10-port 10/100M/1000M

L2+ Managed PoE Industrial Ethernet Switch

OVERVIEW

The DR6010P8C2F is a full Gigabit L2+ managed industrial PoE Ethernet fiber switch independently developed by DevRay. It has 8*10/100/1000Base-TPoE ports Port 1-8 can support IEEE802.3af/at standard. Single port maximum power 30W. and 2*100/1000Base-X SFP fiber ports. Each port can support wire-speed forwarding. The switch integrates the bypass optical switching module. When the power supply of the switch is interrupted, the optical fiber is automatically switched to the bypass-through state to avoid communication interruption due to switch failure and ensure the reliability of network transmission.

The DR6010P8C2F has L2+ network management function,support IPV4 static route forwarding, complete security protection mechanism, ACL/QoS policy and rich VLAN functions, easy to manage and maintain. Support multiple network redundancy protocols STP/RSTP/MSTP(<50ms) ,Support ERPS ring network function(convergence time<20ms) to improve link backup and network reliability to ensure uninterrupted communication of important applications. According to actual application needs, Routing address management,port management, port flow control, VLAN division, IGMP, security policy and other application service configurations are performed through Web, CLI, SNMP, Telnet and other network management methods. The shell is made of aluminum alloy, which has excellent industrial field environmental adaptability (including mechanical stability, climate environment adaptability, electromagnetic environment adaptability, etc.), protection level is IP40, support dual redundant power supply, low power consumption and no fan, 5-year warranty. It is suitable for industrial scenarios such as intelligent transportation, rail transit, electric power industry, mining, petroleum, shipping, metallurgy and green energy construction to establish a cost-effective, stable and reliable communication network.

Feature:

◆ **Gigabit access, SFP fiber port uplink, Integrated Bypass function**

◆ Support non-blocking wire-speed forwarding.

◆ Support full-duplex based on IEEE802.3x and half-duplex based on Backpressure.

◆ Support Gigabit Ethernet port and Gigabit SFP port combination, which enables users to flexibly build networking to meet the needs of various scenarios.

◆ Support physical single-mode single fiber optical path(Bypass) function, pure hardware switching, short switching time, does not affect the data transmission rate and improves the stability of the network system.

◆ **Network management and fast ring function**

◆ STP/RSTP/MSTP/ERPS.

◆ Static and dynamic aggregation.

◆ IEEE802. 1Q VLAN, flexible VLAN division, Access,Trunk and Hybrid.

◆ QoS, Priority mode based on 802. 1P, Port & DSCP, queue scheduling algorithm including EQU, SP, WRR & SP+WRR.

◆ IGMP Snooping V1/V2/V3 meets multi-terminal high-definition video surveillance and video conference access requirements.

◆ ALC, filter data packet through configuring matching rules, processing operation & time permission, and provide flexible and safe access control.

◆ **Security**

◆ 802. 1X authentication.

◆ Port isolation, storm control.

◆ IP-MAC-VLAN-Port binding.

◆ **Stable and reliable**

◆ CCC, CE, FCC, RoHS.

◆ Low power consumption, No fan, aluminum hell.

◆ The user-friendly panel can show the device status through the LED indicator of PWR, SYS, Link, L/A.

One-stop remote control and management

◆ HTTPS, SSLV3, and SSHV1/V2.

◆ RMON, system log, LLDP, and port traffic statistics.

◆ CPU monitoring, memory monitoring, Ping test, and cable diagnose.

◆ Web management, CLI command line (Console, Telnet), SNMP (V1/V2/V3).

Hardware Specification:

Model	DR6010P8C2F
Fixed Port	8*10/100/1000Base-T PoE ports 2*100/1000Base-X uplink SFP slot ports 1*RS232 console por
Ethernet Port	Port 1-8 support 10/100/1000Base-T auto-sensing, full/half duplex MDI/MDI-X self-adaption
Twisted Pair Transmission	10BASE-T: Cat3,4,5 UTP(≤100 meters) 100BASE-TX: Cat5 or later UTP(≤100 meters) 1000BASE-T: Cat5e or later UTP(≤100 meters)
SFP Slot Port	Gigabit SFP optical fiber interface, default no include optical modules (Only supports single-mode single fiber optical module. LC)
Wavelength/Distance	multimode: 850nm 0~550M,1310nm 0~2KM single mode: 1310nm 0~40KM ， 1550nm 0~120KM
Chip Parameter	
Network Management Type	L2+
Ring network	Supports ERPS ring network function, with a maximum number of rings of 5 and a convergence time of<20ms
Network Protocol	IEEE802.3 10BASE-T, IEEE802.3i 10Base-T, IEEE802.3u 100Base-TX IEEE802.3ab 1000Base-X, IEEE802.3z 1000Base-X, IEEE802.3x
Forwarding Mode	Store and Forward(Full Wire Speed)
Switching Capacity	20Gbps
Buffer Memory	14.88Mpps
MAC	8K
LED Indicator	Power Indicator Light : P：1 Green
	Fiber Indicator Light : F：1 Green (Link,SDFED)
	On the PoE seat : Yellow:Indicate PoE Green: Ind icates network working status
Reset Switch	Yes, Press and hold the reset switch for 10s and release it to restore the factory settings
PoE characteristics	
power supply	DC：48-57V
PoE power supply method	Supports 1,2+, 3,6-power supply

PoE output power	Each port has a power supply of 15.4W and a maximum power of 30W per port
Certificate & Warranty	
Lightning Protection	Lightning protection: 6KV 8/20us, Protection level: IP40
	IEC61000-4-2(ESD):±8kV contact discharge,±15kV air discharge
	IEC61000-4-3(RS):10V/m(80~1000MHz)
	IEC61000-4-4(EFT): power cable:±4kV; data cable:±2kV
	IEC61000-4-5(Surge):power cable:CM±4kV/DM±2kV; data cable:±4kV
	IEC61000-4-6(radio frequency transmission):10V(150kHz~80MHz)
	IEC61000-4-8(power frequency magnetic field):100A/m;1000A/m ,1s to 3s
	IEC61000-4-9(pulsed magnet field):1000A/m
	IEC61000-4-10(damped oscillation):30A/m 1MHz
	IEC61000-4-12/18(shockwave):CM 2.5kV,DM 1kV
	IEC61000-4-16(common-mode transmission):30V; 300V, 1s
	FCC Part 15/CISPR22(EN55022):Class B
	IEC61000-6-2(Common Industrial Standard)
Mechanical Properties	IEC60068-2-6 (anti vibration), IEC60068-2-27 (anti shock) IEC60068-2-32 (free fall)
Certificates	• CE Marking • EN 300 386 V2.2.1:2022 Telecommunication network equipment - Harmonized Standard for Electromagnetic Compatibility (EMC) requirements • EN 50121-4:2016+A1:2019 Railway applications. Electromagnetic compatibility Emission and immunity of the signaling and telecommunications apparatus • EN 50155:2021, Railway applications. Rolling stock. Electronic equipment • EN 55011:2016+A2:2021 Industrial, scientific and medical equipment. Radiofrequency disturbance characteristics. Limits and methods of measurement • EN 55022:2010 Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement • EN 60950-1:2005 Information technology equipment – Safety – Part 1: General requirements • EN IEC 61000-3-2:2019, EN 61000-3-3:2013, EN 61000-4-2:2009, EN 61000-4-3:2006+A2:2010, EN 61000-4-4:2012, EN 61000-4-5:2014+A1:2017, EN 61000-4-6:2014, EN 61000-4-8:2010, EN 61000-4-11:2004+A1:2017, EN 61000-6-4:2007 Electromagnetic compatibility (EMC) Testing and measurement techniques • IEC 60068-2-27:2008 Environmental testing-part2-27:test- test ea. and guidance: shock

	• IEC 60068-2-31:2008 Environmental testing-part2-31: Test- test Ec: Rough handling shocks, primarily for equipment-type specimens • IEC 60068-2-64:2008 Environmental testing-part2-64:2008 Test-test Fh: Vibration, broadband random and guidance IEC 60215:2016 Safety requirements for radio transmitting • equipment-General requirements and terminology • IEC 61967-1:2018 Integrated circuits- Measurement of electromagnetic emissions-Part 1: General conditions and definitions • IEC 62151: 2000 Safety of equipment electrically connected to a telecommunication network • Directive 2002/95/EC (RoHS 1), • CFR Part 15, Su voltage 2014/35/EU Directive • UL (UNDERWRITERS LABORATORIES)
Physical Parameter	
Operation TEMP /Humidity	-40~+75°C;5%~90% RH Non condensing
Storage TEMP /Humidity	-40~+85°C;5%~95% RH Non condensing
Dimension (L*W*H)	172mm*145mm*55mm
Installation	Desktop, DIN rail
Network Management Features	
Interface	IEEE802.3x flow control (full duplex)
	Port real-time traffic management (Flow Interval)
	Broadcast storm suppression based on port rate
	Limit the rate of packet traffic on the ingress and egress ports. The
	minimum granularity is 16Kbps and the maximum is 1Gbps
Layer 3 Features	L2+network management,IPV4 static route/ default route@128 pcs, APR@1024 pcs
VLAN	Port configuration of Access, Trunk, Hybrid 4K VLAN based on port, IEEE802.1q, VLAN based on the protocol
Port Aggregation	LACP, Static aggregation Max 3 aggregation groups and 8 ports per group.
Spanning Tree	STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)
Multicast	Multicast VLAN, Fast log out IGMP Snooping v1/v2, Max 1024 multicast groups
Port Mirroring	Bidirectional data mirroring based on port
QoS	Flow-based Rate Limiting
	Flow-based Packet Filtering
	8*Output queues of each port
	802.1p/DSCP priority mapping
	Diff-Serv QoS, Priority Mark/Remark
	Queue Scheduling Algorithm (SP, WRR, SP+WRR)
ACL	Port-based Issuing ACL,ACL based on port and VLAN L2 to L4 packet filtering, matching first 80 bytes message. Provide ACL based on MAC, Destination MAC address, IP Source, Destination IP, IP Protocol Type, TCP/UDP Port, TCP/UDP Port Range, and VLAN, etc.

Security	IP-MAC-VLAN-Port binding ARP inspection,Anti-DoS attack AAA & RADIUS,MAC learning limit Mac black holes,IP source protection IEEE802. 1X & MAC address authentication Broadcast storm control,Backup for host datum SSH 2.0,SSL,Port isolation,ARP message speed limit User hierarchical management and password protection
DHCP	DHCP Client, DHCP Snooping, DHCP Server
Management	SNMP V1/V2C/V3, LLDP Web Management (HTTPS) NTP, System work log, Ping Test CPU instant utilization status view Cable Diagnose,One-key recovery Console/AUX Modem/Telnet/SSH2.0 CLI ONV NMS platform cluster management (LLDP+SNMP) Download & Management on FTP, TFTP, Xmodem, SFTP
System	Category 5 Ethernet network cable Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer10 or later; TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, or Mac OS X) installed on each computer in a network