IS2100D(R2) Series
L2 DIN-rail Industrial Switch

Product Overview

IS2100D(R2) Series Industrial switch delivers high-speed Gigabit Ethernet connectivity in a compact form factor and is designed for a wide range of industrial applications where hardened products are required. The platform is built to withstand harsh environments in manufacturing, energy, transportation, mining, and smart cities. The IS2100D(R2) platform is also ideal for extended enterprise deployments in outdoor spaces, warehouses, and distribution centers.
These switches run software based on DCNOS platform with built-in security and trust, featuring secure boot and image signing. IS2100D(R2) Series switch can be managed and easily set up with a completely redesigned and user-friendly web-GUI. IS2100D(R2) Series switch supports power budget of up to 180W for PoE/PoE+, shared across 8 ports, and is ideal for connecting PoE-powered end devices such as IP cameras, phones, wireless access points, sensors, and more.

Model and Appearance of IS2100D(R2)

Appearance	Description
 IS2100D-2GF8GT-P(R2)	● 8x10/100/1000Base-T POE + 2x100/1000Base-X (SFP) ● 1 console port ● PoE+, up to 180W ● Dual DC power supply, 50 ~ 57 VDC ● Switching capacity: 20Gbps ● Forwarding rate: 14.88Mpps

Key Features and Highlights

Industrial-grade robust Hardware design

IS2100D(R2) series adopts industrial-grade hardware components and a cooling shell of aluminum alloy to ensure the industrial-grade quality of the product.
The series adopts a fan-free thermal design with such a multi-cooling structure as a built-in cooling fan, thermal grease, etc., to ensure an operating temperature range of -40-85°C.
The series is provided with a two-circuit direct current power redundancy design and system power failure alarm. It supports resistance to vibration and dust and follows IP grade protection standards as IP40.

Diverse options of VLAN expansion

The series supports ordinary QinQ, Selective QinQ, and flexible QinQ technology, which ensures users have the maximum freedom to configure QinQ strategies.
The series supports the exchange function of N: 1 VLAN ID, that is, N: 1 VLAN Translation. N VLAN Tags of access port message can be converted to one designated VLAN Tag, thus providing a strong technology guarantee for the convergence of QoS strategies.
The series supports multiple types of VLAN, such as protocol VLAN, MAC VLAN, and Voice VLAN, and plays a role in the multi-service integrated network.

Enhanced protection, ensuring safety and controllability

As Ethernet gradually becomes the mainstream access mode in enterprise-level and operator-level networks, clients have an increasingly higher demand for the safety, controllability, and simplicity of the access layer. IS2100D series is provided with various safety protection mechanisms, offering various anti-DOS attack technologies like SYN Flood, Land, and IGMP Flood, and supporting BPDU Guard and Root Guard, prevents accidental topology rings and illegal edge devices from becoming root nodes, thus avoiding unnecessary topological shock.
In terms of anti-attack measures targeted at the user level, the series simultaneously supports DHCP snooping and IP Source Guard based on port and VLAN respectively, which can be combined to effectively prevent the illegal address spoofing of MAC, IP, and MAC+IP and reduce the risk of DOS attack.
The series supports source MAC address learning restriction function based on port and based on VLAN, and effectively prevents source MAC spoofing from impacting the device MAC table entry, which results in, among others, flooding due to normal users' failure to learn MAC table.
The series supports customized ACL and can perform more flexible rule matching on the first 128 bytes of the message's Ethernet header or IP header according to user demands.
The series supports standard 802.1X authentication access, expanded 802.1X authentication access, effectively avoids IP conflict and PC cloning, and realizes extended enhancement functions like static IP address issuing.

Redundant backup, guaranteeing stability and reliability

The series has two-gigabit uplink ports, which realizes dual uplink network and enhances the robustness and high reliability of user network structure.
The series is the first to support the industrial standard ERPS ring network solution, supports various networking mode like a single ring, tangent ring, intersecting ring, and dual-homing ring, ensures the convergence speed to be less than 50ms, and realizes carrier-grade reliability.
The series supports multi-process MSTP. The processes can run different spanning tree protocols. In the meantime, the number of access sub-rings is increased. Additional access rings can be realized by creating a new MSTP, without affecting original service traffic to reduce network impact.
The series supports DCN EMVTE enhanced multi-VLAN sub-network traffic engineering technology, which is DCN's link backup and load balancing solution based on multi-VLAN sub-network for dual uplink networking environment. Through ULPP (Uplink Protection Protocol) and ULSM (Uplink State Monitor) protocols, fast switch convergence of multiple uplinks is realized to guarantee network performance.
The series has built-in lightning protection settings. The service port has 8KV lightning protection capacity to effectively withstand lightning. This makes the series more adaptable to the harsh environment than ordinary switches, and significantly reduces the damage rate of the device.
The series provides dual DC power input and system power failure alarm.

PoE+ Supply, smart power supply

PoE model supports enhanced Ethernet power supply function (PoE+), with maximum 30W output power per port, and can directly power auxiliary PD devices (including 802.11n wireless access point, visual IP phone, HD web camera, etc.).

The series provides a perfect PoE solution, which allows users to selectively set a PoE power supply port and configure the maximum output power for each port, to save energy. The series supports setting for various power supply strategies, such as free setting the power supply priority for ports. Thus, when there are a large number of devices to be powered, it can maximally ensure that devices with high priority are powered first. Thus, flexible PoE power supply management is realized.

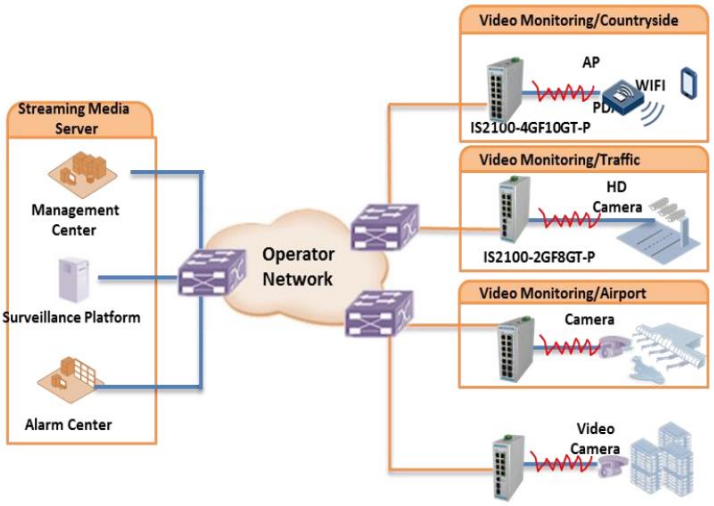
Specification

Item	IS2100D-2GF8GT-P(R2)
Device port	8x10/100/1000Base-T PoE + 2x100/1000Base-X (SFP)
Switching capacity	20G
Packet forwarding rate	14.88Mpps
VLAN characteristics	Port-based VLAN IEEE802.1Q VLAN Private VLAN Protocol VLAN Voice VLAN MAC VLAN Ordinary QinQ Selective QinQ Flexible QinQ VLAN Translation N:1 VLAN Translation
DHCP	Support IPv4/IPv6 DHCP Client and IPv4/IPv6 DHCP Relay Support Option 82 and Option 37/38 Support IPv4/IPv6 DHCP Snooping and IPv4/IPv6 DHCP Server
Reliability	Dual DC power input, support system power failure alarm Support STP，RSTP，MSTP Support multi-process MSTP Support LACP load balance Support EMVTE（ULPP+ULSM）and MRPP Support G.8032 standard ring network protocol Support Loopback detection, VCT, DDM Support ULDP（to realize the same functions as Cisco UDLD）
Safety	Support port speed limit Support broadcast storm control based on message and number of bytes Support port/MAC binding and MAC filter Support MAC number limit based on port and based on VLAN Support anti-ARP spoofing, anti-ARP scanning, and ARP binding Support DHCP Snooping and ND Snooping Support DAI Support standard IEEE 802.1x, extended IEEE 802.1x, and Web Portal Support TACACS+
Multicast	Support IGMP v1/v2/v3 snooping and IGMP Fast leave Support MLD v1/v2 snooping Support multicast VLAN and IPv4/IPv6 DCSCM

QoS	Support ACL-based stream, VLAN ID, COS, TOS, and DSCP Support aggregated PolicyMap Support PolicyMap binding based on port and based on VLAN Support single speed, single barrel, and double color Support field rewriting of DSCP, COS/802.1p priority, and TOS Support 8 queues per port Support queue scheduling algorithms of SP, WRR, SWRR, and DWRR Support matching IP segment message
ACL	Support IP ACL, matching based on fields such as source/destination IP, IP protocol type, IP priority, TCP/UDP source, and destination port number Support MAC ACL, message matching based on fields such as source/destination-based MAC, VLAN ID, and COS Support IP+MAC combination ACL Support custom ACL Support effective ACL according to a time range Support ACL binding based on port and based on VLAN Support ACL-based redirection Support execution of traffic statistical analysis function according to ACL matching
Management, operation, and maintenance	CLI IPv4/IPv6 HTTP IPv4/IPv6 FTP/TFTP IPv4/IPv6 SNTP/NTP Radius authentication of telnet user name and password of IPv4/IPv6 SSH of IPv4/IPv6 Security IP security network management function Syslog of IPv4/IPv6 SNMPv1/v2c/v3 Support MIB port, support Trap Support RMON 1，2，3 and 9 groups Support dual IMG and multiple profiles Support LLDP Support port mirroring, CPU mirroring and RSPAN Support sFlow flow monitoring Support Reset one-key reset Support OEM Support mirror sampling
Energy conservation and environmental protection	Support 802.3az Energy Efficient Ethernet EEE Fan-free mute design to reduce noise
Dimensions	165*140*60mm
Operating Humidity	10% ~ 95%, no condensation
Operating Temperature	-40°C ~ 85°C
Storage Temperature	-40°C ~ 85°C
Rated power input	50 ~ 57 VDC (PoE models) 48VDC (Non PoE models)
Standard and Certification	CE/FCC

Typical Application

The IS2100(R2) Series operates at a wide temperature range and allows deployment in outdoor and harsh industrial environments. PoE models feed 15.4W/30W per port and support remotely controlled APs and video cameras.



Order Information

Product	Description
IS2100D-2GF8GT-P(R2)	IS2100D-2GF8GT-P DIN rail POE industrial Ethernet switch, 8x10/100/1000Base-T POE + 2x100/1000Base-X (SFP). All electrical interfaces support 15.4w/30w PoE, maximum PoE power output 180W, 50~57VDC