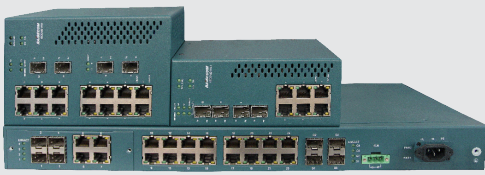


ISCOM21xx-I Series ISCOM2110-I, 2118-I, 2128-I

Managed Industrial-grade Ethernet Switches



► Recommended Products



Top: 2118-I (left), 2110-I (right)
Bottom: 2128-I

ISCOM21xx-I series are managed industrial-grade Ethernet switches manufactured by Raisecom, which serve as ideal solutions for outdoor networking deployment in industry, transportation, military, utility and residential areas.

ISCOM21xx-I series are intelligent L2 aggregation switches that deliver advanced QoS, standard OAM & CFM tools, enhanced network security and reliable Fast and Gigabit Ethernet connectivity under harsh operating conditions.

► Highlights

Sophisticated Network Security Assurance	Networks are secured with port-isolation within individual VLAN, selective Q-in-Q function, MAC table threshold per port, broadcast/multicast/DLF storm control, unique port loopback detection, STP, RSTP & MSTP, and DHCP Client/Snooping/Option82.
Enhanced Industrial-grade Hardware	Devices are designed and manufactured to adapt to deployments in harsh environments: 1) performances and reliabilities are guaranteed under extreme thermal conditions from -40 °C to 85°C (-40°F~185°F); 2) products are also featured to be dust-proof (IP40 level) and lightning-proof up to 6,000V (IEC61000-4-5:2000).
Carrier Ethernet QoS	IEEE802.1p based QoS is supported in terms of 4 queues per port, SP/WRR/SP+WRR, bandwidth control, IGMP snooping, and multicast VLAN registration (MVR) to save bandwidth and optimize corresponding services.
Premium OAM Options	Comply with IEEE802.1ag CFM, IEEE802.3ah OAM, and ITU-T Y.1731 performance monitoring; support TFTP, FTP, TELNET, SSH management options; offer DHCP client function; compatible with Raisecom "OneTouch" network management system.
Advanced Technology	Advanced Layer-2 switching fabric and various port types ensure excellent wire-speed for forwarding capability.

ISCOM21xx-I Series

Highlights Applications Features Specifications Compliances Order Info

► Features

General	
Switching Mode	Store and forward mode; Buffer size: ISCOM2110-I: 128KB; ISCOM2118-I: 128KB; ISCOM2128-I: 384KB
Packet Forwarding	MTU: ISCOM2110-I: 1,632 byte; ISCOM2118-I: 1,632 byte; ISCOM2128-I: 2,048 byte; DLF forward control
Bandwidth Profile	Rate limit:1,000,000Kbps; Ingress and/or Egress per port; Rate limit based on packet type/ queue; Increments: 64Kbps (64K-1M), 1Mbps (1-100M), 10Mbps (100-1000M)
Strom control	Broadcast/multicast/unicast-DLF strom control; Control mode: global, pps
VLAN	IEEE 802.1Q VLAN; 4K active VLANs; Port PVID Overviews
Q-in-Q	Port Q-in-Q; ISCOM2128-I only: Flexible QinQ; 3,328 flexible QinQ configuration entries; Egress VLAN swapping; N:1 VLAN swapping (both egress and ingress); 416 N:1 VLAN swapping per device; 16 N:1 VLAN swapping per port
Link Aggregation	Up to 5 groups and 8 ports per group; Load balance based on CRC harsh value of MAC address
Mirroring	N:1 port mirroring; Mirroring per VLAN; Separate mirroing configurations for ingress & egress ports;
MAC Address Table	IEEE802.1Q 8K MAC address; Add/remove MAC address; View MAC address statistic; Search MAC address; Aging time:15-3,825s; MAC table threshold per port; MAC table limit:1-255;
STP	STP, RSTP & MSTP; 64 instances
Flow Control	IEEE 802.3x in full duplex mode; Back pressure in half duplex mode; Port-based configurations
Multicast	1K multicast addresses; Static multicast group; IGMP Snooping V1/V2/V3; Multicast filtering & unknow multicast discard; MVR
Port Loopback Detection	Auto shutdown individual ports upon fault signals
Port Backup	Support
Transparent Relay	BPDU; DOT1X; LACP
Digital Diagnostic	SFP digital diagnostic function
Ethernet Ring	RAISECOM Ethernet ring: ≤50ms recovery time; Up to N Ethernet rings with max 124 devices in each ring: ISCOM2110-I: N=5; ISCOM2118-I: N=9; ISCOM2128-I: N=14
Advanced	
OAM	IEEE802.3ah OAM including discovery, link performance, remote loopback, fault detection & performance stats per OAM Master; Extended OAM (configure on remote switches)
CFM	IEEE802.1ag, ITU-T Y.1731 protocol, support 256 MEP, 256 MA;

Continued in the next page

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► Features

Advanced	(cont'd)		
SLA	Layer-2/Layer-3 SLA (frame delay, jitter & packet loss)	Cluster Management	RAISECOM Neighbor Discovery Protocol (RNDP); RAISECOM Topology Discovery Protocol (RTDP); RAISECOM Cluster Management Protocol (RCMP); RAISECOM Cluster Program
QoS	CoS/DSCP to queue mapping; Port priority override; Port TRUST mode; TRUST CoS/DSCP priority; Global queue scheduling; 4 queues per port; SP/WRR/SP+WRR; WRR weight range:1-125;	Time Management	Timezone; Time modification; DST; System time synchronization by SNTP Client
Filter	Switch access IP packet filter	LLDP	Discovery remote base on link layer; Get remote basic information
Safety Features	Client classification; RADIUS; TACAS+; Binding of MAC address & port; Port protection; DOT1X; IP source guard; Dynamic ARP inspection	DHCP	DHCP Client/Snooping/Opt82
Maintenance	Debug information output; PING (Packet Internet Groper); Telnet Client; Port statistic; Port dynamic statistic	Error Tolerance & Redundancy	System error report; Fast recovery during serious error
Scheduling	System task scheduling	Auto Configuration	Support
Software Upgrade	Xmodem/FTP upgrade in BOOTROM FTP/TFTP	Password recovery	Support
System Management	CLI/ARP/Telnet/Console/SNMP/Web; management; 16 Layer 3 interfaces, Super VLAN, max 4K VLANs; SSHV2; RMON1,2,3 & 9; Bridge MIB (RFC1493); RAISECOM NMS; System log; Hierarchical alarms; Link alarm per port; Keepalive report; Fault pass through; Module information management	MEF 9 & 14	Support
		Industrial-grade	
		Extended Temp Range	Operating temp:-40~85°C (-40~185°F)
		Dust-proof	IP40 level dust prevention
		Lightning-proof	IEC61000-4-5:2005 Up to 6,000V in common mode; 3,000V in differential mode

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Specifications

Product	ISCOM2110-I	ISCOM2118-I	ISCOM2128-I
Performance	Switching fabric: 5.6Gbps	Switching fabric: 7.2Gbps	Switching fabric: 12.8Gbps
Capacity	32MB SDRAM; 8MB flash; 128KB switch buffer; 1K IGMP groups	32MB SDRAM; 8MB flash; 128KB switch buffer; 1K IGMP groups	32MB SDRAM; 8MB flash; 384KB switch buffer; 1K IGMP groups
MTU	1,632Bytes	1,632Bytes	2,048Bytes
Indicators	Power Supply (flashing); System (flashing); 10/100BASE-T: FDX, 100M & LINK/ACT indicators; 1000BASE-X SFP: LNK/ACT indicators		
Port Specs	6 x10/100BASE-T; 2 x 100BASE-FX SFP; 2 x 100/1000BASE-X SFP; 1 x console (RJ45); 1 x SPDT alarm port;	14 x10/100BASE-T; 2 x 100BASE-FX SFP; 2 x 100/1000BASE-X SFP;	16 x 10/100BASE-T; 4 x 1000BASE-X SFP; Extended slot: - 8 x 10/100BASE-T; - 8 x 100BASE-FX SFP; - 4 x 10/100BASE-T + 4 x 100BASE-FX SFP;
	Management port: 1 console (RJ45); Serial port config: 9600bps/8bit/none parity/1 stop bit/none flow control		
Power Specs	DC 24: 18V~36V DC 28: 35V~75V DC 110: 77V~165V DC 220: 120V~370V AC 220: 90V~264V		
	≤10W (full load)	<13W (full load)	<25W (full load)
User Conditions	Storage temp: -40~85°C (-40~185°F) Operating temp: -40~85°C (-40~185°F) Humidity: 5~95% non-condensing		
Dimensions	146(L) x 130(W) x 59(H) mm3 5.7(L) x 5.1(W) x 2.3(H) cub. inch	146(L) x 130(W) x 98(H) mm3 5.7(L) x 5.1(W) x 3.9(H) cub. inch	440(L) x 360(W) x 44(H) mm3 17.3(L) x 14.2(W) x 1.7(H) cub. inch
Weight	<1.0kg (<2.2lbs)	<1.0kg (<2.2lbs)	<3.7kg (<8.2lbs)

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Highlights Applications Features Specifications Compliances Order Info

Compliances

Safety	N/A (application in process)		
MIB Management	802-1x-2004-MIB	MIB Management (cont'd)	RCCFM
	DISMAN-PING-MIB		RCDOT1AG
	DOT3-OAM-MIB		RCQINQ
	IEEE8021-CFM-MIB81		RCSLA
	RFC1213		RMONMIB
	RFC1493		SWITCH-AUTOCONFIG-MIB
	RFC1757		SWITCH-DHCPCLIENT-MIB
	RFC1907		SWITCH-DHCPOPTION-MIB
	RFC2233		SWITCH-DHCPSNOOPINGMIB
	RFC2571		SWITCH-ERING-MIB
	RFC2572		SWITCH-IFEXTEND-MIB
	RFC2573N		SWITCH-L3FILTER-MIB
	RFC2573P		SWITCHLINKSTATETRACK-MIB
	RFC2573T		SWITCH-MACCONFIG-MIB
	RFC2574		SWITCH-MSTP-MIB
	RFC2575		SWITCH-MVR-MIB
	RFC2665		SWITCH-NTP-MIB
	RFC2674P		SWITCH-PORTBACKUP-MIB
	RFC4363Q		SWITCH-PORTMIRROR-MIB
	TRACEROUTE		SWITCH-PORTSTATISTICMIB
	RAISECOM-ACL-MIB		SWITCH-RATELIMIT-MIB
	RAISECOM-COMMONMANAGEMENT-MIB		SWITCH-RSTP-MIB
	RAISECOMDOT1XMIB		SWITCH-SNMP-MIB
	RAISECOM-EXTEND-OAMUPGRADE-MIB		SWITCH-SYSTEM-MIB
	RAISECOM-EXTOAM-MIB		SWITCH-TRUNK-MIB
	RAISECOM-KEEPALIVE-MIB		SWITCH-VLANCFG-MIB
	RAISECOM-OAM-MIB		
	RAISECOM-OPTICALMONITOR-MIB		
	RAISECOM-PPPOEAGENTMIB		
	RAISECOM-QOS-MIB		
	RAISECOM-RCMP-MIB		
	RAISECOM-RELAY-MIB		
	RAISECOM-REMOTEMANAGEMENT-LOCAL-MIB		
RAISECOM-REMOTEMANAGEMENT-REMOTE-MIB			
RAISECOM-RNDP-MIB			
RAISECOM-RTDP-MIB			
RAISECOM-SCHEDULE-MIB			
RAISECOM-SYSLOGSERVICE-MIB			
SWITCH-SYSTEM-MIB			
		Standards	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 QoS Prioritization
			IEEE 802.3x Flow Control
			IEEE 802.3ah OAM
			IEEE 802.1ag Connectivity Fault Management
			ITU Y.1731 Services OAM
			Static Routing
			IGMPv1/v2/v3 Multicast
			RMON I and II Standards
			SNMPv1/v2/v3
			MEF9 & 14

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► Order Info

ISCOM2110-I-DC (24V)	6 x 10/100BASE-T, 2 x 100BASE-FX SFP, 2 x 100/1000BASE-X SFP; dual +24V DC power supply
ISCOM2110-I-DC	6 x 10/100BASE-T, 2 x 100BASE-FX SFP, 2 x 100/1000BASE-X SFP; dual 48V DC power supply
ISCOM2110-I-DC (+110V)	6 x 10/100BASE-T, 2 x 100BASE-FX SFP, 2 x 100/1000BASE-X SFP; single +110V DC power supply
ISCOM2110-I-AC	6 x 10/100BASE-T, 2 x 100BASE-FX SFP, 2 x 100/1000BASE-X SFP; single AC power supply
ISCOM2118-I-DC (24V)	14 x 10/100BASE-T, 2 x 100BASE-FX SFP, 2 x 100/1000BASE-X SFP; dual +24V DC power supply
ISCOM2118-I-DC	14 x 10/100BASE-T, 2 x 100BASE-FX SFP, 2 x 100/1000BASE-X SFP; dual 48V DC power supply
ISCOM2118-I-DC (+110V)	14 x 10/100BASE-T, 2 x 100BASE-FX SFP, 2 x 100/1000BASE-X SFP; single +110V DC power supply
ISCOM2118-I-AC	14 x 10/100BASE-T, 2 x 100BASE-FX SFP, 2 x 100/1000BASE-X SFP; single AC power supply
ISCOM2128-I-DC/D (+24V)	16 x 10/100BASE-TX, 4 x 1000BASE-X SFP, extended slot available in 1) 8 x 10/100BASE-T; 2) 8 x 100BASE-FX SFP; 3) 4 x 10/100BASE-T + 4 x 100BASE-FX SFP; dual +24V DC power supply
ISCOM2128-I-DC/D	16 x 10/100BASE-TX, 4 x 1000BASE-X SFP, extended slot available in 1) 8 x 10/100BASE-T; 2) 8 x 100BASE-FX SFP; 3) 4 x 10/100BASE-T + 4 x 100BASE-FX SFP; dual 48V DC power supply
ISCOM2128-I-DC/D (+110V)	16 x 10/100BASE-TX, 4 x 1000BASE-X SFP, extended slot available in 1) 8 x 10/100BASE-T; 2) 8 x 100BASE-FX SFP; 3) 4 x 10/100BASE-T + 4 x 100BASE-FX SFP; dual +110V DC power supply
ISCOM2128-I-AC/D	16 x 10/100BASE-TX, 4 x 1000BASE-X SFP, extended slot available in 1) 8 x 10/100BASE-T; 2) 8 x 100BASE-FX SFP; 3) 4 x 10/100BASE-T + 4 x 100BASE-FX SFP; dual AC power supply
ISCOM2128-I-DC/S (+24V)	16 x 10/100BASE-TX, 4 x 1000BASE-X SFP, extended slot available in 1) 8 x 10/100BASE-T; 2) 8 x 100BASE-FX SFP; 3) 4 x 10/100BASE-T + 4 x 100BASE-FX SFP; single +24V DC power supply
ISCOM2128-I-DC/S	16 x 10/100BASE-TX, 4 x 1000BASE-X SFP, extended slot available in 1) 8 x 10/100BASE-T; 2) 8 x 100BASE-FX SFP; 3) 4 x 10/100BASE-T + 4 x 100BASE-FX SFP; single 48V DC power supply
ISCOM2128-I-DS/S (+110V)	16 x 10/100BASE-TX, 4 x 1000BASE-X SFP, extended slot available in 1) 8 x 10/100BASE-T; 2) 8 x 100BASE-FX SFP; 3) 4 x 10/100BASE-T + 4 x 100BASE-FX SFP; single +110V DC power supply
ISCOM2128-I-AC/S	16 x 10/100BASE-TX, 4 x 1000BASE-X SFP, extended slot available in 1) 8 x 10/100BASE-T; 2) 8 x 100BASE-FX SFP; 3) 4 x 10/100BASE-T + 4 x 100BASE-FX SFP; single AC power supply
ISCOM2128-I-AC_DC	16 x 10/100BASE-TX, 4 x 1000BASE-X SFP, extended slot available in 1) 8 x 10/100BASE-T; 2) 8 x 100BASE-FX SFP; 3) 4 x 10/100BASE-T + 4 x 100BASE-FX SFP; redundant AC/DC power supply