



SUNDRAY



RS6800 Series V-Sec Switch Datasheet



Suitable for the access Switch in data center, and distribution, core Switch in a campus network

Product Overview

The RS6800 V-Sec Series are the next-generation intelligent switch independently developed by SUNDRAY. The V-Sec Switch adopts a SDN architecture design, the Switch can be managed by the SUNDRAY NAC Controller with zero configuration, just like the AP in the thin mode. 100% the functions of the switches can be configured via the NAC controller, including VLANs, Authentication, STP, Routing, DHCP Server, M-LAG, Stacking, IGMP, VRRP, etc. The NAC can monitor and visualize the status, including the switch load, port forwarding rates, east-west traffic, etc. also has more security features than traditional switches, and can interact with wireless networks and security devices to achieve a more secure network management and control.

RS6800 series switches are in the leading position among similar products, can meet the networking requirements of large-scale networks, and possess rich intelligence and security features. They are particularly suitable for the access Switch in data center, and distribution, core Switch in a campus network

Models and Photos

Model	Main Specifications
 RS6800-56CQ-EI-48X	<ul style="list-style-type: none">● 48 * 1G/10G SFP+ ports, 8* 40G/100G QSFP28 ports;● Dual power supply by default● Switch capacity: 8Tbps/128Tbps● Packet forwarding rate: 2400Mpps
 RS6800-56CQ-EI-48V	<ul style="list-style-type: none">● 48 * 1G/10G/25G SFP28 ports, 8* 40G/100G QSFP28 ports;● Dual power supply by default● Switch capacity: 8Tbps/128Tbps● Packet forwarding rate: 2400Mpps

V-Sec Features

Intuitive Network Management

- The V-Sec Switch managed via the network controller to provide an interactive and friendly Web GUI. 1:1 display Switch port and panel status. It can vividly show the working status of Switch ports, system resource usage, traffic trends, etc. and supports configuration via clicking on the port, for example, setting VLAN and so on.
- The V-Sec Switch can realize the visual management of the connected terminals, and can control the terminal access via authentication and terminal type in multiple dimensions. It can timely displays the behavior changes of the terminal after access, and can also make network asset statistics.
- The V-Sec Switch supports the visual management of IP addresses with Smart Graphical DHCP address pool, when assigning IP it automatically detects the usage of the IP address such as the remaining lease time and the reservation of the IP address. Effectively improve IP address management efficiency to avoid address conflicts and other IP address obtaining issues.

Easier AIOps Network

- RS6800 series switches support simulating AI terminals to proactively sense service quality around the clock, perceive service quality from the user's point of view, intuitively present service experience, card-type presentation of service health as well as support for service quality state retrospectively.
- RS6800 series switches support active sensing of the port availability of the whole network, and easily complete the connectivity check of all the LAN ports; the switches intelligently sense the quality of traffic paths, intuitively present faulty nodes, and provide professional troubleshooting suggestions.
- RS6800 series switches support path chaining(v-Route)function, which supports querying the actual traffic direction from any source to destination within 30 days and accurately locating the path failure nodes.
- RS6800 series switches support exporting network operation reports and multi-dimensional perception reports through NMC/vNMC platform, focusing on operation and maintenance to save effort.

Secure Authentication and Access Control Methods

- The V-Sec Switch supports a variety of authentication methods, including face recognition, 802.1x, CA certificate authentication, Portal, mobile phone self-Registration, SMS, APP, QR code approval, Facebook and other authentication methods, also support two-factor security authentication.
- The V-Sec Switch supports rich access control policies, such as protocol-based (for example: OSPF, UDP, ARP) ACL and ACL based on custom protocol, switch ports, aggregation port, source and destination IP address, MAC address, and time.

Comprehensive QoS Policies

- The V-Sec Switch supports re-marking the traffic matching ACL to realize traffic supervision. and setting the packet forwarding rate according outbound and the inbound direction per port.
- The V-Sec Switch supports multiple scheduling modes (for example: polling mode, strict priority mode, etc.) to achieve traffic based on packets or ports priority, it can realize COS, DSCP priority mapping based on Switch group.

Completed Terminal Security Policies

- The V-Sec Switch supports IP-MAC automatic binding. When IP-MAC does not match, the terminal will be added to the blacklist. Based on management needs, privileged IPs can be reserved, but privileged IPs must be approved by the administrator before they can be used, and the IP whitelist can be exempted from approval. To facilitate configuration management, the ports of the switch can also be divided into port groups.
- The V-Sec Switch supports access controller based on user-defined terminal types and MAC blacklist and

whitelists, and also support terminal MAC-Switch Port changes detection. After the terminal type that connected to the switch port is changed, the IT staff can be notified through SMS, and the switch can also add the terminal to the blacklist.

Innovative Intranet Defense

- The V-Sec Switch support East-West Traffic Security, With the rapid growth of the terminal's numbers and types, the traditional network architecture that deploys security equipment only at the gateway cannot prevent the attacks initiated within the intranet. Through East-West Traffic Security polices, the traffic within the intranet is managed, abnormal terminal behaviors can be detected, the V-Sec switch can block risky terminal to prevent the spread of the virus within intranet.
- The V-Sec Switch support interaction with security awareness platforms (such as Sangfor Cyber Command, NGAF), After the device is connected, the switch will mirror the traffic to the security awareness platform for big data security analysis. If the platform detects that there is an attacked terminal in the intranet, it will send a blocking instruction to the switch to prevent risky traffic from spreading in the internal network

Various Network Reliability Protection Mechanisms

- RS6500 series V-Sec Switches support VRRP (Virtual Routing Redundancy Protocol to achieve backup of upstream routing.
- RS6500 series V-Sec Switches support M-LAG to achieve the link aggregation cross the devices

Products Specifications

Items	RS6800-56CQ-EI-48X	RS6800-56CQ-EI-48V
Default service ports	48 * 1G/10G SFP+ ports 8 * 40G/100G QSFP28 ports	48 * 1G/10G/25G SFP28 ports 8 * 40G/100G QSFP28 ports
Management port	1*Console port 1*MANAGE port	1*Console port 1*MANAGE port
USB port	1 * USB port	1 * USB port
Dimensions(W*D*H)	442x420x44 (mm)	442x420x44 (mm)
Wight	≤8.9kg	≤8.9kg
Power consumption	≤445.7W	≤445.7W

Working Layer	L2 & L3
Work temperature Operating/storage humidity	Work temperature : 0°C ~ 45°C Storage temperature: -20°C ~ 70°C Work humidity: 5% ~ 90% (RH non-condensing) Storage humidity: 5% ~ 95% RH (non-condensing)
Light indicator	System and power indicator Working status of each ports
Work mode	Support fat (standalone) and thin mode (controller-based mode)
Switch discovery	Layer 2 broadcast automatically discovers wireless AC Configure Static IP Address Layer 3 to discover wireless ACs DHCP Option 43 Discovers Wireless AC DNS Domain Name Discovery Wireless AC SDP Discovery
One Click Replacement	Support to replace the defective Switch via clicking the replace button in the controller
MAC	160K MAC address
	Support MAC address learning and aging automatically Support static, dynamic, blackhole MAC entries Support source MAC address filtering Limit on the number of MAC address learning on the Support interface
VLAN	Support 4K VLAN Voice VLAN support Support default VLAN, Guest VLAN Support Access, Trunk, Hybrid Switch port mode
STP	Support 802.1D(STP),802.1W(RSTP),802.1S(MSTP) Support BPDU Guard, root protection and loopback protection
ACL	Support Standard IP ACL (IP Address Based Hardware ACL) Support extended IP ACL (hardware ACL based on IP address, TCP/UDP port number) Support MAC extended ACL (hardware ACL based on source MAC address, destination MAC address, and optional Ethernet type)

	<p>Support based on time ACL</p> <p>Support expert ACL (a hardware ACL that can be flexibly combined based on the VLAN number, Ethernet type, MAC address, IP address, TCP/UDP port number, protocol type, and time)</p>
802.1x	<p>Support 802.1X authentication</p> <p>Supports port-based authentication and MAC-based authentication</p> <p>Support Guest VLAN</p> <p>Support TRUNK port authentication</p> <p>Supports dynamic delivery of VLANs based on 802.1x</p>
QOS	<p>Support port traffic identification</p> <p>Supports port traffic rate limit</p> <p>Support 802.1p / DSCP / TOS traffic classification</p> <p>8 priority queues per port</p> <p>Support SP, WRR, SP + WRR, RED / WRED queue scheduling</p>
Multicast	<p>Supports IGMP v1/v2/v3 Snooping and fast leave</p> <p>Support multicast forwarding and multicast multi-VLAN replication in a VLAN</p>
Port Aggregation	Support manual and static LACP
DHCP	Support DHCP Server
IPv4 routing	<p>Support static IPv4 routing</p> <p>Support RIPv1/2 OSPF</p> <p>Support Policy-based Routing</p>
IPv6 routing	Support IPv6 static routing
Virtualization technology	<p>Support vUnit (stacking technology, virtualize multiple devices into one)</p> <p>Support M-LAG technology, cross-device link aggregation, paired devices have independent control plane</p>
Reliability	<p>Support VRRP, BFD for VRRP</p> <p>Support BFD for RIP/OSPF/static routing/policy routing</p> <p>Support Smartlink (backup link)</p> <p>Support Monitor-link (uplink monitoring)</p>
Security Features	<p>Support DHCP Relay, DHCP Server, DHCP Snooping</p> <p>Support portal authentication</p> <p>Support 802.1X authentication</p>

	<p>Support blacklist and whitelist</p> <p>Support ARP spoofing</p> <p>Administrator hierarchical management</p> <p>Support SSH V2.0</p> <p>Support port protection and isolation</p> <p>Support to prevent ARP attacks</p> <p>Support CPU protection function</p> <p>Support edge terminal security management and control</p> <p>Support HTTPS access</p>
NMS	<p>Support NAC unified management</p> <p>Support across WAN, NAT remote management</p> <p>SNMPv1/v2C/v3, CLI (Telnet/Console), SSH, Web</p> <p>Support send log file data in Syslog format to Syslog server</p>
Visuality	<p>Visualize traffic and terminal status, portray for security and devices</p>
Switch Profiling	<p>Support monitors the Switch's status such as traffic, user, port status, also user can change the configuration of VLAN, port, DHCP, POE power supply via Controller's Web UI.</p>
Terminal security	<p>Built-in vDetect terminal management micro probe</p> <p>Support terminal fingerprint information collection, terminal policy execution, etc.</p>
Energy saving	<p>supports the IEEE 802.3az standard. when the EEE is enabled, the power consumption of the port at this stage is drastically reduced, thereby saving energy.</p>
Safety & EMC	<p>Meets the security requirements of FCC, CE: EN55022, EN61000-3-2, EN61000-3-3, EN55024, EN60950-1. RoHS</p>

Order Information

Item	Description	Remark
RS6800-56CQ-EI-48X	The SUNDRAY V-Sec Switch, 48* 1G/10G SFP+ optical ports and 8*40G/100G QSFP28, Switching capacity 8Tbps/128Tbps, Forwarding rate 2400 Mpps, includes dual power supply by default. The Switch can be used in fit or fat mode(standalone mode) flexibly. In fit mode, it can be managed by NAC controller to provide a unified wired and wireless network. All the features can be configured by NAC Controller such as VLAN, STP, Static Routing/RIP/OSPF, M-LAG, Stacking, East-West traffic security, Smart Network Topology, Visualized DHCP server, Terminal Identification, 802.1X/Portal authentication, IPv6, etc., to make the network simpler, more secure, and valuable.	Essential
RS6800-56CQ-EI-48V	The SUNDRAY V-Sec Switch, 48* 1G/10G/25G SFP28 optical ports and 8*40G/100G QSFP28, Switching capacity 8Tbps/128Tbps, Forwarding rate 2400 Mpps, includes dual power supply by default. The Switch can be used in fit or fat mode(standalone mode) flexibly. In fit mode, it can be managed by NAC controller to provide a unified wired and wireless network. All the features can be configured by NAC Controller such as VLAN, STP, Static Routing/RIP/OSPF, M-LAG, Stacking, East-West traffic security, Smart Network Topology, Visualized DHCP server, Terminal Identification, 802.1X/Portal authentication, IPv6, etc., to make the network simpler, more secure, and valuable.	Essential
SFP-GE-COPPER	Gigabit SFP to copper transceiver.	Optional
SFP-GE-MM850	Gigabit SFP multiple mode optical module, 550m, LC connector.	Optional
SFP-GE-MM850-I	Gigabit SFP multiple mode optical module, 550m, industrial-grade, LC connector.	Optional
SFP-GE-SM1310-10KM	Gigabit SFP single mode optical module, 10km,	Optional
SFP-GE-SM1310-20KM-I	Gigabit SFP single mode optical module, 20km, industrial-grade, LC connector.	Optional
SFP-GE-SM1310-40KM	Gigabit SFP single mode optical module, 40km, LC connector.	Optional
SFP-GE-SM1550-80KM	Gigabit SFP single mode optical module, 80km, LC connector.	Optional
SFP-10G-MM850	10 gigabit SFP+ multiple mode optical module, 300m, LC connector.	Optional
SFP-10G-SM1310-10KM	10 gigabit SFP+ single mode optical module, 10KM, LC connector.	Optional
SFP-10G-SM1550-40KM	10 gigabit SFP+ single mode optical module, 40KM, LC connector.	Optional

SFP28-25G-MM850-SR	SFP28 25G SR Fiber module, multiple mode, distance 100, LC Connector type.	Optional
QSFP-40G-MM850-SR4	QSFP 40G SR4 Fiber module, multiple mode, distance 100m(OM-3)/150m(OM-4), Connector type: LC.	Optional
QSFP-40G-SM1310-LR4-10KM	QSFP 40G LR4 fiber module, single mode, 1310nm, distance 10km, connector type: LC.	Optional
QSFP28-100G-MM850-SR4	100G SR4 optical module, QSFP28 encapsulation, MPO interface, wavelength 850nm, maximum transmission distance 100M	Optional
SFP-10G-AOC-3M	SFP+ 10G AOC cable, consists of a 3-meter optical fiber and a 10G optical module at each end. It is usually used to interconnect devices in the same cabinet, such as the server to the TOR access switch at the top of the cabinet, or used for switch stacking.	Optional
QSFP-40G-AOC-3M	QSFP+ 40G AOC cable, consists of a 3-meter optical fiber and a 40G optical module at each end. It is usually used to interconnect devices in the same cabinet, such as the server to the TOR access switch at the top of the cabinet, or used for switch stacking.	Optional



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