CS-5900 L3 ENTERPRISE STACKABLE

SWITCH WITH REDUNDANT POWER SUPPLY

CS-5900 SERIES

CS-5900-28F

CS-5900-28X-T

3ISYS
INNOVATIVE · INTEGRATED · INTELLIGENT

The CS-5900 Series are L3 Switches for Enterprises , Carriers and Metro networks. Desgined for today's next generation Enterprises and Carriers with rich features , redundancy , scalability and reliability supporting advance features like MPLS VRF,
comprehensive QoS, enhanced Vlan functions (Multicast Vlan, Voice Vlan, QinQ, etc), classified bandwidth control, multiple link aggregation, security control and Software Defined Networks. Excellent choice for Core , Aggregation and Access with versatile port offering.

3isys CS-5900 series switches have multiple types starting from 28X-T with copper to 28F with Combo combination of Copper and Fiber.

CS-5900-28F

CS-5900-52X-P

CS-5900-28X-T

Product Overview

3ISYS Network CS5900 series next-generation is designed for most demanding Enterprises today for Access, Aggregation, Campus and Datacenters, enriched high performance Hardware and Software with built-in modular 1+1 redundant power supplies. These switches provide high availability, scalability, security, energy efficiency, and ease of operation with innovative features such as Virtual Switch Fabric, POE(SelectedModels), redundant power supplies and Open Flow. SDN Ready and Best suited the need for customer who is looking for performance, availability and reliability.

Key Features and Benefits

Performance and Scalability

With high switching capacity, CS-5900 series support wire-speed L2/L3 forwarding and high routing performance for IPv4 and IPv6 protocols.

The 10 Gigabit Ethernet connectivity of CS-5900is accomplished via a hot-pluggable 10 Gigabit SFP+ transceiver which supports distance up to 300 meters over multimode fiber and 10 to 40km over single-mode fiber (The distance depends the optical module chosen).

CS-5900 series supportmodular redundant AC and DC power supplies for different environment applications.

OpenFlow

CS-5900 supports Open Flowstandard protocol. Enabling one of the open few platforms in industry to support open SDN initiative. Bringing network programmability and automation using software defined networks. 3isysnetworks switches support open flow 1.0 which are compatible with industry standard SDN controller. Software defined networks helps users today to enhance network visibility, automation and security. Customers investment is protected for future if they would like to move to software defined networks.

3isysNetworks Virtual Switch Framework

Virtual Switch Framework can virtualize multiple 3isys switches into one logical device, providing higher redundancy, scalability and ease of operations. The performance and ports density of virtualized device are enhanced

L3 and Multicast Support

CS-5900 series supports L3 routing with support of RIP , BGP and OSPF. Enhanced L3 features such as PBR , L3 MPLS and VRF instances.

Service provider grade MRP support

3isysnetworks switches support MRPP Multi Ring Protection Protocol that provides ring support and much faster time to converge compared to traditional spanning tree protocol.

Comprehensive QoS and Extended Security Features

Cs5900 series witch provides QOS features for classification of traffic and ideal for converged networks running voice, video and data With 8 queues per port,CS-5900 series enable differentiated management of up to 8 traffic types. The traffic can be prioritized according to IEEE802.1p, DSCP, IP precedence and TCP/UDP port number, giving optimal performance to real-time applications such as voice and video. Additionally Cs5900 supports Rate-Limiting which enables customer to apply this on per port or traffic class. 5900 QOs features extended users to have maximum utilization of network bandwidth and control over network resources.

CS5900 supports industry based IEEE 802.1X port-based access control and MAC-based access control to provide higher level of network admission control and security. Supports ACL that can be based on L2/L3 and L4 information customizable on time-based.
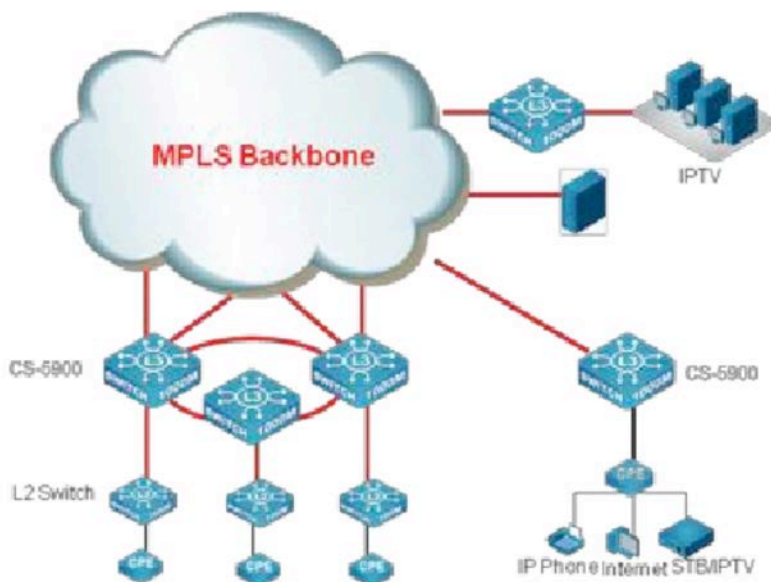
Secure management via Secure Shell (SSH) encrypts network management with support of RADIUS Authentication enables centralized standard AAA functions.

60W Poe support

CS-5900-52X-P support IEEE 802.3af, IEEE 802.3at, IEEE 802.3bt Poe standard and maximum of 740W Poepower budget. IEEE 802.3bt is supported on up to 8 ports and IEEE 802.3at is supported on all ports. Supporting superior POE Power with redundant power supply enable customers for high availableand reliability.

Versatile Port Density for Aggregation and DC

Cs-5900 28F provides most versatile port density in industry today with 24 SFP and 16 RJ45 combo copper ports, this enables customer to use the switch in ToR, Fiber aggregation, Core and access with the need for Copper pluggable modules. In addition to 24 multi factor ports with 4 x 10GIG Uplink ports and dedicated stacking or virtualized Switch Fabric customer can combine multiple switches equivalent to chassis switches with same port density and performance.

Specification

Item	CS-5900-28X-T	CS-5900-28X-P	CS-5900-52X-P	CS-5900-28F
Physical port	20x 10/100/1000BaseT + 4 x GE Combo (GT/SFP) + 4 x 10GE(SFP+)	20x 10/100/1000BaseT + 4 x GE Combo (GT/SFP) + 4 x 10GE(SFP+)	48x 10/100/1000BaseT + 4 x 10GE(SFP+) + 2 x Stacking port	16 x GE Combo (GT/SFP) + 8 x GE (SFP) + 4 x 10GE(SFP+) + 2 x Stacking port
Management port	10/100/1000Mbps RJ45 Ethernet Management port			
	1 Console port (Micro USB for CS-5900-52X-P / RJ45 for others)			
	USB2.0 interface			
Performance				
Switching Capacity	128Gbps	128Gbps	256Gbps	208Gbps
Throughput	95Mpps	95Mpps	191Mpps	155Mpps
MAC Address	16K	16K	32k	32k
Routing Table	Max 13K	Max 13K	16K	16K
L3 Interface	Max 1K	Max 1K	Max 1K	Max 1K
Physical				

Dimension (W*H*D)	440mm*44mm*350mm	440mm*44mm*350mm	440mm*44mm*330mm	440mm*44mm*350mm
Relative Humidity	10%~90% non-condensing			
Temperature	Working 0°C~50°C, storage -40°C~75°C			
Power Supply	2 power slots, 1+1 Modular Redundant			
Poe	NA	IEEE 802.3af (15.4W) IEEE 802.3at (30W) Total Poe power: 740W	IEEE 802.3af (15.4W) IEEE 802.3at (30W) IEEE 802.3bt (60W) (up to 8 ports) Total Poe power: 740W	NA

Main Features	
L1, L2 Features	IEEE802.3(10Base-T),IEEE802.3u(100Base-TX),IEEE802.3z(1000BASE-X), IEEE802.3ab(1000Base-T),IEEE802.3ae(10GBase),IEEE802.3x, IEEE802.3ak(10GBASE-CX4)
	Port loopback detection LLDP and LLDP-MED UDLD 802.3ad LACP, max 128 group trunks with max 8 ports for each trunk LACP load balance
	N:1 Port Mirroring RSPAN ERSPAN
	IEEEE802.1d(STP) IEEEE802.1w(RSTP) IEEEE802.1s(MSTP) Root Guard BPDU Guard BPDU Tunnel

	802.1Q, 4096 VLAN
	MAC VLAN, Voice VLAN, PVLAN, Protocol VLAN, Multicast VLAN
	QinQ, Selective QinQ, Flexible QinQ
	GVRP
	N:1 VLAN Translation
	Broadcast / Multicast / Unicast Storm Control
	IGMP v1/v2/v3 Snooping and L2 Query
	ND Snooping
	MLDv1/v2 Snooping
	Port Security
	Flow Control: HOL, IEEE802.3x
	Bandwidth Control
L3 Features	Static Routing,RIPv1/v2,OSPFv2,BGP4
	OSPFv3, BGP4+
	OSPF multiple process
	LPM Routing
	Policy-based Routing(PBR) for IPv4 and IPv6
	VRRP
	URPF,
	ECMP
	BFD
	IGMP v1/v2/v3, IGMP Proxy,
	DVMRP,PIM-DM,PIM-SM,PIM-SSM, Any Cast RP, MSDP
	Static Multicast Route
	Multicast Receive Control
	Illegal Multicast Source Detect

	ARP Guard, Local ARP proxy, Proxy ARP, ARP Binding, Gratuitous ARP, ARP Limit
	Anti ARP/NDP Cheat, Anti ARP/NDP Scan
	DNS Client, DNS Relay
	GRE Tunnel
IPv6	6to4 Tunnel, Configured Tunnel, ISATAP Tunnel, GRE Tunnel
	ICMPv6,ND,DNSv6
	IPv6 LPM Routing,IPv6 Policy-based Routing(PBR)
	IPv6 VRRPv3,IPv6 URPF,IPv6 RA
	RIPng,OSPFv3,BGP4+
	MLD Snooping,IPv6Muticast VLAN
	MLDv1/v2, PIM-SM/DM for IPv6, IPv6 Any Cast RP, IPv6 ACL, IPv6 QoS
MPLS	MPLS, VRF, LDP (onlyCS-5900-28F)
	MPLS L3 VPN, MPLS L2 VPN(VPLS), VPWS (onlyCS-5900-28F)
QoS	8 Queues
	SWRR, SP,WRR,DWRR,SDWRR,WRED
	Traffic Classification Based on 802.1p COS, ToS, DiffServ DSCP, ACL, port number
	Traffic Policing
	PRI Mark/Remark
ACL	IP ACL ,MAC ACL,IP-MAC ACL
	Standard and Expanded ACLBased on source/destination IP or MAC, IP Protocol, TCP/UDP port, DSCP, ToS, IP Precedence), VLAN, Tag/Untag,CoS
	REDIRECT and Accounting based ACL
	Rules can be configured to port, VLAN, VLAN routing interfaces
	Time Ranged ACL

Security	802.1x AAA Port, MAC based authentication Accounting based on time length and traffic Guest VLAN and auto VLAN	
	RADIUS for IPv4 and IPv6	
	TACACS+ for IPv4 and IPv6	
	MAB	
DHCPv4/v6	DHCP Server/Client for IPv4/IPv6 DHCP Relay/Option 82 DHCP Snooping/Option 82	
Traffic Monitor	sFlow Traffic Analysis IPFIX	
Security Network Management	CLI, WEB, Telnet, SNMPv1/v2c/v3 through IPv4 and IPv6 Syslog and external Syslog Server HTTP SSL SNMP MIB, SNMP TRAP FTP/TFTP SNTP/NTP RMOM 1,2,3,9 Authentication by Radius/TACACS SSH v1/v2 Dual firmware images/ Configuration files 802.3ah OAM, 802.1ag OAM	
Data Center Features	VSF(Virtual Switch Framework)* Openflow1.0* (Support open controllerOpendaylight, Floodlight, etc.)	

Ordering Information

Product	Description
CS-5900-28X-T	L3 Enterprise stackableSwitch, 20x 10/100/1000BaseT + 4 x GE Combo(GT/SFP) + 4 x 10GE(SFP+), modular power (,Maximum 2 power modules supported , 1+1 redundancy. Standard with no power module)
CS-5900-28X-P	L3 Enterprise stackable POE Switch, 20x 10/100/1000BaseT + 4 x GE Combo(GT/SFP) + 4 x 10GE(SFP+), modular power (Maximum 2 power modules supported, 1+1 redundancy. Standard with no power module), up to 740WPOE Power Budget
CS-5900-52X-P	L3 Enterprise stackable POE switch48x 10/100/1000BaseT + 4 x 10GE(SFP+) + 2 Stacking port, Modular power (Maximum 2 power modules supported, 1+1 redundancy. Standard with no power module), up to 740WPoe Power Budget
CS-5900-28F	L3 Enterprise stackable switch 24 SFP with 4 port 10GIG SFP+ having (16*GbE Combo (SFP/RJ45) + 8*100/1000Base-X(SFP) + 4*10GbE(SFP+) + 2* Dedicated Stacking Port), Redundant power supply supported with full feature L3 License. Default with no power supply).
CS-5900-24F	L3 Enterprise 10G Gigabit Fiber Switch (12*100/1000Base-X(SFP) + 12*GbE Combo (SFP/RJ45) + 2*Slots / Maximum 4*10GbE ports). Support redundant power supply with one internal and one external power supply. (Replaced by 28F)
Sfp2+	2 port 10 GIG module for CS-5900-24F
PWR-150-5K	AC power supply, 150W for CS-5900-28X-T and CS-5900-28F
PWR-600-5K	AC power supply, 600W, for CS-5900-28X-P and CS-5900-52X-P
PWR-920-5K	AC power supply, 920W forCS-5900-28X-P and CS-5900-52X-P
PWR-150-5K-DC	DC power supply, 150WforCS-5900-28X-T and CS-5900-28F
3isys-5900-Stack-1	3isys 1 Meter 10G stacking cable. Required for Stacking
3isys-5900-Stack5	3isys 5 meter 10G stacking cable. Required for Stacking.
3isys-5900-Stack-X	5900 Stacking Cable with QSFP available in 3-5 Meters. Stack-3 and Stack-5 . Required for Stacking

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