



ISCOM6820-GP OLT

▼ Introduction

The ISCOM6820-GP is a next-generation, compact, small-capacity, 2U GPON OLT with a card plug-in design intended for industrial and rural networking. It provides abundant functions and flexible networking modes that meet the requirement for low-density and long-distance fiber access. It is perfect for low-density coverage area, outdoor applications, limited installation space, and long distance coverage.

The ISCOM6820-GP features a high backplane bandwidth of 320 Gbit/s, strong switching capacity of 200 Gbit/s, non-blocking forwarding performance for all services, and high reliability. Cards and fans all adopt an energy-saving design to reduce power consumption and emissions.



ISCOM6820-GP

6.Fan	4. Service slot		
	3. Basic Card		
	1. MCU	2. MCU	5. Power Supply

SCOM6820-GP slots

▼ Features

◆ Compact and High Bandwidth

- 2U high with 6 slots. Supports dual Main Control Cards (MCCs). Provide 1 basic slot (16 GPON interfaces) and 1 expansion slot (support 16 GPON or GE interfaces). The expansion/MCC slots support 80/40 Gbit/s bandwidth and L2/L3 wire-speed forwarding.
- The entire device provides 16 or 32 GPON interfaces and 4096 GPON ONUs, and supports 10GE uplink interfaces.

- Supports multi-service access, such as bandwidth, voice, and IPTV, applicable to multiple access scenarios, such as carrier, China Broadcast & TV network, and premise network.

◆ Carrier-Grade Reliability

- MCC 1+1 redundancy protection and hot swapping for all cards.
- Class B PON protection and carrier-grade switching performance.
- Private Ethernet ring network (10GE ring) with a switching time of 50ms.

◆ Abundant Carrier Features

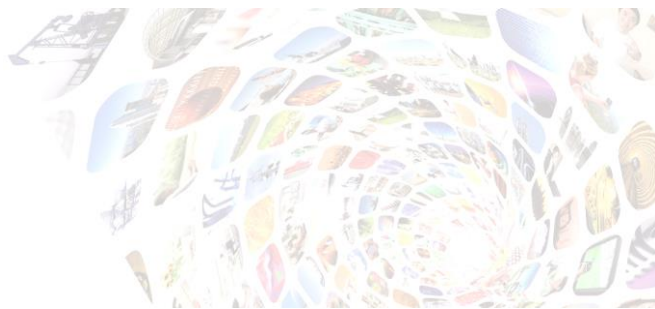
- VLAN, including selective QinQ, VLAN mapping and aggregation.
- Complete QoS, including Dynamic Bandwidth Assignment (DBA), priority control, multiple traffic classification modes and multiple queue scheduling modes, thus meeting different QoS requirements on VoIP, video, and Internet access services.
- Complete ACL, including L2, L3, L4, and user-defined ACLs.
- Static multicast, IGMP Snooping, Proxy, MVR, and controllable multicast.
- IPv4/IPv6 static routes and OSPF.
- IPv4 multicast routing, PIM-SM, and SSM.
- STP/MSTP, link aggregation, DHCP, interface isolation, etc.

◆ Energy-Saving Design

- Low power consumption design for the MCC and cards, with overall power consumption less than 200 W.
- An intelligent fan adjusts rotational speed according to temperature, prolonging fan life, reducing noise, and saving energy.
- Supports powering off the PON cards and uplink cards to save energy.



Number of slot	6	Number of MCC	2 Support up to four 10GE uplink interfaces.
Number of basic card	1, with 16 GPON interfaces	Number of expansion card	1 Support expanding to 16 GPON or GE interfaces.
Number of power supply	1	Number of fan	1
GPON optical interface	Compliance standard: ITU-T 984.2 CLASS B+/C+ Working wavelength: <ul style="list-style-type: none"> • Uplink: 1310 nm, 1.244 Gbit/s • Downlink: 1490 nm, 2.488 Gbit/s Transmission distance: 20/60 km; supporting DDM, complying with RoHS		
GE optical interface	<ul style="list-style-type: none"> • Support IEEE 802.3 1000BASE-LX/SX/CX. • Transmission rate: 1000 Mbit/s 		
GE optical interface	<ul style="list-style-type: none"> • Support IEEE 802.3ae-2002 • Transmission rate: 10 Gbit/s 		
In-band management interface	Support in-band management. Any service interface as the local Ethernet management interface.		
Out-of-band management interface	<ul style="list-style-type: none"> • Transmission rate: 10/100/1000 M auto-negotiation; interface type: RJ45 • Working mode: full/half duplex, auto-negotiation 		
Console interface	<ul style="list-style-type: none"> • Physical interface: RJ45 • Level: RS232 • Baud rate: 9600 baud 		
Power supply (DC)	<ul style="list-style-type: none"> • Rated voltage: -48 VDC • Voltage range: -38.4 to -57.6 VDC 		
Lightning protection level	DC power <ul style="list-style-type: none"> • 0.5 kV in differential mode • 1 kV in common mode 		
System performance			
Switching capacity	200 Gbit/s	Backplane bandwidth	320 Gbit/s
Capacity of the MAC	64K	PON line rate	Standard rate



address table			
Maximum transmission distance	20 KM	Maximum optical splitting ratio	GPON: 1:128
Maximum number of PON interface	GPON: 32	Maximum number of ONU	GPON: 4096
Reliability	<ul style="list-style-type: none"> • Support 1+1 MCC hot backup and inter-card protection for uplink interfaces. • Support class B 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 and adding SVLAN based on interface. • Support selective QinQ and selective QinQ rules based on QinQ-ACL. • Support CVLAN-based selective QinQ rules of ONU LLID • Support VLAN mapping: 1:1 VLAN mapping rules in both the ingress and egress directions, N:1 VLAN mapping rules based on interface, VLAN mapping rules based on SVLAN ID or VLAN ID + CoS, and N:1 VLAN mapping based on GEM PORT. 	Multicast	<ul style="list-style-type: none"> • Support IGMP/MLD Snooping (v1/v2/v3). • Support IGMP/MLD Proxy. • Support MVR (inter-VLAN VoD). • Support controllable multicast. • Support 4K multicast entries.
ACL	<ul style="list-style-type: none"> • Support flexible ACL based on L2–L7. • Support 8K 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	<ul style="list-style-type: none"> • Support IPv4/IPv6 static route and OSPF. • Support IPv4 multicast route, PIM-SM, and SSM. • Support L3 wire-speed forwarding. 	Security	Support storm control.
QoS	<ul style="list-style-type: none"> • Support interface-based queue scheduling and rate limiting. Each interface supports 8 priority queues. 		

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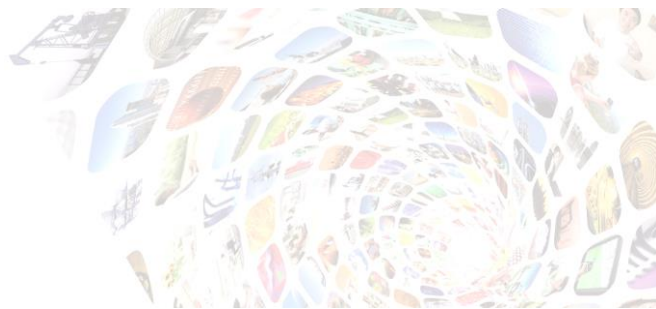
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	<ul style="list-style-type: none"> • Support SP, WRR, WDRR, and SP+WRR queue scheduling modes. • Support the trust CoS and DSCP priority. Support flexible mapping from CoS to queue and DSCP to queue. • Support CoS (802.1p) priority remark. • Support 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, interface rate limiting, priority policies, and VLAN modification policies based on traffic rule. 		
Physical features			
Dimensions (mm) (W × D × H)	442 mm (width) × 236 mm (depth) × 88 mm (height) (without brackets)	Overall power consumption	< 200 W
Full-load weight	<ul style="list-style-type: none"> • DC model: 8.5 kg • AC model: 8.8 kg 	Environment	<ul style="list-style-type: none"> • Operating temperature: 0–55 °C • Operating humidity: 10%–90% RH (non-condensing)

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▼ Typical applications

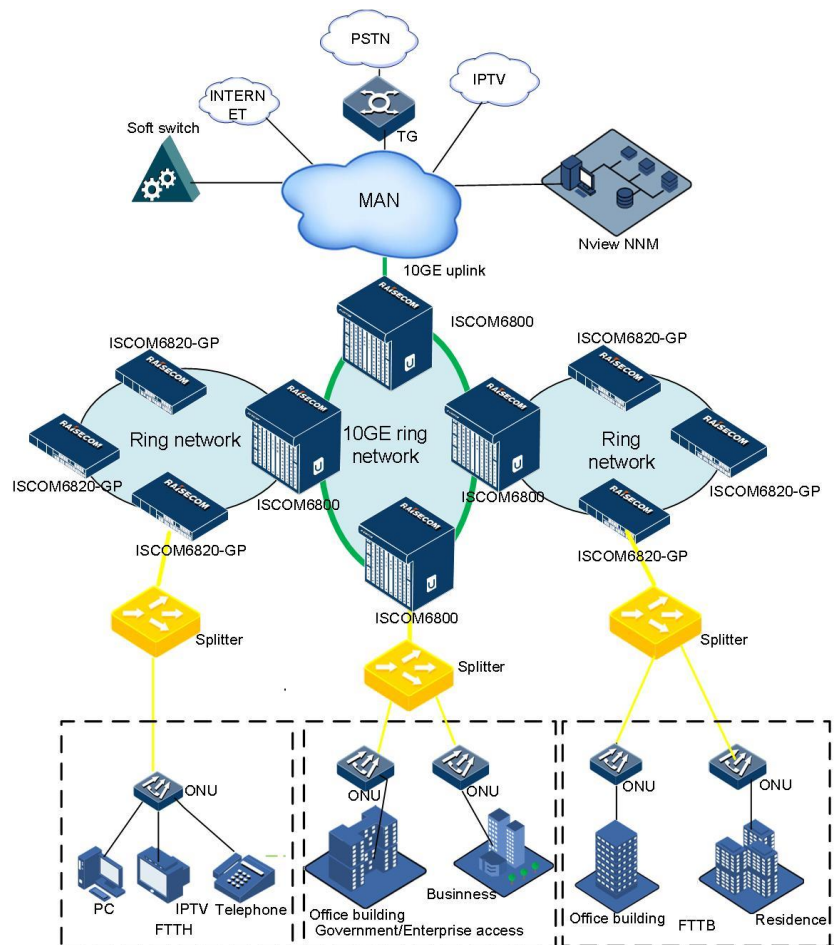


Figure 1 Ring network with ISCOM6820-GP and ISCOM6800

- In this scenario, the ISCOM6820-GP can form a ring network with ISCOM6800, providing customers with reliable access services. In addition, the ISCOM6800 devices located at the aggregation point of each area can form a 10G Ethernet ring, which not only protects the ring network (switching time less than 50 ms) but also saves the trunk fiber resources and meanwhile meet customers' requirements on high-bandwidth transmission.
- The ISCOM6820-GP is very suitable for customers, such as carriers and premise network, to provide low-density user areas, such as villa districts, outskirts, towns, and countryside with typical bandwidth access, IPTV, private line access, and video monitoring services.

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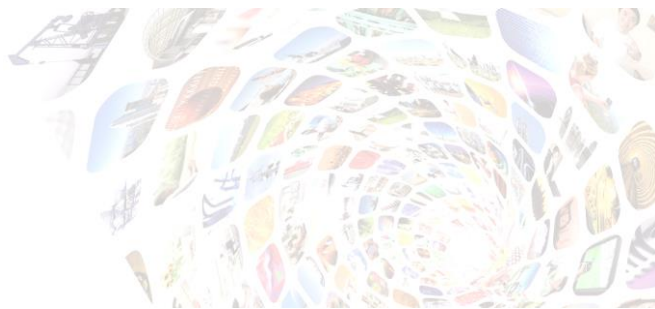
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▼ Ordering information

Model	Description
ISCOM6820-GP-AC	<p>Basic System: 16 GPON port, 2 GE/10GE, 1 fan card, 1 AC card, (slot2&4, Vacant)</p> <p>Configuration details: ISCOM6820 Chassis + ISCOM6820-MCUA + ISCOM6820-GPSC + RPA1302-220D4805 + ISCOM6820-FANS380</p> <p>Options: ISCOM6800-GP16/ISCOM6800-GE16 (slots 4) ISCOM6820-MCUA (slot 2)</p>
ISCOM6820-GP-DC	<p>Basic System: 16 GPON port, 2 GE/10GE, 1 fan card, 1 DC card(dual inputs), (slot2&4, Vacant)</p> <p>Configuration details: ISCOM6820 Chassis + ISCOM6820-MCUA+ ISCOM6820-GPSC+ RPD1302-48D4805 + ISCOM6820-FANS380</p> <p>Options: ISCOM6800-GP16/ISCOM6800-GE16 (slots 4) ISCOM6820-MCUA (slot 2)</p>
ISCOM6800-GP16	GPON card, 16* GPON SFP ports, working in slot 4; (without SFP module)
ISCOM6800-GE16	GE card, 16* GE SFP ports, working in slot4; (without SFP module)
ISCOM6820-MCUA	<p>10GE card, 2*10G SFP+ ports, Slot 1&2</p> <p>1 Console interface(RJ45) for local management and 1 SNMP out-of-band management interface(RJ45)</p>

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