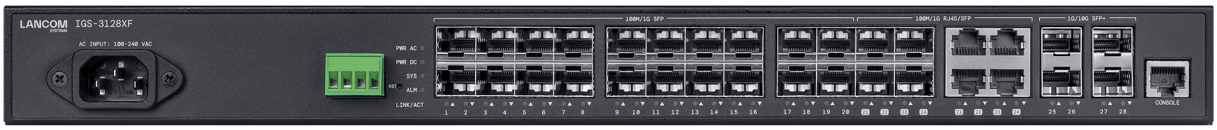
R&S®LANCOM IGS-3128XF

Rugged, temperature-enhanced 28-port Gigabit access switch with cloud management for exclusive fiber-optic connectivity in harsh industrial environments



For industrial companies, infrastructure providers, and operators of critical systems, the R&S®LANCOM IGS-3128XF serves as a reliable distribution instance for internally networking other switches within the network. With its robust metal housing, flexible fiber-optic connectivity across all ports, and extended temperature tolerance, this cloud-ready industrial switch is ideally suited for demanding environments such as manufacturing, logistics, or energy supply. The 28-port Gigabit access switch features 24x 1G SFP ports – 4 of which can be used as combo ports (TP/SFP) – as well as 4x 10G SFP+ ports for uplinks and backbone connections. For flexible power supply options, the R&S®LANCOM IGS-3128XF comes with an internal AC power unit and an additional connector for external DC power sources. Its shallow housing depth allows for space-saving installation, particularly in compact distribution cabinets. With layer 3 lite functionality and support for the R&S®LANCOM Management Cloud (R&S®LMC), the R&S®LANCOM IGS-3128XF enables centralized and automated management of both the device and the entire network.

- Industrial Gigabit access switch with fiber-optic support on all ports: 20x 1G SFP ports, 4x combo ports (TP/SFP), and 4x 10G SFP+ ports
- AC and DC input for maximum flexibility in the choice of power supply
- Robust metal housing for reliability in harsh environments and demanding temperatures (-20 °C to +55 °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 and access control lists
- Secure remote management through TACACS+, SSH, SSL, and SNMPv3
- Cloud-managed LAN for fast configuration and convenient management via the R&S®LANCOM Management Cloud
- IPv6 and IPv4 support for modern enterprise networks
- Including 2x 19" mounting brackets
- 5-year replacement service for all components

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High performance on 28 ports

The R&S®LANCOM IGS-3128XF is equipped with 20x 1G SFP ports, 4x combo ports (TP/SFP), and 4x 10G SFP+ ports supporting transfer rates of up to 10 Gbps. The combo ports can be used flexibly as either copper (RJ45) or fiber-optic ports (SFP). With a data throughput of 128 Gbps on the backplane, it also offers full performance even under heavy load. This makes the industrial access switch the ideal central distribution instance in the network for connecting additional switches in modern network infrastructures.

Designed for industrial applications

Designed for use in severe frost or extreme heat (-20 °C to +55 °C), the R&S®LANCOM IGS-3128XF is optimally tailored to the requirements of the industrial and manufacturing sectors. Its metal housing provides enhanced resistance to bumps and vibration, while AC and DC inputs offer maximum flexibility in power supply options. The shallow housing depth of just 211 mm saves valuable space and allows for flexible installation – even in small network cabinets or confined environments. Compared to many standard switches with a depth of 300–400 mm, this design leaves ample room for effective cable management and optimal air circulation.

Cloud-managed LAN with port templates and Secure Terminal Access

With the R&S®LANCOM Management Cloud (R&S®LMC) and Cloud-managed LAN, the R&S®LANCOM IGS-3128XF offers quick and easy network integration as well as automatic provision of the configuration across locations with the a click of a mouse. Time-consuming individual device and switch port configurations are now a matter of the past. The targeted switch rollout via the R&S®LMC enables automatic VLAN assignment to switch ports including practical switch port profiles and therefore “zero-touch” assignment to the devices. Secure Terminal Access provides access to the command line of the R&S®LANCOM switch ("CLI tunneling") directly from the R&S®LANCOM Management Cloud – encrypted and without leaving the cloud interface. Secure Terminal Access provides expert functions as well as extensive diagnostic and troubleshooting commands for the devices. Some highlights include: “trace” and “ping” commands for quick troubleshooting, access to low-level configuration parameters and detailed statistics of the LCOS SX operating system as well as secure remote access to third-party devices in the local network via the integrated SSH client.

Interference-free high-speed transmissions over distances of several kilometers

The R&S®LANCOM IGS-3128XF supports fiber-optic connectivity on all 28 ports, enabling reliable high-speed data transmission even across long distances. Link aggregation (LACP) allows multiple ports to be combined into a single logical channel, achieving a total transmission rate of up to 40 Gbps. As a result, this industrial access switch significantly boosts network performance and is ideal for organizations with extensive or distributed infrastructures. Another advantage: fiber-optics not only enhance installation flexibility but also effectively protect the network from electromagnetic interference – for example, when cables are laid parallel to power or machinery lines.

High reliability through redundant power supply

As a central distribution point for stable internal networking, the continuous availability of the R&S®LANCOM IGS-3128XF is essential. In addition to the integrated 100–240 V AC power supply, the industrial access switch also supports a 24–54 V DC power supply via an optional external power adapter (connection block), ensuring high operational reliability. If one power source fails, the other takes over – guaranteeing uninterrupted operation, even in critical infrastructure environments.

Configurable access control & secure remote management

The R&S®LANCOM IGS-3128XF stops 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, multi, and MAC-based) or by ACLs (access control lists). Thanks to secure communication protocols such as SSH, SSL, and SNMPv3, professional remote management of the network is possible. The switch also supports 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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DHCP server functionality

As a DHCP server, the switch can independently and automatically assign IP addresses to clients. The R&S®LANCOM IGS-3128XF supports this basic layer-3 function and thus takes over the IP management of the connected network.

Static routing for efficient networks

The R&S®LANCOM IGS-3128XF supports the basic layer-3 function of static routing, shifting certain routing tasks from the router to the switch. The predefinition of network routes through one or more network segments enables faster data exchange, especially in the case of high internal data traffic, and reduces the load on the router. Freed-up router capacity is then additionally available for handling external data traffic. This increases the efficiency of the entire network.

IPv6 and IPv4 support

Thanks to its dual-stack implementation, the R&S®LANCOM IGS-3128XF can be used in pure IPv4, pure IPv6, or mixed networks. Numerous applications such as SSL, SSH, Telnet, or TFTP can thus also be run over IPv6 networks. IPv6 features such as stateless autoconfiguration, neighbor device discovery, and MLD snooping round out the IPv6 features.

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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 32K MAC addresses
Throughput	Max. 128 Gbps on the backplane
Maximum packet processing	95,23 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
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
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

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Layer 2 switching	
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	
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 27 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)
s-flow	Standard for monitoring of high-speed-networks. Visualization of network use, accounting an analysation to protect your network against dangers
Hardware	
Weight	6.80 lbs (3,10 kg)
Power supply	Internal power supply unit (100 – 240 V, 50 – 60 Hz), and a connector for an external DC power supply unit with 24 - 54 V
Environment	▶ normal temperature range -20 bis 55°C ▶ Relative humidity (during and outside operation): non-condensing and condensing 5% to 90% ▶ Minimum ambient temperature for cold start is 0°C
Housing	Robust metal housing, 19" 1U (442 x 44 x 211 mm > W x H x D) with removable mounting brackets, network connectors on the front
Mean time between failure	▶ at 25 ° C: 197 000 hours (MTBF) ▶ at 60 ° C: 29 000 hours (MTBF)
Power consumption (max)	35 W
Acoustic noise (typ)	40 dBa

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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" trust seal 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
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 802.3az	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)

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Supported RFC standards	
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
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
Cable	IEC power cord
19" brackets	Two 19" brackets for rackmounting
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.

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Support	
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 M	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. 10731
R&S®NC Support Direct Advanced 24/7 M	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. 10779, 10780 or 10781)
R&S®NC Support Direct 24/7 M	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. 10755, 10756 or 10757)
R&S®NC Support Direct Advanced 10/5 M	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. 10767, 10768 or 10769)
R&S®NC Support Direct 10/5 M	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. 10743, 10744 or 10745)
R&S®LANCOM Management Cloud	
R&S®LANCOM Management Cloud	R&S®LANCOM LMC-B-1Y License (1 Year), enables the management of one category B device for one year via the R&S®LANCOM Management Cloud, item no. 50103
R&S®LANCOM Management Cloud	R&S®LANCOM LMC-B-3Y License (3 Years), enables the management of one category B device for three years via the R&S®LANCOM Management Cloud, item no. 50104
R&S®LANCOM Management Cloud	R&S®LANCOM LMC-B-5Y License (5 Years), enables the management of one category B device for five years via the R&S®LANCOM Management Cloud, item no. 50105
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
Copper SFP transceiver module	R&S®LANCOM SFP-CO1, item no. 61494
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

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Accessories*	
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
IEC power cord (UK)	R&S®LANCOM Power Cord, UK plug, item no. 61650
IEC power cord (CH)	R&S®LANCOM Power Cord, CH plug, item no. 61652
IEC power cord (US)	R&S®LANCOM Power Cord , US plug, item no. 61651
IEC power cord (AU)	R&S®LANCOM Power Cord, AU plug, item no. 61653
***) Note**	Support for third-party accessories (SFP and DAC) is excluded and cannot be granted
Item number(s)	
R&S®LANCOM IGS-3128XF	61671

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