

## ISCOM2828F(D)

### Enhanced L2 Carrier Ethernet Access Switch

ISCOM2828F(D) is designed for Carrier Ethernet access portfolio, which provides cost-effective solutions for campus, enterprise, and residential access scenarios. The product has 24 x 100Base-x fiber client interfaces and 4 x SFP combo GE network interfaces, which enables flexible network deployments such as dual ring or ring + chain. The ISCOM2828F(D) 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.



ISCOM2828F (D)

## Highlights

### Network Security

Upgraded security with port-isolation, advanced ACL, broadcast/multicast/DLF storm control, unique port loopback detection, and DHCP Client/Snooping/Option82 functionality

### Resiliency & Protection

Supports STP/RSTP/MSTP, redundant links and IEEE 802.3ad Link Aggregation

### Carrier Ethernet Service & Management

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;

Advanced QoS technology allows stream-marking based on CoS, DSCP and port priority;

Scheduling modes including SP, WRR, SP+WRR;

Support flow-based mirroring/rate-limit/redirection/VLAN swapping and rewriting

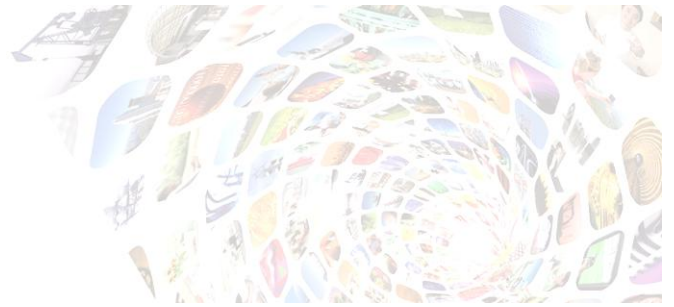
### Multicast Functionality

Supports IGMP snooping/proxy, multicast filtering, multicast VLAN registration (MVR) to save bandwidth and optimize corresponding services such as IPTV

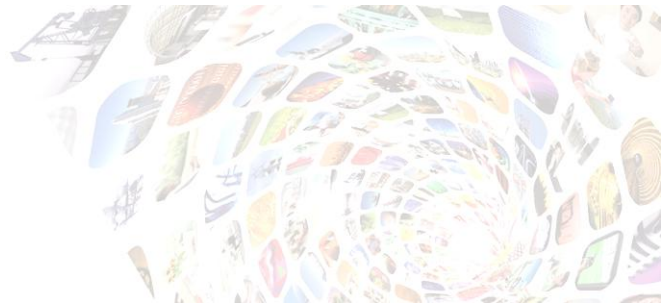


## Features

<b>Switching Mode</b>	Store and forward mode; Non-blocking switching
<b>Packet Forwarding</b>	MTU: 9,712 byte (default); DLF control
<b>Bandwidth Profile</b>	Rate limiting:1,048,576Kbps; Burst configuration (Max 130KB); Ingress rate limit per port; Rate limit per VLAN; Increments:64Kbps (64K-1M)/1Mbps(1-100M)/10Mbps (100-1000M)
<b>VLAN</b>	IEEE 802.1Q VLAN: 4K active VLANs; port-based VLAN; GVRP, 256 max dynamic VLAN
<b>Storm Control</b>	Broadcast/multicast/unicast/DLF storm control; Control mode: global, bps, burst; Default burst: 8KB
<b>Multicast</b>	1K multicast addresses; Static multicast group; IGMP Snooping V1/V2/V3; Multicast filtering & unknown multicast discarding; MVR
<b>Mirror</b>	Mirroring per port; Separate mirroring configurations for ingress & egress ports
<b>Port Loopback Detection</b>	Auto shutdown individual ports upon fault signals; Auto-detection interval can be set
<b>MAC Address Table</b>	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;
<b>Q-in-Q</b>	Port/flexible Q-in-Q; 682 flexible Q-in-Q configurable items; Egress-direction VLAN-mapping
<b>Link Aggregation</b>	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)
<b>Flow Control</b>	IEEE 802.3x in full duplex mode; Back pressure in half duplex mode; Separate configurations for ingress &egress
<b>STP</b>	STP, RSTP & MSTP (64 instances); 256 STG
<b>Digital Diagnostic</b>	SFP digital diagnostic function
<b>Port Backup</b>	Supported
<b>Transparent Relay</b>	BPDU; DOT1X; LACP; CDP; VTP; PVST
<b>Advanced</b>	
<b>OAM</b>	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)
<b>Cluster Management</b>	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
QoS	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, port priority
Ethernet Ring	Raisecom private ring protocol; Up to 8 rings; 124 devices on one ring; switching time $\leq 50$ ms
ACL	MAC/IP-based ACL; ACL map (L2~L4 byte)
Safety Features	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	EPL, EVPL, ELAN



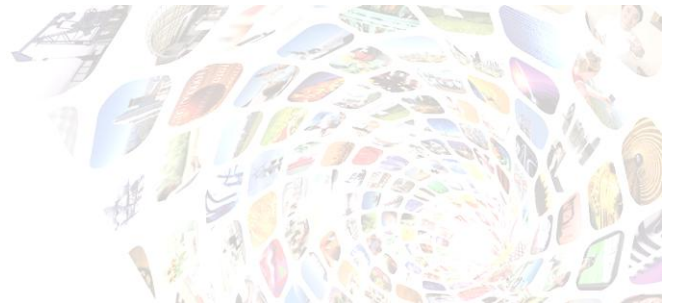
Time Management	Time zone; Time modification; Support SNTP & NTP
Software Upgrade	Xmodem/FTP upgrade in BOOTROM FTP/TFTP
Auto Configuration	Supported
DHCP	DHCP Client/Snooping/Opt82/Relay
Lightning Proof	Up to 6KV (CM&DM) lightning proof ability on all power and communication interfaces

## 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

## 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
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<b>Physical Interface</b>	Management port: 1 console (RJ45); Client interfaces: 24 x 100BASE-X ports; Network interfaces: 4 x COMBO (4x 100/1000Base-X SFP; 4x 10/100/1000M Base-T RJ45 ports);	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
<b>Power Specs</b>	AC: 90~264V, 47~63Hz; DC: -48V; Full load: ≤15.0W	
<b>User Conditions</b>	Operating temp: 0~55 °C (32~122 °F); Storage temp: -25~70 °C (-13~158 °F); Humidity: 10~90% non-condensing	
<b>Dimensions</b>	440(L) x 220(W) x 44(H) mm <sup>3</sup>	
<b>Weight</b>	≤ 3.0Kg	

## Ordering Information

ISCOM2828F-AC	24 x 100Base-X, 4 x COMBO (4 x 100/1000Base-X + 4 x 10/100/1000Base-T); Single AC power supply
ISCOM2828F-DC	24 x 100Base-X, 4 x COMBO (4 x 100/1000Base-X + 4 x 10/100/1000Base-T); Single DC power supply
RPA0401-220S12	External AC redundancy power, input: 100~240V, 1A, 50/60Hz
RPD0401-48S12	External DC redundancy power, input: -48V, 1.5A