



ISCOM6820

The ISCOM6820 is a new-generation compact small-capacity 2U-plug-in Optical Line Terminal (OLT) platform developed by Raisecom. It supports mixed insertion of GPON and XG(S)-PON cards, and provides rich features and flexible deployment modes for networking, thus meeting requirements for low-density and long-distance fiber access. It can be deployed in such scenarios as non-dense coverage areas, outdoor areas, limited-space areas, and areas with prolonged-distance coverage.

The ISCOM6820 features non-blocking forwarding and high reliability for all services. Cards and fans adopt green energy-saving design to lower power consumption and emissions.

ISCOM6820



Slot 5 fan	Slot 4 Service card			
	Slot 4 Service card			
	Slot 7 Power card	Slot 6 Power card	Slot 2 Uplink MCC	Slot 1 Uplink MCC

Highlights >>

Compact design and high bandwidth	<ul style="list-style-type: none"> 2U high, 7 slots, 2 uplink MCCs (1+1 load balancing), 2 service card slots available, supporting Layer 2 and Layer 3 wire-speed forwarding 32 GPON interfaces, to 32 XG(S)-PON Combo interfaces, and up to twelve 10GE uplink interfaces A PON interface supports up to 256 ONUs. Wherein, the Combo interface allows GPON/XGS-PON ONUs to coexist under the same PON interface Accessing broadband, voice, IPTV, and other services to meet various accessing applications of carriers and industrial users
Carrier-grade reliability	<ul style="list-style-type: none"> Uplink MCC 1+1 load balancing, hot-swapping for all cards Type B backbone fiber protection, meeting carrier-grade requirements
Abundant features	<ul style="list-style-type: none"> VLAN, including selective QinQ, VLAN mapping and aggregation Complete QoS, including 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 Link aggregation, DHCP, interface isolation, and other common functions
Energy-saving design	<ul style="list-style-type: none"> Low power consumption design for the MCC and service cards, with overall power consumption less than 500 W. Adjusting the rotational speed according to temperature, prolonging fan life, reducing noise, and saving energy

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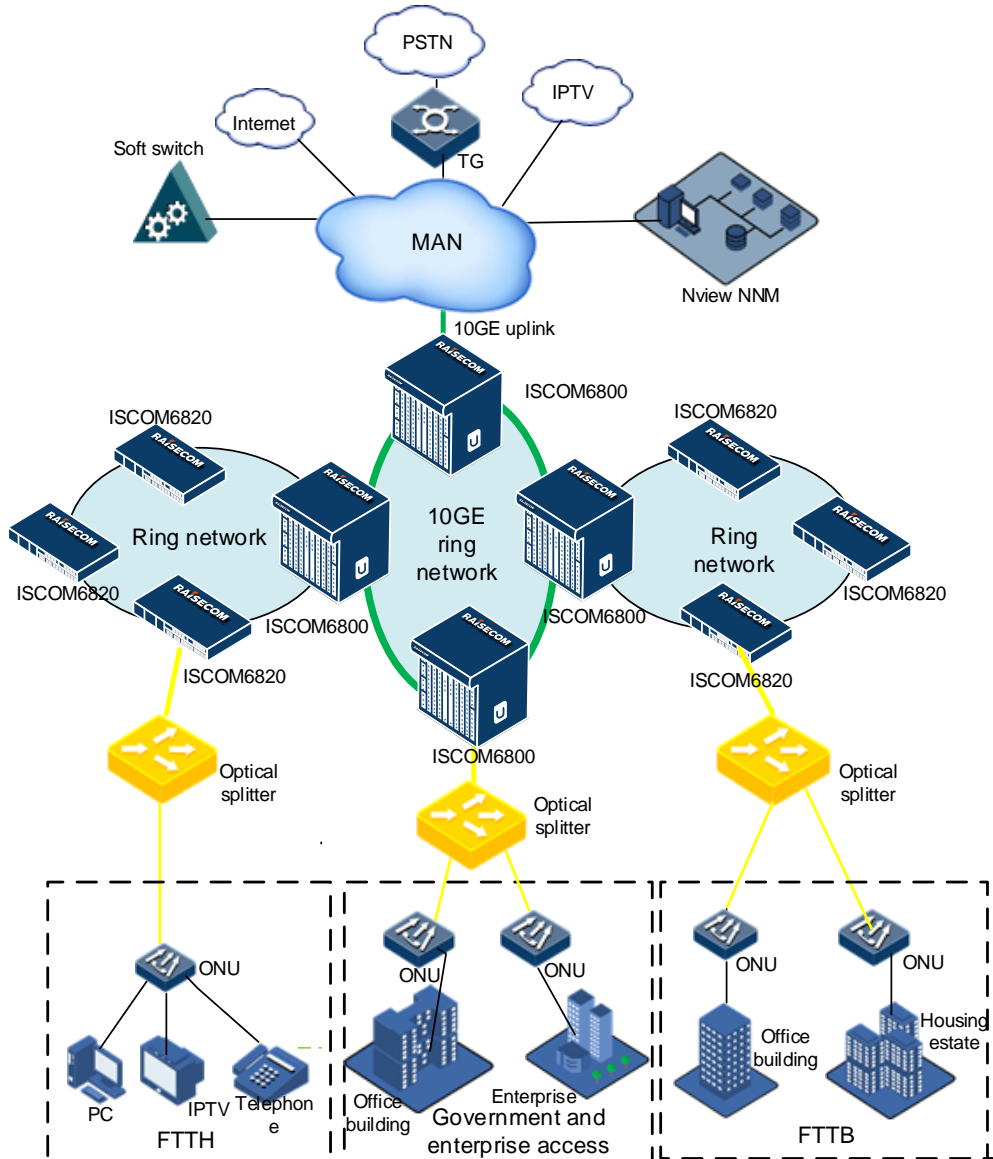
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Application >>

Figure.1 Ring networking with the ISCOM6820-GP and ISCOM6800



The ISCOM6820 provides various typical broadband access, IPTV, leased line access, and video monitoring services for operators, enterprise parks, and other customers in low-density user areas. Its XGS-PON Combo card can support the coexistence of GPON, XG-PON, and XGS-PON ONUs under the same PON interface, and can support smooth upgrading of carriers' networks, better and more flexibly matching various terminal products to meet customer needs.

In this scenario, the ISCOM6820 can interwork with the ISCOM6800 to form an Ethernet ring network and provides reliable access services for customers. The ISCOM6800 devices at each aggregation points in the area can form a 10G Ethernet ring network (with a sub-50ms switching time), so the networking can provide ring network protection and save fiber resources on the trunk fiber, thus meeting the customer's requirements for high-bandwidth transmission.

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Key features >>

MAC	<ul style="list-style-type: none">● 128K MAC addresses● Static unicast MAC addresses● Static multicast MAC addresses● Dynamic MAC address learning● Enabling/Disabling MAC address learning based on interface● Showing, gathering statistics about, clearing, and querying MAC addresses● MAC address limit based on GEM port or XGEM port● MAC address tracking
VLAN	<ul style="list-style-type: none">● Up to 4094 concurrent VLANs● Access and trunk modes for VLAN interfaces● Basic QinQ and selective QinQ based on interface● 1:1 VLAN mapping● N:1 VLAN aggregation
Route	Static ARP entries
Multicast	<ul style="list-style-type: none">● Static multicast● IGMP Snooping● MLD Snooping● IGMP Proxy and MLD Proxy
ACL	<ul style="list-style-type: none">● ACL based on MAC address● ACL based on IP address● ACL MAP● ACL in the egress direction of the interface● User-defined ACL
Link aggregation	<ul style="list-style-type: none">● Up to 32 link aggregation groups● Support 6 load balancing modes based on MAC address and/or IP address.
QoS	<ul style="list-style-type: none">● Global trust mode● Trusting CoS/DSCP priority● Queue scheduling based on interface● Mapping from the CoS to queue● Mapping from the DSCP to queue● Support SP, WRR, DRR, and SP+WRR queue scheduling modes● Traffic statistics, and flow-based mirroring, rate limiting, redirection, and VLAN mapping● Modifying 802.1p CoS, DSCP, and IP precedence based on flow
DHCP	<ul style="list-style-type: none">● DHCP Snooping● DHCP Relay● DHCP Option 18, Option 37, and Option 82
Flow control	IEEE 802.3x flow control and backpressure flow control

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Security

- Physical interface isolation and Layer 2 isolation in the specified VLAN
- Storm control over broadcast, multicast, and DLF packets
- Interface backup, meeting sub-50ms switching requirements
- Attack prevention and DOS attack prevention

Management

- Login through Console, Telnet, or SSH, and uniform NMS (SNMPv1/v2/v3)
- Memory monitoring, CPU monitoring, and file system management

Specifications >>

Number of slots	7
Number of MCCs	2. Support up to twelve 10GE uplink cards
Switching capacity	1.04 Tbit/s (load balancing mode)
Backplane bandwidth	800 Gbit/s in bidirectional mode
MAC address table	128K
Forwarding rate	Wire-speed forwarding on all interfaces
PON interfaces	32*GPON 32*XG(S)-PON Combo
PON splitting ratio	1:256
Number of fans	1
Power supply	Dual DC power supplies, 1+1 redundancy protection Rated voltage: -48 V; voltage range: -38.4 V to -57.6 V
Dimensions	442mm (W) × 250 mm (D) × 88.1 mm (H) (without brackets)
Environment	Operating temperature: -5 to 60°C Operating humidity: 10%–90% RH (non-condensing)
Weight	< 10 kg
Power Consumption	< 500 W

Compliances >>

Standards & protocols	ITU-T 984.x ITU-T 988.x ITU-T 987.x ITU-T 9807.x ETSI EN 300 019-1-1~3 IEC 60068-2 IEC 60721-2-6 IEC 60721-3-1~3 ETSI EN 300 753 NEBS GR-63-CORE ROHS IEC 61000-4-2~6 IEC 61000-4-29 EN 61000-4-2~6 EN 61000-4-29 ETSI EN 300 386 V1.6.1 ETSI ES 201 468 V1.4.1 VCCI V-3 EN 55022 EN 55024 EN 55032 ITU-T K.20 CISPR 22 CISPR 24 ITU-T K.32 ITU-T K.44 FCC part 15
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ICES-003
EN 60950-1
EN 60825-1~2
IEC 60825-1~2
IEC 60950-1
UL 60950-1
MIL-HDBK-217F
BELLCORE TR-332/SR-332

Ordering Information >>

ISCOM6820-DC/D (A)	ISCOM6820 minimum system, with configurations of 1 chassis, 1 MCC, 1 fan, and 2 DC power supplies
ISCOM6820-SMUA (A)	Uplink MCC, six 10GE (SFP+)
ISCOM6800-XCOA (A)	Service card, with 8 XG(S)-PON Combo interfaces
ISCOM6800-GPHA (A)	Service card, with 16 GPON interfaces
ISCOM6800-XCHA (A)	Service card, with 16 XG(S)-PON Combo interfaces
RPD1601-48S48 (A)	Single DC 600W power card
FANS385 (A)	Fan

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