IRS5048F4R-48P-DC

Layer 3 Rack Mounted 48 Ports Gigabit PoE Switch with 4 10G SFP+ uplink ports



Product Description:

The IRS5048F4R-48P-DC is a high-performance industrial-grade Layer 3 PoE switch designed for mission-critical and harsh environment applications. Engineered for maximum reliability and network resilience, it features 48 Gigabit PoE ports and 4 high-speed 10G SFP+ uplink ports, supporting flexible 20ms redundancy ring technology for uninterrupted operation.

With dual-channel DC power input, an IP40-rated rugged Aluminum housing, and an extended operating temperature range of -40°C to 75°C, this rack-mountable switch ensures stable performance in demanding industrial settings such as transportation, energy, and outdoor installations. Ideal for deployments where connectivity and uptime are essential, the IRS5048F4R-48P-DC delivers robust switching, high-power PoE supply, and carrier-grade network reliability.

Product Features:

- IEEE802.3, IEEE 802.3u, IEEE802.3ab, IEEE802.3z, IEEE802.3ae，IEEE802.3af, IEEE802.3at
- Provides 48*10/100/1000 Base-TX ports
- Provides 4*10G SFP+ ports
- High back-plane bandwidth 176Gbps
- 2 channels 44-57V DC Power input
- Support MLD Snooping
- Support standard IP/ Extend IP / MAC IP / ARP ACL
- Support IGMP snooping for Multi-media application
- Support Port mirror and bandwidth control
- Support IEEE802.3x Flow control
- Support Port Based VLAN / 802.1Q Tag VLAN
- Support IEEE802.3ad Port trunk with LACP
- Support Spanning tree protocol IEEE802.1d/802.1w/802.1s
- Support IEEE 802.1p class of service

- Support IEEE 802.1x user authentication
- Support Broadcast storm filter
- Support DHCP client, DHCP relay, DHCP server, DHCP snooping
- Support Static Route, Policy Route, RIP, OSPF, VRRP
- Support System event log
- Support command line interface management
- Management by Web / SNMP / SSH / Telnet / Console
- IP40 Aluminum case
- 200,000 hours MTBF (Parts count reliability prediction)
- EMI: FCC Part 15, CISPR (EN55022) Class A
- EMS: EN61000-4-2 (ESD), EN61000-4-3 (RS)
- EN61000-4-4 (EFT), EN61000-4-5 (Surge)
- EN61000-4-6 (CS), EN61000-4-6 (Common Mode Conduction)
- Industrial: IEC6100-6-2
- Railway: EN50155, EN50121-4
- Transportation: NEMA TS-2
- CE Class A, LVD, ROHS2.0
- Warranty: 5 years

Product Specifications：

Attributes	
Networking Interfaces	48 x 10/100/1000 Mbps RJ45 Ethernet Ports 4 x 10Gbps SFP+ Ethernet Ports
Management Interface	Console
Alarm Terminal	Power fail alarm
LED Indicators	Pwr1, Pwr2, Link/Act, PoE
Performance	
Switching Capacity	176 Gbps
Forwarding Capacity	130.9 Mpps
Forwarding Mode	Store and Forward
Packet Buffer Memory	16 Mbit
RAM for CPU	2 Gbit
Flash Memory	256 Mbit
MAC Address Table	32K
Max. Jumbo Frame size	12KB
ACL Table	4K
VLAN Quantity	4K
VLAN Interface	1K
Multicast groups	4K
Routing Host	8K IPv4 or 2K IPv6
Routing Entries	12K IPv4 or3K IPv6
Port Queues	8
PoE Budget	1200W

Physical	
Dimensions	440 x 250 x 44 mm
Weight	5KG
Operating Temperature	-40 to 75℃
Storage Temperature	-45 to 85℃
Operating Humidity	5 to 95% Noncondensing
Power Method	44-57VDC
Max. Power Consumption	Including PoE Output: 1300W max Excluding PoE Output: 60W max
EMC Safety	FCC, CE, RoHS
Reliability	200,000 hours MTBF
Power over Ethernet	
PoE Interfaces	Ports 1-48
PoE Standard	IEEE802.3af, IEEE802.3at
Max. PoE Wattage per Port	30W
PoE Voltage	54VDC
PoE Pin Assignment	V- (RJ45 Pin1,2), V+ (RJ45 Pin 3,6)
PoE Management	Port-base PoE status view and control
Port Configuration	
Enable and Disable	Support control enable and disable
Auto-Negotiation	Support force port mode and speed
Flow Control	Support IEEE802.3x full-duplex Support half-duplex backpressure
Storm Control	Support broadcast, multicast and DLF package rate limit
Port Mirroring	Support many to one mirroring
Rate Limit	Support Port input and output rate limit
Link Aggregation	Support manual Link Aggregation Support LACP Up to 8 maximum aggregation groups, each containing up to 8 ports
Aggregation Strategy	Source MAC / Destination MAC / Source Destination MAC Source IP / Destination IP / Source Destination IP
Port Protection	Each port can be configured into isolated protected port from each other
MAC Configuration	
MAC Address Table Management	Support
Transfer Mode	Support IVL transfer mode
Static MAC Address	Support
MAC Binding	Support
MAC Address Filter	Support
MAC Quantity Limitation	Support limit the number of MAC-addresses Learning per port
VLAN Configuration	
VLAN Based on 802.1Q	Support
MAC-Based VLAN	Support
IP-Based VLAN	Support
Protocol-Based VLAN	Support
Guest VLAN	Support

Private VLAN	Support
Voice VLAN	Support
VLAN Mapping	Support 1:1 mapping
QinQ	Support basic QinQ Support flexible QinQ
Reliability Protocol	
Spanning Tree	Support STP/RSTP/MSTP
BPDU Guard	Support
BPDU Filter	Support
Port Loop Detection	Support
EAPS Protocol	Support RFC3619
ERPS Protocol	Support
DLDP Protocol	Support DLDP
LLDP Protocol	Support LLDP and LLDP-MED
UDLD Protocol	Totally compatible with UDLD protocol of CISCO
VLLP (VRRP Layer-2 Loop Protection)	Support, Only used with VRRP
L3 Routing	
ARP	Support static and dynamic ARP
Static Route	Support static route based on IPv4 and IPv6
RIP	Support RIP v1/v2 & IPv6 RIPng
OSPF	Support OSPFv2 & IPv6 OSPFv3
BGP	Support BGP4 & IPv6 BGP4+
Policy Route	Support
VRRP	Support
Multicast	
Static Multicast MAC Address	Support
IGMP SNOOPING	Support
IGMP Querier	Support
IGMP Filter	Support
MVR	Support
GMRP	Support
PIM-SM	Support
Access Control List (ACL)	
Based on Standard IP	Support
Based on Extend IP	Support
Based on MAC IP	Support
Based on MAC ARP	Support
Based on time	Support
Port Filtering	Support
Quality of Service (QOS)	
Scheduling Mode	Support WRR，RR，WDRR，SP
Sorting Based on Port	Support
Sorting Based on 802.1p	Support
Sorting Based on DSCP	Support

Sorting Based on ACL	Support
QoS Policy	Support packets mapping to queue Support COS or DSCP Remarking Support rate limits of data flow Support data flow statistics Support mirroring of data flow
DHCP	
DHCP Client	Support
DHCP Relay	Support
DHCP Server	Support
DHCP Snooping	Support
DHCP option 82	Support
Security	
Administrative Security	Support start and end TELNET, WEB and SNMP serve Support TELNET, WEB and SNMP serve binding with Standard IP ACL Support control the number of user for TELNET
CPU Protect	Switch self-security protect, forbid flow attack
IP-MAC Address Binding	Support binding between static configuration IP, MAC and Port
AAA	Support 802.1x protocol Support RADIUS protocol Support RADIUS server authentication authorization and bill Support MAC-based 802.1X authentication. Support 802.1x guest VLAN
DHCP SNOOPING	Support dynamic ARP binding to prevent ARP spoofing Support dynamic IP, MAC port binding Support stationary port connect to DHCP server, to prevent privately connect to DHCP sever
Prevent ARP Spoofing	Support manual configure ACL rule based on MAC ARP prevent ARP spoofing Support DHCP SNOOPING function, switch dynamically binding ARP and port, when the DHCP get IP address , to prevent ARP spoofing
IPv6	
IPv4/IPv6 Dual Protocol Stack	Support
IPv6 Address	Support manual address configuration and stateless address auto-configuration
IPv6 Neighbor Discovery	Support
ICMPv6	Support
IPv6 Path MTU Discovery	Support
Management Feature	
CLI Management	Support Console, Telnet and SSH Support multiple TELNET connections based on IPv4 and IPv6 Support multiple SSH connections based on IPv4 and IPv6
WEB Management	Support HTTP / HTTPS based on IPv4 and Ipv6
SNMP Management	Support SNMP protocol Support SNMP TRAP Support standard and private MIB
User management	Support multi-user management
TACACS+	Support switch authentication via TACACS+ server remote username and password

	Support password encryption in PAP and CHAP mode Support TACACS+ server to authorize the switch's commands Support TACACS+ based on IPv4 and IPv6
Show CPU Utilization	Support
Show RAM Utilization	Support
Log Management	Support local log management Support SYSLOG
RMON	Support RMON 1, 2, 3 and 9 groups
Configuration Download / Upload	Support Web / TFTP transmission based IPv4 and Ipv6
Upgrade Firmware	Support Web / TFTP transmission based IPv4 and Ipv6
Timer Management	Support local timer management Support SNTP protocol get clock
Debugging Tools	
PING	Support
PING6	Support
TRACEROUTE	Support
TELNET Client	Support
SSH Client	Support
Package List	
Industrial PoE Switch	1pcs
User Manual	1pcs
Power Cord	1pcs
DB9 to RJ45 Cable	1pcs
Rack Mount Kit	2pcs
Rubber Feet	4pcs
Warranty Card	1pcs

Order Information：

Switch Models	
IRS5048F4R-24P-DC	48 Ports Gigabit Industrial PoE Switch with 4 10G SFP+ uplink ports, 2 DC power input
SFP Modules	
XGSFP-RJ45	10G SFP module, RJ45 port
XGSFP-M-LC-01	10G SFP module, multi-mode, 500M, 850nm, LC
XGSFP-S-LC-20	10G SFP module, single-mode, 20km, 1310nm , LC
XGSFP-S-LC-40	10G SFP module, single-mode, 40km, 1310nm, LC
XGSFP-S-LC-80	10G SFP module, single-mode, 80km, 1550nm, LC