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Raisecom Technology Co., Ltd

ISCOM5800E EPON Optical Line Terminal

ISCOM5800E is the enhanced Optical Line Terminal of Raisecom GEPON system with various line modules, including 2/4/10 GE line module, 2/4 PON line module. It is designed to provide powerful routing ability, access capacity and use 15 slots chassis, redundant SMC control module. It provides 11 service slots which can be inserted all types of service module, except for 4 combo interface line module which can only be inserted into slot 5 and 10 GE line module which can only be inserted into slot 6 as well as slot 9. ISCOM5800E also supports flexible uplink interface allocation, and can be extended to support TDM interface, voice gateway interface.

GEPON complies with IEEE802.3ah standard and enhances the transfer rates of high-speed Internet connection services by fiber optics while reducing the cost by sharing multiple lines. It can greatly reduce the networking CAPEX and OPEX for its reducing failure points and simplifying network architecture, presenting carriers an ideal solution for deploying packet switching network with limited fiber resources.

ISCOM5800E
Chassis Optical Line Terminal

Datasheet

Feature

SMC control module Redundancy	Support SMC control module hot redundancy Auto send trap warning while detecting the different software or hardware version of SMC Graceful switchover without affecting the business
Line protection	Support different PON interfaces protecting in the same PON line module Support protecting between different PON line modules
Flexibility	Support 2*10 GE interface and 2 GE interfaces line module Support 4 PON interfaces line module Support 2 PON interfaces line module Support 2 gigabit ethernet combo interfaces line module Support 4 gigabit ethernet combo interfaces line module
Redundant Power Supply	Two front-loading, redundant, load-sharing, hot-swappable dual AC or dual DC or one AC and one DC power supply
Forwarding mode	Store-and-forward
Port rate limiting	Based on ingress and egress of each port, 64K increment.
Max frame size	8000 Bytes Support Jumbo frame
Backplane	Support 64Gbps
Storm control	Support storm control of broadcast, multicast and DLF according to PPS.
Multicast	IGMP Snooping V1/V2/V3 IGMP Proxy Multicast VLAN Registration (MVR) Support more than 255 multicast groups
Spanning tree	STP, RSTP and MSTP
Routing protocol	Support static route and default gateway
Link aggregation	Up to 14 trunk groups, 8 1000M ports in each trunk 6 types of load-sharing based on MAC and IP address

Specification

Number of slot	1-15 slots 7,8 slot for SMC module 13,14 slot for power supply 5 slot for 4 gigabit combo interface module 6, 9 slot for 10 GE interface module
PON interface line module	2/4 PON interfaces SFF optical module SC/PC connector single mode, single-stran 1310nm burst receive 1490nm continuous trans Symmetric 1.25Gbps 20km distance Split ratio: 1:32 and 1:64 Indicators: LNK, ACT;
10 Gigabit Ethernet interface line module	XFP (10 Gigabit Small Form Factor Pluggable) Auto-negotiation supported LC connector Full/half duplex mode Flow control at both modes Auto MDI/MDI-X 100m distance Indicators: LNK, ACT; 2* 100/1000M SFP optical module Auto-negotiation supported RJ45 connector Indicators: LNK, ACT;

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Mirror	Port-to-Multiport morroring, separate mirroring of ingress and egress traffic
MAC address table	IEEE802.1D standard address learning MAC address learning function can be enabled/disable on each port 16K MAC address, 100 static MAC address Support MAC address clear/search function Show MAC address and MAC address stats function The number of dynamic learned MAC address can be limited on per port
Flow control	IEEE802.3x in full duplex, back pressure in half duplex
DHCP	Support DHCP snooping and option82 Support DHCP server/client Support DHCP relay
VLAN	IEEE 802.1Q, 4094 concurrent VLAN VLAN N:1 aggregation and 1:1 conversion
Tranparent transmission	Support BPDU, Dot1x, LACP, GMRP, GVRP, and GARP on per port
SLA	Support upstream Service Level Agreement, increasement 64kbps
Link diagnostic	Link diagnostic on PON network
OAM	Support IEEE802.3ah standard OAM and Raisecom OAM
Encryption and security	Prevent illegal ONU from accessing the PON network through ONU register control; illegal ONU cannot register to OLT Support Triple Churning Prevent Denial of Service Attacking Support protocol packets filter Support port isolation Support port protection
QoS	Support CAR (Committed Access Rate) function at 1M increment Up to 4 output queues Support 1K data flow queues at maximum VLAN ID replacement based on data flow Support IEEE802.1p and DSCP PRI remark Support QoS Profile management, customized QoS proposal
Queue schedule algorithm	Strict Priority (SP), Weighted Round Robin (WRR), Bounded delay and hybrid (SP + WRR) schedule
ACL	Support L2 - L4 packet filtering based on source MAC address, destination MAC address, source IP address, destination IP address, port, protocol, VLAN, VLAN range, MAC address range and illogical frames.
Ethernet ring	Up to 8 ethernet rings, 124 devices in each ring
QinQ	Up to QinQ based on port Up to flexible QinQ
Management	Local management through console port Remote management through SNMP and Telnet SNMP V1/V2/V3

4 Gigabit Ethernet interface line module	4*100/1000M electrical interfaces or 4*1000M SFP interfaces Auto-negotiation supported RJ45 or LC connector Full/half duplex mode Flow control at both modes Auto MDI/MDI-X 100m distance Indicators: LNK, ACT;
2 Gigabit Ethernet interface line module	2*1000M electrical interfaces or 2*1000M SFP interfaces Auto-negotiation supported RJ45 or LC connector Full/half duplex mode Flow control at both modes Auto MDI/MDI-X 100m distance Indicators: LNK, ACT;
SNMP management port	1*10/100M Auto-negotiation supported RJ45 connector Full/half duplex mode Flow control at both modes Auto MDI/MDI-X Indicator: LNK/ACT, 100M
Serial port configuration	9600bps/8bit/none parity/1 stop bit/none flow control
Indicators	Power Supply (PWR1,PWR2) System (flashing)
Dimension	442(W)*267(D)*248(H)
Net Weight	4.6kg(with two power supplies)
Power supply	Two hot-swappable AC or DC
Input power supply voltage	AC: 85V-265V, 50/60Hz DC: -36V- -72V
Power consumption	≤250W (at max load)
Working ambience	Temp: -5~50 centigrade RH: 20~90% non-condensing
Storage ambience	Temp: -25~85 centigrade RH: 5~90% non-condensing
Safety compliance	CE marking FCC Class A EN 60950-1 UL 60950-1

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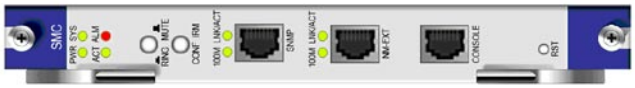
Feature of ISCOM5800E-SMC



ISCOM5800-SMC is a network management module for ISCOM5800 system and can only be installed in Slot 7 and 8. It communicates with NMS by reporting alarm traps and answering polls and also executing configuration commands on both local GEPON OLTs and remote ONUs. ISCOM5800-SMC is a necessary component in ISCOM5800 system.

Console interface	Connector type: RJ45 Standard: complies with RS232 standard Bit rate: 9600bps
2Mbit/s Synchronous Clock Interface	Bit rate: 2048Kb/s±50ppm Code:HDB3 Impedance of interface:75Ω(unblanced) Electrical characteristics:complies with ITU-T G.703 Frame structure:complies with ITU-T G.704 Jitter tolerance:complies with ITU-T G.823
Power Consumption	<30W
Working Ambience	0~50 centigrade
Dimension	211.13mm(H)×220mm(D)×2mm(W)
SNMP and NM-EXT Interface	Connector type:RJ45 Standard:10/100Base-T 10/100Mbps Auto-negotiation

Feature of ISCOM5800E-10GEX2-2GE

Preliminary

ISCOM5800E-10GEX2-2GE line module only can be inserted into slot 6 and 9.

10GE interface specification	XFP optical module IEEE802.3ae Connector type: LC/PC Fiber form: two strands Wavelength: 1310nm burst receive, 1490 continuous transmit Speed: symmetric 1.25Gbps Indicators: LNK, ACT
GE interface specification	2*100/1000M optical Connector type: LC/PC Copper interface support auto-negotiation Full/half duplex mode 802.3x and back pressure flow control Auto-MDI/MDIX Indicators: LNK, ACT
Dimension	211.13mm(H)×220mm(D)×2mm(W)

Compliance

Standards & protocols	For xDSL module: G.992.1 G.992.3 G.992.5 G.991.2 G.993.1 G.993.2 For PON module: IEEE802.3-2002 IEEE802.3ah-2004 For Ethernet port: IEEE802.3 10BaseT IEEE802.3u 100BaseTX IEEE802.3ab 1000BaseT IEEE802.3z 1000BaseX IEEE802.3ae (XFP) 100BaseBX (SFP) 100BaseFX (SFP) 100BaseLX (SFP) 1000BaseBX (SFP) 1000BaseSX 1000BaseLX/LH 1000BaseZX IEEE802.1w IEEE802.3ad IEEE802.3x full duplex on 10BaseT, 100BaseTX, and 1000BaseT ports For VoIP: RFC 3261/2543 RFC 2327 RFC 3550 ITU-T H.248.v1/v2/v3 IEEE802.1D Spanning Tree Protocol IEEE802.1p CoS Prioritization IEEE802.1Q VLAN SNMPv1/v2c/v3

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Feature of ISCOM5800E-2PON

ISCOM5800E-2PON provides 2 PON interfaces and can be installed in Slot 1-6 and 9-13.

PON interface specification	SFF optical module Connector type: SC/PC Fiber form: single strand Wavelength: 1310nm burst receive, 1490 continuous transmit Speed: symmetric 1.25Gbps Transmission distance: 20km Split ratio: 1:32 and 1:64 Indicators: LNK, ACT
Power Consumption	<15W
Weight	<0.45Kg

Feature of ISCOM5800E-4PON

ISCOM5800E-4PON provides 4 PON interfaces and can be installed in Slot 1-6 and 9-13.

PON interface specification	SFF optical module Connector type: SC/PC Fiber form: single strand Wavelength: 1310nm burst receive, 1490 continuous transmit Speed: symmetric 1.25Gbps Transmission distance: 20km Split ratio: 1:32 and 1:64 Indicators: LNK, ACT
Power Consumption	<25W
Weight	<0.55Kg

Feature of ISCOM5800E-2GE

ISCOM5800E-2GE provides 2 combo GE interfaces (2*100/1000M copper and 2* 100/1000M optical)and can be installed in Slot 1-6 and 9-13.

GE interface specification	2 Combo (2*100/1000M copper + 2*100/1000M optical) Connector type: RJ45 + SFP Copper interface support auto-negotiation Full/half duplex mode 802.3x and back pressure flow control Auto-MDI/MDIX Indicators: LNK, ACT
Power Consumption	<10W
Weight	<0.39Kg

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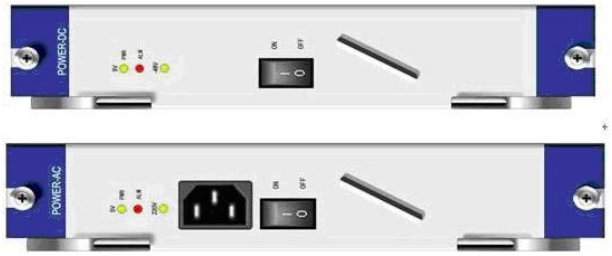
Feature of ISCOM5800E-4GE

ISCOM5800E-4GE provides 4 combo GE interfaces (4*100/1000M copper and 4* 100/1000M optical)and can be installed in Slot 1-6 and 9-13.

GE interface specification	4 Combo (4*100/1000M copper + 4*100/1000M optical) Connector type: RJ45 + SFP Copper interface support auto-negotiation Full/half duplex mode 802.3x and back pressure flow control Auto-MDI/MDIX Indicators: LNK, ACT
Power Consumption	<10W
Weight	<0.39Kg

Feature of Power Supply



Power supply line module provides AC or DC output, and it can be installed in Slot 14 and 15.

SUB-PWRII-DC-300 specification	-48 V DC power supply, 300W output.
SUB-PWRII-AC-300 specification	220V AC power supply, 300W output.

Ordering Information

Part Number	Description
ISCOM5800E-15	6U, 15-slots chassis, without any modules and power supply.
SUB-PWRII-DC-300	-48V/DC Power Supply Module(300W) for OPCOM3500E-12, RC006-12 REV.B
SUB-PWRII-AC-300	220V/AC Power Supply Module (300W) for OPCOM3500E-12, RC006-12 REV.B
RC006-FANS1	Optional accessory, fans upon OPCOM3500E-12 or RC006-12, 19inch, 1Unit high
ISCOM5800E-SMC	Network management and switch line module
ISCOM5800E-2PON	Provides 2 single-strand fiber PON interfaces for communicating with downlink ONU
ISCOM5800E-4PON	Provides 4 single-strand fiber PON interfaces for communicating with downlink ONU
ISCOM5800E-2GE	Provides 2 gigabit combo interfaces enable both 100/1000BaseT and 100/1000M interfaces for uplinks

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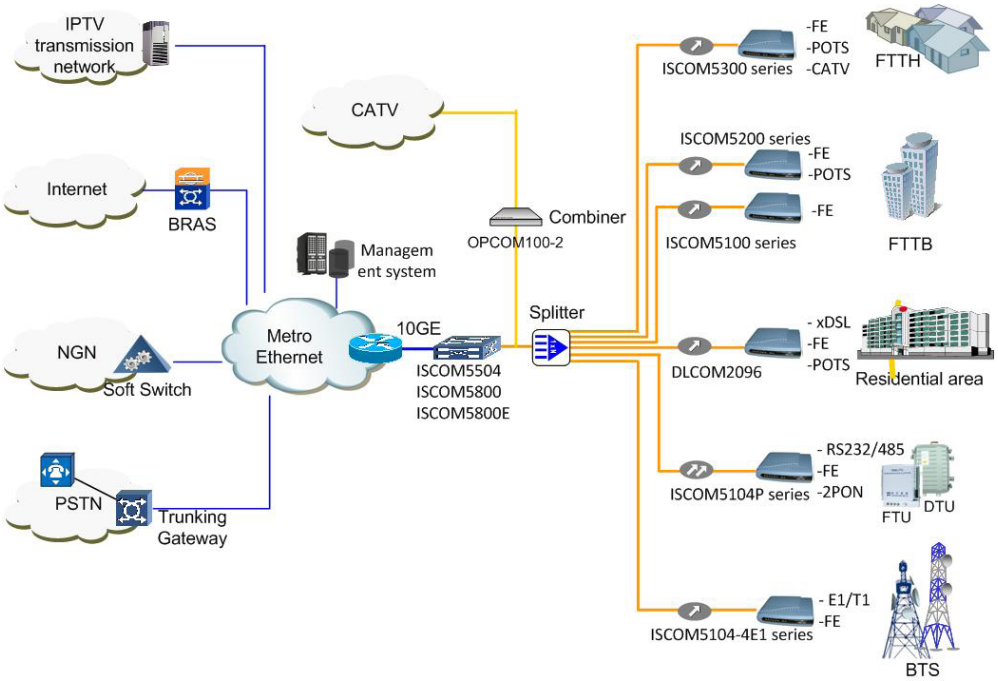
ISCOM5800E-4GE	Provides 4 gigabit combo interfaces enable both 100/1000BaseT and 100/1000M interfaces for uplinks
ISCOM5800E-10GEX2-2GE	Provides 2*10 GE interfaces for connecting with uplink switches, and 2GE interfaces for VoIP service or others service

Appendix Specification of PON interface

Optical Connector	Wavelengh (nm)	Rx sensitivity (dBm)	Tx Power (dBm)	Typical distance (km)	Overload point (dBm)
SC/PC	1490	<-27	+2 - +7	20	>-6dBm

Note:
* For ISCOM5800E-2GE/4GE line module, 1000M speed is supported on hardware versionA, while 100/1000M speed is availabled on hardware versionB.
** Any line module of ISCOM5800E, except ISCOM5800-10GEX2-2GE and ISCOM5800E-SMC, can be mixed inserted into chassis of ISCOM5800 and ISCOM5800E.

Typical Application



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