

AI-Ready Switch with 2.5G PoE++



AIM-24MG6XF-UPoE Highlight

- Switch with AI4AV
- 8 x 2.5G PoE++ ports
- 16 x 2.5G PoE+ ports
- 6 x 10G SFP+ optical ports
- Total PoE power of 750W
- 5-year hardware warranty*
- Open API
- Compatible with various AV control software and hardware
- Compatible with Dante, NDI, IPMX, and 10G AV-over-IP
- Supports multiple AV protocols such as JPEG and AES67
- Supports docking with AI systems
- Supports customized software development**

AIM-24MG6XF-UPoE is a Layer 3 managed PoE++ switch, equipped with 24 100M/1000M/2.5Gbps Ethernet electrical interfaces, 6 10Gbps SFP+ fiber optic interfaces and one Console port. It supports the IEEE802.3af/at/bt standards and can serve as an Ethernet Power Sourcing Equipment (PSE). Ports 1-8 have the PoE++ power supply function, and ports 9-24 have the PoE+ power supply function. It can automatically detect and identify the powered devices that comply with the standards and supply power to them through network cables.

Adopting the store-and-forward technology and combining it with dynamic memory allocation, it ensures that the bandwidth is effectively allocated to each port. It supports the Layer 3 routing function, provides a complete security policy, a perfect QoS (Quality of Service) policy and rich VLAN (Virtual Local Area Network) functions. It is easy to manage and maintain, meeting the networking and access requirements of enterprises, residential communities, hotels, office networks and campus networks.

The switch has a built-in AI intelligent module, which can interact with the holographic AI platform to achieve the following featured functions:

•Intelligent Management: The switch can be centrally configured and managed through the platform, and batch upgrades of the switches can be carried out. When a switch is replaced, the original configuration can be automatically synchronized.

•Intelligent Monitoring: Real-time monitoring of the running status of the switch, faults such as IP address conflicts, DHCP conflicts, network loops, abnormal port negotiation, abnormal port traffic, etc., and accurate positioning of alarms.

•Intelligent Self-healing: Intelligently analyze the running status of the terminal. When the terminal runs abnormally, the POE port can intelligently restart the terminal; When a network loop is detected, it can intelligently block the loop.

•Intelligent Identification: Automatically identify the types of terminals, such as IPC (Internet Protocol Camera), access control devices, intercom devices, computers, etc.; Automatically monitor the online and offline status of terminal devices.

•Intelligent Visualization: Automatically generate a global visual topology diagram; Visualize the running status of the switch; Visualize the link traffic and utilization rate; Visualize the port information.

AV-over-IP Software-Defined

These are the featured functions of the VINGLOOP series switches. For AV-over-IP manufacturers with in - depth cooperation, the VINGLOOP switch can automatically detect the AV devices connected to the interfaces, and then automatically complete the settings of IGMP, VLAN, QoS, etc. for the interfaces.

For widely - used international AV - over - IP technologies such as Dante, NDI, IPMX, JPEG, AES67, and Q - LAN, and 10G AV-over-IP, the ports can be configured through AI via voice, text, and other interactive methods.

The VINGLOOP switch also offers a rich set of API functions, which allow customers to carry out integrated development of control center software and hardware, or enable interaction between AV - over - IP hardware and the switch. Joint development with VINGLOOP can be carried out to achieve the new - generation AI - enabled AV applications of AI for AV.***

AI-Ready Switch with 2.5G PoE++

AIM-24MG6XF-UPoE SPECIFICATION

| | |
|----------------------|---|
| Interface | 8 x 1G/2.5G PoE RJ45 (Support POE/POE+/POE++) |
| | 16 x 1G/2.5G POE RJ45 (Support POE/POE+) |
| | 6 x SFP+ 10G Port (Compatible with Gigabit) |
| Management Port | 1 x Console |
| Factory Default | 1 x Reset Button |
| PoE Standard | IEEE802.3af/at/bt Standard PoE (Support 802.3bt4 on Port 1-8) |
| Maximum PoE Output | 90W |
| Total Power | Total PoE Power Output 750W, Power Supply 800W |
| PoE Pin | 1/2(+), 3/6(-); |
| Switch Capacity | 598Gbps |
| Packet Forwarding | 222Mpps |
| Working Temperature | 0~45°C |
| Storage Temperature | -40~70°C |
| Operating Humidity | 10%~90% No condensation |
| Storage Humidity | 5%~95% No condensation |
| Dimension | 440(L)x285(W)x45(H)mm |
| Weight | <6Kg |
| Lightning Protection | 6KV |
| Input voltage | AC:100~240V/50~60Hz |
| Power Consumption | <800W Maximum Load |
| SKU | AIM-24MG6XF-UPoE |



AI-Ready Switch with 2.5G PoE++

AIM-24MG6XF-UPoE Software Features

| | |
|-------------------------------|---|
| Forward Mode | Store-Forward |
| MAC Address | Static configuration and dynamic MAC learning MAC browsing and removal Configurable aging time of the MAC address |
| MAC Table | 16K |
| Jumbo Frame | 12K |
| Port Cache | 16Mbit |
| Port Profile | Support outbound and inbound port speed limit Support outbound and inbound port speed limit IEEE 802.3x traffic control for Full-Duplex mode Back-pressure traffic control for Half-Duplex mode Storm suppression for unknown Unicast, multicast, broadcast type Storm suppression based on bandwidth regulation and storm filtering |
| Link Aggregation | Support port aggregation Support static aggregation Support dynamic aggregation(LACP) Support source MAC payload Support destination MAC payload Support based on source and destination MAC load Support load based on IP address |
| VLAN | 4K support VLAN Port-based VLAN 802.1ad (QinQ) fixed |
| Layer 2 Ring Network Protocol | 802.1d STP, 802.1w RSTP, 802.1s MSTP Port Fast, Uplink Fast, Backbone Fast BPDU Guard, BPDU Filter, Root Guard Standard ERPS ERPS single ring single instance ERPS single-ring multiple instances |
| IP Routing (IPv4) | Inter vlan Multi IP Default route Policy routing Static routing RIP v1/v2,OSPF,BGP Active/Standby switchover VRRP Preemption/BFD/Track OSPF multi-process MD5 encryption authentication Route COST setting Inter-area route filtering |
| IPv6 | IPv6-Ping,IPv6-Tracert,IPv6-Telnet,IPv6-TFTP,IPv6-ICMP RIPng OSPFv3 |
| Multicast | IGMP V1/2(Snooping) IGMP Proxy |
| DHCP | DHCP Server DHCP Relay DHCP Snooping |
| Mirror | Support port mirroring for incoming port packets Support port mirroring for outgoing port packets Support port mirroring for inbound and outbound packets Support multi-to-one destination port mirroring |



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AIM-24MG6XF-UPoE Software Features

| | |
|----------------------------|---|
| ACL/QoS | <ul style="list-style-type: none"> Access list based on source mac Mac access list based on ethertype Ip access list-standard ACL Whether to support the access list of the time period ACL verification of source IP address ACL verification of the destination IP address ACL verification of source port ACL verification of the destination port Support 802.1P (CoS) priority marking Support DSCP priority re-marking Support 802.1P/DSCP priority mapping Support Qos based on COS/DSCP Support 8 queues Support SP, WRR, SP+WRR and other scheduling modes |
| Security Features | <ul style="list-style-type: none"> Support port-based 802.1X local authentication Support 802.1X remote authentication Support port-based MAC address filtering Authentication based on MAC address Support Radius authentication Loop detection (private) Support port isolation Single port isolation Multiple groups of port isolation Port security ARP Aing/Bnding/Proxy Support storm suppression for multicast/unknown unicast/broadcast |
| Power Safe | IEEE 802.3az |
| POE | <ul style="list-style-type: none"> Support 802.11af / at / bt Standard Power Pin 1/2(+), 3/6(-) PoE Smart Diagnose PoE Schedule Maximum PoE Output per Port 90W PoE Priority |
| AV-over-IP | <ul style="list-style-type: none"> Supports open standard video technologies such as DanteAV, NDI, IPMX, DanteAV, etc. Supports audio technologies such as Dante, AES67, Q-LAN, etc. Supports technologies such as JPEG XS, JPEG 2000, H.265, H.264, AV1, etc. Supports the integration of software and hardware AV control console. Supports the networking of large-scale AV-over-IP networks. Supports automatic IGMP. Supports automatic QoS. Supports the automatic device identification and configuration function for partner AV-over-IP manufacturers. |
| AI Support | <ul style="list-style-type: none"> Built-in AI intelligent module. It supports docking with the VINGLOOP AI platform. It supports the VINGLOOP AI platform to automatically perform AV settings on the switch. |
| Management and Maintenance | <ul style="list-style-type: none"> CLI: Console, Telnet, SSHv1/2 Web-GUI: HTTP, HTTPS SNMPv1/v2 SNMP Alarm/Inform/Traps RMON Support LLDP NTP v1/2 System log (operation log, alarm log) Support user hierarchical management and password protection Support restore to factory mode Debugging |



AI-Ready Switch with 2.5G PoE++

| VINGLOOP Model | Description |
|---|--|
| AI-Ready 1G PoE Switch | |
| AIG-8G2GF-PoE | 8 x 1G PoE+ Port, 2 x 1G SFP, 125W PoE budget. L2 Switch |
| AIG-24G4GF2-PoE | 16 x 1G PoE+ Port, 2 x 1G SFP, 375W PoE budget. L2 Switch |
| AIG-48G6XF-PoE | 48 x 1G PoE+ Port, 6 x 1G SFP, 450W PoE budget. L3 Switch |
| AIG-24G24GF6XF | 24 x 1G Port, 24 x 1G SFP Port, 6 x 1G SFP. L3 Switch |
| AIG-48GF6XF | 48 x 1G SFP Port, 6 x 1G SFP. L3 Switch |
| AI-Ready 2.5G Multi-Gigabit PoE++ Switch with 10G Uplink | |
| AIM-24MG6XF-UPoE | 8 x 2.5G/1G PoE++ Port, 16 x 2.5G/1G PoE+ Port, 6 x 10G SFP+, 720W PoE budget, L3 Switch |
| AI-Ready 10G Fiber Switch with 100G Uplink | |
| AIX-24XF4CF | 24 x 10G SFP+, 4 x 100G QSFP28, Additional Power Supply Slot, L3 Switch |
| AIX-48XF4CF | 48 x 10G SFP+, 4 x 100G QSFP28, Additional Power Supply Slot, L3 Switch |
| 25G Core Switch | |
| AIV-48VF8CF | High performance 48 x 25G, 8 x. 100G, L3 Datacenter Switch |



AI-Ready Switch with 2.5G PoE++

| VINGLOOP Model | Description |
|--------------------------|---|
| 100G Fiber Module | |
| SWM-100GM | 100G QSFP28 module, SR4 multimode dual – core, dual – LC interface, wavelength 850nm, transmission distance 100m. |
| SWM-100GS | 100G QSFP28 module, LR4 single – mode dual – core, dual – LC interface, wavelength 1310nm, transmission distance 10km |
| 40G Fiber Module | |
| SWM-40GM | 40G QSFP module, SR4 multimode multi – core, MPO interface, wavelength 850nm, requires matching multimode optical fiber, maximum transmission distance 400m |
| SWM-40GS | 40G QSFP module, LR single – mode dual – core, dual – LC interface, wavelength 1310nm, transmission distance 10km |
| 25G Fiber Modul | |
| SWM-25GM | 25G SFP28 module, SR multimode dual – core, dual – LC interface, wavelength 850nm, transmission distance 100m |
| SWM-25GS | 25G SFP28 module, LR single – mode dual – core, dual – LC interface, wavelength 1310nm, transmission distance 10km |
| 10G Fiber Module | |
| SWM-10GT | 10G SFP + Copper module, RJ45 interface, transmission distance 100m |
| SWM-10GM | 10G SFP + module, multimode dual – core, dual – LC interface, wavelength 850nm, transmission distance 300m |
| SWM-10GS | 10G SFP + module, single – mode dual – core, dual – LC interface, wavelength 1310nm, transmission distance 10km |
| 1G Fiber Module | |
| SWM-1GM | 1G SFP module, multimode dual – core, dual – LC interface, wavelength 850nm, transmission distance 550m |
| SWM-1GS | 1G SFP module, single – mode dual – core, dual – LC interface, wavelength 1310nm, transmission distance 20km |
| SWM-1GT | 1G SFP Copper port module – (RJ45) |



- * All switch products come with a 5-year hardware warranty, and the fiber optic modules come with a 3-year warranty.
- ** VINGLOOP undertakes software-defined development services to better support your AV-over-IP business.
- *** The AI docking functions are continuously being added, and we also undertake AI integration services for AV manufacturers.

