OPTOSTAR 10GE Security Routing Ethernet Aggregation Switch

OP-S6850 Series

Shenzhen Optostar Optoelectronics Co., Ltd

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Overview

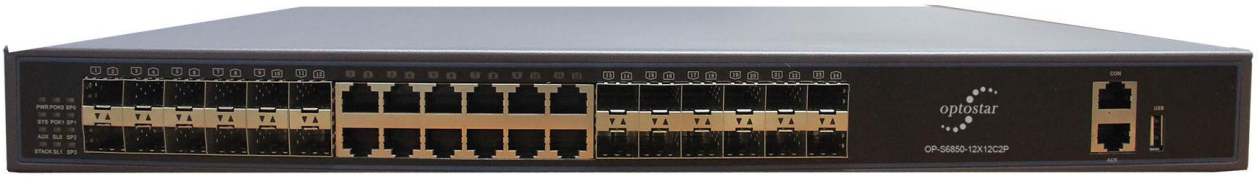
OP-S6850 Series are 10GE security routing Ethernet switch with high-performance, high-security and multi-service. It owns advanced non-blocking array exchange and huge packet cache supporting smooth operation at the extreme circumstance. It is for IP MAN convergence layer and large-scale enterprise zone or the core of the network layer.

Product Parameter

OP-S6850-24E4C

- Backplane capacity 128Gbps
- Packet forwarding rate 95.2Mpps
- 24*10/100/1000Base-T
- 4*GE Combo
- 2*10GE slot
- 1+1 redundant power
- Support stack
- Full-loaded power ≤40W
- 802.3af and 802.3at
- Max power supply for single port is 30W
- 440mm*380mm*44mm

OP-S6850-12X12C2P



- Backplane capacity 128Gbps
- Packet forwarding rate 95.2Mpps

- 12*10/100/1000Base-X SFP
- 12*GE Combo
- 2*10GE slot
- 1+1 redundant power
- Support stack
- Full-loaded power ≤50W
- 440mm*380mm*44mm

OP-S6850-12G12C2P

- Backplane capacity 128Gbps
- Packet forwarding rate 95.2Mpps
- 12*10/100/1000Base-T
- 12*GE Combo
- 2*10GE slot
- 1+1 redundant power
- Support stack
- Full-loaded power ≤40W
- 440mm*380mm*44mm

OP-S6850-44G4C2B

- Backplane capacity 256Gbps
- Packet forwarding rate 130.9Mpps
- 44*10/100/1000Base-T

- 4*GE Combo
- 2*10GE XFP slot
- Support stack
- Full-loaded power ≤60W
- 440mm*380mm*44mm

OP-S6850-44X4C2B

- Backplane capacity 256Gbps
- Packet forwarding rate 130.9Mpps
- 44*10/100/1000Base-X SFP
- 4*GE Combo
- 2*10GE slot
- Support stack
- Full-loaded power ≤70W
- 440mm*380mm*44mm

Technical Indexes

Attributes	OP-S6850-12G12C2P-AC/DC	OP-S6850-12X12C2P-AC/DC	OP-S6850-44G4C2B-AC/DC	OP-S6850-44X4C2B-AC/DC	OP-S6850-24E4C
Backplane capacity	128Gbps	128Gbps	256Gbps	256Gbps	128Gbps
Switching capacity	128Gbps	128Gbps	256Gbps	256Gbps	128Gbps
Throughput (IPv4/IPv6)	95.2Mpps	95.2Mpps	130.9Mpps	130.9Mpps	95.2Mpps
Port	12*10/100/1000 Base-T 12*GE Combo 2*10GE slot	12*10/100/1000 Base-X SFP 12*GE Cmb 2*10GE slt	44*10/100/1000 Base-T 4*GE Combo 2*10GE XFP slot	44*10/100/1000 Base-X SFP 4*GE Combo 2*10GE slot	24*10/100/1000 Base-T(POE) 4*GE Cmb 2*10GE slt
Memory and storage	256MB DDR2 SDRAM Memory and 8MB Flash Memory				

Redundancy design	1+1 hot-swap redundant power				
Power supply	AC：Input 90～260V，50～60Hz； DC：Input -36V～-72V；				
Power consumption	Full-load ≤40W Idle ≤15W	Full-load ≤50W Idle ≤15W	Full-load ≤60W Idle ≤30W	Full-load ≤70W Idle ≤30W	Full-load ≤40W Idle ≤15W
POE power supply	-	-	-	-	Single power can supply 360W
Outline dimensions (mm) (W*D*H)	440mm×380mm×44mm				
Weight (in maximum configuration)	≤6kg	≤6.5kg	≤6kg	≤6.5kg	≤6kg
Environmental requirements	Working temperature：-15°C～55°C Storage temperature：-40°C～70°C Relative humidity：10%～90%，no condensing				

Prduct Features

Attributes		OP-S6850 Series
L2 features	MAC	16K MAC address MAC Black Hole Port MAC Limit
	VLAN	4K VLAN entries Port-based/MAC-based/IP subnet-based VLAN Port-based QinQ and Selective QinQ (StackVLAN) VLAN Swap and VLAN Remark PVLAN to realize port isolation and saving public-vlan resources GVRP
	Spanning tree protocol	IEEE 802.1D Spanning Tree Protocol (STP) IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) IEEE 802.1s Multiple Spanning Tree Protocol instances (MSTP) Remote loop detecting
	Port	Bi-directional bandwidth control Static link aggregation and LACP(Link Aggregation Control Protocol) Port mirroring and traffic mirroring
Security features	User's security	Anti-ARP-spoofing Anti-ARP-flooding IP Source Guard create IP+VLAN+MAC+Port binding Port Isolation MAC address binds to port and port MAC address filtration

		IEEE 802.1x and AAA/Radius authentication
	Device security	Anti-DOS attack(such as ARP，Synflood, Smurf, ICMP attack), ARP detection, worm and Msblaster worm attack SSHv2 Secure Shell SNMP v3 encrypted management Security IP login through Telnet Hierarchical management and password protection of users
	Network security	User-based MAC and ARP traffic examination Restrict ARP traffic of each user and force-out user with abnormal ARP traffic Dynamic ARP table-based binding IP+VLAN+MAC+Port binding L2 to L7 ACL flow filtration mechanism on the 80 bytes of the head of user-defined packet Port-based broadcast/multicast suppression and auto-shutdown risk port URPF to prevent IP address counterfeit and attack DHCP Option82 and PPPoE+ upload user's physical location Plaintext authentication of OSPF、RIPv2 and BGPv4 packets and MD5 cryptograph authentication
IP routing	IPv4	ARP Proxy DHCP Relay DHCP Server Static route RIPv1/v2 OSPFv2 BGPv4 ECMP Strategy route Route policy
	IPv6	ICMPv6 ICMPv6 redirection DHCPv6 ACLv6 OSPFv3 RIPng BGP4+ Configured Tunnel ISATAP 6to4 tunnel IPv6 and IPv4 Tunnels
Service features	ACL	Standard and extended ACL Time Range ACL Packet filter providing filtering based on source/destination MAC address, source/destination IP address, port, protocol, VLAN, VLAN range, MAC address range, or invalid frame. System supports concurrent identification at most 50 service traffic Packet filtration of L2～L7 even deep to 80 bytes of IP packet head

	QoS	Rate-limit to packet sending/receiving speed of port or self-defined flow and provide general flow monitor and two-speed tri-color monitor of self-defined flow Priority remark to port or self-defined flow and provide 802.1P, DSCP priority and Remark CAR(Committed Access Rate)、Traffic Shaping and flow statistics Packet mirror and redirection of interface and self-defined flow Super queue scheduler based on port and self-defined flow. Each port/ flow supports 8 priority queues and scheduler of SP, WRR and SP+WRR. Congestion avoid mechanism，including Tail-Drop and WRED
	Multicast	IGMPv1/v2/v3 IGMPv1/v2/v3 Snooping IGMP Filter MVR and cross VLAN multicast copy IGMP Fast leave IGMP Proxy PIM-SM/PIM-DM/PIM-SSM PIM-SMv6、PIM-DMv6、PIM-SSMv6 MLDv2/MLDv2 Snooping
Reliability	Loop protection	EAPS and GERP (recover-time <50ms) Loopback-detection
	Link protection	FlexLink (recover-time <50ms) RSTP/MSTP (recover-time <1s) LACP (recover-time <10ms) BFD
	Device protection	VRRP host backup Double fault-tolerant backup of host program and configuration files Board card hot swap support 1+1 power hot backup
Maintenance	Network maintenance	Telnet-based statistics RFC3176 sFlow LLDP 802.3ah Ethernet OAM RFC 3164 BSD syslog Protocol Ping and Traceroute
	Device management	Command-line interface（CLI）, Console, Telnet and WEB configuration System configuration with SNMPv1/v2/v3 RMON (Remote Monitoring)1/2/3/9 groups of MIB NTP(Network Time Protocol) GN.Link Ⅱ Server NGBNView network management WEB-based network management Ping and Traceroute

Order Information

Model	Description
OP-S6850-12G12C2P	12*10/100/1000Base-T,12 Combo GE, 2*10GE extended slot, 1+1 redundancy power supply slot,
OP-S6850-12X12C2P	12*10/100/1000Base-X,12 Combo GE, 2*10GE extended slot, 1+1 redundancy power supply slot,
OP-S6850-24E4C	24*10/100/1000BaseT,4 Combo GE, 2*10GE extended slot, 1+1 redundancy power supply slot, POE power supply
OP-S6850-44G4C2B	44*10/100/1000Base-T, 4*ComboGE(1000BaseX SFP or 10/100/1000BaseT),2*10GE extended slot,
OP-S6850-44X4C2B	44*10/100/1000Base-X, 4*ComboGE(1000BaseX SFP or 10/100/1000BaseT),2*10GE extended slot,
OP-PWR100AC	OP-S6850-12G12C2P/ OP-S6850-12X12C2P，100W 220V AC power module
OP-PWR180AC	OP-S6850-44G4C2B / OP-S6850-44X4C2B，180W 220V AC power module
OP-PWR100DC	OP-S6850-12G12C2P/ OP-S6850-12X12C2P，100W -48V DC power module
OP-PWR180DC	OP-S6850-44G4C2B / OP-S6850-44X4C2B，180W -48V DC power module

Relative SFP+ Module

Part No.	Package	Data Rate	Wavelength	Component	Output Power	Rec. Sens	Connector	Case Temp.	Reach	Multi-rate
OP-MP+885L1MD-0.3	SFP+	Up to 10.5G	850nm	VCSEL/PIN	-7.3~-1dBm	-9.9dBm	LC	C/I	0.3km	YES
OP-MP+813L1SD-10	SFP+	Up to 10.5G	1310nm	DFB/PIN	-8.2~0.5dBm	-14.4dBm	LC	C/I	10km	YES
OP-MP+813L1SD-10	SFP+	9.95~11.3G	1310nm	DFB/PIN	-8.2~0.5dBm	-14.4dBm	LC	C/I	10km	YES
OP-MP+813L1SD-40	SFP+	Up to 10.5G	1310nm	DFB/PIN	1~6dBm	-13dBm	LC	C/I	40km	YES
OP-MP+815L1SD-40	SFP+	1.25~11.3G	1550nm	EML/PIN	-1~4dBm	-16dBm	LC	C/I	40km	YES
OP-MP+815L1SD-40	SFP+	9.95~11.3G	1550nm	EML/PIN	-1~4dBm	-15.8dBm	LC	C/I	40km	YES
OP-MP+815L1SD-80	SFP+	9.95~11.3G	1550nm	EML/APD	0~4dBm	-24dBm	LC	C/I	80km	YES
OP-MDCP+8xxL1SD-40	DWDM SFP+	9.95~11.3G	DWDM C-band	EML/PIN	-1~4dBm	-16dBm	LC	C/I	40km	YES
OP-MDCP+8xxL1SD-80	DWDM SFP+	9.95~11.3G	DWDM C-band	EML/APD	-1~4dBm	-24dBm	LC	C/I	80km	YES
OP-MCP+8xxL1SD-10	CWDM SFP+	Up to 10.5Gbps	1270~1330nm	DFB/PIN	8.2~0.5dBm	14.4dBm	LC	C/I	10km	YES
OP-MCP+8xxL1SD-40	CWDM SFP+	1.25~11.3G	1470~1610nm	EML/PIN	-1~4dBm	-16dBm	LC	C/I	40km	YES
OP-MCP+8xxL1SD-40	CWDM SFP+	9.95~11.3G	1470~1610nm	EML/PIN	-1~4dBm	-16dBm	LC	C/I	40km	YES
OP-MCP+8xxL1SD-60	CWDM SFP+	Up to 10.5Gbps	1270~1330nm	DFB/APD	1~6dBm	-20dBm	LC	C/I	60km	YES
OP-MCP+8xxL1SD-70	CWDM SFP+	1.25~11.3G	1470~1610nm	EML/APD	-1~4dBm	-23dBm	LC	C/I	70km	YES
OP-MCP+8xxL1SD-70	CWDM SFP+	9.95~11.3G	1470~1610nm	EML/APD	-1~4dBm	-23dBm	LC	C/I	70km	YES
OP-MP+823L1SD-10	BIDI SFP+	Up to 10.5Gbps	T1270/R1330nm	DFB/PIN	-2~3dBm	-13dBm	LC	C/I	10km	YES
OP-MP+832L1SD-10	BIDI SFP+	Up to 10.5G	T1330/R1270nm	DFB/PIN	-2~3dBm	-13dBm	LC	C/I	10km	YES
OP-MP+823L1SD-20	BIDI SFP+	Up to 10.5G	T1270/R1330nm	DFB/PIN	-2~3dBm	-13dBm	LC	C/I	120km	YES
OP-MP+832L1SD-20	BIDI SFP+	Up to 10.3Gbps	T1330/R1270nm	DFB/PIN	-2~3dBm	-13dBm	LC	C/I	40km	YES
OP-MP+823L1SD-40	BIDI SFP+	Up to 10.5G/td>	T1270/R1330nm	DFB/PIN	1~6dBm	-13dBm	LC	C/I	40km	YES

OP-MP+832L1SD-40	BIDI SFP+	Up to 10.5G/td>	T1330/R1270nm	DFB/PIN	1~6dBm	-13dBm	LC	C/I	40km	YES
OP-MP+823L1SD-60	BIDI SFP+	Up to 10.5G/td>	T1270/R1330nm	DFB/APD	1~6dBm	-20dBm	LC	C/I	60km	YES
OP-MP+832L1SD-60	BIDI SFP+	Up to 10.5G/td>	T1330/R1270nm	DFB/APD	1~6dBm	-20dBm	LC	C/I	60km	YES
OP-MP+823L1SD-10	BIDI SFP+	Up to 10.5Gbps	T1270/R1330nm	DFB/PIN	-2~3dBm	-13dBm	LC	C/I	10km	YES
OP-MP+832L1SD-10	BIDI SFP+	Up to 10.5G	T1330/R1270nm	DFB/PIN	-2~3dBm	-13dBm	LC	C/I	10km	YES

Part Relative SFP Module

Part No.	Package	Data Rate	Wavelength	Component	Output Power	Rec. Sens	Connector	Case Temp.	Reach	Multi-rate
OP-MCP4xxL1SD-40	CWDM SFP	Up to 1.25G	1270~1610nm	DFB/PIN	-5~0dBm	-25dBm	LC	C/I	40km	YES
OP-MCP4xxL1SD-80	CWDM SFP	Up to 1.25G	1270~1610nm	DFB/PIN	0~5dBm	-25dBm	LC	C/I	80km	YES
OP-MCP4xxL1SD-120	CWDM SFP	Up to 1.25G	1270~1610nm	DFB/APD	0~5dBm	-32dBm	LC	C/I	120km	YES
OP-MCP6xxL1SD-40	CWDM SFP	Up to 2.67G	1270~1610nm	DFB/PIN	0~5dBm	-18dBm	LC	C/I	40km	YES
OP-MCP6xxL1SD-80	CWDM SFP	Up to 2.67G	1270~1610nm	DFB/APD	0~5dBm	-28dBm	LC	C/I	80km	YES
OP-MP213L1SD-20	SFP	Up to 622M	1310nm	FP/PIN	-15~-8dBm	-28dBm	LC	C/I	20km	YES
OP-MP213L1SD-40	SFP	Up to 622M	1310nm	FP/PIN	-3~2dBm	-28dBm	LC	C/I	40km	YES
OP-MP215L1SD-80	SFP	Up to 622M	1550nm	DFB/PIN	-3~2dBm	-28dBm	LC	C/I	80km	YES
OP-MP215L1SD-120	SFP	Up to 622M	1550nm	DFB/APD	0~5dBm	-30dBm	LC	C/I	120km	YES
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Important Notice

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