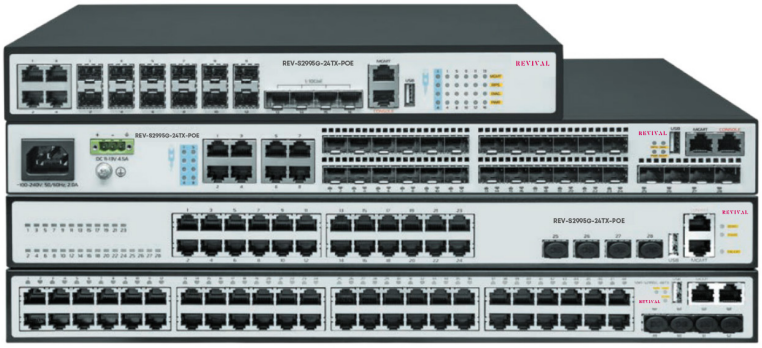
DATASHEET

REV-S2995G Series

L3 Managed Switches



The S2995G series is a new generation of L3 REV switches. Thanks to the combination of optical and copper interfaces 10GE uplink ports, rich L2 and L3 functionality, the REV-S2995G series switches can be used to solve a wide range of tasks both in internet service providers networks and enterprise networks.

Main features:

- Dynamic routing OSPF, BGP, PIM
- 1/10GE SFP+ Uplink ports
- Comprehensive security features
- Powerful features for managing quality of service (QoS)

Switch Models

The S2995G series switches are equipped by 10GbE Uplink and GbE Downlink interfaces. Due to the presence of RJ45/SFP combo ports, REV-S2995G can be used in networks with copper or optical links, depending on requirements.

Model	10/100/1000 Base-T	Combo ports 10/100/1000Base-T |100/1000Base-X SFP	100/1000 Base-X SFP	1/10G SFP+
REV-S2995G-24TX-POE	20	4	-	4
REV-S2995G-48TX-POE	48	-	-	4

High performance

Due to modern chipset, all S2995G series models support full port speed switching and routing simultaneously. 10 GbE Uplink ports and 1GbE Downlink ports allow transfering traffic from cliets to the network core and back without loss and increase in delays.

L3 features

The S2995G series switches supports IPv4/IPv6 hardware routing. Support for dynamic routing protocols (RIP, OSPF, BGP), multicast packet routing (PIM, MSDP), Policy-Based routing (PBR) and ECMP functionality allows building high performance multiservices L3 networks.

Model	Routing Table	PIM Routing Table	ARP Table	L3 Interfaces
REV-S2995G-48TX-POE	512	512	512	512

Stacking Support

VSF protocol allows stacking several physical S2995G series switches into a single logical device, thereby simplifying configuration and icreasing networks reliability. Stacking is performed through standard interfaces and does not require the purchase of additional cards.

Multicast management

The S2995G series REV switches have all the necessary functionality for multicast control. Layer 2 supports IGMP Snooping, MVR, IGMP packet filtering. Layers . supports routing of multicast traffic using the PIM-SM, PIM-DM, MSDP protocols. This allows the REV-S2995G to be used to organize high-quality and secure services using multicast traffic, such as IPTV.

Support PoE+

REV-S2995G switches support PoE 802.3af and PoE+ 802.3at standards with intelligent power management. PoE technology reduces the cost of ownership and simplifies network maintenance by allowing to power WiFi hotspots, IP/Video phones, thin clients directly from the switch.

Quality of Service (QoS)

The Support for 8 hardware queues per port allows to create 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.

Security

The S2995G 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. MAC-IP-Port binding functionality helps to protect the network from IP/MAC address spoofing by clients. Support for 802.1x and MAB protocols provides authentication of devices connected to the network.

Model	Multicast Group	Queues per Port	ACL
REV-S2995G-48TX-POE	4K	8	512

Operational convenience

S2995G series REV switches work under the control REV system NOS (Networking Operating System) with the typical syntax CLI and SNMP MIB for all REV switches. 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, Web and SNMP.

Resilience

For organizing resilient networks, support for standard protocols STP/RSTP/MSTP as well as ERPS (G.8032) including ERPS + CFM is implemented.

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.

Dimensions and power supply

Model	Dimension	Weight (brutto)	Power Consumption	Cooling	Power Supply
REV-S2995G-24TX-POE	440 x 44 x 320 mm	6 kg	400 Watt	Active	100-240AC
REV-S2995G-48TX-POE	440 x 44 x 320 mm	6,64 kg	790 Watt	Active	100-240AC, 52-57V DC+

Technical Brief:

Switching type
- Store-and-Forward

MAC address table
- 16K entries

MAC address table features
- Limiting max number MAC addresses on a port, VLAN
- Static MAC addresses
- MAC-notification
- Disabling MAC address learning on a port, VLAN
- Blackhole MAC

Flow Control
- 802.3x Flow Control
- HOL

Jumbo frame
- 10 Kbytes

Flash memory size
- 32 + 128 Mbytes

RAM size
- Whole series - 512 Mbytes, REV-S2995G-48TX-POE - 256 Mbytes

QinQ
- Port-Based / Selective QinQ

Ring Protection
- ERPS ITU-T G.8032
- MRPP
- Fast Link
- ULPP
- ULSM

Spanning Tree
- 802.1D STP
- 802.1W RSTP
- 802.1S MSTP (32 Instances)
- Root/BPDU Guard
- BPDU Tunnel

Loopback Detection
- Per-port
- Per-port-per-vlan
- Action shutdown/block

Port Aggregation
- LACP 802.3ad / 802.1ax
- Up to 128 groups per switch / up to 8 ports in group
- Load balance src/dst MAC, src/dst IP, dst-src-MAC/IP, dst-src-MAC-IP, ingress-port

Traffic Mirroring
- SPAN, RSPAN, ERSPAN
- 7 groups
- One-to-one / Many-to-one
- Flow-based (ACL)
- Remote VLAN
- Reflector Port

VLAN
- IEEE 802.1Q , 4094 VLAN
- Port-based VLAN
- Private VLAN
- Protocol VLAN
- Voice/MAC VLAN
- Multicast VLAN
- Super VLAN
- VLAN Trunking
- VLAN Translation
- GVRP

Multicast
- 4096 IGMP groups
- IGMP v1/v2/v3 Snooping
- IGMP Fast Leave
- IGMP Snooping Immediately Leave
- IGMP Snooping Querier
- Multicast VLAN Registration
- Multicast Src/Dst Control
- Limiting the maximum number of subscriptions
- Illegal source detection
- Multicast policy
- Multicast Filter
- IGMP Snooping RADIUS Authentication
- MLD v1/v2 Snooping, MLD Snooping Immediately Leave
- MLD Snooping Querier

Security

- SSH v1/v2
- SSL v1/v2/v3
- MAC binding
- MAC filter
- Limiting the number of MAC addresses on a port
- Limiting Broadcast/Multicast/ Unicast packets on a port by Kbps
- Access Management (IP-MAC-Port Binding)
- Port Security
- Port Isolation
- ARP Guard
- ARP Binding
- ARP Limit
- Anti-ARP-Scan
- Dynamic ARP inspection (DAI)
- RA Snooping
- ND Snooping
- SAVI
- CPU protection
- IEEE 802.3az (Energy Efficient) Ethernet),
- CE, RoHS
- CB, cUL, LVD

ECMP

- Up to 8 equal routes

Redundancy Protocols

- VRRP

Multicast Routing

- IGMP proxy
- DVMRP
- PIM-DM / PIM-SM / PIM-SSM: whole series - 2048 REV-S2995G-48TX-POE - 226
- Anycast RP
- MSDP

Routing

- Routing table: whole series - 1024, REV-S2995G-48TX-POE - 425 routes
- Static routing
- Policy-Based routing (PBR)
- RIPv1/v2
- OSPFv2/v3
- BGPv4+

Signaling Protocols

- BFD

Tunneling

- GRE

Routing IPv6

- Static
- IPv6 PBR
- RIPng
- OSPFv3
- BGPv4+

IPv6

- ICMPv6; ND

IPv6 Tunneling

- GRE
- 6to4
- ISATAP

QoS

- 8 queues per port
- Strict Priority, WDRR, Strict+WDRR
- Bandwidth Control
- Flow Redirect
- Traffic classification per port, ACL (L2-L4), VLAN ID, CoS, ToS, DSCP, IPv6 Flow Label
- Per port / VLAN policing
- Remarking DSCP, CoS/802.1p, Precedence, ToS

DHCP

- IPv4/IPv6 DHCP Client/Relay
- Option 82, Option 37/38
- IPv4/IPv6 DHCP Snooping/ Server
- DHCP User Control
- Binding table on flash

Stacking

- Stacking via SFP+
- Stack link bandwidth up to 40Gbps
- Up to 8 switches in the stack

Management and monitoring

- RADIUS, TACACS+
- 802.1x (host/port based access control, Dynamic VLAN, Guest VLAN, Auto VLAN)
- MAC Authentication Bypass
- Up to 15 levels of user privileges
- Passing privilege levels via RADIUS/TACACS+
- Xmodem/TFTP/FTP, CLI, Telnet, Console
- Web/SSL, SSH (IPv4/IPv6)
- SNMPv1/v2c/v3, SNMP Traps, Public & Private MIB interface
- RMON 1,2,3,9
- Bootp/DHCP Client
- Autoprovisioning
- SNTP/NTP (IPv4/IPv6)
- PPPoE Intermediate agent
- Debug commands
- Password recovery
- Password encryption
- Backup and restore settings
- Ping, Traceroute
- Syslog (IPv4/IPv6)
- Dual IMG, Multiple Configuration Files
- Port/CPU Mirror, RSPAN, ERSPAN
- OAM, Dying GASP, VCT, DDM
- Multiple IP Interface
- ULDP (like Cisco UDLD), LLDP/LLDP MED
- Management of indication
- Virtual Cabel Test (VCT)

ACL

- Whole series - 1502, REV-S2995G-48TX-POE - 512 ACL
- Per port / VLAN
- Filtering based on: switch port, VLAN ID, 802.1p priority, MAC address, EtherType, IPv4 / IPv6 address, IPv6 traffic class, IPv6 flow label, ToS, DSCP, protocol type, TCP / UDP port number, CPU interface Filtering
- Time Range ACL
- Userdefined ACL
- ACL statistics

IPv6

- ICMPv6
- NDP
- SNMP over IPv6
- HTTP over IPv6
- IPv6 ping/traceroute
- IPv6 Telnet IPv6 Syslog
- RFC1981 Path MTU Discovery
- RFC2460 IPv6
- RFC2461 4861 Neighbor Discovery
- RFC2462,4862 IPv6 Stateless Address Auto-configuration
- RFC2464 IPv6 Neighbor over Ethernet and definition
- RFC3515, 4291 IP Version 6 Addressing Architecture
- RFC2893, 4213 IPv4/IPv6 Dual-stack
- IPv6 Ready Logo Phase 2

Logging

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

USB Support

- USB 2.0 - port

Cooling

- Active
- Fan speed control: 3 speeds (for TX models)

Humidity

- 5%-95%, no condensation

Operating temperature

- 0C ~ 50C

Storage temperature

- -40C ~ 70C

Surge protection

- Up to 4 kV

MBTF

- >800000 hours

Ordering information

Model	Description
REV-S2995G-24TX-POE	L3 Managed PoE Switch. 24 ports 100/1000BaseT RJ-45, 4 ports 1/10GE SFP+. Power 100-240AC.
REV-S2995G-48TX-POE	L3 Managed PoE Switch. 48 ports 100/1000Base-T RJ45, 4 ports 1/10GE SFP+. Power 100-240AC. 52-57V DC RPS.

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