AI-Ready Switch with AV-over-IP Support

AI-Powered AV-over-IP Access Switch



AIG-8G2GF-PoE Key Features

AI-Ready Switch for AV	Open API
8 x 1G PoE+ Ports	Compatible with Various AV Control Hardware & Software
2 x 1G SFP Fiber Ports	Matches Dante, NDI, IPMX
125W Total PoE Power Budget	Supports Multiple AV Protocols (JPEG, AES67)
5-Year Hardware Warranty*	Supports AI System Integration

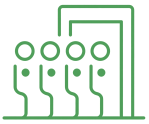
AIG-8G2GF-PoE It is a Layer 2 managed PoE+ switch equipped with eight 100M/1000Mbps Ethernet copper ports, two 1Gbps SFP fiber ports, and one Console port. Supporting IEEE 802.3af/at standards, it acts as Power Sourcing Equipment (PSE) providing a total power output of 125W. It can automatically detect and identify standard-compliant Powered Devices (PDs) and supply power to them via network cables. Utilizing store-and-forward technology combined with dynamic memory allocation, it ensures that bandwidth is efficiently allocated to every port. It supports comprehensive Layer 2 switching functions, provides robust security policies, advanced QoS policies, and rich VLAN features, making it easy to manage and maintain while meeting the networking and access requirements of enterprises, residential communities, hotels, office networks, and campus networks. The switch comes with a dedicated AV WebUI and built-in AI intelligent modules, enabling linkage with the AINM-8500 all-AV-over-IP network management platform to realize network management for complete AV-over-IP systems.

Software-Define AV is a signature feature of VINGLOOP. For deeply partnered AV-over-IP manufacturers, VINGLOOP switches can automatically detect connected AV devices on their ports and instantly complete port configurations such as IGMP, LACP, and QoS. For globally widely-used AV technologies such as Dante, NDI, IPMX, JPEG, AES67, Q-LAN, and the HAN Alliance, the switch enables multi-modal interaction via AI to configure ports. VINGLOOP switches also provide rich API functions, allowing customers to carry out integrated development of central control software and hardware, or interact AV-over-IP hardware with the switch, and jointly develop with VINGLOOP to achieve next-generation AI-driven smart AV applications (AI for AV). Currently, it already supports control plugins from renowned brands like Q-SYS and Crestron, as well as various IoT AI management platforms.

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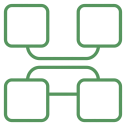
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4 Core AV-over-IP Features are four core features developed exclusively by VINGLOOP OS for AV-over-IP systems. Through technical collaboration with various brands' R&D teams, they are specially designed for IGMP, QoS, and LACP, aiming to provide plug-and-play automatic optimization for various AV protocols.



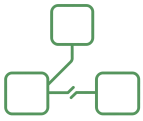
AV-QoS

**Tailored for complex AV-over-IP converged flows
Intelligently prioritizes Dante PTP data streams
Co-prioritizes AES67/Q-LAN/HAN PTP streams
Sub-prioritizes audio and video streams



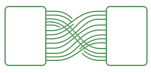
Video-IGMP

**Designed for large AV-over-IP video streams
Especially for video streams of 10G and above
Supports auto-negotiation with endpoint devices
Permits only required IGMP flows specified by the protocol



AV-IGMP

**Tailored for complex AV-over-IP switching network architectures
Manages required IGMP data stream flooding
Automatically adjusts IGMP ports based on endpoint subscription status
Blocks all non-subscribed IGMP traffic flooding



AV-LACP

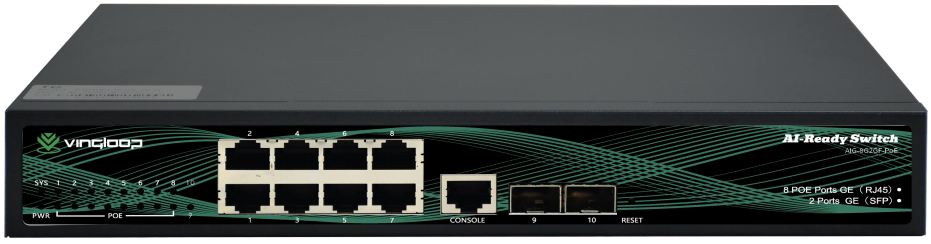
**Designed for multi-switch networks
Automatically binds all uplink ports with LACP link aggregation
Automatically configures load-balancing algorithms
Automatically loads required VLAN trunk configurations

VINGLOOP OS

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AIG-8G2GF-PoE Specification	
Fixed ports	8 × 1G PoE Electrical ports(Support PoE/PoE+)
	2 x SFP 1G Port
Manager Port	1 × Console Port
Reset button	1 × Reset button
Power Supply Standards	IEEE802.3af/at Standard PoE
Maximum port output power	30W
Total power	125W
PoE Pin Position	1/2(+), 3/6(–);
Switch Capacity	20Gbps
Packet Forwarding	14.8Mpps
Working Temperature	0~50˚C
Storage Temperature	–40~70˚C
Operating Humidity	10%～90% No condensation
Storage Humidity	5%～95% No condensation
Dimension	270(L) * 183(W) * 45(H)mm
Weight	1.42Kg
Lightning Protection	6KV
Input voltage	AC:100～240V/50～60Hz
Power Consumption	<150W Maximum Load (With PoE output)
SKU	AIG-8G2GF-PoE



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AIG-8G2GF-PoE 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	8K
Jumbo Frame	9K
Port Cache	4.1M
Port Profile	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 Support multi loop ERP
Multicast	IGMP V1/2(Snooping) IGMP Proxy IGMP Fast Leave
DHCP	DHCP Server DHCP Relay DHCP Snooping
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

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AIG-8G2GF-PoE Software Features	
Safety Features	Supports port-based 802.1X local authentication Supports 802.1X remote authentication Supports port-based MAC address filtering MAC address-based authentication Supports Radius authentication Loop detection (private) Supports port isolation Single-group port isolation Multi-group port isolation IP source guard Port security ARP inspection / binding / proxy Supports storm suppression for multicast / unknown unicast / broadcast
Software defined	Supports standard API interfaces, compatible with third-party local central control, cloud AI, and IoT platforms to integrate the VINGLOOP API for switch management, control, and invocation.
POE	Supports 802.3af/at power supply Simultaneous power supply and data transmission Power supply pins: 1/2(+), 3/6(-) PoE intelligent diagnosis PoE scheduled reboot Maximum output power per port: 30W Power supply priority setting
AV-over-IP	Supports open-standard video technologies such as Dante AV, NDI, IPMX, and Dante AV Supports audio technologies such as Dante, AES67, and Q-LAN Supports video compression technologies such as JPEG XS, JPEG 2000, H.265, H.264, and AV1 Supports hardware and software integration for AV control systems Supports large-scale AV-over-IP network deployment Supports AV-IGMP for automatic IGMP functionality Supports AV-QoS for automatic QoS functionality Supports AV-LACP for cross-switch automatic link aggregation Supports Video-IGMP for IGMP filtering of high-traffic Video-over-IP products Supports automatic device discovery and configuration for partner AV-over-IP manufacturers
AV-over-IP GUI	Dedicated AV GUI, automatically generating settings for Dante, NDI, AES67, IPMX, and SDVoE What you see is what you get (WYSIWYG) Plug-and-play for AV devices
AI intelligence	Built-in AI intelligent module in the switch Integrates with holographic AI platforms to achieve AI intelligent functions such as intelligent deployment, intelligent visualization, intelligent monitoring, intelligent management, intelligent self-healing, intelligent identification, and intelligent O&M Supports integration with the VINGLOOP AI platform Supports the VINGLOOP AI platform in automatically performing AV configurations on the switch*
Management and maintenance	CLI: Console, Telnet, SSHv1/2 Web-GUI: HTTP, HTTPS SNMPv1/v2, SNMP Alarm/Inform/Traps RMON Supports LLDP NTP v1/2 System logs (operation logs, alarm logs) Supports user hierarchical management and password protection Supports FTP/TFTP loading and upgrading Supports restoring factory defaults Supports R&D debugging Supports unified network management via holographic AI platform Supports cloud-based management

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VINGLOOP Models	Description
1000Mbps PoE Switches	
AIG-8G2GF-PoE	1. 8 Gigabit PoE copper ports + 2 Gigabit SFP fiber ports 2. Supports PoE/PoE+ power supply – Max PoE output power: 125W, Max power supply capacity: 150W 3. Layer 2 managed
AIG-24G4GF2-PoE	1. 16 Gigabit PoE copper ports + 2 Gigabit SFP fiber ports 2. Supports PoE/PoE+ power supply – Max PoE output power: 375W, Max power supply capacity: 450W 3. Layer 2 managed
AIG-48G6XF-PoE	1. 48 Gigabit PoE copper ports + 6 10G SFP+ fiber ports 2. Supports PoE/PoE+ power supply – Max PoE output power: 450W, Max power supply capacity: 520W 3. Layer 3 managed
AIG-24G24GF6XF	1. 24 Gigabit copper ports + 24 Gigabit SFP fiber ports + 6 10G SFP+ fiber ports 2. Non-PoE 3. Layer 3 managed
AIG-48GF6XF	1. 48 Gigabit SFP fiber ports + 6 10G SFP+ fiber ports 2. Non-PoE 3. Layer 3 managed
2.5Gbps PoE++ Switches	
AIM-24MG6XF-UPoE	1. 8 x 1G/2.5G PoE++ copper ports (up to 90W per port) 2. 16 x 1G/2.5G PoE+ copper ports (up to 30W per port) + 6 x 10G SFP+ fiber ports 3. Max PoE output power: 720W, Max power supply capacity: 800W 4. Layer 3 managed
10Gbps fiber access, 100Gbps fiber uplink switches	
AIX-24XF4CF	1. 24 x 10G SFP+ fiber ports + 4 x 40G/100G QSFP28 fiber ports 2. AC power supply, 2 power slots (1 hot-swappable AC power supply included as standard) 3. Layer 3 managed
AIX-48XF4CF	1. 48 x 10G SFP+ fiber ports + 4 x 40G/100G QSFP28 fiber ports 2. AC power supply, 2 power slots (1 hot-swappable AC power supply included as standard) 3. Layer 3 managed
25Gbps fiber access, 100Gbps fiber uplink switches	
AIV-48VF8CF	1. 48 x 25G SFP28 fiber ports + 8 x 100G QSFP28 fiber ports, ultra-high-performance data center switch 2. AV-over-IP spine-leaf architecture core switch 3. Supports HA, MLAG, PTP clock synchronization, and SMPTE 2110 4. Layer 3 managed

All switches share the VINGLOOP Switch OS, featuring four core functions developed specifically for AV-over-IP systems: AV-IGMP, AV-QoS, AV-LACP, and Video-IGMP. Depending on the hardware configuration, there are minor differences in the basic features of Layer 2 and Layer 3 switches; please refer to the product descriptions for details.

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VINGLOOP Models	产品规格参数	Description
100G Fiber modules		
SWM-100GM	100G QSFP28模块 SR4多模双芯，双LC接口，波长850nm，传输距离100m	100G QSFP28 module, SR4 multimode dual – core, dual – LC interface, wavelength 850nm, transmission distance 100m.
SWM-100GS	100G QSFP28模块 LR4单模双芯，双LC接口，波长1310nm，传输距离10km	100G QSFP28 module, LR4 single – mode dual – core, dual – LC interface, wavelength 1310nm, transmission distance 10km
25G Fiber modules		
SWM-25GM	25G SFP28模块 SR多模双芯，双LC接口，波长850nm，传输距离100m	25G SFP28 module, SR multimode dual – core, dual – LC interface, wavelength 850nm, transmission distance 100m
SWM-25GS	25G SFP28模块 LR单模双芯，双LC接口，波长1310nm，传输距离10km	25G SFP28 module, LR single – mode dual – core, dual – LC interface, wavelength 1310nm, transmission distance 10km
10G Fiber modules		
SWM-10GT	万兆SFP+电口模块，、RJ45接口，、传输距离100m；	10G SFP + Copper module, RJ45 interface, transmission distance 100m
SWM-10GM	万兆SFP+模块，多模双芯，双LC接口，波长850nm，传输距离300m；	10G SFP + module, multimode dual – core, dual – LC interface, wavelength 850nm, transmission distance 300m
SWM-10GS	万兆SFP+模块，单模双芯，双LC接口，波长1310nm，传输距离10km；	10G SFP + module, single – mode dual – core, dual – LC interface, wavelength 1310nm, transmission distance 10km
1G Fiber modules		
SWM-1GM	千兆SFP模块，多模双芯，双LC接口，波长850nm，传输距离550m	1G SFP module, multimode dual – core, dual – LC interface, wavelength 850nm, transmission distance 550m
SWM-1GS	千兆SFP模块，单模双芯，双LC接口，波长1310nm，传输距离20km	1G SFP module, single – mode dual – core, dual – LC interface, wavelength 1310nm, transmission distance 20km
SWM-1GT	千兆SFP电口模块-(RJ45)	1G SFP Copper port module – (RJ45)

* All switch products come with a 5-year hardware warranty, and fiber optic modules come with a 3-year warranty.
**VINGLOOP provides software-defined development services to better support your AV-over-IP business.
*** AI integration features are continuously expanding, and we also accept custom AI integration projects for AV manufacturers.

