



ISCOM6800 xPON OLT

▼ Introduction

RAISECOM ISCOM6800 is a high-capacity chassis carrier-grade Optical Line Terminal (OLT). By adopting platform-based design, it provides EPON, 10G EPON, GPON, and XG-PON service access, and also supports multi-service aggregation and various leased lines access.

ISCOM6800, with a high backplane bandwidth of 2.56 Tbit/s and high switching capacity of 1.28 Tbit/s, capable of all service non-blocking forwarding and high reliability, can meet the carrier's "high-capacity with fewer offices" networking requirements through its high access capacity (supporting up to 14336 ONUs). Cards and fans adopt green energy-saving design to reduce power consumption. The ISCOM6800 also meets the FTTx, HFC bidirectional transformation, base station Backhaul, IP leased line interconnection, and etc..



ISCOM6800

▼ Features

■ High density and high bandwidth

Be of 13U high, 22 slots, 18 line cards, 2 MCUs, and 14 service cards, with Layer 2 line speed forwarding ability. Providing up to 224 EPON interfaces (Max. 14336 EPON ONUs), 112 10G EPON interfaces (Max. 14336 10G EPON ONUs), or 224 GPON interfaces (Max. 28672 GPON ONUs).

Support GE/10GE uplink interface.

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

■ Carrier-grade reliability

MCU 1+1 protection, 1+1 power supplying.

Type B/C/D PON protection and carrier-grade switching

Ethernet ring network Protection (10GE) within 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.

Support 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 1300 W.

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

Support powering off the PON service card and uplink card to save energy.

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▼ Specifications

Hardware features			
Number of slots	22	Number of MCUs	2
Number of EPON service cards	Up to 14. Each card supports 16 EPON interfaces.	Number of 10G EPON service cards	Up to 14. Each card supports 8 10G EPON interfaces.
Number of GPON service cards	Up to 10. Each card supports 16 GPON interfaces.	Number of GE service cards	Up to 14. Each card supports 16 GE interfaces.
Number of uplink cards	Uplink cards are mixed with EPON service cards, so you should configure the number of uplink cards as required.	Number of fans	1
Number of power supplies	2	Number of air outlet frames	1, with dustproof net and cabling rack
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 		
GPON optical interface	<ul style="list-style-type: none"> Compliant standard: ITU-T 984.2 CLASS B+/C+ Working wavelength: 1490 nm; uplink rate: 1.25 Gbit/s; downlink rate: 2.5 Gbit/s Transmission distance: 20/60 km; supporting DDM, complying with RoHS 		
10GEPON optical interface	<ul style="list-style-type: none"> Compliant standard: IEEE 802.3av 10GBASE-PR30 (symmetric) and 10G/1GBASE-PRX30 (asymmetric) Working wavelength: 1577/1490 nm; uplink rate: 10.3125 Gbit/s (symmetric) or 1.25 Gbit/s (asymmetric); downlink rate: 10.3125 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 		
10GE optical interface	<ul style="list-style-type: none"> Support IEEE 802.3ae-2002 Transmission rate: 10 Gbit/s 		

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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)	-48 VDC power module; voltage range: -38.4 to -57.6 VDC		
Lightning protection level	DC power: 0.5 kV in differential mode and 1 kV in common mode		
System performance			
Switching capacity	1.28 Tbit/s	Backplane bandwidth	2.56 Tbit/s
Capacity of the MAC address table	128K	PON line rate	Standard rate
Maximum transmission distance	20 km	Maximum optical splitting ratio	<ul style="list-style-type: none"> • EPON: 1:64 • 10GEPON: 1:256 • GPON: 1:128
Maximum number of PON interfaces	<ul style="list-style-type: none"> • EPON: 224 • 10GEPON: 112 • GPON: 224 	Maximum number of ONUs	<ul style="list-style-type: none"> • EPON: 14336 (1:64 splitting ratio) • 10GEPON: 14336 (1:128 splitting ratio) • GPON: 28732 (1:128 splitting ratio)
Reliability	<ul style="list-style-type: none"> • Support 1+1 hot backup of and MCUs and power supplies and inter-card protection for uplink interfaces. • 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"> • Support 4K VLANs. • Support basic QinQ, able to add SVLAN based on interface. • Support selective QinQ: 1K rules based on QinQ-ACL selective QinQ rules; 8K ONU LLID selective QinQ rules based on CVLAN. • Support VLAN mapping: 8K 1:1 VLAN mapping rules in both the ingress and egress directions; 8K N:1 VLAN 	Multicast	<ul style="list-style-type: none"> • Support static multicast. • Support IGMP Snooping (v1/v2/v3). • Support MVR (inter-VLAN copy). • IGMP Proxy. • Support controllable multicast. • Support 1K multicast entries.

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	mapping rules based on interface; 8K VLAN mapping rules based on outer VLAN-ID+CoS; 8K N:1 VLAN mapping rules based on ONU LLID		
ACL	<ul style="list-style-type: none"> • Support ACL based on MAC address, IP address, IPv6 address, combination of these factors, and customized ACL. • Support 5K ACL rules. • Support 1200 ACL rules. 	Link aggregation	<ul style="list-style-type: none"> • Support up to 32 link aggregation groups. Support 8 GE interfaces (including 10GE interface) by each group. • Support 6 load balancing modes based on MAC address, IP address, etc. • Support LACP.
Route	Support static route and up to 100 pieces.	Security	Support IP Source Guard, dynamic ARP inspection, anti-DoS attack, and storm control.
QoS	<ul style="list-style-type: none"> • Support interface-based queue scheduling and rate limiting. Each interface supports 8 priority queues. • Support SP, WRR, WDRR, and SP+WRR queue scheduling modes. • Support trust CoS and DSCP priority. Support flexible mapping from CoS to queue and DSCP to queue. • Support CoS (802.1p) priority remark. • Support configuring CoS or DSCP priority for packets that matching ACL rules. • Support modifying 802.1p CoS, DSCP, and IP Precedence based on flow. • Support packet filtering, redirection, traffic mirroring, traffic statistics, traffic monitoring, interface queue scheduling, and VLAN modification policies based on traffic rule. 		
Physical features			
Dimensions (mm) (W × D × H)	440 × 233 × 578.5 (13U, including air outlet frame)	Overall power consumption	1300 W
Full-configuration weight	38.6 kg	Environment	Operating temperature: 0–45°C Operating humidity: 10%–90% RH (non-condensing)

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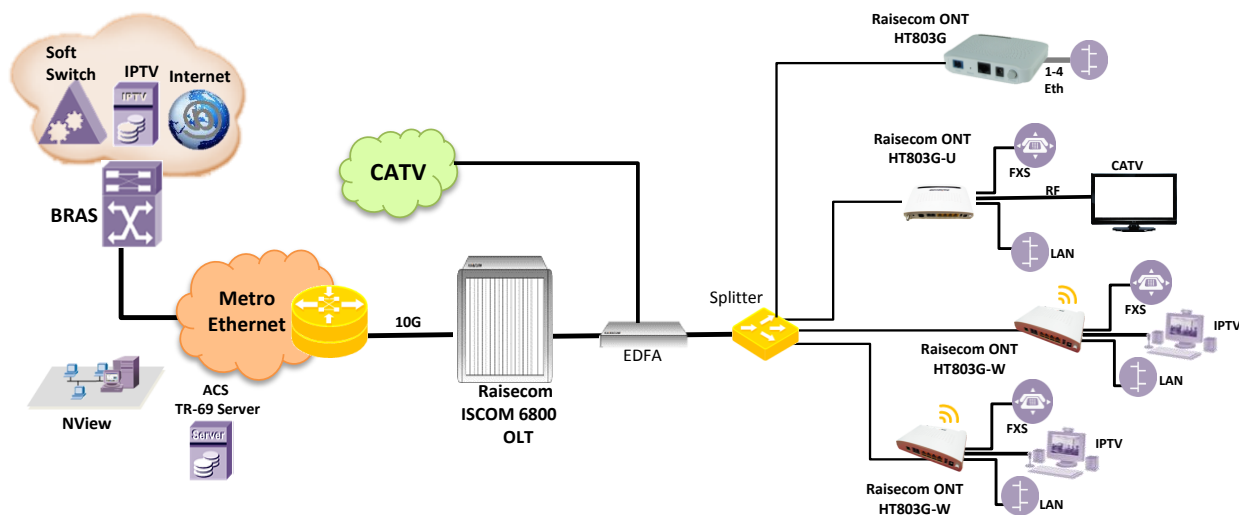
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▼ Typical applications



XPON comprehensive access solution

- FTTH access: provide video, data, and voice services for newly-built residential areas, villas, and network reconstruction of old residential areas.
- FTTB access: the ONU is downlink connected to the LAN switch in a tree structure. LAN switches work independently without affect each other.

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▼ Ordering information

Model	Description
ISCOM6800-18-A	ISCOM6800 chassis with integrated FAN module , 18 slots. (ISCOM6800-18-A, A marks the integration of Chassis and fan module)
ISCOM6800-SMCA	Switching and control card, working in slot 9 or 10. 1 Console interface(RJ45) for local management and 1 SNMP out-of-band management interface(RJ45).
ISCOM6800-EP16	GEPON line card, 16* GEPON SFP ports, working in slot 1-8 and slot 11-16. (without SFP modules)
ISCOM6800-XEP8	10G EPON(asymmetric) line card, 8* 10GEPON XFP ports , working in slot1-8 and slot 11-16. (without SFP modules) Note: Only MDU(6104/6116/6124) type ONU with 10GEPON interface.
ISCOM6800-GP16	GPON line card, 16* GPON SFP ports, working in slot 1-8 and slot 11-16. (without SFP modules)
ISCOM6800-GE16	GE card, 16* GE SFP ports, working in slot 1-8 and slot 11-16. (without SFP modules)
ISCOM6800-XP4A	10GE card, 4* 10GE SFP+ ports, working in slot 19 or 20. (without SFP modules)
ISCOM6800-XP2A	10GE card, 2* 10GE SFP+ ports, working in slot 19 or 20. (without SFP modules)
ISCOM6800-XP4L	10GE card, 4* 10GE SFP+ ports, working in slot1-8 and slot 11-16. (without SFP modules)
RPA2161-S-220S54	1U, 19" mountable rack. AC/DC embedded power system supplying -48Vdc voltage output. It can be configured by one to two rectifiers with hot swappable function; the rectifier normal operation range is 90-290VAC.
RPD2151-48S48	DC -48v power supply card.
WGF-01	Airflow slot and cable array. (only for ISCOM6800)
ISCOM6800-18-FANS382	Intelligent FAN. (only for ISCOM6800) , for spare parts ordering.

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