28-port 10G Uplink L3 Managed Industrial Ethernet Switch
4-Port 1/10G SFP
16-Port 10/100/1000Base-T RJ45
8-Port 100/1000Base-X SFP

OVERVIEW

The DR4T8016G-SFP is a 10G uplink L3 managed industrial Ethernet fiber switch independently developed by DevRay. It has 16* 10/ 100/ 1000Base-T RJ45 ports and 8* 100/ 1000Base-X SFP ports and 4* 1/ 10G SFP+ fiber slot ports. Each port can support wire-speed forwarding. The DR4T8016G-SFP has L3 network management function, supports IPV4/IPV6 management, dynamic routing full line-speed forwarding, complete security protection mechanism, perfect ACL/QoS policy, and rich VLAN functions, easy to manage and maintain. With industry-leading ring network technology. It supports a variety of industrial-grade redundant ring network protocols, and each port can form a ring network, supporting chain ring network, starring network, double starring network, ring network, tangent network ring network, intersecting ring network, coupled ring network, self-healing within ERPS <20ms of the ring network. The switches series has high reliability, high security, and high

high manageability, ensures reliable transmission of key data, supports remote management. The product completely follows the industrial product design and materials. The shell is made of metal material to enhance heat dissipation. It has excellent adaptability to the industrial site environment (including mechanical stability, climate environment adaptability, electromagnetic environment adaptability, etc.). Protection level reaches IP40 and supports 2AC+DC dual redundant power supply, and the MTBF can up to 35 years, 5 years warranty. It is suitable for intelligent transportation, rail transit, power industry, mining, petroleum, and industrial scenes such as shipping, metallurgy, and green energy construction form a cost-effective, stable, and reliable communication network.

Feature:

◆Support non-blocking wire-speed forwarding.

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

◆Supports Gigabit Ethernet port and 10G SFP+ uplink port combination, which enables users to flexibly build networking to meet the needs of various scenarios.

◆ **Security**

◆ Support port isolation.

◆ Support port broadcast storm suppression.

◆ Support IP+MAC+port+VLAN quadruple flexible combination binding function.

◆ Support 802. 1X authentication to provide authentication functions for LAN computers, and control the authorization status of controlled ports according to the authentication results.

Strong business processing capability

◆ Support ERPS ring network and STP/RSTP/MSTP to eliminate layer 2 loops and realize link backup.

◆ Support IEEE802. 1Q VLAN, Users can flexibly divide VLAN, Voice VLAN, and QinQ configuration according to their needs.

◆ Support static and dynamic aggregation to effectively increase link bandwidth, realize

load balancing, link backup, and improve link reliability.

◆ Support QoS, port-based, 802. 1P-based and DSCP-based three priority modes and four queue scheduling algorithms: Equ, SP, WRR, and SP+WRR.

◆ Support ACL to filter data packets by configuring matching rule processing operations and time permissions, and provide flexible security access control policies.

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

Stable and reliable

◆ CCC, CE, FCC, RoHS.

◆ Low power consumption, No fan, aluminum shell.

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

◆ Self-developed power supply, high redundancy design, providing a long term and stable power output.

◆ **Easy operation and maintenance management**

◆ Support CPU monitoring, memory monitoring, Ping detection, cable length detection.

◆ Support HTTPS, SSLV3, SSHV1/V2 and other encryption methods, making management more secure.

◆ Support RMON, system log, and port traffic statistics to facilitate network optimization and transformation.

◆Support LLDP to facilitate the network management system to query and judge the communication status of the link.

◆Support Web network management, CLI command line (Console, Telnet), SNMP (V1/V2/V3) and other diversified management and maintenance.

Hardware Specification:

Model	DR4T8016G-SFP
Fixed Port	4*1/10G uplink SFP+ ports 16*10/100/1000Base-T RJ45 ports 8*100/1000Base-X SFP ports 1*Console port
Ethernet Port	Port 1-16 support 10/ 100/ 1000Base-T(X) 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 port and 10G SFP+ optical fiber port, default no include optical modules (optional order single-mode / multi-mode, single fiber / dual fiber optical module. LC)
SFP Port Expansion	Turbo overclocking 2.5G optical module and ring
Wavelength/Distance	Multi-mode: 850nm / 0-550M(1G), 850nm /0-300M(10G), Single-mode: 1310nm / 0-40KM, 1550nm / 0-120KM.
Chip Parameter	
Network Management Type	L3
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-T, IEEE802.3z 1000Base-X, IEEE802.3ae10GBase-LR/SR, IEEE802.3x
Forwarding Mode	Store and Forward(Full Wire Speed)

Switching Capacity	128Gbps	
Buffer Memory	96Mpps	
MAC	32K	
LED Indicator	Power Indicator Light	P：1 Green
	Fiber Indicator Light	F：1 Green (Link,SDFED)
	On the RJ45 seat	Yellow:Indicate PoE Green: dicates network working status
Reset Switch	Yes, Press and hold the reset switch for 10s and release it to restore the factory settings	
Power		
Working Voltage	DC36-72V, 4 Pin industrial phoenix terminal, support anti-reverse protection	
Power Consumption	Standby<25W, Full load<45W	
Power Supply	AC100-240V 50/60Hz industrial power supply	
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~+80°C, 5%~90% RH Non condensing
Storage TEMP /Humidity	-40~+85°C, 5%~95% RH Non condensing
Dimension (L*W*H)	440mm* 300mm*44mm
Installation	Desktop, 19 inch 1U cabinet installation