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FOREVER ENGINEERING SYSTEMS PVT. LTD.











FES-SNP-2008 Series

Fully Gigabit L2 Access Switch

Product Overview

FES-SNP-2008 series are full GbE standalone switches provide enterprise-class access for campus and branch applications. These fully managed switches can provide advanced Layer 2 features as well as optional Power over Ethernet Plus (PoE+) power. It integrates advanced management and security functions to provide performance and scalability. It is ideal solution for enterprise and carrier access network deployment

Appearance	Description
	8x10/100/1000Base-T+2x100/1000Base-X (SFP)
TES	1 console, 1 reset port
	AC power supply
	Switching capacity: 20Gbps
FES-SNP-2008	Forwarding rate: 14.88Mpps
	8x10/100/1000Base-T+2x100/1000Base-X (SFP)
	1 Console, 1 Reset port
	PoE+, up to 124w
	AC power supply
	Switching capacity: 20Gbps
FES-SNP-2008P	Forwarding rate: 14.88Mpps





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Key Features & Highlights

Green Energy

FES-SNP-2008 series complies with **IEEE 802.3az** (Energy-Efficient Ethernet) standard, dramatically lower power consumption

With the **Innovative port-LED Shut-off** function, the user can automatically set the switch port-LED UP or DOWN at a specified period according to their needs to achieve functional, energy-saving correct results.

A full account of low noise requirements of the environment, FES-SNP-2008 uses **Fanless Design and Smart fan** strategies to real-time temperature monitoring system, and reduce the noise pollution.

Enhanced Security

FES-SNP-2008 series provides a variety of security mechanisms like SYN Flood, Land, ICMP Flood attack prevention and other DOS class technology, BPDU Guard and Root Guard which avoid accidental topology loops and prevent illegal edge devices become root to cause unnecessary flapping.

IEEE **802.1X** port-based access control ensures all users are authorized before being granted access to the network. User authentication is carried out using any standard-based RADIUS server.

Access Control Lists (ACLs) can be used to restrict access to sensitive network resources by denying packets and forward by different policies. User-defined ACL provides more flexible access control for users.

FES-SNP-2008 supports **DHCP snooping**, which prevents DHCP attacks and illegal DHCP SERVER by setting trust ports and untrust ports. With DHCP Snooping binding and option82 enabled, it can combine modules like dot1x and ARP, or implement user-access-control independently.

FES-SNP-2008 supports abundant L2 security features such as **ARP guard**, **Anti-ARP scanning**, and other ARP and **MAC Security** technology to protect network security and reliability.

High Reliability

FES-SNP-2008 supports 4 Gigabit uplink ports, which could be designed to offer redundant uplinks with various ring protection applications, effectively raised the expansibility and performance of the network.

G.8032 provides sub-50ms protection and recovery switching for Ethernet traffic in a carrier ring topology. FES-SNP-2008 series supports G.8032 v2 and can be deployed in a variety of complex network topologies including single ring, tangent ring, intersecting rings, double rings, and other home networking.

Abundant Multicast Features

FES-SNP-2008 series also supports MVR (Multicast VLAN Register), selectively allows traffic to cross between different VLANs for bandwidth and security reasons. With the MVR Trunk function, which could associate multicast VLAN to trunk port, FES-SNP-2008 series combines the VLAN data into the same link, saving lots of resources for users.

FES-SNP-2008 series could prevent multicast traffic from flooding via IGMP Snooping, while multicast traffic is only forwarded to ports associated with multicast devices.





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Specifications:

Item		FES-SNP-2008P	FES-SNP-2008
Ports		8 x 10/100/1000Base-T + 2x	8 x 10/100/1000Base-T + 2x
		100/1000Base-X (SFP)	100/1000Base-X (SFP)
		Auto-MIDX	Auto-MIDX
Performance			
Switching Cap	acity	20Gbps	20Gbps
Forwarding Ra	ate	14.88Mpps	14.88Mpps
MAC ADDRE	SS	8K	8K
Jumbo Frame		10K	10K
ACL Table		1408	1408
Queues per por	rt	8	8
VLAN TABLE	<u> </u>	4K	4K
Physical			
Dimension(W×	$(\mathbf{H} \times \mathbf{D})$	340mm x 43.6mm x200mm	220mm x 160mm x44.3mm
Power Input		100~240VAC, 50~60Hz	100~240VAC, 50~60Hz
Power Consumption		144W	7W
Cooling		Passive	Passive
Temperature		Working 0°C~50°C, Storage -40°C~70°C	
Relative Humidity		5%~95%, non-condensing	
EMC Safety		CE, RoHS	
POE		IEEE 802.3af POE (15.4W)IEEE 802.3at POE+ (30W)	NA
		PoE output 124w	
Main Features		-	
Forwarding		Storage and Forwarding	
VLAN		Port-based VLAN, IEEE802.1Q, private VLAN, Protocol VLAN, Voice VLAN, MAC VLAN	
		Normal QinQ, Selective QinQ, Flexible QinQ VLAN Translation, N:1 VLAN Translation	
DHCP		IPv4/IPv6 DHCP Client, IPv4/IPv6 DHCP Relay Option 82, Option 37/38	
		IPv4/IPv6 DHCP Snooping, IPv4/IPv6 DHCP Server	
Reliability	Spanning Tree	802.1D STP, 802.1W RSTP, 802.1S MSTP	
Kenabinty	1	Root Guard, BPDU Guard, BPDU Forwarding	
		,	
	LACP	8 groups / 8 ports	
	L2 Ring Protection	MRPP	
		ITU-T G.8032	
		Loopback Detection Fast Link	
Security		IP ACL, MAC ACL, MAC-IP ACL,	User-Defined ACL
·		Time Range ACL	
		ACL rules can be configured to port, VLAN Storm Control based on packets and bytes	





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MLD v1/v2 snooping IPv4/IPv6 DCSCM 8 Queues Per Port Bandwidth Control Flow Redirect Classification based on ACL, VLAN ID, COS, TOS, DSCP, Policing Based on Port and VLAN Single Rate single barrel double color for Policing Remark DSCP, COS/802.1p, Precedence, TOS SP, WRR, SWRR, WDRR for Scheduling Match the IP fragmentation of a message Maintenance and Operation TFTP/FTP		Port Security, MAC Limit based on VLAN and Port Anti-ARP-Spoofing, Anti-ARP-Scan, ARP Binding ND Snooping	
Authentication, Authorization, Accounting Radius, TACACS+ IGMP v1/v2/v3 snooping, IGMP Fast leave MVR MLD v1/v2 snooping IPv4/IPv6 DCSCM 8 Queues Per Port Bandwidth Control Flow Redirect Classification based on ACL, VLAN ID, COS, TOS, DSCP, Policing Based on Port and VLAN Single Rate single barrel double color for Policing Remark DSCP, COS/802.1p, Precedence, TOS SP, WRR, SWRR, WDRR for Scheduling Match the IP fragmentation of a message Maintenance and Operation Management TFTP/FTP CLI, Telnet, Console, Reset Web/SSL (IPv4/IPv6) SSH (IPv4/IPv6) SNMP 1/v2c/v3 SNMP Trap Public & Private MIB interface RMON 1,2,3,9 Ping, Trace Route Radius Authentication Syslog (IPv4/IPv6) SNTP/NTP (IPv4/IPv6) Dual IMG, Multiple Configuration Files Port Mirror, CPU Mirror, RSPAN sFlow (S4600-28P/52P-SI) OAM EFM VCT, DDM ULDP (like Cisco UDLD)		DAI	
Multicast IGMP v1/v2/v3 snooping, IGMP Fast leave MVR MLD v1/v2 snooping IPv4/IPv6 DCSCM 8 Queues Per Port Bandwidth Control Flow Redirect Classification based on ACL, VLAN ID, COS, TOS, DSCP, Policing Based on Port and VLAN Single Rate single barrel double color for Policing Remark DSCP, COS/802.1p, Precedence, TOS SP, WRR, SWRR, WDRR for Scheduling Match the IP fragmentation of a message Maintenance and Operation Management TFTP/FTP CLI, Telnet, Console, Reset Web/SSL (IPv4/IPv6) SSH (IPv4/IPv6) SNMPv1/v2c/v3 SNMP Trap Public & Private MIB interface RMON 1,2,3,9 Ping, Trace Route Radius Authentication Syslog (IPv4/IPv6) SNTP/NTP (IPv4/IPv6) Dual IMG, Multiple Configuration Files Port Mirror, CPU Mirror, RSPAN sFlow (S4600-28P/52P-SI) OAM EFM VCT, DDM ULDP (like Cisco UDLD)		IEEE 802.1x	
MLD v1/v2 snooping IPv4/IPv6 DCSCM 8 Queues Per Port Bandwidth Control Flow Redirect Classification based on ACL, VLAN ID, COS, TOS, DSCP, Policing Based on Port and VLAN Single Rate single barrel double color for Policing Remark DSCP, COS/802.1p, Precedence, TOS SP, WRR, SWRR, WDRR for Scheduling Match the IP fragmentation of a message Maintenance and Operation Management TFTP/FTP CLI, Telnet, Console, Reset Web/SSL (IPv4/IPv6) SSH (IPv4/IPv6) SNMPv1/v2c/v3 SNMP Trap Public & Private MIB interface RMON 1,2,3,9 Ping, Trace Route Radius Authentication Syslog (IPv4/IPv6) SNTP/NTP (IPv4/IPv6) SNTP/NTP (IPv4/IPv6) Dual IMG, Multiple Configuration Files Port Mirror, CPU Mirror, RSPAN sFlow (S4600-28P/52P-SI) OAM EFM VCT, DDM ULDP (like Cisco UDLD)		Authentication, Authorization, Accounting Radius, TACACS+	
8 Queues Per Port Bandwidth Control Flow Redirect Classification based on ACL, VLAN ID, COS, TOS, DSCP, Policing Based on Port and VLAN Single Rate single barrel double color for Policing Remark DSCP, COS/802.1p, Precedence, TOS SP, WRR, SWRR, WDRR for Scheduling Match the IP fragmentation of a message Maintenance and Operation Management TFTP/FTP CLI, Telnet, Console, Reset Web/SSL (IPv4/IPv6) SSH (IPv4/IPv6) SNMPv1/v2c/v3 SNMP Trap Public & Private MIB interface RMON 1,2,3,9 Ping, Trace Route Radius Authentication Syslog (IPv4/IPv6) SNTP/NTP (IPv4/IPv6) Dual IMG, Multiple Configuration Files Port Mirror, CPU Mirror, RSPAN sFlow (S4600-28P/52P-SI) OAM EFM VCT, DDM ULDP (like Cisco UDLD)	Multicast	IGMP v1/v2/v3 snooping, IGMP Fast leave MVR	
Classification based on ACL, VLAN ID, COS, TOS, DSCP, Policing Based on Port and VLAN Single Rate single barrel double color for Policing Remark DSCP, COS/802.1p, Precedence, TOS SP, WRR, SWRR, WDRR for Scheduling Match the IP fragmentation of a message TFTP/FTP CLI, Telnet, Console, Reset Web/SSL (IPv4/IPv6) SSH (IPv4/IPv6) SNMPv1/v2c/v3 SNMP Trap Public & Private MIB interface RMON 1,2,3,9 Ping, Trace Route Radius Authentication Syslog (IPv4/IPv6) SNTP/NTP (IPv4/IPv6) SNTP/NTP (IPv4/IPv6) SNTP/NTP (IPv4/IPv6) Oual IMG, Multiple Configuration Files Port Mirror, CPU Mirror, RSPAN sFlow (S4600-28P/52P-SI) OAM EFM VCT, DDM ULDP (like Cisco UDLD)		MLD v1/v2 snooping IPv4/IPv6 DCSCM	
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Web/SSL (IPv4/IPv6) SSH (IPv4/IPv6) SNMPv1/v2c/v3 SNMP Trap Public & Private MIB interface RMON 1,2,3,9 Ping, Trace Route Radius Authentication Syslog (IPv4/IPv6) SNTP/NTP (IPv4/IPv6) Dual IMG, Multiple Configuration Files Port Mirror, CPU Mirror, RSPAN sFlow (S4600-28P/52P-SI) OAM EFM VCT, DDM ULDP (like Cisco UDLD)	Maintenance and Operation Management	TFTP/FTP	
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SNMPv1/v2c/v3 SNMP Trap Public & Private MIB interface RMON 1,2,3,9 Ping, Trace Route Radius Authentication Syslog (IPv4/IPv6) SNTP/NTP (IPv4/IPv6) Dual IMG, Multiple Configuration Files Port Mirror, CPU Mirror, RSPAN sFlow (S4600-28P/52P-SI) OAM EFM VCT, DDM ULDP (like Cisco UDLD)		Web/SSL (IPv4/IPv6)	
SNMP Trap Public & Private MIB interface RMON 1,2,3,9 Ping, Trace Route Radius Authentication Syslog (IPv4/IPv6) SNTP/NTP (IPv4/IPv6) Dual IMG, Multiple Configuration Files Port Mirror, CPU Mirror, RSPAN sFlow (S4600-28P/52P-SI) OAM EFM VCT, DDM ULDP (like Cisco UDLD)		SSH (IPv4/IPv6)	
Public & Private MIB interface RMON 1,2,3,9 Ping, Trace Route Radius Authentication Syslog (IPv4/IPv6) SNTP/NTP (IPv4/IPv6) Dual IMG, Multiple Configuration Files Port Mirror, CPU Mirror, RSPAN sFlow (S4600-28P/52P-SI) OAM EFM VCT, DDM ULDP (like Cisco UDLD)		SNMPv1/v2c/v3	
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Ping, Trace Route Radius Authentication Syslog (IPv4/IPv6) SNTP/NTP (IPv4/IPv6) Dual IMG, Multiple Configuration Files Port Mirror, CPU Mirror, RSPAN sFlow (S4600-28P/52P-SI) OAM EFM VCT, DDM ULDP (like Cisco UDLD)		Public & Private MIB interface	
Radius Authentication Syslog (IPv4/IPv6) SNTP/NTP (IPv4/IPv6) Dual IMG, Multiple Configuration Files Port Mirror, CPU Mirror, RSPAN sFlow (S4600-28P/52P-SI) OAM EFM VCT, DDM ULDP (like Cisco UDLD)		RMON 1,2,3,9	
Syslog (IPv4/IPv6) SNTP/NTP (IPv4/IPv6) Dual IMG, Multiple Configuration Files Port Mirror, CPU Mirror, RSPAN sFlow (S4600-28P/52P-SI) OAM EFM VCT, DDM ULDP (like Cisco UDLD)		Ping, Trace Route	
SNTP/NTP (IPv4/IPv6) Dual IMG, Multiple Configuration Files Port Mirror, CPU Mirror, RSPAN sFlow (S4600-28P/52P-SI) OAM EFM VCT, DDM ULDP (like Cisco UDLD)		Radius Authentication	
Dual IMG, Multiple Configuration Files Port Mirror, CPU Mirror, RSPAN sFlow (S4600-28P/52P-SI) OAM EFM VCT, DDM ULDP (like Cisco UDLD)		Syslog (IPv4/IPv6)	
Port Mirror, CPU Mirror, RSPAN sFlow (S4600-28P/52P-SI) OAM EFM VCT, DDM ULDP (like Cisco UDLD)		SNTP/NTP (IPv4/IPv6)	
sFlow (S4600-28P/52P-SI) OAM EFM VCT, DDM ULDP (like Cisco UDLD)		Dual IMG, Multiple Configuration Files	
OAM EFM VCT, DDM ULDP (like Cisco UDLD)		Port Mirror, CPU Mirror, RSPAN	
VCT, DDM ULDP (like Cisco UDLD)		sFlow (S4600-28P/52P-SI)	
ULDP (like Cisco UDLD)		OAM EFM	
		VCT, DDM	
LLDP/LLDP MED		ULDP (like Cisco UDLD)	
		LLDP/LLDP MED	

Order Information:

Product	Description
FES-SNP-2008	L2 Gigabit Intelligent Ethernet Switch with 8 10/100/1000Base-T and 2 100/1000Base-SFP ports, 100-240VAC Power Input
FES-SNP-2008P	L2 Gigabit Intelligent Ethernet PoE Switch with 8*10/100/1000 Base-T and2*100/1000Base-SFP ports, 100-240VAC Power Input. 30w POE+ Supported. PoE output 124w



