

IRS5008F4-BP

8 Ports Gigabit Industrial Bypass Switch with 4*10G SFP+ and 4* Duplex LC(Bypass) Ports



Product Description:

The **IRS5008F4-BP** is a rugged, industrial-grade 8 Ports Gigabit Layer 3 **fiber optic bypass switch** with **4 duplex LC connectors**, designed to ensure **uninterrupted network connectivity** during power failures. It features an **automatic optical bypass function**, instantly rerouting traffic to prevent link disruption when power is lost—critical for mission-critical networks where downtime is unacceptable.

Key Features & Benefits

- ✓ **Automatic Bypass Protection** – Seamlessly switches to "**Bypass Mode**" during power loss, maintaining fiber link integrity.
- ✓ **Ultra-Fast Switching & Low Loss** – Fiber-to-fiber technology ensures **minimal latency (<1ms)** and **ultra-low insertion loss**.
- ✓ **Dual-Fiber & Single-Fiber Support** – Compatible with both **2-core and 1-core fiber** configurations.
- ✓ **Industrial Reliability** – Built for harsh environments, including **power substations, transportation systems, and factory automation**.
- ✓ **Two Operational Modes:**

- **In-Line Mode (Power On):** Normal operation, forwarding Ethernet traffic through the local switch.

- **Bypass Mode (Power Off):** Directly passes traffic between remote switches, bypassing the local device.

Typical Applications

- **Power Substation Automation**

- **Railway & Traffic Monitoring Systems**

- **IP Surveillance & Security Networks**

- **Industrial IoT & Factory Automation**

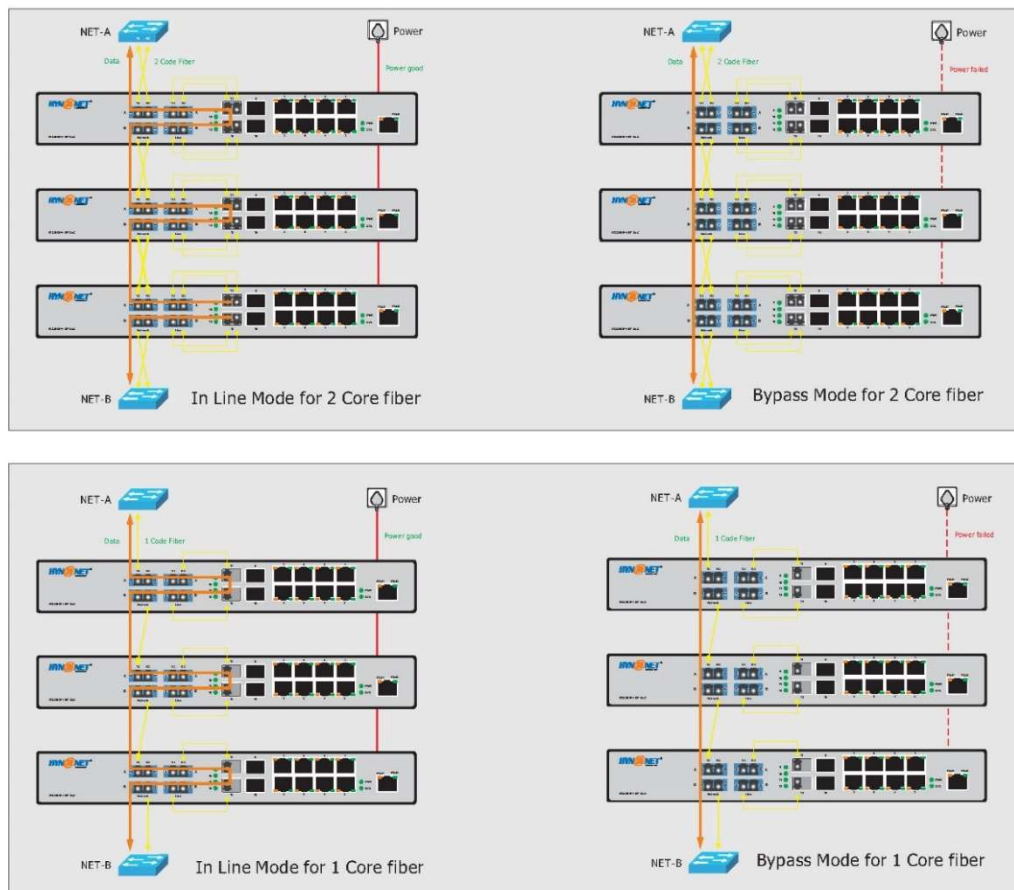
- **Mission-Critical Communication Systems**

How It Works

1. **Normal Operation (Powered):** Traffic flows through the local network switch.

2. **Power Failure:** Instantly activates **Bypass Mode**, creating a direct optical link between remote devices.

3. **Power Restoration:** Automatically reverts to **In-Line Mode**, resuming standard operation.



Product Specifications:

Attributes	
Networking Interfaces	8 x 10/100/1000Mbps RJ45 Ports 4 x 10Gbps SFP+ Slots 4 x Duplex LC (Support Bypass)
Management Interface	Console
LED Indicators	Power, Link/Act
Optical path	
Optic Interfaces	LC
Optic Mode	Single Mode
Optic Wavelength	1260~1650nm
Bypass function	Support auto-detect power supply interruption so that switch to bypass mode to stable network operation is possible
Bypass recovery time	Less than 20ms.
Performance	
Switching Capacity	96 Gbps
Forwarding Capacity	71.42 Mpps
Forwarding Mode	Store and Forward
Packet Buffer Memory	12 Mbit
RAM for CPU	2 Gbit
Flash Memory	512 Mbit
MAC Address Table	16K
Max. Jumbo Frame size	16KB
ACL Table	1K

VLAN Quantity	4K
VLAN Interface	512
Multicast groups	512
Routing Host	512
Routing Entries	64
Port Queues	8
Physical	
Dimensions	330 x 200 x 44 mm
Weight	3.5KG
Operating Temperature	-40 to 70°C
Storage Temperature	-40 to 80°C
Operating Humidity	5 to 90% Noncondensing
Power Method	100-240VAC, 50/60Hz
Max. Power Consumption	15W
EMC Safety	FCC, CE, RoHS
Reliability	Build-in two AC-DC power supply or two DC Power Input
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
DLDAP Protocol	Support DLDAP
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
IGMP	Support IGMP v1/v2/v3
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 option 82	Support
DHCP Snooping	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	
Switch	1pcs
User Manual	1pcs
Power Cord	1pcs
DB9 to RJ45 Cable	1pcs
Rack Mount Kit	2pcs
Rubber Feet	4pcs

Order Information:

Switch Models	
IRS5008F4-BP-AC	8 Ports Gigabit Industrial Switch with 4*10G SFP+ and 4* Duplex LC(Bypass) Ports, AC Power Input
IRS5008F4-BP-DC	8 Ports Gigabit Industrial Switch with 4*10G SFP+ and 4* Duplex LC(Bypass) Ports, DC Power Input