AI-Ready Switch with 2.5G PoE++

AIM-24MG6XF-UPoE Highlight
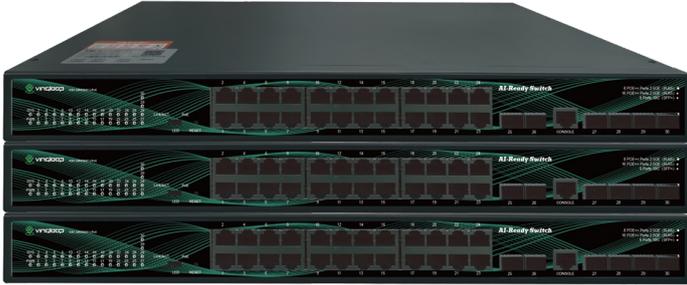
- Switch with AI4AV
- 8 x 2.5G PoE++ ports
- 16 x 2.5G PoE+ ports
- 6 x 10G SFP+ optical ports
- Total PoE power of 750W
- 5-year hardware warranty*

- Open API
- Compatible with various AV control software and hardware
- Compatible with Dante, NDI, IPMX, and SDVoE
- 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 Initialization: Quickly register the switch information by scanning the QR code with a mobile phone; Configure and issue settings for all switches in the network with one click; Automatically generate a delivery report.

•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.

•Intelligent Operation and Maintenance: Convenient operation and maintenance can be achieved through remote access in the cloud and mobile applets, and operation and maintenance weekly reports and monthly reports can be automatically generated.

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, SDVoE, JPEG, AES67, and Q - LAN, 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)×285(W)×45(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, 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

AI-Ready Switch with 2.5G PoE++

AIM-24MG6XF-UPoE Software Features	
ACL/QoS	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	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	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	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	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	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 25G / 100G

AIV-48VF8CF Highlight

- Switch with AI4AV
- 48 x 25G SFP28 ports
- 8 x 100G QSFP28 ports
- Power Supply Module Pluggable
- 5-year hardware warranty*

- Open API
- Compatible with various AV control software and hardware
- Compatible with Dante, NDI, IPMX, and SDVoE
- Supports multiple AV protocols such as JPEG and AES67
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- Supports customized software development**

AIV-48VF8CF is a Layer 3 managed high performance switch, equipped with 48 10G/25G SFP28 Ethernet optical interfaces, 8 100Gbps QSFP28 fiber optic interfaces and one Console port. It supports Pluggable module power supply. 4 hot-swappable fans with Front-to-Rear airflow. The switch offers line speed forwarding with total 4 Tbps switch capability and 2,976 Mpps throughput.

Adopting the spine-leaf technology and combining it with Priority Flow Control (PFC), explicit Congestion Notification (ECN), and MLAG (Multi-Chassis Link Aggregation) , AIV-28VF8CF ensures that the bandwidth is effectively allocated to each switch and 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.

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AI-Ready Switch with 25G / 100G

AIV-48VF8CF

Interface	48 x 25G SFP28 Ports
	8 x 100G QSFP28 Ports
Management Port	1 x Console
Factory Default	1 x Reset Button
Switch Capability	4 Tbps
Packet Forwarding	2,976 Mpps
Working Temperature	0~45°C
Storage Temperature	-40~70°C
Operating Humidity	10% ~ 90% No condensation
Storage Humidity	5% ~ 95% No condensation
Dimension	4.4 x 44.2 x 45.1 cm
Weight	8.85 Kg
Latency	700 ns
Input voltage	AC:100 ~ 240V/50 ~ 60Hz
Power Consumption	<160W Maximum Load
SKU	AIV-48VF8CF

AI-Ready Switch with 25G / 100G

| AIV-48VF8CF Software Features	
Forward Mode	Store-Forward / Cut-Through
MAC Address	Static configuration and dynamic MAC learning MAC browsing and removal Configurable aging time of the MAC address
MAC Table	Automatic learning and aging of MAC addresses Clear FDB based on PORT+VLAN Hardware learning Static and dynamic MAC address entries Blackhole MAC (Support global configuration) Blackhole MAC (Per-VLAN configuration) MAC flapping detect
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, multicast, broadcast type Storm suppression based on bandwidth regulation and storm filtering
Link Aggregation	Static-LAG & LACP Static load balance（SLB） Dynamic load balance（DLB） Round-robin load balance（RR） LAG self-healing Weighted link aggregation
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
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Power Safe	IEEE 802.3az
POE	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	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.
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![vingloop logo]

Auto-Config
Monitor
AV-IGMP

AIV-48VF8CF

MLAG

Spine-Leaf

10G/25G

AIM-24MG6XF-UPoE

2.5G / PoE++

Application based AI

- AV over IP technology: NDI / Dante / SDVoE / IPMX...

- Application base: Meeting room / Command Center

- Brand base: TiTLIS / Yealink / Aurora

- Customized Applications
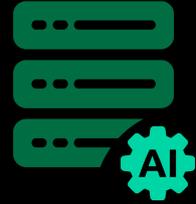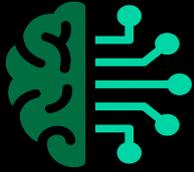
Public AI / Private AI / Local AI

- DeepSeek / Qwen / Llama open source AI Based

- Light hardware with ARM / MAC / FPGA based
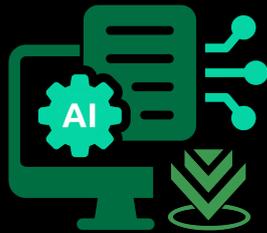
VINGLOOP-AI-01

Android Client

AI Server

Agent Server
Can be integrated into AI Server

Switch Agent

More AI-Ready Switches List

VINGLOOP Model	Description
AI-Ready 1G Switch	
AIG-8G2GF	8 x 1G RJ45, 2 x 1G SFP, L2 Switch
AIG-24G2GF	24 x 1G RJ45, 2 x 1G SFP, L2 Switch
AIG-24G4GF	24 x 1G RJ45, 4 x 1G SFP (4 x 1G RJ45 combo), L2 Switch
AI-Ready 2.5G Multi-Gigabit Switch with 10G Uplink	
AIM-24MG6XF	24 x 2.5G/1G RJ45, 6 x 10G SFP+, L3 Switch
AIM-48MG4XF2CF	48 x 2.5G/1G, 4 x 10G SFP+, 2 x 100G QSFP28, Basic L3 Switch
Ai-Ready L3 Switch with 10G Uplink and Redundant Power	
AIG-24G4GF4XF	24 x 1G RJ45 (4 x 1G SFP combo), 4 x 10G SFP+, L3 Switch
AIG-24GF8G4XF	24 x 1G SFP (8 x 1G RJ45 combo), 4 x 10G SFP+, Additional Power Supply Slot, L3 Switch
AIG-48G6XF	48 x 1G RJ45, 6 x 10G SFP+, Additional Power Supply Slot, L3 Switch
AIG-48GF6XF	48 x 1G SFP, 6 x 10G SFP+, Additional Power Supply Slot, L3 Switch
AIG-24G24GF6XF	24 x 1G SFP, 24 x 1G RJ45, 6 x 10G SFP+, Additional Power Supply Slot, L3 Switch
AIG-PWR-AC72W	AC 100-240V Power Supply, 72W Power
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
AI-Ready 1G PoE Switch	
AIG-8G2GF-PoE	8 x 1G PoE+ Port, 2 x 1G SFP, 125W PoE budget. L2 Switch
AIG-24G2GF-PoE	16 x 1G PoE+ Port, 2 x 1G SFP, 220W PoE budget, L2 Switch
AIG-24G4GF-PoE	24 x 1G PoE+ Port, 2 x 1G SFP, 370W PoE budget, L2 Switch
AIG-24G4GF2-PoE	24 x 1G PoE+ Port, 4 x SFP (4 x 1G RJ45 combo), 370W PoE budget, L2 Switch
AI-Ready 1G PoE Switch with 10G Uplink	
AIG-24G4GF4XF-PoE	24 x 1G PoE+ (4 x 1G SFP combo), 4 x 10G SFP+, 370W PoE budget, L3 Switch
AIG-48G6XF-PoE	48 x 1G PoE+, 6 x 10G SFP+, 450W PoE budget, L3 Switch

AI-Ready Switches / Fiber Modules

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.