



ISCOM5508 (B) EPON OLT

▼ Introduction

The ISCOM5508 (B), developed by Raisecom, is a small-capacity enhanced cartridge Optical Line Terminal (OLT). Its power supply, fan, main control unit, EPON interface card, and SFP adopt modular design, thus easy for installation and deployment, and flexible extension. With powerful EPON access capabilities, carrier-grade reliability, it supports strong security (such as ACL and anti-DOS attacks) and selective QinQ, and provides good management, maintenance, and monitoring functions.

The ISCOM5508 (B), with rich features and flexible networking schemes, meets low-density and long-distance fiber access requirements. Through the NNM NView system, it provides a complete solution of comprehensive access and uniform network management for access layer.



ISCOM5508 (B)

▼ Features

■ High integrity and flexible networking

Be of 1U high, single MCU, 2 EPON/GE subcards, adopt modular design for easy installation and component replacement, and support Layer 2 line speed forwarding. Provide up to 12 EPON interfaces, and support 768 ONUs and up to 14 GE interfaces.

Support accessing broadband, voice, IPTV, etc. services to meet various accessing applications of carriers, broadcast, radio, and television network, and customer premise network

Support cascading OLTs in a link network to be downstream devices in the remote areas, able to meet rural long-distance broadband access scenario requirements and save Trunk fiber resources.

■ Carrier-grade reliability

Support 1+1 power supply protection and hot swapping of all cards.

Support B/C/D-class PON protection and carrier-grade switching.

Support private Ethernet ring network and a switching time of 50ms.

■ Rich features

Support VLAN, including selective QinQ, VLAN mapping and aggregation.

Support complete QoS, including dynamic assignment of bandwidth, priority control, multiple traffic classification modes, multiple queue scheduling modes, etc. to meet different QoS requirements for VoIP, video, and Internet access services.

Complete ACL, including L2, L3, L4, and customized ACLs.

Support static multicast, IGMP Snooping, Proxy, MVR, and controllable multicast.

Support static route.

Support STP/MSTP, link aggregation, DHCP, interface isolation, etc.

■ Green energy-saving design

Adopt low power consumption design for the MCU and service cards, with overall power consumption below 60 W.

Adopt intelligent fan which can adjust rotational speed according to temperature, thus prolonging fan life, lowering noise, and saving energy.

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▼ Specifications

Hardware features			
Number of slots	3	Number of MCUs	1
Number of EPON service cards	Up to 3 (including MCU). Each card supports 4 EPON interfaces. The entire device supports up to 12 EPON interfaces.	Number of GE cards	Up to 3 (including the MCU). The MCU provides 6 GE uplink interfaces. The other 2 GE cards provide 4 GE interfaces respectively. The entire device supports up to 14 GE interfaces.
Number of fans	1	Number of power supplies	2
EPON optical interface	<ul style="list-style-type: none"> Compliant standard: IEEE 802.3ah 1000BASE-PX20+-D Working wavelength: 1490 nm; uplink rate: 1.25 Gbit/s; downlink rate: 1.25 Gbit/s Transmission distance: 20 km; supporting DDM, complying with RoHS 		
GE electrical interface	<ul style="list-style-type: none"> Support IEEE 802.3 10/100/1000BASE-TX. Transmission rate: 10/100/1000M auto-negotiation 		
GE optical interface	<ul style="list-style-type: none"> Support IEEE 802.3 1000BASE-LX/SX/CX Transmission rate: 1000 Mbit/s 		
In-band management interface	Support in-band management. Without specific interface, you can choose any service interface to work as the local Ethernet management interface.		
Out-of-band management interface	<ul style="list-style-type: none"> Transmission rate: 10/100M auto-negotiation; interface type: RJ45 Working mode: full/half duplex, auto-negotiation 		
Console interface	Physical interface: RJ45; level: RS232; Baud rate: 9600 Baud		
Power supply (DC)	<ul style="list-style-type: none"> -48 VDC power module; voltage range: -36 to -72 VDC +24 VDC power module; voltage range: 18 to 36 VDC 		
Power supply (AC)	110/220 VAC power module; voltage range: 100–240 VAC (50/60 Hz)		
Lightning protection level	<ul style="list-style-type: none"> AC power: 6 kV in differential mode and 6 kV in common mode DC power: 1 kV in differential mode and 2 kV in common mode 		
System performance			
Switching capacity	128 Gbit/s	Backplane bandwidth	40 Gbit/s
Capacity of the MAC	32K	PON line rate	Symmetric in both uplink and

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address table			downlink: 1.25 Gbit/s
Maximum transmission distance	20 km	Maximum optical splitting ratio	1:64
Maximum number of PON interfaces	12	Maximum number of ONUs	768
Reliability	<ul style="list-style-type: none"> • Support 1+1 hot backup of power supplies and hot swapping of all cards. • Support B/C/D-class PON protection (inter-card), able to meet carrier-grade switching time. • Support private Ethernet ring protection with 50ms switching time. 		
Software features			
VLAN	<ul style="list-style-type: none"> • 4K VLANs. • Basic QinQ, able to add SVLAN based on MAC address, CVLAN, IP address, and protocol type. • Selective QinQ: 8K rules based on CVLAN and 1K rules based on ACL. • VLAN mapping: 8K 1:1 or N:1 VLAN mapping rules based on CVLAN and 1K 1:1 VLAN mapping rules based on ACL. 	Multicast	<ul style="list-style-type: none"> • Static multicast. • IGMP Snooping (v1/v2/v3). • MVR (inter-VLAN copy) and MVR Proxy. • Controllable multicast. • 1K multicast entries.
ACL	<ul style="list-style-type: none"> • ACL based on MAC address, IP address, and customized ACL. Support ACL MAP. • Support 2KACL rules. 	Link aggregation	<ul style="list-style-type: none"> • Up to 32 link aggregation groups. Support 14GE by each group. • 6 load balancing modes based on MAC address, IP address, etc.
Route	Static route and up to 100 pieces.	Security	IP Source Guard, dynamic ARP inspection, anti-DoS attack, and storm control.
QoS	<ul style="list-style-type: none"> • Interface-based queue scheduling. Each interface supports 8 priority queues. • SP, WRR, DRR, and SP+WRR queue scheduling modes. • Trust CoS and DSCP priority. Support flexible mapping from CoS to queue and DSCP to queue. • CoS (802.1p) priority remark. • Configuring CoS or DSCP priority for packets that matching ACL rules. • Modifying 802.1p CoS, DSCP, and IP Precedence based on flow. • Packet filtering, redirection, traffic mirroring, traffic statistics, traffic monitoring, interface queue scheduling, and VLAN modification policies based on traffic rule. 		
Physical features			
Dimensions (mm)	440 × 266 × 44.5 (1U)	Overall power	40 W

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(Width × Depth × Height)		consumption	
Full-configuration weight	5.9 kg	Environment	<ul style="list-style-type: none"> • Operating temperature: 0–45°C • Operating humidity: 10%–90% RH (non-condensing)

▼ Typical applications

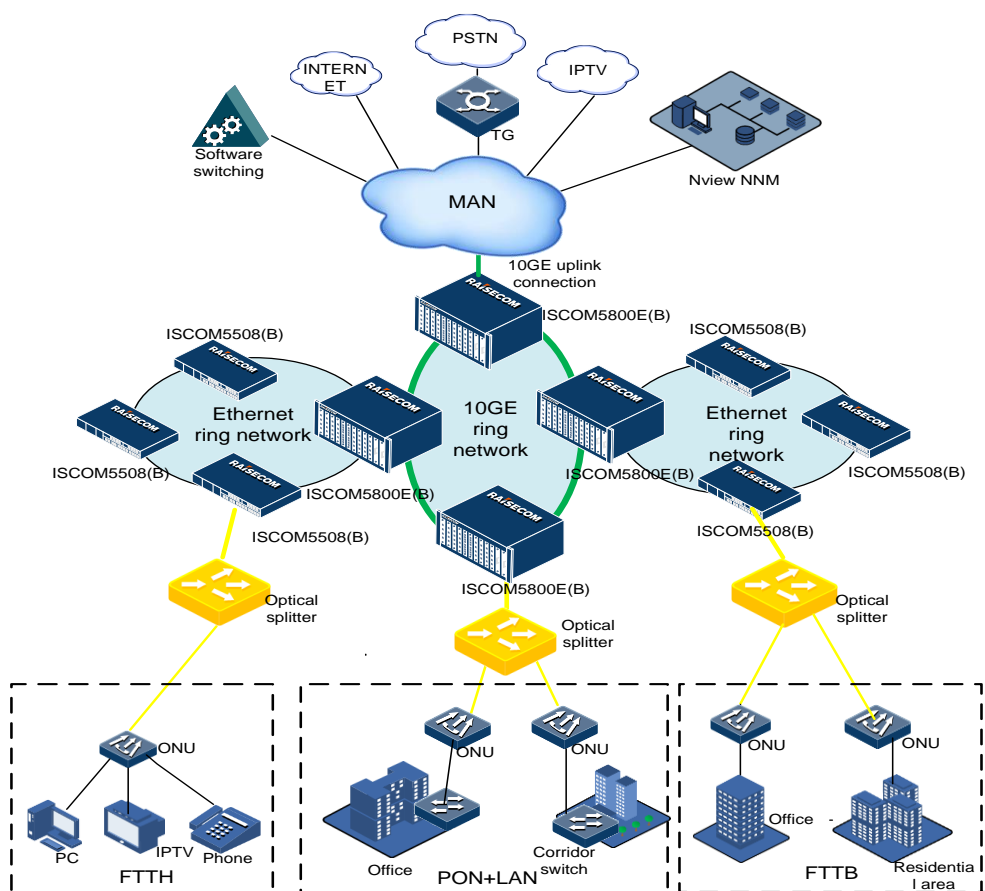


Figure 1 Ring networking with the ISCOM5508 (B) and ISCOM5800E (B)

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In this scenario, the ISCOM5508 (B) can network with the Raisecom ISCOM5800E (B) to provide reliable access service for customers. This networking scheme also makes the ISCOM5508E (B) devices on each aggregation node form a 10GE ring network (with less than 50ms switching time), which not only provides ring network protection but also saves Trunk fiber resources and meets high-bandwidth transmission requirements. The ISCOM5508 (B) is suitable for carriers and customer premise network customer to provide typical broadband access, IPTV, leased line access, and video monitoring in areas with sparse users, such as suburban, town, and rural areas.

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▼ Ordering information

Model	Description
ISCOM5508-AC/D	Basic system: 4* EPON SFP ports+ 2*GE(e) + 4*GE(o) + 2*AC Power+1*Fan (slot 2&3,vacant); EP4B/GE4B workable in slot 2&3, 12 EPON in Max. Configuration details: 5508B Chassis + ISCOM5508-EPSC + 2*RPA1101-SI-220S12 + FANS306 (without SFP modules)
ISCOM5508-DC/D	Basic system: 4*EPON SFP ports+ 2*GE(e) + 4*GE(o) + 2* DC power(-48V) + 1* Fan (slot 2&3,vacant) EP4B/GE4B workable in slot 2&3, 12 EPON in Max. Configurations details: 5508B Chassis + ISCOM5508-EPSC + 2*RPD1101-48S12 + FANS306 (without SFP modules)
ISCOM5508-AC_DC	Basic system: 4*EPON SFP ports + 2*GE(e) + 4*GE(o) + 1*DC power + 1* ACpower + 1*Fan (slot 2&3,vacant) EP4B/GE4B workable in slot 2&3, 12 EPON in Max. Configurations details: 5508B Chassis + ISCOM5508-EPSC + RPA1101-SI-220S12 + RPD1101-48S12 + FANS306 (without SFP modules)
ISCOM5508-EPSC	MCU, 2*GE(e), 4*GE (o), 1 Console interface(RJ45) for local management and 1 SNMP out-of-band management interface(RJ45), working in slot 1. For spare parts ordering; (without SFP modules)
ISCOM5508-EP4B	EPON line card, 4 * EPON SFP ports, working in Slot 2&3; (without SFP modules)
ISCOM5508-GE4B	GE card, 4*GE SFP ports ,working in slot 2&3;(without SFP modules)
FANS306	Intelligent fan (only for ISCOM5508), for spare parts ordering.
RPA1101-SI-220S12	110V/220V AC power module, for spare parts ordering.
RPD1101-48S12	DC -48V power module, for spare parts ordering.
GSFP-PX20DM-R	GEPON OLT SFP module , PX20+ standard
GSFP-PX2PDM-R	GEPON OLT SFP module , PX20++standard

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