

# SNR S5210 series

L2+ Managed Ethernet switches



The SNR switches S5210 series are universal GigabitEthernet Layer 2+ switches designed for use at the access and aggregation level.

Various power backup options, and support for power monitoring allows build fault-tolerant networks of telecom operators and Enterprise segment.

## Main features:

- 1/10GbE SFP+ Uplink ports
- Wide range of security features
- Non-blocking switching matrix
- Power supply backup (-RPS/-DC/-UPS)
- Power monitoring
- Simple configuration via SNR CLI
- Built-in surge protection on all copper ports
- Static routing

## Switch models

Model	10/100/1000Base-T	Combo ports 10/100/1000Base-T  100/1000Base-X SFP	100/1000BaseX-SFP	1/10GbE SFP+
SNR-S5210G-8TX	8	-	-	4
SNR-S5210X-8F	-	-	-	8
SNR-S5210G-24TX	24	-	-	4
SNR-S5210G-24TX-POE	24	-	-	4
SNR-S5210G-24FX	-	4	20	4

## High performance

The S5210 series switches are built with modern chipsets and have a non-blocking switching matrix that allows all switch ports to operate simultaneously at full speed. It also guarantees high performance and minimal network latency.

Model	Switching Capacity	Forwarding Rate	MAC
SNR-S5210G-8TX	90 Gbps	95,2 Mpps	16K
SNR-S5210X-8F	160 Gbps	95,2 Mpps	16K
SNR-S5210G-24TX	128 Gbps	95,2 Mpps	16K
SNR-S5210G-24TX-POE	128 Gbps	95,2 Mpps	16K
SNR-S5210G-24FX	128 Gbps	95,2 Mpps	16K

## Resilience

For organizing resilient networks, support for standard protocols STP/RSTP/MSTP.

Link aggregation functionality using LACP or static aggregation allows combining up to 8 ports into one logical interface, increasing the bandwidth ability and resilience at the data link level.

Due to equipping each RJ-45 port with surge protection, the switch components are protected from damage when high voltage applied to the port.

## Quality of Service (QoS)

Support for 8 hardware queues per port allows creating flexible service policies for different types of traffic, thus ensuring high quality of sensitive services under high load conditions. Traffic can be classified by field values in L2-L4 headers, including CoS, DSCP, VLAN ID, IP/MAC addresses, and TCP/UDP ports.

Model	Multicast group	Queues per Port	ACL
SNR-S5210X-8TX	1024	8	1536
SNR-S5210X-8F	1024	8	1536
SNR-S5210G-24TX	1024	8	1536
SNR-S5210G-24TX-POE	1024	8	1536
SNR-S5210G-24FX	1024	8	1536

## Security

The S5210 series switches provide a wide range of security features for both service providers and enterprise networks. Hardware Access Control Lists (ACLs) can filter traffic by L2-L4 header fields without performance brake.

## Operational convenience

The S5210 series switches have a convenient and intuitive CLI. The system supports all the necessary functionality of the Enterprise/ISP level for building modern data networks and has extensive management and monitoring capabilities via CLI and SNMP.

## PoE+ support

The S5210 series switches support PoE 802.3af и PoE+ 802.3at standards with a smart capacity management. The PoE technology reduces cost of ownership and makes network maintenance easier. It allows to supply with power directly from switch different types of equipment such as WiFi hotspots, IP/Video phones, thin clients and others.

Model	Number of PoE ports	Total PoE capacity
SNR-S5210G-24TX-POE	24	370 Watt

## Dimensions and power supply

Switch models SNR-S5210X-8F-RPS, SNR-S5210G-24TX-RPS, SNR-S5210G-24FX-RPS are equipped with an RPS connector for connecting a backup DC 12V power supply, and models SNR-S5210G-24TX-UPS, SNR-S5210G-24FX-UPS, SNR-S5210X-8F-UPS have a built-in controller discharge/charge battery 12V. It is recommended to use a battery with a capacity of 5-50Ah. However, you can use a battery with a larger capacity, which will increase the charging time.. The series also includes switches with the ability to connect a backup DC 48V power supply.

Model	Dimension	Weight (Brutto)	Power Consumption	Cooling	Power Supply
SNR-S5210X-8TX	280 x 44 x 180 mm	2,20 kg	24 Watt	Passive	100-240AC
SNR-S5210X-8F	280 x 44 x 180 mm	2,08 kg	30 Watt	Active	100-240AC
SNR-S5210X-8F-UPS	280 x 44 x 180 mm	2,08 kg	45 Watt	Active	100-240AC, 12V DC+UPS
SNR-S5210X-8F-RPS	280 x 44 x 180 mm	2,08 kg	30 Watt	Active	100-240AC, 12V DC
SNR-S5210X-8F-DC	280 x 44 x 180 mm	2,08 kg	30 Watt	Active	100-240AC, 48V DC
SNR-S5210G-24TX	442 x 44 x 208 mm	3,25 kg	30 Watt	Passive	100-240AC
SNR-S5210G-24TX-DC	442 x 44 x 208 mm	3,35 kg	30 Watt	Passive	100-240AC, 48V DC
SNR-S5210G-24TX-RPS	442 x 44 x 208 mm	3,35 kg	30 Watt	Passive	100-240AC, 12V DC
SNR-S5210G-24TX-UPS	442 x 44 x 208 mm	3,35 kg	50 Watt	Passive	100-240AC, 12V DC+UPS
SNR-S5210G-24TX-POE	442 x 44 x 208 mm	4,00 kg	425 Watt	Active	100-240AC
SNR-S5210G-24FX	442 x 44 x 208 mm	3,40 kg	60 Watt	Active	100-240AC
SNR-S5210G-24FX-RPS	442 x 44 x 208 mm	3,40 kg	60 Watt	Active	100-240AC, 12V DC
SNR-S5210G-24FX-DC	442 x 44 x 208 mm	3,40 kg	60 Watt	Active	100-240AC, 48V DC
SNR-S5210G-24FX-UPS	442 x 44 x 208 mm	3,40 kg	80 Watt	Active	100-240AC, 12V DC+UPS

## Technical Brief:

### Switching type

- Store-and-Forward

### MAC address table

- 16K entries

### MAC address table features

- Limiting max number MAC addresses on a port, switch
- Static MAC addresses
- MAC-notification

### Flow Control

- 802.3x Flow Control

### Jumbo frame

- 12 Kbytes

### Flash memory size

- 64 Mbytes

### RAM size

- 256 Mbytes

### Ring Protection

- ERPS ITU-T G.8032\*

### Loopback Detection

- Per-port

### VLAN

- 4094 VLAN
- Protocol VLAN
- Voice/MAC VLAN
- VLAN Translation

### L3 functions

- Static routing
- 32 IP interfaces
- 512 IPv4 routes
- 2K IPv4 ARP

### Spanning Tree

- 802.1D STP
- 802.1W RSTP
- 802.1S MSTP
- Root/BPDU Guard
- BPDU Forwarding

### Port Aggregation

- LACP 802.3ad / 802.1ax
- Up to 64 groups per switch / up to 8 ports in group
- Load balance src/dst MAC, src/dst IP

### Multicast

- 1024 IGMP groups
- IGMP v1/v2/v3 snooping
- IGMP Fast leave
- IGMP Snooping Querier
- Multicast VLAN Registration
- IGMP Filter
- IGMP limit

### QoS

- 8 queues per port
- Bandwidth Control
- Traffic classification per port, ACL, VLAN ID, CoS, ToS, DSCP, IPv6 Flow Label, TCP/UDP ports, protocol type, traffic class IPv6, IPv4
- Remarking DSCP, CoS/802.1p, Precedence, ToS
- SP, WFQ

### ACL

- 1536 ACL
- Filtering based on: switch port, VLAN ID, COS, 802.1p priority, MAC-address, EtherType, IPv4-address, IPv6-address\*, ToS, DSCP, protocol type, port number TCP/UDP
- Userdefined ACL\*
- ACL for telnet/SSH connections

### DHCP

- IPv4 DHCP Client/Relay
- IPv4/IPv6 DHCP Snooping
- Option 82, Option 37/38
- DHCP Snooping Binding (IP Source Guard)
- DHCP Server

## Security

- SSH v1/v2
- SSL v1/v2/v3
- Limiting the number of MAC addresses on a port
- MAC Authentication Bypass
- Limiting Broadcast/Multicast/Unicast packets on a port by pps/Kbps
- Access Management (IP-MAC-Port Binding)
- Port Security
- Port Isolation
- CPU protection
- Dynamic ARP inspection (DAI)
- RA Snooping
- SAVI

## Logging

- RAM logging
- Flash logging
- Logging to Syslog server
- Configuring the logging level
- Logging executed command

## QinQ

- Port-Based
- Selective QinQ

## Management and monitoring

- TACACS+
- RADIUS
- Different levels of user privileges
- Passing privilege levels via RADIUS/TACACS+
- SCP/SFTP/TFTP/FTP, CLI, Telnet, Console
- SSH
- SNMPv1/v2c/v3, SNMP Traps, Public & Private MIB interface
- NTP
- ZTP
- Password encryption
- Backup and restore settings
- Ping, Traceroute
- Syslog (IPv4/IPv6)
- VCT, DDM
- Multiple IP Interface
- LLDP
- Iperf3 client
- Virtual Cabel Test (VCT)
- UPS Connection monitoring and power supply, voltage and amperage charge/discharge UPS (for UPS models)
- PPPoE Intermediate agent
- Packet-capture
- Dying gasp
- ULDP

## Traffic Mirroring

- Support 4 groups
- One-to-one / Many-to-one
- RSPAN

## Humidity

- 5%-95%, no condensation

## Storage temperature

- 0C ~ 50C

## Storage temperature

- -40C ~ 70C

## Surge protection

- Up to 4 kV\* (\*exempt SNR-S5210X-8F)

\* - functionality will be implemented in future software versions

## Ordering information

Model	Description
SNR-S5210X-8TX	L2+ Managed switch, 24 x 10/100/1000Base-T, 4 x 1/10GbE SFP+. Power: 220V AC
SNR-S5210X-8F	L2+ Managed switch, 8 x 1/10GbE SFP+. Power: 220V AC
SNR-S5210X-8F-UPS	L2+ Managed switch, 8 x 1/10GbE SFP+. Power: 220V AC, 12V battery connector
SNR-S5210X-8F-RPS	L2+ Managed switch, 8 x 1/10GbE SFP+. Power: 220V AC, 12V DC
SNR-S5210X-8F-DC	L2+ Managed switch, 8 x 1/10GbE SFP+. Power: 220V AC, 48V DC
SNR-S5210G-24TX	L2+ Managed switch, 24 x 10/100/1000Base-T, 4 x 1/10GbE SFP+. Power: 220V AC
SNR-S5210G-24-RPS	L2+ Managed switch, 24 x 10/100/1000Base-T, 4 x 1/10GbE SFP+. Power: 220V AC, 12 V DC
SNR-S5210G-24TX-DC	L2+ Managed switch, 24 x 10/100/1000Base-T, 4 x 1/10GbE SFP+. Power: 220V AC, 48V DC
SNR-S5210G-24TX-UPS	L2+ Managed switch, 24 x 10/100/1000Base-T, 4 x 1/10GbE SFP+. Power: 220V AC, 12V battery connector
SNR-S5210G-24TX-POE	L2+ Managed PoE switch, 24 x 10/100/1000Base-T, 4 x 1/10GbE SFP+. Power: 220V AC. POE 370W
SNR-S5210G-24FX	L2+ Managed switch, 20 x 100/1000 Base-X SFP, 4 x Combo 10/100/1000Base-T   100/1000Base-X SFP, 4 x 1/10GbE SFP+. Power: 220V AC
SNR-S5210G-24FX-RPS	L2+ Managed switch, 20 x 100/1000 Base-X SFP, 4 x Combo 10/100/1000Base-T   100/1000Base-X SFP, 4 x 1/10GbE SFP+. Power: 220V AC, 12V DC
SNR-S5210G-24FX-DC	L2+ Managed switch, 20 x 100/1000 Base-X SFP, 4 x Combo 10/100/1000Base-T   100/1000Base-X SFP, 4 x 1/10GbE SFP+. Power: 220V AC, 48V DC
SNR-S5210G-24FX-UPS	L2+ Managed switch, 20 x 100/1000 Base-X SFP, 4 x Combo 10/100/1000Base-T   100/1000Base-X SFP, 4 x 1/10GbE SFP+. Power: 220V AC, 12V battery connector

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