

## ISCOM2128EA-MA

### Enhanced L2 Carrier Ethernet Access Switch

ISCOM2128EA-MA is designed for Carrier Ethernet access portfolio, which provides cost-effective solutions for campus, enterprise, and residential access scenarios. The product has 24 x 10/100Base-T auto-sensing client interfaces and 4 x SFP combo GE network interfaces, which enables flexible network deployments such as dual ring or ring + chain. The ISCOM2128EA-MA also offers rich functionality that guarantees MEF-compliant E-Line, E-tree and E-LAN services together with full suite of management and protection mechanisms for FTTX triple-play applications.

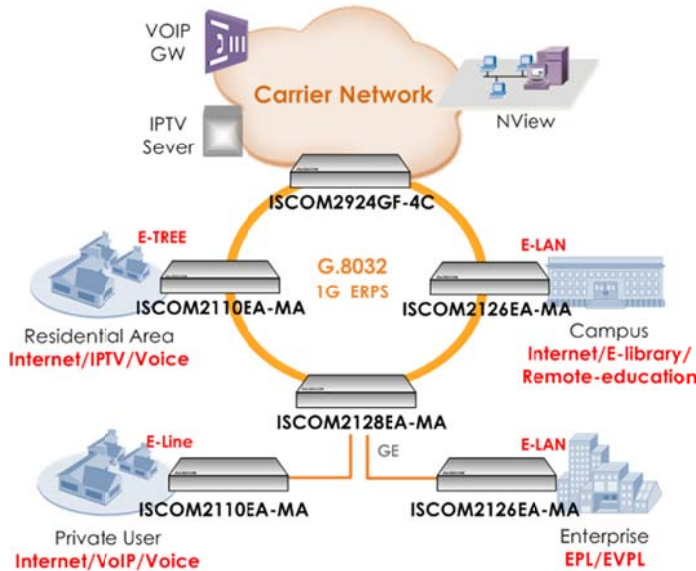


ISCOM2128EA-MA

### Highlights

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| <b>Network Security</b>                          | Upgraded security with port-isolation, advanced ACL, broadcast/multicast/DLF storm control, unique port loopback detection, and DHCP Client/Snooping/Option82 functionality  |
| <b>Resiliency &amp; Protection</b>               | Supports ITU-T G.8031 linear and ITU-T G.8032 ring protection with switching time less than 50ms; Supports STP/RSTP/MSTP, redundant links and IEEE 802.3ad Link Aggregation  |
| <b>Carrier Ethernet Service &amp; Management</b> | Supports IEEE 802.3ah Link OAM, IEEE 802.1ag end-to-end connectivity OAM and ITU-T Y.1731 end-to-end service and performance;<br>Advanced QoS technology allows stream-marking based on CoS, DSCP, IP precedence and priority;<br>Scheduling modes including SP, WRR, SP+WRR;<br>Support flow-based mirroring/rate-limit/redirection/VLAN swapping and rewriting |
| <b>Multicast Functionality</b>                   | Supports IGMP snooping/proxy, multicast filtering, multicast VLAN registration (MVR) to save bandwidth and optimize corresponding services such as IPTV  |

## Typical Application



### Products involved

- 10G aggregation switch:  
ISCOM2924GF-4C
- L2 access switch:  
ISCOM2110EA-MA  
ISCOM2126EA-MA(B)  
ISCOM2128EA-MA

## Features

Switching Mode	Store and forward mode; Non-blocking switching
Packet Forwarding	MTU: 9,712 byte (default); DLF control
Bandwidth Profile	Rate limiting:1,048,576Kbps; Burst configuration (Max 130KB); Ingress rate limit per port; Egress flow shaping per port; Rate limit per VLAN; Increments:64Kbps (64K-1M)/1Mbps(1-100M)/10Mbps (100-1000M)
VLAN	IEEE 802.1Q VLAN: 4K active VLANs; port-based VLAN; GVRP, 256 max dynamic VLAN
Storm Control	Broadcast/multicast/unicast/DLF storm control; Control mode: global, bps, burst; Default burst: 8KB
Multicast	1K multicast addresses; Static multicast group; IGMP Snooping V1/V2/V3;



Multicast filtering & unknown multicast discarding;  
MVR

**Mirror** Mirroring per port;  
Separate mirroring configurations for ingress & egress ports

**Port Loopback Detection** Auto shutdown individual ports upon fault signals;  
Auto-detection interval can be set

**MAC Address Table** 16K MAC address;  
Add/remove MAC address;  
View MAC address statistic;  
Search MAC address;  
Aging time:10-1,000,000s;  
MAC table threshold per port;  
MAC table limit:1-255;

**Q-in-Q** Port/flexible Q-in-Q;  
682 flexible Q-in-Q configurable items;  
Egress-direction VLAN-mapping

**Link Aggregation** Up to 6 groups and 8 ports per group;  
Group member max-port-number 26;  
Load balance based on MAC/MAC+IP;  
Standard LACP (static only)

**Flow Control** IEEE 802.3x in full duplex mode;  
Back pressure in half duplex mode;  
Separate configurations for ingress & egress

**STP** STP, RSTP & MSTP (64 instances);  
256 STG

**Digital Diagnostic** SFP digital diagnostic function

**Port Backup** Supported

**Transparent Relay** BPDU; DOT1X; LACP; CDP; VTP; PVST

## Advanced

**OAM** IEEE802.3ah OAM including discovery, link performance, remote loopback,  
fault detection & performance stats per OAM standards;  
OAM Active/Passive mode;  
OAM MIB Variable Get function;  
OAM Event function;  
Extended OAM (configure on remote switches)

**Cluster Management** Raisecom Neighbor Discovery Protocol (RNDP);  
Raisecom Topology Discovery Protocol (RTDP);



	Raisecom Cluster Management Protocol (RCMP); Raisecom Cluster Program
<b>SLA</b>	Layer-2/Layer-3 SLA (frame delay, jitter & packet loss)
<b>System Management</b>	CLI/Telnet/NMS/SNMP/Web management; 16 Layer 3 interfaces, super VLAN, max 4K VLANs; RMON1, 2, 3 & 9; Bridge MIB (RFC1493); Raisecom NMS; System log; Hierarchical alarms; Link alarm per port; Keep-alive report; Fault pass through; Module information management
<b>Maintenance</b>	Debug information output; PING (packet internet groper); Telnet client; Port statistics; Port dynamic statistics
<b>QoS</b>	Global CoS/DSCP to queue mapping; Port priority override; Port TRUST mode: CoS/DSCP/port priority; Global queue scheduling with 8 queues per port; Scheduling mode: SP/WRR/SP+WRR; WRR weight range:1-255; Flow statistic; Flow-based mirror/rate-limit/ redirection/VLAN swapping/rewriting of 802.1p CoS, DSCP, IP priority
<b>Ethernet Ring</b>	Raisecom private ring protocol; Up to 8 rings; 124 devices on one ring; switching time $\leq 50$ ms
<b>ACL</b>	MAC/IP-based ACL; ACL map (L2~L4 byte)
<b>Safety Features</b>	Client classification and password protection; RADIUS; TACACS+;



Binding of MAC address & port;  
Port protection;  
PPPoE agent;  
DOT1X;  
IP source guard;  
Dynamic ARP inspection (DAI)

**CFM** IEEE802.1ag/ITU-T Y.1731 protocol: up to 256 MEP, 256 MA;  
Connectivity check (CC); Loopback (LB); Link trace (LT)

**Password Recovery** Supported

**Filter** ACL hardware filter;  
Support MAC 1536 traffic streams

**LLDP** Discovery remote base on link layer;  
Get remote basic information

**Error Tolerance & Redundancy** System error report;  
Fast recovery during serious error

**Scheduling** System task scheduling

**MEF 9 & 14** Supported

**Time Management** Time zone; Time modification;  
Support SNTP & NTP

**Software Upgrade** Xmodem/FTP upgrade in BOOTROM  
FTP/TFTP

**Auto Configuration** Supported

**DHCP** DHCP Client/Snooping/Opt82/Relay



## Specifications

Performance	Switching fabric: 12.8Gbps
Capacity	64MB DDR2; 8MB flash; 1.5MB switch buffer; 1K IGMP groups
Indicators	Power Supply (flashing); FE port: LINK/ACT; SFP port: LINK/ACT
Physical Interface	Management port: 1 console (RJ45); Client interfaces: 24 x 10/100 Base-TX RJ45 port; Network interfaces: 4 x COMBO (4x 100/1000Base-X SFP; 4x 10/100/1000M Base-T RJ45 ports);
Power Specs	AC: 90~264V, 47~63Hz; DC: -48V; Full load: ≤15.0W
User Conditions	Operating temp: 0~50 °C (32~122 ° F); Storage temp: -25~70 °C (-13~158 ° F); Humidity: 10~90% non-condensing
Dimensions	440(L) x 220(W) x 44(H) mm <sup>3</sup>
Weight	≤ 3.0Kg

## Compliances

Standards & protocols	IEEE 802.1Q VLAN IEEE 802.3ad Link Aggregation IEEE 802.1ad QinQ IEEE 802.1D Spanning Tree Protocol IEEE 802.1w RSTP IEEE 802.1s MSTP IEEE 802.1x Security IEEE 802.1p CoS Prioritization IEEE 802.3x Flow Control IEEE 802.3ah OAM IEEE 802.1ag Connectivity Fault Management ITU Y.1731 Services OAM Static Routing IGMP v1/v2/v3 RMON I and II standards SNMPv1/v2c/v3 MEF9 MEF14
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## Ordering Information

ISCOM2128EA-MA-AC/S	24 x 10/100Base-T, 4 x COMBO (4 x 100/1000Base-X + 4 x 10/100/1000Base-T); Single AC power supply
ISCOM2128EA-MA-DC/S	24 x 10/100Base-T, 4 x COMBO (4 x 100/1000Base-X + 4 x 10/100/1000Base-T); Single DC power supply