Kyland Data Center Products
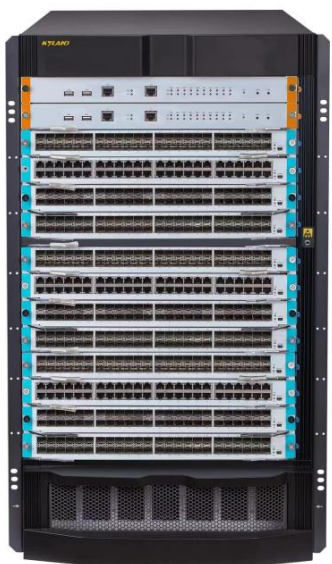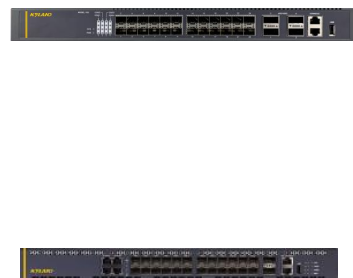
Sep, 2022

Kyland Data Center Products

Data Center Switch
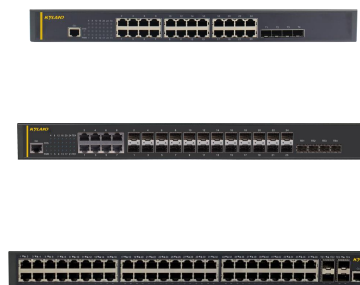
Core Switch

10 Gigabit Switch

Aggregation Switch

Access Switch

Competitive Analysis(Industrial vs Commercial)

	Industrial Ethernet Switch	Commercial Switch
Operation temperature range	-40℃ — +75℃	0℃ — +50℃
Fan	Fanless	Fan
Protection class	IP30/40	Low intensity
Install	DIN-RAIL, Wall-mounting, Rackmount	Rackmount
Voltage	DC24V, 48V, 110V; DC/AC 220V	AC/DC 220V
Ring protocol	<50ms, DT-Ring/STP/DRP/MRP	STP
Protocol	Industrial protocol & standard protocol	Standard protocol
Data forwarding capability	Low	High
Electromagnetic protection	High	Low
MTBF	10 YEARS	5YEARS
Application scenarios	Industrial, wind, grid, substation, factory, etc.	Operator, Bank, Government, Data Center, etc.

Data Center Switch

SCIOM6896G-H

Classis Model:
SICOM6896G-H-4BS
SICOM6896G-H-8BS
SICOM6896G-H-12BS

SICOM6896G-H series switches are a new generation of high-performance core switches for cloud computing, data center and high-end campus networks. The product adopts advanced hardware architecture design, excellent switching performance and rich data center business features. SICOM6896G-H series support a maximum of 768 10G ports, 512 40G ports, and 128 100G ports, and reserves the evolution capability to 256 100G ports.

SICOM6896G-H series switches further integrate various network services such as IPv6, MPLS VPN, network security, traffic analysis, virtualization, etc. Various data center high reliability technologies

SICOM6896G-H-12BS

SICOM6896G-H-8BS

SICOM6896G-H-4BS

Data Center Switch-Key Features

Advanced hardware architecture design, powerful processing capability

High-performance ASIC switching chips

High-density 10 Gigabit service boards

Max 768 10G ports, 256 40G ports, and 96 100G ports

Date Center Level High Reliability

Based on HPS

Support ISSU, GR

① ② ③ ④ ⑤ ⑥

SICOM6896G-H Series

Innovative Green Design

Rich Service Features

Support Layer 2&3 multicast protocol

Support Layer 2&3 MPLS VPN

Support Comprehensive IPv6 Solution

Rich Data Center Features

High Performance

High Reliability

Flexibility

Easy Managed

Large Layer-2 technology: Trill, SPB

Security

Device-level security protection

Complete security authentication

Enhanced service security

Data Center Switch Features

01 **Data Center Features**

Support virtualization technology
Support TRILL/SPB large second-layer technology

02 **STP**

Support 802.1D (STP), 802.1W (RSTP), 802.1S (MSTP) Support BPDU protection, root protection, loop protection

03 **Multicast**

Support IGMP v1/v2/v3 Support IGMP Snooping Support IGMP Fast Leave Support multicast group policy and multicast group quantity limit Support multicast traffic replication across VLANs Support PIM-SM, PIM-DM

04 **IPv6**

Support ICMPv6, DHCPv6, ACLv6, IPv6 Telnet Support IPv6 neighbor discovery Support Path MTU discovery Support MLD, MLD Snooping Support IPv6 static routing, RIPng, OSPFv3, BGP4+ Support manual tunnel, ISATAP tunnel, 6to4 tunnel

05 **QOS**

Support traffic classification based on the fields of L2/L3/L4 protocol headers
Support CAR traffic restriction
Support 802.1P/DSCP priority re-marking
Traffic policing and traffic shaping
Support Ingress and Egress ACLs
Support matching L2, L3, L4 and IP quintuple for replication, forwarding and discarding
Support Hash homologous and homologous load balancing to ensure session integrity of traffic output

06 **Security**

Support L2/L3/L4-based ACL flow identification and filtering security mechanism
Support anti-DDoS attack, TCP SYN Flood attack, UDP Flood attack, etc. Support the suppression function of multicast, broadcast and unknown unicast packets
Support port isolation
Support port security , IP+MAC+ port binding Support DHCP Snooping, DHCP Option 82 Support IEEE 802.1x authentication
Support Radius,Tacacs+ authentication
Support uRPF
Support command line hierarchical protection

Data Center Switch-Ordering Information

	Industrial Ethernet Switch	Commercial Switch
Classis	SICOM6896G-H-4BS	SICOM6896G-H chassis (including 2 fan slots, 7 power supply slots, no power supply as standard, 2 main control slots, 4 switch fabric board slots, and 4 line card slots)
	SICOM6896G-H-8BS	SICOM6896G-H Chassis (including 3 fan slots, 7 power supply slots, no power supply as standard, 2 main control slots, 4 switch fabric board slots, and 8 line card slots)
	SICOM6896G-H-12BS	SICOM6896G-H Chassis (including 4 fan slots, 7 power supply slots, no power supply as standard, 2 main control slots, 4 switch fabric board slots, 12 line card slots)
Power Supply	SICOM6896G-H-AC1200W	SCIOM6896G-H AC power module 1200W
	SICOM6896G-H-POE1000W	SICOM6896G-H POE AC power module 1000W
MCU Card	SICOM6896G-H-MSU	SICOM6896G-H Main Control Card
SFU Card	SICOM6896G-H-SWI	SICOM6896G-H-4BS Switch Fabric Card
	SICOM6896G-H-SWII	SICOM6896G-H-8BS Switch Fabric Card
	SICOM6896G-H-SWIII	SICOM6896G-H-12BS Switch Fabric Card
LPU Card	SICOM6896G-H-48GE	48 Gigabit Copper ports line card (RJ45)
	SICOM6896G-H-48GX	48 Gigabit Fiber ports line card (SFP)
	SICOM6896G-H-48GS	48 Gigabit Copper ports line card (RJ45), support POE/POE+
	SICOM6896G-H-48X	48 10Gigabit Fiber ports line card (SFP+)
	SICOM6896G-H-8QX	8 40Gigabit Fiber ports line card (QSFP+)
	SICOM6896G-H-8CX	4 100Gigabit Fiber ports line card (QSFP28)

Core Switch

SCIOM6896G-S
Classis Model:
SICOM6896G-S-1BS
SICOM6896G-S-4BS
SICOM6896G-S-8BS

SICOM6896G-S series switches are new-generation T-bit core switches for next- generation IP metropolitan area networks and large campus networks. This series products adopts an advanced distributed multi-level switching matrix architecture. On the basis of providing high-performance L2/L3/L4 wire-speed switching services, it further integrates IPv6, MPLS VPN, network security, traffic analysis, virtualization, etc. network services, combined with a variety of high-reliability technologies such as uninterrupted upgrade, uninterrupted forwarding, graceful restart, and redundancy protection, ensure the long-term uninterrupted communication capability of the network. Deep energy saving, greatly reducing the energy consumption of device, low carbon and

environmental protection, effectively reducing operation and maintenance costs, and providing a perfect solution for the green and sustainable development of the network.

SICOM6896G-S-8BS

SICOM6896G-S-4BS

SICOM6896G-S-1BS
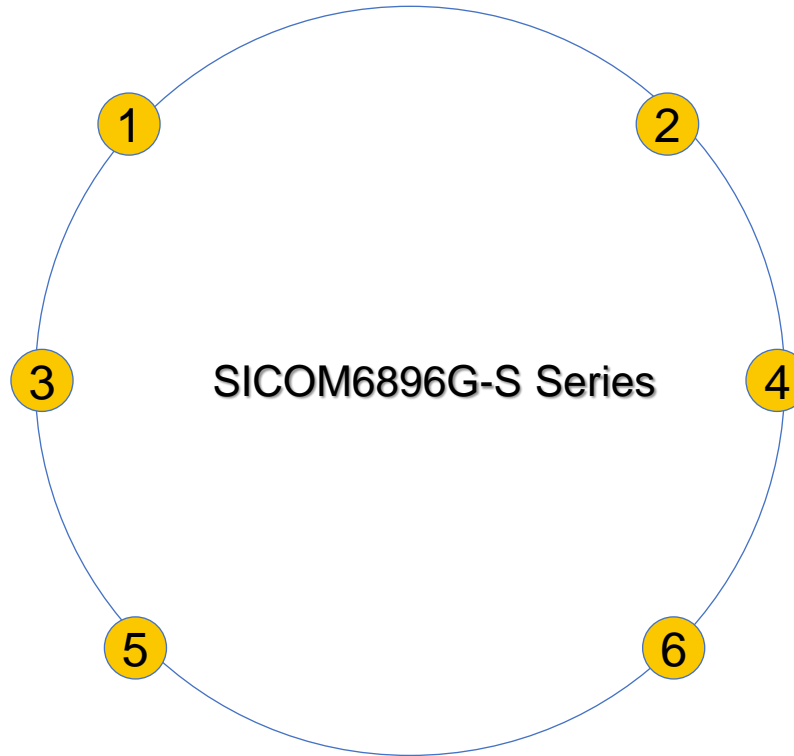
Data Center Switch-Key Features

Advanced hardware architecture design, powerful processing capability

Designed for the 40G platform

Support high-density 10 Gigabit LPU

Virtualization cluster switch technology

High Performance

High Reliability

Flexibility

Easy Managed

Innovative green design

Date Center High reliability level

Based on HPS

Support ISSU, GR

Rich Service Features

Support Layer 2&3 multicast protocol

Support Layer 2&3 MPLS VPN

Support Comprehensive IPv6 Solution

Security

Device-level security protection

Complete security authentication

Enhanced service security

1
2
3
4
5
6

SICOM6896G-S Series

Core Switch Features SICOM6896G-S

01

VLAN

Support 4K VLAN entries
Support GVRP
Support 1:1 and N:1 VLAN Mapping
Support basic QinQ and flexible QinQ functions
Support Private VLAN

02

STP

Support 802.1D (STP), 802.1W (RSTP), 802.1S (MSTP) Support BPDU protection, root protection, loop protection

03

Multicast

Support IGMP v1/v2/v3 Support IGMP Snooping Support IGMP Fast Leave Support multicast group policy and multicast group quantity limit Support multicast traffic replication across VLANs Support PIM-SM, PIM-DM

04

IPv6

Support ICMPv6, DHCPv6, ACLv6, IPv6 Telnet Support IPv6 neighbor discovery Support Path MTU discovery Support MLD, MLD Snooping Support IPv6 static routing, RIPng, OSPFv3, BGP4+ Support manual tunnel, ISATAP tunnel, 6to4 tunnel

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QOS

Support traffic classification based on the fields of L2/L3/L4 protocol headers
Support CAR traffic restriction
Support 802.1P/DSCP priority re-marking
Traffic policing and traffic shaping
Support Ingress and Egress ACLs
Support matching L2, L3, L4 and IP quintuple for replication, forwarding and discarding
Support Hash homologous and homologous load balancing to ensure session integrity of traffic output

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Security

Support L2/L3/L4-based ACL flow identification and filtering security mechanism
Support anti-DDoS attack, TCP SYN Flood attack, UDP Flood attack, etc. Support the suppression function of multicast, broadcast and unknown unicast packets
Support port isolation
Support port security , IP+MAC+ port binding Support DHCP Snooping, DHCP Option 82 Support IEEE 802.1x authentication
Support Radius,Tacacs+ authentication
Support uRPF
Support command line hierarchical protection

Core Switch-Ordering Information

	Product	Description
SICOM6896G-S-1BS Ordering Information	SICOM6896G-S-1BS	SICOM6896G-S-1BS Chassis (including 1 fan slot, 3 power supply slots, no power supply as standard, 2 service with main control slots, 1 general service slot)
	SICOM6896G-S-1BS-MSU-8X24GX	Service with main control card, 24 Gigabit Fiber ports (SFP) + 8 10Gigabit Ports (SFP+)
	SICOM6896G-S-1BS-MSU-8X24GE	Service with main control card, 24 Gigabit Copper ports (RJ45) + 8 10Gigabit Ports (SFP+)
Classis	SICOM6896G-S-4BS	SICOM6896G-S-4BS Chassis (including 1 fan slot, 3 power supply slots, no power supply as standard, 2 main control slots, 4 service slots)
	SICOM6896G-S-8BS	SICOM6896G-S-8BS Chassis (including 1 fan slot, 3 power supply slots, no power supply as standard, 2 main control slots, 8 service slots)
Power Supply	SICOM6896G-S-AC350W	SICOM6896G-S 350W AC power module (4BS can be fully loaded)
	SICOM6896G-S-DC350W	SICOM6896G-S 350W DC power module (4BS can be fully loaded)
	SICOM6896G-S-AC550W	SICOM6896G-S 550W AC power module (can be fully loaded with 8 line cards)
	SICOM6896G-S-DC550W	SICOM6896G-S 550W DC power module (can be fully loaded with 8 line cards)
MCU Card	SICOM6896G-S-MSU-I	SICOM6896G-S Series Main Control Board, Max support 72 Gigabit ports + 16 10Gigabit ports per card
	SICOM6896G-S-MSU-II	SICOM6896G-S Series Main Control Board, Max support 64 10Gigabit ports per card

Core Switch-Ordering Information

	Product	Description
LPU Card	SICOM6896G-S-24GX24GE	48 Gigabit ports line card with 24 Gigabit SFP ports(SFP) and 24 Gigabit Copper ports(RJ45)
	SICOM6896G-S-48GE	48 Gigabit Copper ports (RJ45) line card
	SICOM6896G-S-48GX	48 Gigabit Fiber ports (SFP) line card
	SICOM6896G-S-8X24GE	32 ports line card with 24 Gigabit Copper ports (RJ45) and 8 10Gigabit ports (SFP+)
	SICOM6896G-S-8X24GX	32 ports line card with 24 Gigabit Fiber ports (SFP) and 8 10Gigabit ports (SFP+)
	SICOM6896G-S-16X	16 10Gigabit Fiber ports (SFP+) line card
	SICOM6896G-S-4QX	4 40Gigabit Fiber ports (QSFP+) line card

10Gigabit Switch

SICOM8648X

Classis Model:
SICOM8648X-4CX24X-HV-HV/L1-L1
SICOM8648X-4CX2QX48X-HV-HV/L1-L1

SICOM8648X Series is a full-10GE TOR switches oriented for high- performance computing, data center and high- end campuses. SICOM8648X Series adopts the advanced hardware architecture design.
SICOM8648X Series (1U height) supports up to 2.56Tbps switching capacity and 48 10GE ports + 2 40GE ports + 4 100G ports or 72 10GE ports.
SICOM8648X Series supports KVSS, TRILL, SDN and FCoE / FC. By cooperating with SICOM6896G Series, SICOM8648X Series can converge data of 15000+ 10GE servers.

Carrier-Level Aggregation Layer-3 Ethernet Switch Innovative KVSS (KYLAND Virtual Switch System)

10Gigabit Switch-Specifications

ITEM		SICOM8648XX-4CX24X-HV-HV/ L1-L1	SICOM8648XX-4CX2QX48X-HV-HV/ L1-L1
Interface		24 10GE/GE SFP+ ports,4 100GE/40GE QSFP28 ports	48 10GE/GE SFP+ ports, 2 40GE QSFP+ ports, 4 100GE/40GE QSFP28 ports
Backplane		800Gbps	1920Gbps
Forwarding Rate		600Mpps	1440Mpps
Total Output BTU	1000BTU/H=293W	238.91	501.71
Fan Number		4	4
Noise@25℃(dBA)		57	57
MTBF(H)		>100000	>100000
Forwarding mode		Store-forward	Store-forward
Flash(MB)		32	64
DRAM(MB)		1024	512
MAC		32K	64K
Jumbo Frame		9K	9K
Routing Table	IPv4	16K	8K
	IPv6	12K	4K
ARP Table	IPv4	10K	4K
	IPv6	10K	4K
Total SVI		1K	1K

Aggregation Switch

SICOM8630
Classis Model:
SICOM8630-6X24GE
SICOM8630-6X24GX8GE
SICOM8630-6X48GE
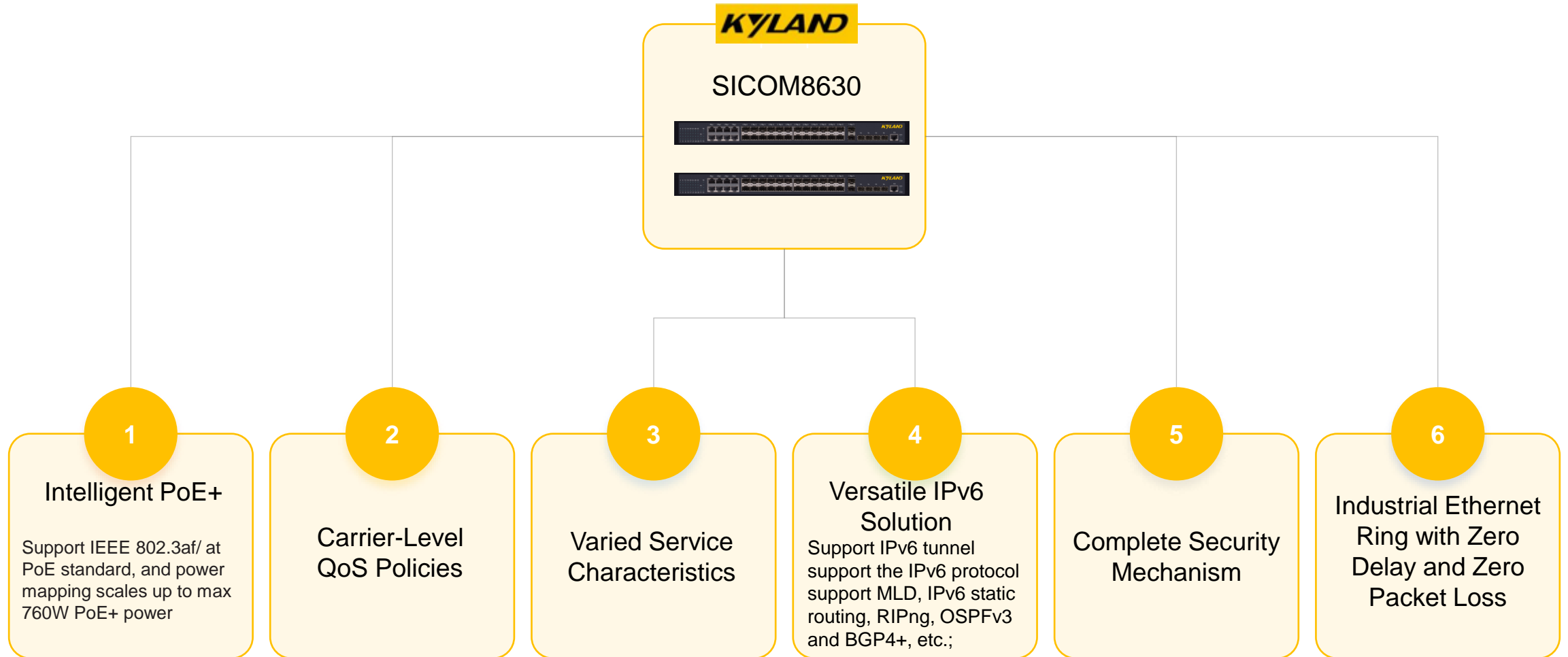**SICOM8630-6X24GX24GE**
SICOM8630-6X48GP

Kyland SICOM8630 Series is a new generation of aggregation 10G switches introduced by Kyland. It is targeted at the IP MAN (metropolitan area network), campus networks and enterprise networks. It is developed on the basis of high performance hardware and ROS software platform with Kyland own independent intellectual property rights. It supports multiple services like IPv6, VPN and network security based on L2/L3/L4 wire-speed switching service. It also supports non stop upgrade , continuous forwarding, graceful restarting and redundancy protection.

Carrier-Level Aggregation Layer-3 Ethernet Switch Innovative KVSS (KYLAND Virtual Switch System)

Aggregation Switch-Key Features

KYLAND

SICOM8630

1

Intelligent PoE+

Support IEEE 802.3af/ at PoE standard, and power mapping scales up to max 760W PoE+ power

2

Carrier-Level QoS Policies

3

Varied Service Characteristics

4

Versatile IPv6 Solution

Support IPv6 tunnel support the IPv6 protocol support MLD, IPv6 static routing, RIPng, OSPFv3 and BGP4+, etc.;

5

Complete Security Mechanism

6

Industrial Ethernet Ring with Zero Delay and Zero Packet Loss

Aggregation Switch-Specifications

ITEM		6X24T	6X24GX8GE	6X48GE	6X24GX24GE	6X48GP
Interface	Gigabit Copper	24	8	48	24	48
	Gigabit SFP	/	24	/	24	/
	10 Gigabit	6 * 10Gigabit SFP+ ports				
Backplane		216Gbps				
Forwarding Rate		126Mpps	138Mpps	162Mpps	162Mpps	162Mpps
Power Consumption	AC: 100V-240V	75W	75W	75W	150W	≤1000W POE
Total output BTU	1000BTU/H=293W	255.97	255.97	255.97	511.94	3412.96
Noise@25℃(dBA)		45				
MTBF(H)		>200000				
Forwarding mode		Store-forward				
Flash(MB)		16				
DRAM(MB)		512				
MAC		32K				
Jumbo Frame		9K				
Routing Table	IPv4	12K				
	IPv6	6K				
ARP Table	IPv4	12K				
	IPv6	2K				
Total SVI		1K				

Access Switch

SICOM8620

SICOM8620 Series L3-lite Series is aggregation 10GE switch. It is targeted at the IP MAN (metropolitan area network), government and enterprise networks, Internet café and disk-less working environment. It is developed on the basis of high performance hardware. It supports functions such as powerful ACL, flexible QinQ, 1:1 or N:1 VLAN switching, Ethernet OAM, carrier-level QoS and industry-level 10GE Ether-ring, ensuring this switch series meets application requirements in all kinds of complicated sites. It also supports layer-3 routing protocol

Innovative Virtual Cluster Switching Technique KVSS (KYLAND Virtual Switch System)
Intelligent PoE+

Aggregation Switch-Ordering Information

Product	Description
SICOM8620-4X24GE	Layer-3 lite switch with 24 GE and 4 10GE ports (1 Console port, 24 GE TX ports, 4 10GE/GE SFP+ ports; 100 to 240 VAC input, 60 HZ , fanless, 1U, standard 19-inch rack-mounted installation)
SICOM8620-4X8G24GE	Layer-3 lite switch with 24 GE and 4 10GE ports (1 Console port, 16 100M/1000M SFP ports, 8 GE SFP/TX combo ports, 4 10GE/GE SFP+ ports; 100 to 240 VAC input, 60 HZ, the cooling fan, 1U, standard 19 inch rack-mounted installation)
SICOM8620-4X24GP	Layer-3 lite POE switch with 24 GE ports and 4 10GE ports (1 console port, 24 GE POE TX ports, 4 10GE/GE SFP ports; standard AC220V power supply, 370W POE power, the cooling fan; 1U; standard 19-inch rack-mounted installation)
SICOM8620-6X48GE	Layer-3 lite switch with 48 GE and 6 10GE/GE SFP+ ports (1 Console port, 48 GE TX ports, 6 10GE/GE SFP+ ports; 100 to 240 VAC input, 60 HZ, the cooling fan, 1U, standard 19 inch rack-mounted installation)
SICOM8620-6X48GP	Layer-3 lite POE switch with 48 GE ports and 6 10GE/GE ports (1 console port, 48 GE POE TX ports, 6 10GE/GE SFP+ ports; standard AC220V power supply, 370W AC POE power, 740W DC POE power, the cooling fan; 1U; standard 19-inch rack-mounted installation)

Case1-Transportation Industry Solutions

Three-level management structure: provincial monitoring center, road monitoring sub-center, and grassroots unit.

Stable, reliable, and easy to expand: the backbone link of the entire network adopts 10G/Gigabit fiber dual-link connection, the road section monitoring and basic units use industrial-grade switches, and the networking adopts industrial-grade Ethernet ring network redundancy technology to protect the switching time < 50ms.

Case2-Insturance Solutions

Overall plan

GPON technology to build the access network.

The GPON core OLT uses SICOM6896G-S to achieve multi-service integration POL networking.

The average access bandwidth of each household in the residential area of the retirement community is 100M, and the switch is selected for installation in the household, with an average access bandwidth of 300M per AP.

The average access bandwidth of each AP in the rehabilitation center is 300M, and outdoor APs are used for wireless coverage in outdoor areas.

Network access control and information distribution equipment are connected to the core switch equipment of the PON network.

The dual-machine virtualized redundant configuration is used to deploy behavior auditing, firewalls and other security device to protect against Internet threats and regulate the behavior of LAN users.
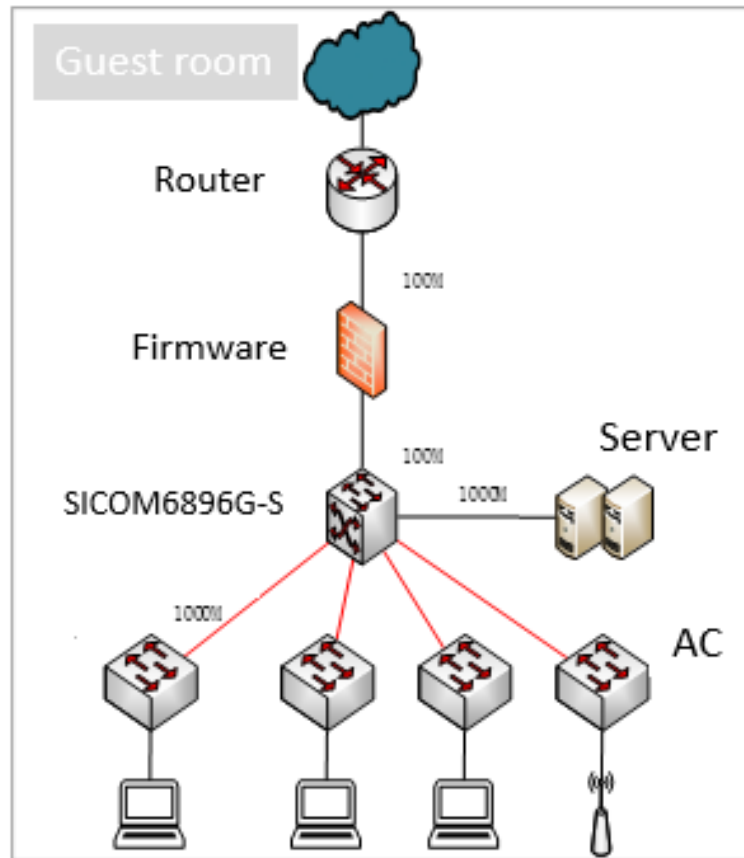
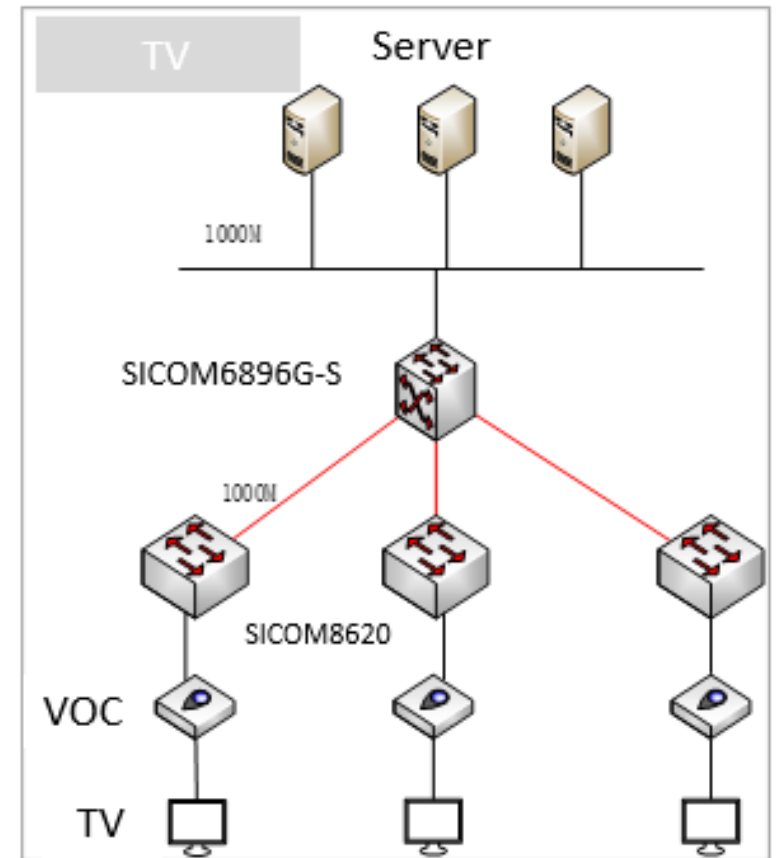Meets requirements of the Ministry of Public Security's 82# order.
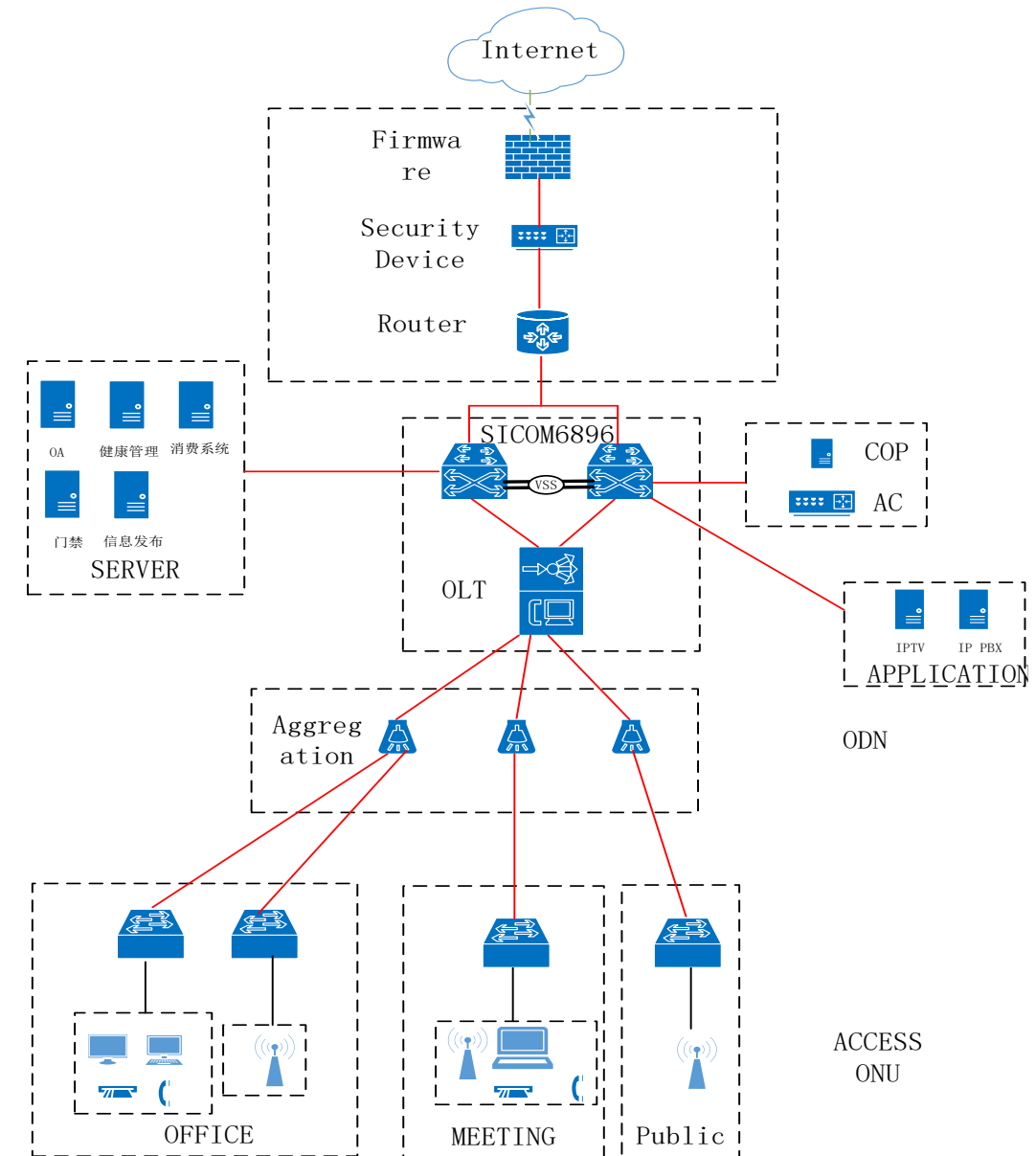
Case3-Hotel Solutions
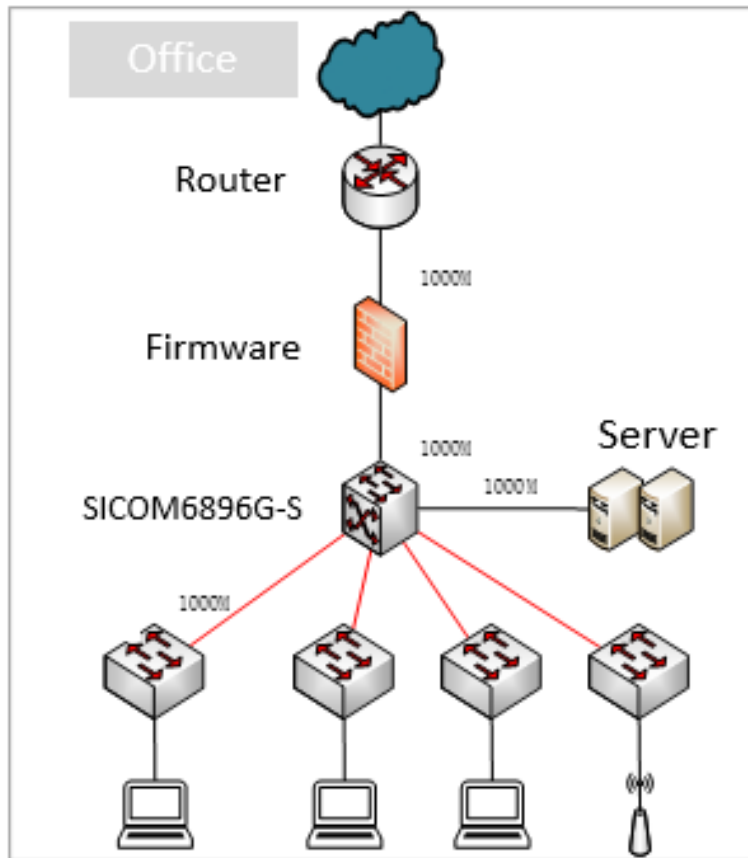
Core Switch:
SICOM6896G-S series as core switch, all server connect with core switch

Access Switch:
SICOM8630/8620 as access switch

Wireless AP
Wireless AP through wireless controller connect with network

Thank you!