

# 16 Ports Gigabit Managed Industrial PoE Switch

## WD-GS-2210-16P4Si

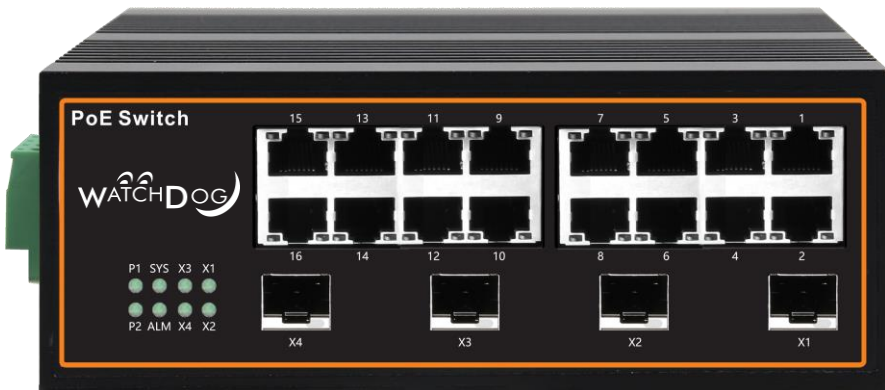
### Product brochure



Apollo Infoways Pvt. Ltd.  
[www.mywatchdog.in](http://www.mywatchdog.in)  
Email: [info@mywatchdog.in](mailto:info@mywatchdog.in)  
Helpline: 18003099415

# 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-2210-16P4Si 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-2210-16P4Si 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, 16 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):  $10\text{V/m}$  (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):  $3\text{V}$  (10kHz-150kHz);  $10\text{V}$  (150kHz-80MHz)

IEC60068-2-6 (Vibration)

IEC60068-2-27 (Shock)

IEC60068-2-32 (Free Fall)

# Specifications

<b>Hardware</b>	
<b>Network Interface</b>	<ul style="list-style-type: none"> <li>• 16-Port 10/100/1000Mbps RJ45</li> <li>• 4-Port 10/100/1000Mbps SFP module</li> <li>• Console ports x1</li> </ul>
<b>Network Protocol</b>	<ul style="list-style-type: none"> <li>• 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</li> </ul>
<b>Performance</b>	<ul style="list-style-type: none"> <li>• Switching capacity:40Gbps (Non-Block)</li> <li>• Forwarding ratet: 29.8Mpps</li> <li>• Packet buffer: 4.1Mb</li> <li>• Forwarding model: Store and forward</li> </ul>
<b>LED Indicator</b>	<ul style="list-style-type: none"> <li>• Power Indicator: P1,P2</li> <li>• System Indicator: SYS</li> <li>• Alarm Indicator: ALM</li> <li>• SFP Port Indicator: Link&amp;Act F1~F2</li> <li>• RJ45 Port Indicator: POE&amp;Link&amp;Act 1~8</li> </ul>
<b>POE Pin</b>	<ul style="list-style-type: none"> <li>• 1/2 (+) , 3/6/(-);</li> </ul>
<b>Power Supply</b>	<ul style="list-style-type: none"> <li>• Input voltage: 48-56V DC</li> <li>• Input port: Pluggable 5 pin terminals block, 5.08mm pitch (support dual DC power source backup, built-in overcurrent protection, support anti-reverse connection)</li> <li>• No-load power: 6W@52V DC</li> <li>• Full load power: 320W@52V DC (POE full load output)</li> <li>• Max. power for single port: 30W</li> </ul>
<b>Physical Parameter</b>	<ul style="list-style-type: none"> <li>• Casing: Corrugated high-strength metal housing, IP40</li> <li>• Installation: DIN-Rail</li> <li>• Dimension (LxWxH) : 164mm×130mm×78.8mm</li> </ul>
<b>Environmental Condition</b>	<ul style="list-style-type: none"> <li>• Operating Temperature: -40~75°C</li> <li>• Storage Temperature: -40~85°C</li> <li>• Operating Humidity: 5%~95% RH (non-condensing)</li> <li>• Storage Humidity: 0%~95% RH (non-condensing)</li> </ul>
<b>Certification</b>	<ul style="list-style-type: none"> <li>• CE/ROHS/FCC</li> </ul>

## Software

<b>Protocol</b>	<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 802.1ae MAC Security</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>
<b>AI Button</b>	<p>AI Loop Protect</p> <p>AI PoE</p> <p>AI VLAN</p> <p>AI Extend</p>
<b>DHCP</b>	DHCP Snooping
<b>VLAN</b>	<p>4K VLAN</p> <p>802.1Q VLAN、MAC VLAN ,IP VLAN</p> <p>Voice VLAN</p>
<b>MAC Table</b>	<p>IEEE 802.1d</p> <p>Support MAC address automatic learning and aging</p> <p>Support static, dynamic, filtering address table</p>
<b>Security</b>	<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>

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