flexibility and fail-safety with reliable surge protection are ensured by redundant industry-standard terminals with multiple DC input voltage options.

A high-performance basis for Wi-Fi 7 – PoE included

With four 2.5 Gigabit Ethernet ports and PoE++ (IEEE 802.3bt), the R&S®LANCOM IGS-3510XUP provides a powerful foundation for Wi-Fi 7 access points with LAN connectivity of up to 2.5G – even in particularly harsh environments. The combination of multi-Gigabit performance and high PoE power meets the increased data transmission and power supply requirements of modern access points. Earlier Wi-Fi generations such as Wi-Fi 6(E) are fully supported.

Central power supply without additional wiring

As a powerful PoE switch, the R&S®LANCOM IGS-3510XUP supplies connected PoE end devices without the need for additional power supplies or power cabling. An external, optional power supply unit is required to operate the IGS-3510XUP itself. It supports the Power over Ethernet standards IEEE 802.3at/af (PoE+) and IEEE 802.3bt (PoE++, Type 4) with up to 90W per port. Thanks to high power reserves with a total output of 360 watts, it is thus ideal for efficient power supply of end devices with the highest energy requirements even in outdoor areas that are difficult to reach. In addition to multi-Gigabit-capable access points, this also includes end devices such as PoE-powered lighting, industrial displays, or heated video cameras, which can be easily supplied with power even in harsh outdoor environments.

Cloud-managed LAN

With the R&S®LANCOM Management Cloud, the R&S®LANCOM IGS-3510XUP offers fast and easy network integration as well as automatic configuration assignment. Cloud-managed LAN replaces individual device configuration with holistic network orchestration and enables automatic VLAN assignment to the desired switch ports. This allows all configurations to be rolled out at the click of a mouse, making even more complex networking scenarios easy to administer. In addition, the R&S®LANCOM IGS-3510XUP as a cloud-managed industrial switch supports you in complying with NIS 2 requirements in critical infrastructure.

Configurable access control

The R&S®LANCOM IGS-3510XUP excludes rogue clients from gaining unauthorized access to the network. This is ensured by secured access control on all ports as per IEEE 802.1X (port-based, single-based, multi-based, and MAC-based).

Secure remote management

Secure communication protocols such as SSH, SSL and SNMPv3 make the R&S®LANCOM IGS-3510XUP ideal for professional remote network management. The switch also support the TACACS+ protocol for authentication, authorization, and accounting. This optimized solution promises maximum security for multi-site network management and monitoring.

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Static routing for efficient networks

The R&S®LANCOM IGS-3510XUP supports the basic layer-3 feature static routing and thus the shift of certain routing tasks from the router to the switch. Administrator-predefined network routes, through one or multiple network segments, enable fast data transfer especially in scenarios with high data volumes and relieve the router accordingly. Newly available router capacities can then additionally be used to manage external data traffic. As a result, the entire network efficiency is increased.

DHCP server functionality

As a DHCP server, the switch is able to independently and automatically assign IP addresses to clients. The R&S®LANCOM IGS-3510XUP supports this basic layer-3 function and thus takes over the IP management of the connected network.

IPv6 and IPv4 support

Thanks to its dual-stack implementation, the R&S®LANCOM IGS-3510XUP operates in pure IPv4, pure IPv6 or in mixed networks. Applications such as SSL, SSH, Telnet or TFTP can continue to be operated on IPv6 networks. Supported IPv6 features includes stateless auto configuration, neighbor detection, and MLD snooping.

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Security	
Secure Shell Protocol (SSH)	SSH for a secure remote configuration
Secure Sockets Layer (SSL)	SSL to encrypt HTTP connections; advanced security for browser-based configuration via web interface
IEEE 802.1X	IEEE 802.1X access control on all ports; RADIUS for authentication, authorization and accounting with e.g. MD5 hashing; guest VLAN; dynamic VLAN assignment
Private VLAN edge	Layer 2 isolation between clients in the same VLAN ("protected ports"); support multiple uplinks
Port security	Locking of MAC addresses to ports; limiting of the number of learned MAC addresses
IP source guard	Blocking access for illegal IP addresses on specific ports
Access control lists	Drop or rate limitation of connections based on source and destination MAC addresses, VLAN ID, IP address (IPv4/IPv6), protocol, port, DSCP/IP precedence, TCP/UDP source and destination ports, IEEE 802.1p priority, ICMP packets, IGMP packets, TCP flag
RADIUS/TACACS+	Authentication, authorization and accounting of configuration changes by RADIUS or TACACS+
Storm Control	Multicast/Broadcast/Unicast storm suppression
Isolated Group	Allows certain ports to be designated as protected. All other ports are non-isolated. Traffic between isolated group members is blocked. Traffic can only be sent from isolated group to non-isolated group.
DHCP Snooping	Protection against rogue DHCP servers on the network - Outgoing DHCP-server packets are only allowed on specific ports.
Dynamic ARP Inspection	Dynamic ARP Inspection to prevent man-in-the-middle attacks incl. proxy ARP
Performance	
Switching technology	Store and forward with latency less than 4 microseconds
MAC addresses	Support of max 16K MAC addresses
Throughput	Max. 68 Gbps on the backplane
Maximum packet processing	51 million packets per second (mpps) at 64-byte packets
VLAN	Port based and IEEE 802.1q tag based VLAN with up to 4,093 VLAN; Supports ingress and egress packet filter in port based VLAN
Jumbo frame support	Jumbo frame support with up to 10240 bytes
PoE with IEEE 802.3bt and IEEE 802.3at/af	
2.5G Ports	4x IEEE 802.3bt 2.5G PoE ports with up to 90W per port (type 4, compatible to IEEE 802.3at/af powered devices), limited by the maximum PoE power supplied
1G Ports	4x IEEE 802.3at PoE ports (compatible to IEEE 802.3af powered devices), limited by the maximum PoE power supplied
Power	max. 360 W total power with dynamic load balancing on all ports
Priorisation	Supports port based priority and PoE status setting
Status information	Monitoring via LED, displaying the actual power consumption per port in web interface
Energy efficiency (Green Ethernet)	
Energy detection	Energy efficiency according to IEEE 802.3az. Automatically turns off power on Gigabit Ethernet RJ-45 port when detecting link down or Idle of client. Active mode is resumed without loss of any packets when the switch detects the link up
Cable length detection	Adjusts the signal strength based on the cable length. Reduces the power consumption for short cable
Layer 3 features	
Number of L3 inferfaces	up to 128
Static routing (IPv4/IPv6)	Hardware based static routing (IPv4/IPv6) with a number of 128 possible routes
DHCP Server	DHCP Server per VLAN, max. 16 pools

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Layer 2 switching	
Spanning Tree Protokoll (STP) / Rapid STP / Multiple STP	Standard Spanning Tree according to IEEE 802.1d with fast convergence support of IEEE 802.1w (RSTP); using Multiple Spanning Tree instances by default according to IEEE 802.1s (MSTP)
Link Aggregation Control Protocol (LACP)	Support of 26 groups containing up to 4 ports each according to IEEE 802.1ax
VLAN	Support for up to 4K VLANs simultaneously (out of 4093 VLAN Ids); matching due to port, IEEE 802.1q tagged VLANs, MAC adresses, IP subnet and Private VLAN Edge function ("protected ports")
Voice VLAN	Voice traffic is automatically assigned to a voice-specific VLAN and treated with appropriate levels of QoS
IGMP multicasts	IGMP v1, v2, v3 to limit bandwidth-intensive multicast traffic to ports with requesters; supports 1024 multicast groups; source-specific multicasting
IGMP querier	Support of multicast domains of snooping switches in the absence of a multicast router
IGMP Snooping	IGMP Snooping to identify multicast groups and prevent unnecessary traffic
IGMP proxy	IGMP proxy to pass IGMP messages through
MLD v1/v2	Multicast Listener Discovery - IPv6 multicast packets are transmitted to interested listeners only
Generic VLAN registration	VLAN registration with GVRP according to IEEE 802.1q for automatic delivery of VLANs in bridged domains
DHCP Relay Agent	Relay of DHCP broadcast request to different LANs
Supported DHCP options	► DHCP option 82
Interfaces	
Ethernet	► 4 TP ports 10/100/1000 Mbps ► 4 TP ports 100/1000/2500 Mbps ► 2 SFP+ ports 1/10 Gbps ► 10 concurrent Ethernet ports in total
Console port	RJ45 configuration port for command line access
Management and monitoring	
Management	LANconfig, WEBconfig, R&S®LANCOM Management Cloud, Industry Standard CLI
Command Line Interface (CLI)	Configuration and status display from the command line with console application and direct connection to console port, via Telnet or SSH
Monitoring	LANmonitor, R&S®LANCOM Management Cloud
Remote Monitoring	Integrated RMON software agent supports 4 RMON groups (history, statistics, alarms and events) for enhanced traffic management, monitoring and analysis
Port Mirroring	Traffic can be mirrored from on port to another for investigation with network analyzer or RMON probe. Up to 9 ports can be mirrored to a single mirror port. Single sessions can be selected
Security	Access rights (read/write) can be set up separately, access control list
SNMP	SNMP management via SNMPv1, v2c or v3 with support of traps. User-based security model for SNMPv3 (USM)
Diagnosis	Diagnosis from the switch with PING and cable diagnosis
Firmware update	► Update via WEBconfig and browser (HTTP/HTTPS) ► Update via TFTP and LANconfig ► Dual firmware image to update during operation
Secure Copy	Securely import and export files
DHCP client	Automatic assignement of the management IP address by DHCP
SNTP	Automatic time settings with Simple Network Time Protocol (SNTP)

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Management and monitoring	
s-flow	Standard for monitoring of high-speed-networks. Visualization of network use, accounting an analysation to protect your network against dangers
Hardware	
Weight	2,0 lbs (0,9 kg)
Power supply	external power supply required, refer to accessory "LANCOM DPSU-480/55" ► 44~57 VDC Input for IEEE 802.3af (max. 15.4W) output required ► 50~57 VDC Input for IEEE802.3at (max. 30W) output required ► 50~57 VDC Input for IEEE802.3bt Type 3 (max. 60W) output required ► 52~57 VDC Input for IEEE802.3bt Type 4 (max. 90W) output required
Environment	Temperature range -40 – 60°C; humidity 10 – 90%; non-condensing
Housing	hardened metal housing for DIN rails, 70 x 168 x 130 mm > W x H x D) network connectors on the front
Fans	None; fanless design without rotating parts, high MTBF
Mean time between failure	► at 25° C: 318 000 hours (MTBF) ► at 75° C: 58 000 hours (MTBF)
Power consumption (max) without powered devices	35W
Power consumption (max) at full PoE power delivery	375W
Power consumption (idle)	15W
PoE Budget	360W
Heat power (max)	51 BTU/h
Software	
LCOS version	based on LCOS SX 4.30
Lifecycle Management	After discontinuation (End of Sale), the device is subject to the R&S®NC Lifecycle Management. Details can be found at: Link
IT Security made in Germany	The development and quality assurance take place in Germany in accordance with high security standards. The „IT Security made in Germany" quality label of the German IT Security Association attests to the level of security achieved.
Declarations of conformity*	
Europe/EFTA	CE
North America	FCC/IC
Australia / New Zealand	ACMA
***) Note**	The full text of the specific Declaration of Conformity is available here
Supported IEEE standards	
IEEE 802.1AB	Link Layer Discovery Protocol (LLDP)
IEEE 802.1AB	LLDP-MED
IEEE 802.1ad	Q-in-Q tagging
IEEE 802.1ak	MRP and MVRP - Multiple Registration Protocol and Multiple VLAN Registration Protocol
IEEE 802.1d	MAC Bridging
IEEE 802.1d	Spanning Tree

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Supported IEEE standards	
IEEE 802.1p	Class of Service
IEEE 802.1q	VLAN
IEEE 802.1s	Multiple Spanning Tree Protocol (MSTP)
IEEE 802.1w	Rapid Spanning Tree Protocoll (RSTP)
IEEE 802.1X	Port Based Network Access Control
IEEE 802.3	10Base-T Ethernet
IEEE 802.3ab	1000Base-TX Ethernet
IEEE 802.1ax, incl. 802.3ad	Link Aggregation Control Protocol (LACP)
IEEE 802.3ae	10 Gigabit Ethernet over fiber
IEEE 802.3af	Power over Ethernet (PoE)
IEEE 802.3at	Power over Ethernet Plus (PoE+)
IEEE 802.3bt	Power over Ethernet++(PoE++) Type 4
IEEE 802.3az	Energy Efficient Ethernet
IEEE 802.3u	100Base-T Ethernet
IEEE 802.3x	Flow Control
IEEE 802.3z	1000Base-X Ethernet
Supported RFC standards	
RFC 854	Telnet Protocol Specification
RFC 1213	MIB II
RFC 1215	SNMP Generic Traps
RFC 1493	Bridge MIB
RFC 1769	Simple Network Time Protocol (SNTP)
RFC 2021	Remote Network Monitoring MIB v2 (RMONv2)
RFC 2233	Interface MIB
RFC 2460	Internet Protocol Version 6 (IPv6)
RFC 2613	SMON MIB
RFC 2617	HTTP Authentication
RFC 2665	Ethernet-Like MIB
RFC 2674	IEEE 802.1p and IEEE 802.1q Bridge MIB
RFC 2818	Hypertext Transfer Protocol Secure (HTTPS)
RFC 2819	Remote Network Monitoring MIB (RMON)
RFC 2863	Interface Group MIB using SMIv2
RFC 2933	IGMP MIB
RFC 3019	MLDv1 MIB
RFC 3414	User based Security Model for SNMPv3
RFC 3415	View based Access Control Model for SNMP

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Supported RFC standards	
RFC 3587	IPv6 Global Unicast Address Format
RFC 3621	Power Ethernet MIB
RFC 3635	Ethernet-Like MIB
RFC 3636	IEEE 802.3 MAU MIB
RFC 4133	Entity MIBv3
RFC 4188	Bridge MIB
RFC 4251	The Secure Shell Protocol Architecture (SSH)
RFC 4291	IP Version 6 Addressing Architecture
RFC 4443	Internet Control Message Protocol (ICMPv6)
RFC 4541	IGMP- and MLD-Snooping
RFC 4668	RADIUS Authentication Client MIB
RFC 4670	RADIUS Accounting MIB
RFC 5519	Multicast Group Membership Discovery MIB
Scope of delivery	
Manual	Hardware Quick Reference (DE/EN), Installation Guide (DE/EN)
Cable	Serial configuration cable, 1.5m
Support	
Warranty extension	Free warranty extension up to 5 years (replacement service for defects) Find details here. The service and support conditions valid as of July 01, 2026, available at rs-nc.rohde-schwarz.com/fileadmin/pdf/LCS/ServiceSupportConditions/Rohde-Schwarz-Networks-and-Cybersecurity-GmbH-Service-and-Support-Conditions-20260701.pdf, apply.
Security updates	Up to 2 years after End of Sale of the device (but min. 3 years, see Link), can be extended by purchasing R&S®NC Support products
Software updates	Regular free updates including new features as part of the R&S®NC Lifecycle Management (Link)
Information on the EU Data Act	For details on product data and data on connected services, please refer to: Link
Manufacturer support	Available with R&S®NC products such as Support Access (for R&S®NC Community Partners only), Direct, or Premium
R&S®NC Support Access	Exclusively forR&S®NC Community partners: Personal manufacturer support (best effort) and security updates for the device, valid for all service categories, term-based (starting at the beginning of each quarter) for 1, 3, or 5 years (item no. 10804, 10805, or 10806)
R&S®NC Replacement Advanced S	Security updates until EOL (min. 5 years) and 5 years NBD advance replacement with delivery of the replacement device within one business day (8/5/NBD), item no. 10730
R&S®NC Support Direct Advanced 24/7 S	Direct, prioritized 10/5 manufacturer support incl. 24/7 emergency hotline and security updates for the device, NBD advance replacement with delivery of the device on the next business day (24/7/NBD), guaranteed first response times (SLA) of max. 30 minutes for reporting massive operational disruptions by telephone (priority 1) and max. 4 hours for all other concerns (priority 2), term-based for 1, 3, or 5 years (item no. 10776, 10777 or 10778)
R&S®NC Support Direct 24/7 S	Direct, prioritized 10/5 manufacturer support incl. 24/7 emergency hotline and security updates for the device, guaranteed first response times (SLA) of max. 30 minutes for reporting massive operational disruptions by telephone (priority 1) and max. 4 hours for all other concerns (priority 2), term-based for 1, 3, or 5 years(item no. 10752, 10753 or 10754)
R&S®NC Support Direct Advanced 10/5 S	Direct, prioritized 10/5 manufacturer support and security updates for the device, NBD advance replacement with delivery of the device on the next business day (10/5/NBD), guaranteed first response times (SLA) of max. 2 hours for reporting massive operational disruptions by telephone (priority 1) and max. 4 hours for all other concerns (priority 2), term-based for 1, 3, or 5 years (item no. 10764, 10765 or 10766)

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Support	
R&S®NC Support Direct 10/5 S	Direct, prioritized 10/5 manufacturer support and security updates for the device, guaranteed first response times (SLA) of max. 2 hours for reporting massive operational disruptions by telephone (priority 1) and max. 4 hours for all other concerns (priority 2), term-based for 1, 3, or 5 years (item no. 10740, 10741 or 10742)
R&S®LANCOM Management Cloud	
R&S®LANCOM LMC-A-1Y LMC License	LANCOM LMC-A-1Y License (1 Year), enables the management of one category A device for one year via the R&S®LANCOM Management Cloud, item no. 50100
R&S®LANCOM LMC-A-3Y LMC License	R&S®LANCOM LMC-A-3Y License (3 Years), enables the management of one category A device for three years via the R&S®LANCOM Management Cloud, item no. 50101
R&S®LANCOM LMC-A-5Y LMC License	R&S®LANCOM LMC-A-5Y License (5 Years), enables the management of one category A device for five years via the R&S®LANCOM Management Cloud, item no. 50102
Accessories*	
1000Base-SX SFP transceiver module	R&S®LANCOM SFP-SX-LC1, item no. 61556
1000Base-SX SFP transceiver module	R&S®LANCOM SFP-SX2-LC1, item no. 60183
1000Base-LX SFP transceiver module	R&S®LANCOM SFP-LX-LC1, item no. 61557
1000Base-LX SFP BiDi transceiver module	R&S®LANCOM SFP-BiDi1550-SC1, item no. 60201
10GBase-SX SFP transceiver module	R&S®LANCOM SFP-SX-LC10, item no. 61485
10GBase-LX SFP transceiver module	R&S®LANCOM SFP-LX-LC10, item no. 61497
10GBase-LX SFP transceiver module	R&S®LANCOM SFP-LR40-LC10, item no. 60182
10GBase-LX SFP BiDi transceiver module	R&S®LANCOM SFP-BiDi1310-LC10, item no. 60202
10G multi gigabit Ethernet copper module	R&S®LANCOM SFP-CO10-MG, Art.-Nr.: 60170, max. 1 module usable due to increased power consumption and associated heat
10G Direct Attach Cable 1m	R&S®LANCOM SFP-DAC10-1m, Art.-Nr.: 61495
10G Direct Attach Cable 3m	R&S®LANCOM SFP-DAC10-3m, Art.-Nr.: 60175
recommended din rail power supply	► R&S®LANCOM DPSU-480/55, item no. 61435 ► PULS CPS20.481 (alternative R&S®Networks and Cybersecurity qualified third party PSU)
***) Note**	Support for third-party accessories (SFP and DAC) is excluded and cannot be granted
Item number(s)	
R&S®LANCOM IGS-3510XUP	61912

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