

16 Ports Gigabit Managed Industrial PoE Switch

WD-GS-2210-16P4Si

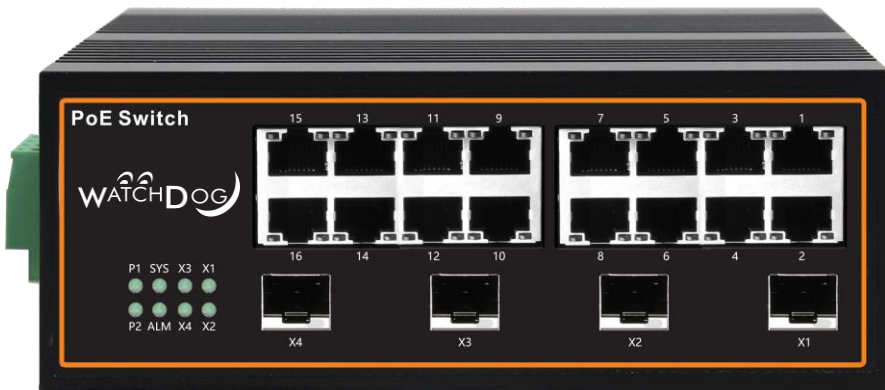
Product brochure



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Product Introduction

WD-GS-2210-8P4Si is a 20-port gigabit managed industrial Ethernet switch with 16 gigabit PoE RJ45 ports and 4 gigabit optical SFP ports. Each POE port can provide up to 30W of power and can be used for the Powered Devices (PDs) which is compatible with IEEE802.3af/at. It is especially suitable for application scenarios which it is difficult to provide AC power and want to save the wiring costs. EMC Class 4 protection performance; corrugated high-strength aluminum profile shell, IP40 grade, low power consumption design, anti-vibration DIN-rail installation, operating temperature of -40°C-75°C, can work in harsh environments. WD-GS-2210-8P4Si can also support various network management functions: RUN-Ring (self-healing time <10ms), RSTP, VLAN, QoS, SNMPv1/v2c/v3, IEEE802.1X, SSH/SSL, port mirror, port aggregation etc. The WD-GS-2210-8P4Si is a reliable solution for intelligent transportation, video surveillance and other harsh industrial environments by its rich redundancy, switching and security management features.



Highlights

Port 6KV lightning protection

- All ports support 6KV lightning protection, PSE short circuit protection, PoE overload, power supply over temperature protection, over voltage protection, surge current protection and other protection features.

AI smart button

- AI Loop Protect: Using the RUN-Ring technology, when the main link of the network transmission fails, the system automatically switches to the backup link, and the fault recovery time can reach as fast as 10ms.
- AI PoE: Detection of PD port and reboot the device automatically when device crash.
- AI VLAN: Isolating ports 1-16 from each other, so that can suppress network storms effectively and improve network performance.
- AI Extend: 1-16 ports support 250 meters long-distance power supply (CAT 5e network cable is suggested).

Powerful application capabilities

- Support 802.1Q VLAN, MAC VLAN, IP VLAN, users can divide VLAN flexibly as needed.
- Support QoS, 8 port queues, support port priority, 802.1P priority, DSCP priority, support SP, WRR, SP+WRR, WFQ priority scheduling algorithm.
- Support ACL, support L2 (Layer 2) ~ L4 (Layer 4) packet filtering function, provide flexible and secure access control policy.
- Supports IGMP v1/v2/v3 Snooping and MLD v1/v2 Snooping to meet the requirements of multi-terminal HD video surveillance or video conferencing.
- It supports the fast leave mechanism and querier of Layer 2 multicast, and supports Layer 2 IPv4 static multicast and Layer 2 IPv6 static multicast.

Full security mechanism

- Completed security authentication mechanism: It supports IEEE 802.1x, Radius, Tacacs+, etc.
- The loop detection mechanism can ensure the stable operation of the network for a long time.
- High security features such as port isolation in VLAN, DHCP-Snooping and IP+MAC+port binding, etc., to further ensure user data security.
- Support multi protections like ARP, IP source and DoS.
- Support declining user access by the port numbers, IP address, and MAC address.

Diverse reliability protection

- Support STP (IEEE 802.1d), RSTP (IEEE 802.1w) and MSTP (IEEE 802.1s) protocols to eliminate Layer 2 loops and implement link backup.
- Supports loop protection, root bridge protection, TC protection, BPDU protection, and BPDU filtering.
- Supports relay alarm output functions such as power failure, port disconnection, and PoE power supply abnormality.
- EMC Class4 and anti-jamming capability.

Powerful POE

- Support the 802.3af/at standard and has a built-in high-power power supply to meet the needs of POE scenarios such as CCTV, wireless coverage, and IP telephony.
- Support PoE power limit, and set the priority of PoE ports. When the power exceeds the limit, the high-priority ports have priority.
- Support setting the time period of PoE power supply, and users can adjust it according to the real needs.
- Support to check the status of PoE chip like temperature, output power and other parameters in real time through the web page.

Flexible and convenient management and maintenance

- Support various management methods such as Console, Telnet, and SSH.
- Support simple and efficient WEB management (HTTP, HTTPS, SSL V3)
- Support TFTP mode to upload and download files.
- Support SNMP V1/V2/V3
- Support Hored Apollo cloud platform, which can realize all-round remote operation and maintenance such as automatic device discovery, network topology management, and remote configuration management of devices.

Compliance

EMI: FCC CFR47 Part 15, EN55022/CISPR22, Class A

EMS:

IEC61000-4-2 (ESD): $\pm 8\text{kV}$ (contact), $\pm 15\text{kV}$ (air)

IEC61000-4-3 (RS): 10V/m (80MHz-2GHz)

IEC61000-4-4 (EFT): Power Port: $\pm 4\text{kV}$; Data Port: $\pm 2\text{kV}$

IEC61000-4-5 (Surge): Power Port: $\pm 2\text{kV/DM}$, $\pm 4\text{kV/CM}$; Data Port: $\pm 6\text{kV}$

IEC61000-4-6 (CS): 3V (10kHz-150kHz); 10V (150kHz-80MHz)

IEC60068-2-6 (Vibration)

IEC60068-2-27 (Shock)

IEC60068-2-32 (Free Fall)

Specifications

Hardware	
Network Interface	<ul style="list-style-type: none"> • 16-Port 10/100/1000Mbps RJ45 • 4-Port 10/100/1000Mbps SFP module • Console ports x1
Network Protocol	<ul style="list-style-type: none"> • IEEE802.3, IEEE802.3i, IEEE802.3u, IEEE802.3ab, IEEE802.3z, IEEE802.3ad, IEEE802.3x, IEEE802.3af/at, IEEE802.1p, IEEE802.1q, IEEE802.1w, IEEE802.1d, IEEE802.1s
Performance	<ul style="list-style-type: none"> • Switching capacity:40Gbps (Non-Block) • Forwarding ratet: 29.8Mpps • Packet buffer: 4.1Mb • Forwarding model: Store and forward
LED Indicator	<ul style="list-style-type: none"> • Power Indicator: P1,P2 • System Indicator: SYS • Alarm Indicator: ALM • SFP Port Indicator: Link&Act F1~F2 • RJ45 Port Indicator: POE&Link&Act 1~8
POE Pin	<ul style="list-style-type: none"> • 1/2 (+) , 3/6/(-);
Power Supply	<ul style="list-style-type: none"> • Input voltage: 48-56V DC • Input port: Pluggable 5 pin terminals block, 5.08mm pitch (support dual DC power source backup, built-in overcurrent protection, support anti-reverse connection) • No-load power: 6W@52V DC • Full load power: 486W@52V DC (POE full load output) • Max. power for single port: 30W
Physical Parameter	<ul style="list-style-type: none"> • Casing: Corrugated high-strength metal housing, IP40 • Installation: DIN-Rail • Dimension (LxWxH) : 164mm×130mm×78.8mm
Environmental Condition	<ul style="list-style-type: none"> • Operating Temperature: -40~75°C • Storage Temperature: -40~85°C • Operating Humidity: 5%~95% RH (non-condensing) • Storage Humidity: 0%~95% RH (non-condensing)
Certification	<ul style="list-style-type: none"> • CE/ROHS/FCC

Software

Protocol	<p>IEEE 802.3: Ethernet Media Access Control (MAC) protocol</p> <p>IEEE 802.3i: 10BASE-T Ethernet</p> <p>IEEE 802.3u: 100BASE-TX fast Ethernet</p> <p>IEEE 802.3ab: 1000BASE-T gigabit Ethernet</p> <p>IEEE 802.3z: 1000BASE-X gigabit Ethernet(fiber)</p> <p>IEEE 802.3ad: Comply link aggregation standard</p> <p>IEEE 802.3x: Flow control</p> <p>IEEE 802.1p: About the traffic priority of the second layer of Qos / Cos protocol (multicast filtering)</p> <p>IEEE 802.1q: VLAN Bridge operation</p> <p>IEEE 802.1d: STP spanning tree</p> <p>IEEE 802.1s: MSTP spanning tree</p> <p>IEEE 802.1w: RSTP spanning tree</p> <p>IEEE 802.3af</p> <p>IEEE 802.3at</p>
AI Button	<p>AI Loop Protect</p> <p>AI PoE</p> <p>AI VLAN</p> <p>AI Extend</p>
DHCP	<p>DHCP Snooping</p>
VLAN	<p>4K VLAN</p> <p>802.1Q VLAN、MAC VLAN ,IP VLAN</p> <p>Voice VLAN</p>
MAC Table	<p>IEEE 802.1d</p> <p>Support MAC address automatic learning and aging</p> <p>Support static, dynamic, filtering address table</p>
Security	<p>Password protection</p> <p>Decline user access by port number, IP address and MAC address</p> <p>HTTPS、SSL V3、 TLS V1、 SSH V1/V2</p> <p>Support IP-MAC-PORT ternary binding</p> <p>ARP Protection、 IP source Protection、 DoS Protection</p> <p>Support DHCP Snooping and DHCP attack protection</p> <p>Support 802.1X authentication, AAA</p> <p>Support port security, port isolation</p> <p>Support CPU protection</p>

Software	
PoE Management	<ul style="list-style-type: none"> Support PoE total power limit Support PoE chip status view Support PoE port priority setting Support PoE power time period setting
ACL	<ul style="list-style-type: none"> Support L2 (Layer 2) ~ L4 (Layer 4) packet filtering function Support port mirroring, port redirection, flow rate limit, QoS remarking
QoS	<ul style="list-style-type: none"> Support 16 port queues Support port priority, 802.1P priority, DSCP priority Support SP, RR, WRR, priority scheduling algorithm
Spanning Tree	<ul style="list-style-type: none"> Support STP(IEEE 802.1d), RSTP(IEEE 802.1w) and MSTP(IEEE 802.1s) Support loop protection, root bridge protection, TC protection, BPDU protection, BPDU filtering
Multicast	<ul style="list-style-type: none"> Support IGMP v1/v2 Snooping Support multicast VLAN Supports multicast filtering, packet statistics, and unknown multicast discards
Storm Suppression	<ul style="list-style-type: none"> Multicast suppression Broadcast suppression Unknown unicast suppression
Link Aggregation	<ul style="list-style-type: none"> Static aggregation Dynamic aggregation Support IP, MAC, and hybrid load balancing modes Up to 32 aggregation groups
IPv6	<ul style="list-style-type: none"> IPv6 Ping、 IPv6 Tracert、 IPv6 Telnet IPv6 SSH 、 IPv6 SSL
Management and Maintenance	<ul style="list-style-type: none"> WEB management (HTTP、 HTTPS、 SSL V3) CLI (Telnet, SSH V1/V2, Local serial port) SNMP V1/V2/V3 LLDP、 RMON ARP protection, IP source protection, DoS protection CPU monitoring, memory monitoring System log, grading warning Support Ping, Tracert detection, cable detection