

Industrial Managed Gigabit PoE Switch — DR6020P16C4F**Product Description:**

Devray DR6020P16C4F Industrial Switch is a Layer 2+ managed Gigabit PoE Switch that features 8-Port Gigabit 802.3af/at PoE + 8-Port Gigabit RJ45 + 4-Port Gigabit SFP optical port, is specially designed to build a full Gigabit backbone to transmit reliable and high-speed data in heavy industrial demanding environments and forward data to remote network through fiber optic cabling. It comes with an IP40 rugged case and redundant power system. The industrial managed switch provides user friendly but advanced IPv6/IPv4 management interfaces and Soft-reboot PoE Non-stop function. It is the best investment for expanding industrial business or upgrading its network infrastructure.

Feature:

- ◆ Support L2+ Switching features including 802.1Q VLAN, Mirroring, IGMP Snooping, DHCP Snooping, LLDP, PoE management, IP Source Guard, ARP inspection, ACLs etc
- ◆ Support spanning tree STP(802.1D) and RSTP(802.1W) and MSTP(802.1s)
- ◆ Support enhanced management through WEB, CLI, TELNET, SSH, SNMP.
- ◆ Dual firmware backup mechanism
- ◆ Support PoE management, like PoE schedule, PoE PD-alive, Port PoE Priority, Soft-reboot PoE Non-stop
- ◆ Support G.8032 quick ring protocol. Self-recovery time <20ms
- ◆ Support IEEE1588 v2, transparent clock(TC);
- ◆ support IPV4/IPV6 static routing functions
- ◆ Support cable diagnosis, SFP digital diagnostics monitoring
- ◆ Support memory and CPU monitoring
- ◆ 6KV surge protection, 6KV contact/8KV air ESD protection

Hardware Specification:

Model	DR6020P16C4F
Copper Ports	16-10/100/1000BASE-T RJ45 auto-sensing ports
Fiber Ports	4-100/1000BASE-T SFP interfaces, supports 100/1000Mbps dual mode
PoE Ports	8-802.3af/802.3at PoE Injector Ports
Console Ports	1 x RS-232-to-RJ45 serial port (115200, 8, N, 1)
Switch Architecture	Store-and-Forward
Switch Fabric	40Gbps/non-blocking
Throughput	29.76Mpps @64 bytes
Address Table	8K entries
Share Data Buffer	4.1 Mb
Jumbo Frame	9216 Bytes
SDRAM	1Gb
Flash Memory	128Mb
Flow Control	IEEE 802.3x pause frame for full-duplex; Back pressure for half-duplex
Reset Button	>2 sec.: Factory default and reset
Power Supply	48 ~ 57 VDC, 50/60Hz, Dual DC
PoE Standards	IEEE 802.3af Power over Ethernet/PSE IEEE 802.3at Power over Ethernet Plus/PSE
PoE Power Supply Type	Per Port 52V DC, 300mA. Max. 15.4 watts (IEEE 802.3af) Per Port 52V DC, 600mA. Max. 30 watts (IEEE 802.3at)
LED Indicators	Power: Green Solid on--power work normal, off--power disconnected System: Green Blink--work normally, solid on--soft work abnormal, fast blink--softupgrade PoE: Yellow Solid on--PoE work normally, Off-PoE doesn't work, Blink-PoE overload 10/100/1000T RJ45 Interfaces (Port 1 to Port 16): 1000 LNK/ACT(Green), Blink--port connected with data transmission; Solid on--port connected without data transmission 100/1000Mbps SFP Interfaces (Port 17 to Port 20): Green Blink- port connected with data transmission; Solid on- port connected without data transmission
EMC	Surge Immunity: 6KV Per: IEC61000-4-5 ESD Protection: ESD Level 4 Per: IEC61000-4-2; EFT Level 4 Per: IEC61000-4-4
Dimension	165*145*68mm
Weight	1.5kg
Working Temperature	-40°C to 75°C
Storage Temperature	-40°C to 80 °C
MTBF	50,000hrs

Certificates

- CE Marking
- EN 300 386 V2.2.1:2022 Telecommunication network equipment - Harmonised Standard for ElectroMagnetic Compatibility (EMC) requirements
- EN 50121-4:2016+A1:2019 Railway applications. Electromagnetic compatibility Emission and immunity of the signalling 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)

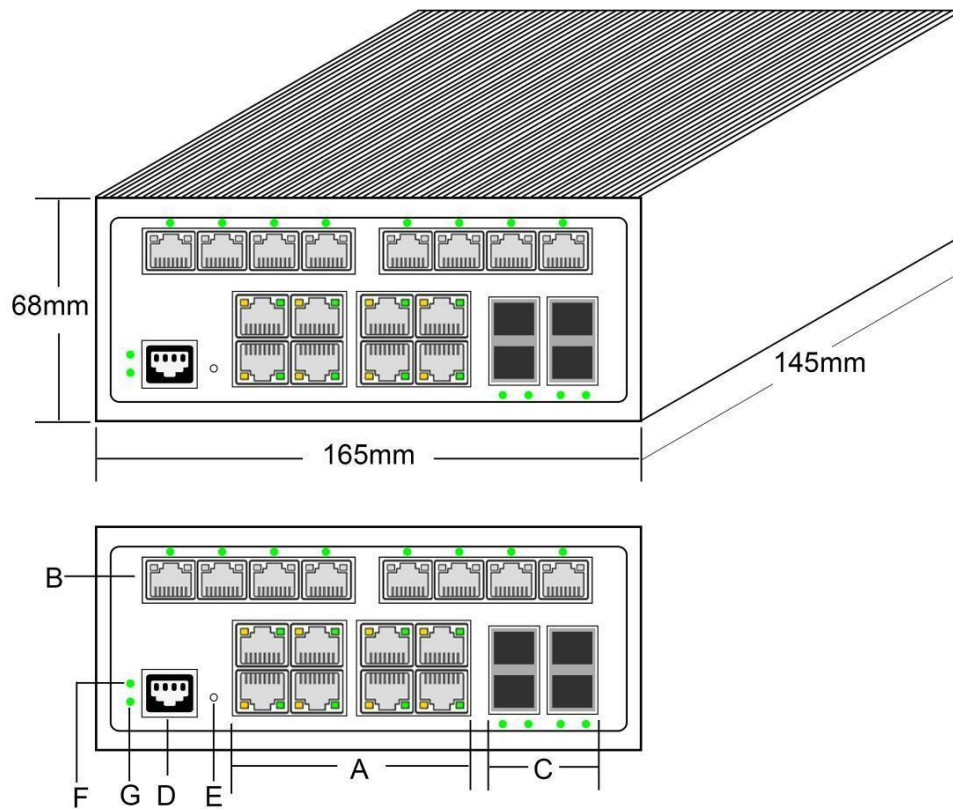
Layer 2 functions

Port configuration	Auto-negotiationFlow Control Port Mirror: TX/RX/BOTH; Many-to-1 monitor Traffic statistics
Link Aggregation	Static link aggregation LACP Algorithm based on Source/Destination MACAlgorithm based on Source/Destination IP
MAC Table	Aging Time Static MAC address Dynamic MAC address management
VLAN	4094 Active VLANs 4094 VID 802.1Q Tag VLAN Port VLAN Protocol VLAN MAC VLAN Voice VLAN 802.1ad Q-in-Q tunneling Private VLAN (Protected port) GARP/GVRP
ACL	256 ACLs L2, L3 e L4 Time-based ACL
Spanning tree	802.1D Spanning Tree Protocol (STP) 802.1w Rapid Spanning Tree Protocol (RSTP) 802.1s Multiple Spanning Tree Protocol (MSTP)Loop Guard Root Guard TC-BPDU Guard BPDU Guard BPDU Filter
Ring Protection	<20ms G.8032 ERPS Ring
Multicast	256 groups IGMP v1/v2/v3 Snooping, Fast LeaveMLD Snooping Multicast VLAN
QOS	8 mapping IDs to 8 level priority queuesCoS port-based CoS 802.1p-basedCoS DSCP-based Scheduling algorithms SP, WRR, SP+WRR Storm Control (Broadcast, Multicast, Unknown Unicast)Bandwidth control per port
Security Features	Port Security MAC address filter ARP Association (Manual, ARP scanning, DHCP snooping)ARP Protection DoS (Denial of Service) Classification of packages based on: End.MAC, IP End, TCP / UDPPorts, Protocol Type; 802.1x Authentication (port-based e MAC-based)TACACS/TACACS+ Authentication RADIUS Authentication

	DHCP Filter Guest VLAN SSLv2/SSLv3/TLSv1 SSHv1/SSHv2 Restriction of WEB access based on: IP Address, And. MAC and Port;Port Isolation Loopback detection
Management	SNMP v1/v2c/v3 with Full Private MIBs RMON 4 groups WEB (HTTP/HTTPS) CLI (Telnet, Console, SSHv1/v2) Firmware upgrade via console/web/TFTPConfiguration Backup/Reload Dual Firmware LLDP
Synchronization, IEEE1588	Support IEEE1588v2 transparent clock
Other Features	DNS Client DHCP Relay DHCP Client DHCP Snooping DHCP Option 82 NTP/SNTP Client UPNP UDLD
PoE management	Soft-reboot PoE Non-stop Total PoE power budget control Per port PoE function enable/disablePoE admin-mode control PoE port power feeding priorityPer PoE port power limitation PD classification detection PD alive check PoE schedule
Maintenance	Cable Diagnostics Ping SFP DDM(Digital Diagnostics Monitoring)Thermal protection System log (Local and Remote) Memory and CPU Monitoring

Layer 3 functions

Static Routing	IPv4 Unicast: Static Routing(Software Base) IPv6 Unicast: Static Routing(Software Base)
IPV6	IPv6 neighbor discovery (ND) Path maximum transmission unit (MTU) discovery Internet Control Message Protocol (ICMP) version 6TCPv6/UDpv6 Ping6 Telnet(v6) Http/Https Interface IPV6 ACL IPV6

Dimension:

- A: 1~8 1000Mbps PoE Ports B: 9~16 1000Mbps RJ45 Uplink Ports
C: 17~20 Gigabit SFP Ports D: Console Port
E: Reset Key F: Power LED Indicator
G: System Status LED Indicator

Ordering Information:

Product Model: DR6020P16C4F

Product Description: 20-Port gigabit managed industrial PoE switch, with 8-Port Gigabit802.3af/at PoE + 8-Port Gigabit RJ45 + 4-Port Gigabit SFP optical port, and 1 console port.

Port 1-8 support PoE, IEEE802.3af/at. Max Poe Power per Port is 30W.

Note: SFP module & power supply of the industrial switch is not included, please order it separately.

Packing Lists	20-Port gigabit managed industrial PoE switch(DR6020P16C4F)
	User Guide
	Warranty Card