

 SE8600 Series High-density Terabit Core Switching OLT

 Data Sheet

 SE8600 series are designed for high-density access switching integrated platform which

 combine multi-service and high-density 10G EPON OLT requirement, they are deployed

 for high-density EPON OLT as carrier broadband access network.SE8600 series have the

 unique half-size slot service cards for the highest density EPON/GPON/10GE/10GEPON

 port and terabit switching net can provide the ability of 40/100G future upgrade switching

 and smooth upgrade access platform. SE8600 series have the first innovation processing

 architecture with fully distributed based on 64-bit multi-core processors and high

 performance AISC. They can provide IPv4/IPv6 wire-speed transferring capacity and be

 widely used on the IP MANs of carriers, WANs and MANs of enterprises, egress, core

 layer, and convergence layer of enterprise

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□ 4U compact design, half-size serve slots

 SE8600-4

 □ 1+1 master control redundancy,1+1power supply

 redundancy

 □ Hot plug fan chassis, intelligent speed and

 temperature control

 □ 6slots，2 main control cards,4 line cards

 □ Maximum support 32\*EPON and 24\*GE

 □ Support EPON/10GEPON mixed insertion for future

 new cards

 □ 1.6Tbps widely backplane capacity and smooth

 upgrade to 40G/100G

 □ IPv4/IPv6 and MPLS hardware line speed forwarding

 □ The whole power consumption less than 350W

 SE8600-8 □ 9U compact design, half-size serve slots

 □ 1+1 master control redundancy,1+1power supply

 redundancy

 □ Hot plug fan chassis, intelligent speed and

 temperature control

 □ 10slots，2 main control cards,8 line cards

 □ Maximum support 64\*EPON and 48\*GE

 □ Support EPON/10GEPON mixed insertion for future

 new cards

 □ 3.2Tbps widely backplane capacity and smooth

 upgrade to 40G/100G

 □ IPv4/IPv6 and MPLS hardware line speed forwarding

 □ The whole power consumption less than 680W

 SE8600-16

 □ 15U compact design, half-size serve slots

 □ 1+1 master control redundancy,2+2power supply

 redundancy

 □ Hot plug fan chassis, intelligent speed and

 temperature control

 □ 18slots，2 main control cards,16 line cards

 □ Maximum support 128\*EPON and 96\*GE

 □ Support EPON/10GEPON mixed insertion for future

 new cards

 □ 6.4Tbps widely backplane capacity and smooth

 upgrade to 40G/100G

 □ IPv4/IPv6 and MPLS hardware line speed forwarding

 □ The whole power consumption less than1200W

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 Product Specification:

|  |  |  |  |
| --- | --- | --- | --- |
| **Item** | **SE8600-4** | **SE8600-8** | **SE8600-16** |
| Backplane | >1.6Tbps | >3.2Tbps | >6.4Tbps |
| capacity |
| Switching | 960Gbps | 1.6Tbps | 3.2Tbps |
| capacity |
|
| Throughput(IPv | 720Mpps |  | 1440Mpps | 2860Mpps |
| 4/IPv6) |
| Number of slots | 6 | 10 | 18 |
| Number of | 4 | 8 | 16 |
| service board |
| slots |
| Service port | Up to 32\*EPON and | Up to 64\*EPON and | Up to 128\*EPON and |
| 24\*GE | 48\*GE | 96\*GE |
| Redundancy | 1+1 power redundancy | 1+1 power redundancy | 2+2 power redundancy |
| 1+1 main control | 1+1 main control | 1+1 main control |
| design |
| redundancy | redundancy | redundancy |
| Power supply | AC：90～260V，50～ | 60Hz； |  |
| DC：-36V～-72V； |
| Power | ≤300W | ≤680W | ≤1200W |
| consumption |
| Outline | 442mm×176mm×420mm | 442mm×310mm×420mm | 442mm×664mm×420mm |
| dimensions |
| (mm) (W\*D\*H) |
| Weight (in | ≤15kg | ≤25kg | ≤45kg |
| maximum |
| configuration) |
| Environmental | Working temperature：0C～40C |
| Storage temperature：-40C～70C |
| parameter |
| Relative humidity：10%～90%，no condensing |

 Business Features:

|  |  |
| --- | --- |
| **Attributes** | **SE8600 Series** |
| PON features | IEEE 802.3ah EPON |
| China telecom/Unicom | GEPON standard |
| 20Km for single fibber |
| Access 64 terminals for single fibber PON |
| Uplink and downlink triple churning encrypted function |
| ONU terminal legitimacy certification, report illegal ONU registration |
| DBA algorithm |
| Standard OAM and extended OAM |
| ONU batch software upgrade, fixed time upgrade, real time upgrade |
| PON transmit and inspect receiving optical power |

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| L2 features | MAC | MAC Black Hole |
| Port MAC Limit |
| MAC address limitation based on ONU |
| VLAN | 4K VLAN entries |
| Port-based/MAC-based/IP subnet-based VLAN |
| Port-based QinQ and Selective QinQ (StackVLAN) |
| VLAN Swap and VLAN Remark and VLAN Translate |
| GVRP |
| Based on ONU service flow VLAN add, delete, replace |
| Spanning | IEEE 802.1D Spanning Tree Protocol (STP) |
| IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) |
| tree |
| IEEE 802.1s Multiple Spanning Tree Protocol instances (MSTP) |
| protocol |
| ONU remote loop detecting alarm |
|  | Port |  |
|
| Static link aggregation and LACP(Link Aggregation Control Protocol) |
| Port mirroring and traffic mirroring |
|  | User | 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 |
| security |
| IEEE 802.1x and AAA/Radius authentication |
| TACACS+ authentification |
| dhcp anti-attack flood attack automatic suppression |
| ONU isolation control |
|
| Security | Device | Anti-DOS attack(such as ARP，Synflood, Smurf, ICMP attack), ARP detection, |
| worm and Msblaster worm attack |
| SSHv2 Secure Shell |
| security | SNMP v3 encrypted management |
| features |
| Security IP login through Telnet |
| Hierarchical management and password protection of users |
|  | Network | 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 |
| Supports IP+VLAN+MAC+Port binding |
| L2 to L7 ACL flow filtration mechanism on the 80 bytes of the head of |
| user-defined packet |
| security |
| 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 |

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| --- | --- | --- |
|  |  | RIPv1/v2 |
| OSPFv2 |
| BGPv4 |
| Strategy route |
| Route policy |
| IPv6 | ICMPv6 |
| ICMPv6 redirection |
| DHCPv6 |
| ACLv6 |
| OSPFv3 |
| RIPng |
| BGP4+ |
| Configured Tunnel |
| ISATAP |
| 6to4 tunnel |
| IPv6 and IPv4 Tunnels |
|  | 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 |
| Support packet filtration of L2～L7 even deep to 80 bytes of IP packet head |
|  |
| Service | 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 |
| features |
|  | 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 |
|  |
| MPLS | L3 MPLS VPN |
| L2 VPN: VLL (Martini, Kompella) |
| MCE |
| MPLS OAM |
| Reliability | Loop | EAPS and GERP (recover-time <50ms) |
| protection | Loopback-detection |

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|  | Link | FlexLink (recover-time <50ms) |
| RSTP/MSTP (recover-time <1s) |
| protection | LACP (recover-time <10ms) |
| BFD |
| Device | VRRP host backup |
| Double fault-tolerant backup of host program and configuration files |
| 1+1 main control panel hot backup |
| protection |
| 1+1 power hot backup |
| Fan redundancy |
| Maintenan | Network | Telnet-based statistics |
| RFC3176 sFlow |
| LLDP |
| maintena |
| 802.3ah Ethernet OAM |
| nce |
| RFC 3164 BSD syslog Protocol |
| Ping and Traceroute |
| ce | Device | 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 |
| managem |
| NTP(Network Time Protocol) |
| ent |
| GN.LinkⅡ Server |
| NGBNView network management |

 Purchase Information:

|  |  |
| --- | --- |
| **Product Name** | **Product Description** |
| SE8600-04 | 6slots(4\*service slots,2\*main control slots,1\*hot plug fan disk, no main control |
| boards, no power supply) |
| SE8600-08 | 10slots(8\*service slots,2\*main control slots,1\*hot plug fan disk, no main control |
| boards, no power supply) |
| SE8600-16 | 18slots(16\*service slots,2\*main control slots,2\*hot plug fan disk, no main control |
| boards, no power supply) |
| NG01MSUA0 | SE8600-04, main control boards, NGEngine™ I switch routing engine |
| NG02MSUA0 | SE8600-08/16, main control boards, NGEngine™Ⅱ switch routing engine |
| NG03MSUA0 | SE8600-08/16, main control boards, NGEngine™Ⅲ switch routing engine |
| NG01PWR750A1 | SE8600,750W dual power supply module A1 |
| NG01PWR1000A1 | SE8600,1000W dual power supply power A1 |
| NG01EP08SA | 8600,EPON service card,8\*EPON SFP,4\*1000BaseX SFP,2\*100/1000Base-T, SI |
| NG01EP08MA | 8600,EPON service card,8\*EPON SFP,4\*1000BaseX SFP,2\*100/1000Base-T, MI |
| NG01GS24SA | SE8600, switch routing service card,24\*1000BaseX SFP interface, SI |
| NG01GS24MA | SE8600, switch routing service card,24\*1000BaseX SFP interface, MI |
| NG01GT24SA | SE8600, switch routing service card,24\*10/100/1000BaseT interface, SI |
| NG01GT24MA | SE8600, switch routing service card,24\*10/100/1000BaseT interface, MI |
| NG01SFP+04SA | SE8600, switch routing service card,4\*10GE SFP+10GE interface, SI |
| NG01SFP+04MA | SE8600, switch routing service card,4\*10GE SFP+10GE interface, MI |

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| NG01SFP+08SA | SE8600, switch routing service card,8\*10GE SFP+10GE interface, SI |
| NG01SFP+08MA | SE8600, switch routing service card,8\*10GE SFP+10GE interface, MI |
| NG01SFP+12SA | SE8600, switch routing service card,12\*10GE SFP+10GE interface, SI |
| NG01SFP+12MA | SE8600, switch routing service card,12\*10GE SFP+10GE interface, MI |
| NG01EP08SA | SE8600, switch routing service card,12\*10GE SFP+10GE interface, SI |
| NG01EP08MA | SE8600, switch routing service card,12\*10GE SFP+10GE interface, MI |

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