RAISECOM
Raisecom Technology Co., Ltd.

Datasheet

ISCOM6820-EP OLT

▼ Introduction

The ISCOM6820-EP, developed by Raisecom, is a new-generation, compact, small-capacity, and 2U EPON OLT with card plug-in design intended for industrial customers. It provides abundant functions and flexible networking modes, which meets the requirements on low-density and long-distance fiber access. It is mainly applicable to scenarios, such as low-density coverage area, outdoor environment, limited installation space, and areas where distance should be extended for larger coverage rate.

The ISCOM6820-EP 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 lower power consumption, thus reducing energy consumption and emission.

ISCOM6820-EP

<table>
<tr><td rowspan="3">6. Fan</td><td colspan="3">4. Expansion card</td></tr>
<tr><td colspan="3">3. Basic card</td></tr>
<tr><td>1. MCC (Active)</td><td>2. MCC (Standby)</td><td>5. Power supply</td></tr>
</table>

Slot distribution of the SCOM6820-EP

▼ Features

◆Compact type and intensive bandwidth

- It is 2U high with 6 slots. Support dual Main Control Cards (MCCs). Provide 1 basic slot (16 EPON interfaces) and 1 expansion slot (support 16 EPON or GE interfaces). The expansion/MCC slots support 40/80 Gbit/s bandwidth and L2/L3 wire-speed forwarding.
- The entire device provides up to 32 EPON interfaces with 1:64 splitting ratio and supports 10GE uplink interfaces.
- Support multi-service access, such as bandwidth, voice, and IPTV, applicable to multiple access scenarios, such as carrier, ISP, and MSO.

◆Carrier-grade reliability

- Support MCC 1+1 redundancy protection and hot swapping for all cards.
- Support class B PON protection and carrier-grade switching performance.
- Support private Ethernet ring network (10GE ring) with sub-50ms switching delay.

◆Abundant features

- Support VLAN, including selective QinQ, VLAN mapping and aggregation.
- Support 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.
- Support complete ACL, including L2, L3, L4, and user-defined ACLs.
- Support static multicast, IGMP Snooping, Proxy, MVR, and controllable multicast.
- Support IPv4/IPv6 static routes and OSPF transparent transmission.
- Support STP/MSTP, link aggregation, DHCP, interface isolation, and so on.

◆Energy-saving design

- Adopt low power consumption design for the MCC and cards, with overall power consumption (at full load) less than 200 W.
- Adopt an intelligent fan which can adjust rotational speed according to temperature, thus prolonging fan life, lowering noise, and saving energy.

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- The PON cards and uplink cards can be powered off to save energy.

▼ Specifications

Hardware features			
Number of slot	6	**Number of MCC**	2 Support up to four 10GE uplink interfaces.
Number of basic card	1, with 16 EPON interfaces	**Number of expansion card**	1 Support up to 16 EPON or GE interfaces.
Number of power supply	1	**Number of fan**	1
EPON optical interface	Compliance standard: IEEE 802.3 Working wavelength: • Uplink: 1310 nm, 1.244 Gbit/s • Downlink: 1490 nm, 1.244 Gbit/s Transmission distance: 20/60 km DDM-capable and RoHS-compliant		
GE optical interface	• IEEE 802.3 1000BASE-LX/SX/CX • Transmission rate: 1000 Mbit/s		
10GE optical interface	• IEEE 802.3ae-2002 • Transmission rate: 10 Gbit/s		
In-band management interface	Support in-band management. You can select any service interface as the local Ethernet management interface.		
Out-of-band management interface	• Transmission rate: 10/100/1000 Mbit/s 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)	• Rated voltage: -48 VDC • Voltage range: -38.4 to -57.6 VDC		
Lightning protection	DC power		

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level	• 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 address table	64K	**PON line rate**	Standard rate
Maximum transmission distance	20 KM	**Maximum optical splitting ratio**	EPON: 1:64
Maximum number of PON interface	EPON: 32	**Maximum number of ONU**	EPON: 2048
Software features			
VLAN	• 4K VLANs • Basic QinQ and interface-based SVLAN adding • Selective QinQ and selective QinQ rules based on QinQ-ACL • CVLAN-based selective QinQ rules of ONU LLID • VLAN mapping: 1:1 VLAN mapping in both the ingress and egress directions of the interface; N:1 VLAN mapping based on interface; VLAN mapping rules based on SVLAN ID or VLAN ID + CoS; and N:1 VLAN mapping based on GEM PORT	**Multicast**	• IGMP/MLD Snooping (v1/v2) • IGMP/MLD Proxy • MVR (inter-VLAN VoD) • Controllable multicast • 4K multicast entries
ACL	• Flexible ACL based on L2–L7 • 8K ACL rules	**Link aggregation**	• Up to 32 link aggregation groups, up to 8 GE interfaces (including 10GE interface) for each group • 6 load balancing modes based on MAC address, IP address, and so on. • LACP
Route	• IPv4/IPv6 static routes • IPv4 multicast routes • L3 wire-speed forwarding	**Security**	Storm control
QoS	• Interface-based queue scheduling and rate limiting, 8 priority queues for each interface		

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	• SP, WRR, WDRR, and SP+WRR queue scheduling modes • Trust CoS and DSCP priority, and flexible mapping from CoS to queue and DSCP to queue • CoS (802.1p) priority remark • Configuration of CoS or DSCP priority for packets that matching ACL rules • Modification of 802.1p CoS, DSCP, and IP precedence based on flow • 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) (Width × Depth × Height)	442 mm (width) × 236 mm (depth)×88 mm (height) (without brackets)	**Overall power consumption**	< 200 W
Full-load weight	9.0 kg	**Environment**	• Operating temperature: -5 to 60 °C • Operating humidity: 10%–90% RH (non-condensing)

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▼ Typical applications

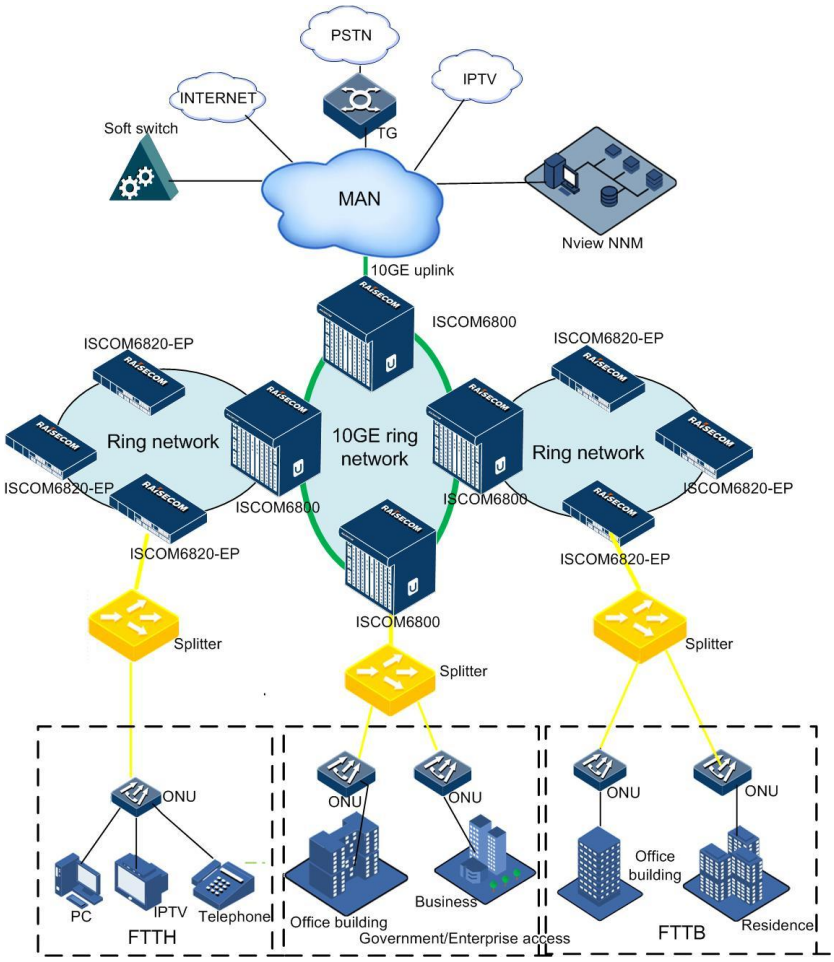

Figure 1 Ring network with ISCOM6820-EP and ISCOM6800

- In this scenario, the ISCOM6820-EP can form a ring network with the 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 (sub-50 ms switching time) but also saves the trunk fiber resources and meanwhile meet customers' requirements for high-bandwidth transmission.
- The ISCOM6820-EP 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, leased line access, and video monitoring services.

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▼ Ordering information

Model	Description
ISCOM6820-EP-AC	ISCOM6820-EP minimum system: 1 basic card, 1 fan, 1 AC power supply, and 1 MCC
ISCOM6820-EP-DC	ISCOM6820-EP minimum system: 1 basic card, 1 fan, 1 dual-input DC power supply, and 1 MCC
ISCOM6820-EP-DC/D	ISCOM6820-EP minimum system (including cable management frame): 1 chassis, 1 fan, 1 basic service card, 1 MCC, and dual DC power supplies

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