### FOREVER ENGINEERING SYSTEMS PVT. LTD.











FES-S6600-X-SI

### L2+10G Access Switch

### **Product Overview**

FES-S6600-X-SI is L2 10G uplink intelligent switches designed for carrier and MAN networks. It supports comprehensive QoS, enhanced VLAN functions (Dynamic VLAN, Voice VLAN, Q-in-Q, N:1 VLAN Translation etc), Ethernet Ring Protection Protocol (G.8032), classified bandwidth control, intelligent security control, OAM (Operations, Administration and Maintenance), manageability functions and Triple-Play services which fulfil the network requirements demanded by carrier network, MAN access. FES-S6600-X-SI Series switch offers green features like Fan-less design feature, which can dramatically lower power consumption, achieve green energy and save the cost for the carrier and MAN users.

FES-S6600-X-SI is equipped with the full GE ports and 4\*10G SFP+ uplink ports, it integrates advanced management and security functions to provide performance and scalability.

Appearance	Description
	24 x 10/100/1000Base-T + 4 x 10GE(SFP+)
	1 Console, 1 USB, 1Reset
	AC Power Supply
FES-S6600-28X-SI	Forward performance: 96Mpps
	Switching Capacity: 128Gbps
	24 x 10/100/1000Base-T + 4 x 10GE(SFP+)
	1 Console, 1 USB, 1 Reset, PoE up to 370W
FES-S6600-28XP-SI	AC Power Supply
FL3-30000-28AF-31	Forward performance: 96Mpps
	Switching Capacity: 128Gbps
	48 x 10/100/1000Base-T + 4 x 10GE(SFP+)
	1 Console, 1 USB, 10/100MBase-Tmanagement Port, 1
######################################	AC Power Supply
FES-S6600-52X-SI	1 Reset
	Forward performance: 131Mpps
	Switching Capacity: 176Gbps





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### **Key Features and Highlights**

#### **10G Uplink Access Switch**

Equipped with the full GE ports and 4\*10G SFP+ uplink ports, FES-S6600-X-SI provides a solid foundation and more than enough bandwidth for your business applications today and in the future.

#### L3 Forwarding

FES-S6600-X-SI supports L3 forwarding allowing you to segment your network into workgroups and communicate across VLANs without degrading application performance.

#### **VSF (Virtual Switch Framework)**

Virtual Switch Framework can virtualize multiple FES switches into one logical device, achieving the sharing of information and data tables between different switches. The performance and ports density of the virtualized device is greatly enlarged by times under VSF. VSF also simplifies management work for the network administrator and provides more reliability.

#### **Enhanced Security**

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 (**ACL**s) 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-S6600-X-SI 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-S6600-X-SI 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-S6600-X-SI supports 4 10G 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-S6600-X-SI 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-S6600-X-SI 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-S6600-XSI combines the VLAN data into the same link, saving lots of resources for users. FES-S6600-X-SI 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-S6600-28X-SI	FES-S6600-28XP-SI	FES-S6600-52X-SI		
	24 x 10/100/1000	24 x 10/100/1000	48 x 10/100/1000Base-T +		
	Base-T +	Base-T +			
Ports	4 x 1/10GE(SFP+)	4 x 1/10GE(SFP+)	4 x 1/10GE(SFP+)		
	Auto-MIDX	Auto-MIDX	Auto-MIDX		
Management port	rt 1x Console port	1x Console port	1x Console port		
	1x USB2.0 interface	1x USB2.0 interface	1x USB2.0 interface		
	1x Reset key	1x Reset key	1x Reset key		
Performance	·				
<b>Switching Capaci</b>	ty 128Gbps	128Gbps	176Gbps		
<b>Forwarding Rate</b>	96Mpps	96Mpps	131Mbps		
MAC ADDRESS	16K	16K	16K		
Jumbo Frame	10K bytes	10K bytes	10K bytes		
Packet Buffer	12MBits	12MBits	24MBits		
ACL Table	512	512	512		
Queues per port	8	8	8		
VLAN TABLE	4K	4K	4K		
Physical					
Dimension(W×H	<b>44</b> 0mm x 44mm x	440mm x 44mm x	440mm x44mm x280mm		
Dimension(vv·n·D)	170mm	300mm			
Power Input	100~240VAC, 50~60Hz	100~240VAC, 50~60Hz	100~240VAC, 50~60Hz		
Power Consumpt	tion 21W	<420W	<50W		
Cooling	Passive	Active	Active		
Temperature	Working 0°C~50°C,	Working 0°C~50°C,	Working 0°C~50°C, Storage -		
	Storage -40°C~70°C	Storage -40°C~70°C	40°C~70°C		
Relative Humidit	y 5%~95%, non- condensing	5%~95%, non- condensing	5%~95%, non-condensing		
EMC Safety	CE, RoHS	CE, RoHS	CE, RoHS		
PoE	NA	IEEE 802.3af POE (15.4W) IEEE 802.3at POE+ (30W)	NA		
		PoE output 370w			
Main Features					
Forwarding	Storage and forwardi	Storage and forwarding			
	Port-based VLAN, IEE MAC VLAN	Port-based VLAN, IEEE802.1Q, private VLAN, Protocol VLAN, Voice VLAN, MAC VLAN			
VLAN	Normal QinQ, Flexible QinQ				
	VLAN Translation, N:	VLAN Translation, N:1 VLAN Translation			
L3 Features	Static Routing, PBR	Static Routing, PBR			
DHCP	IPv4/IPv6 DHCP Clien	IPv4/IPv6 DHCP Client, IPv4/IPv6 DHCP Relay Option 82, Option 37/38			
		IPv4/IPv6 DHCP Snooping, IPv4/IPv6 DHCP Server			
	IPv4/IPv6 DHCP Snoo	ping, IPv4/IPv6 DHCP Serve	er		





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	Spanning	Root Guard, BPDU Guard, BPDU Forwarding, TCN filtering		
	Tree	neet duding, bi be duding, bi be forwarding, fert intering		
LACP		64 groups / 8 ports		
		MRPP		
	L2 Ring	ERPS (G.8032)		
	Protection	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		
		Port Security, MAC Limit based on VLAN and Port Anti-ARP-Spoofing, Anti-ARP-Scan, ARP Binding ND Snooping		
		DAI		
		IEEE 802.1x		
		Authentication, Authorization, Accounting Radius, TACACS+		
Multicast		•		
iviuiticast		IGMP v1/v2/v3 snooping, IGMP Proxy, IGMP v3		
QoS		MLD v1/v2 snooping  8 Queues Per Port		
QUS		Bandwidth Control		
		Flow Redirect		
		Classification based on ACL, VLAN ID, COS, TOS, DSCP,		
		Policing Based on Port and VLAN		
		Single Rate single barrel double colour for Policing		
		SP DWRR SDWRR, SP+DWRR for Scheduling		
		Match the IP fragmentation of a message		
Maintenan	ce and	TFTP/FTP		
Operation		CLI, Telnet, Console		
Manageme	nt	Web/SSL (IPv4/IPv6)		
		SSH (IPv4/IPv6)		
		SNMPv1/v2c/v3		
		SNMP Trap		
		Public & Private MIB interface		
		RMON 1,2,3,9		
		Ping, Trace Route SNTP/NTP (IPv4/IPv6)		
		Radius Authentication		
		Syslog (IPv4/IPv6)		
		Dual IMG, Multiple Configuration File		
		Port Mirror, RSPAN		
		sFlow OAM EFM		
		VCT, DDM		
		ULDP (like Cisco UDLD)		
		LLDP/LLDP MED		
Green Ener	gy	Fanless	Auto-speed fan	







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## **Order Information:**

Product	Description	
FES-S6600-28X-SI	L2+ Full Gigabit Access Switch with 24 10/100/1000Base-T and 4 10GE(SFP+) ports, static routing, 1 fixed AC power	
FES-S6600-28XP-SI	L2+ Full Gigabit Access Switch with 24 10/100/1000Base-T PoE and 4 10GE(SFP+) ports, static routing, 1 fixed AC power, PoE output up to 370w	
FES-S6600-52X-SI	L2+ Full Gigabit Access Switch with 48 10/100/1000Base-T and 4 10GE (SFP+) ports, static routing, 1 fixed AC power	



