

IRS1808F4-BP

8 Ports Gigabit Layer 2 Industrial Bypass Switch with 4*1G SFP and 4* Duplex LC(Bypass) Ports



Product Description:

The **IRS1808F4-BP** is a rugged, industrial-grade 8 Ports Gigabit Layer 2 **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**

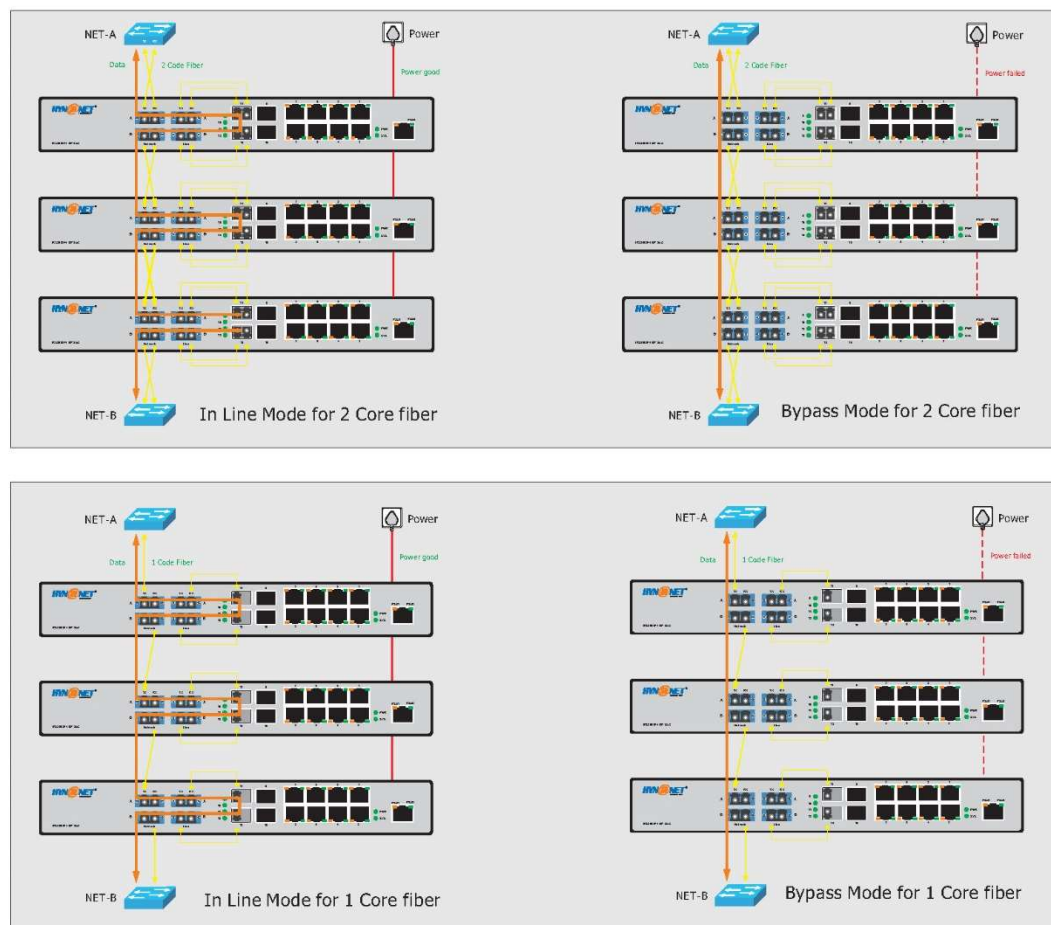
- **Mission-Critical Communication Systems**

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 1Gbps 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	24 Gbps
Forwarding Capacity	17.9 Mpps
Forwarding Mode	Store and Forward
Packet Buffer Memory	4.1 Mbit
RAM for CPU	1 Gbit
Flash Memory	128 Mbit
MAC Address Table	8K

Max. Jumbo Frame size	16KB
ACL Table	512
VLAN Quantity	4K
VLAN Interface	32
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
Voice VLAN	Support
Guest VLAN	Support
Private VLAN	Support
VLAN Mapping	Support 1:1 mapping
Double VLAN Markup	Support basic QinQ
Reliability Protocol	
Spanning Tree	Support STP/RSTP/MSTP

BPDUGuard	Support
BPDUGFilter	Support
Port Loop Detection	Support
EAPS Protocol	Support RFC3619
ERPS Protocol	Support G.8032/Y.1344
LLDP Protocol	Support LLDP and LLDP-MED
UDLD Protocol	Totally compatible with UDLD protocol of CISCO
Host Routing	
Static ARP	Support
Static Routing	Support
Multicast	
Static Multicast MAC Address	Support
IGMP SNOOPING	Support
MVR	Support
GMRP	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, SP, WFQ
Sorting Based on Port	Support
Sorting Based on 802.1p	Support
Sorting Based on DSCP(DiffServ)	Support
Sorting Based on ACL Data Flow	Support
QoS Strategy	Support packet mapped to the corresponding output queue Support to modify the packet's COS and DSCP sign Support limit of data flow Support statistics of data flow Support mirroring of data flow
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	
ICMPv6	Support
IPv6 Neighbor Discovery	Support
MUD Snooping	Support
IPv6 Telnet	Support
Management Feature	
CLI Management	Support serial port management Support TELNET management Support SSH management
WEB Management	Support
SNMP Management	Support SNMP protocol Support SNMP TRAP Support standard and private MIB
User management	Support multi-user management
Show CPU Utilization	Support
Show RAM Utilization	Support
TACACS+	Support TACACS+ server remote user name and password authentication Support PAP and CHAP password encryption Support TACACS+ server command authorization
Log Management	Support
RMON	Support RMON 1,2,3,9 group
Cluster Management	Support neighbor discovery protocol Support topology discovery protocol Support manual and automated join cluster group Support cluster unification management
OAM	Support 802.3ah Support 802.1ag
DHCP Server	Support serving IP addresses for multiple DHCP pools/scopes
DHCP Client	Support
Configuration Download / Upload	Support
Upgrade Firmware	Support
Timer Management	Support local timer management Support SNTP protocol get clock
Debugging Tools	
PING	Support
TRACEROUTE	Support
TELNET Client	Support
Package List	
POE Switch	1pcs
User Manual	1pcs
Power Cord	1pcs
DB9 to RJ45 Cable	1pcs
Rack Mount Kit	2pcs
Rubber Feet	4pcs

Order Information:

Switch Models	
IRS1808F4-BP-AC	8 Ports Gigabit Industrial Switch with 4*1G SFP and 4* Duplex LC(Bypass) Ports, AC Power Input
IRS1808F4-BP-DC	8 Ports Gigabit Industrial Switch with 4*1G SFP and 4* Duplex LC(Bypass) Ports, DC Power Input