

SICOM6648G Series



Product Overview

Kyland SICOM6648G 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 nonstop upgrade, continuous forwarding, graceful restarting and redundancy protection. KYLAND SICOM6648G Series has 5 models: SICOM6648G-6X24GE, SICOM6648G-6X24GX8GE, SICOM6648G-6X48GE, SICOM6648G-6X24GX24GE and SICOM6648G-6X48GP. It supports up to 48 gigabit ports and 6 10GE ports.

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

Virtualize multiple physical devices into one. The performance, reliability and management of the virtual system are superior to the physical ones;

Improved Performance: KVSS makes full use of each link in the physical devices, which avoids STP blocking the link and protects the original link to the maximum extent;

High Reliability: Based on the advanced distribution mechanism and efficient cross-physical link aggregation link function, the logic control plane, service control plane and service data plane are separated. Thus, the device can support continuous layer3 routing forwarding, avoiding service interruption as a result of a single point

of failure;

Easy Management: KVSS realizes single IP management, greatly improving the networking efficiency and lowering the operating cost.

Product Characteristics

Carrier-Level QoS Policies

Supports priority retagging and complicated flow classification based on VLAN, MAC, source address, destination address, IP or priority to better streamline carrier's services. Support flexible bandwidth control policies and supports port-/flow-based flow limit, and ensuring the line speed forwarding of each port to make sure the high quality of video, audio and data services. Support 8 priority queues by each port. Support multiple queue schedule algorithms such as SP, WRR, and SP+WRR.

Varied Service Characteristics

Supports layer-2 and layer-3 multicast routing protocol, which enable the device can access to IPTV, HD video surveillance and HD video conference.

Supports layer-3 routing protocol and super-large routing table capacity, which enables the device is available in large campus networks, enterprise networks and industry networks.

Versatile IPv6 Solution

SICOM6648G Series supports the IPv6 protocol suite, IPv6 neighbor discovery, ICMPv6, path MTU discovery, DHCPv6, etc.;

SICOM6648G Series supports Ping, Traceroute, Telnet, SSH, ACL based on IPv6;

SICOM6648G Series supports MLD, MLD Snooping, IPv6 static routing, RIPng, OSPFv3 and BGP4+, etc.;

Supports IPv6 tunnel: manual tunnel, automatic tunnel, GRE tunnel, 6to4 tunnel, ISATAP;

SICOM6648G Series supports IPv4 transiting to IPv6: IPv6 manual tunnel, automatic tunnel, 6 to 4 tunnel, ISATAP tunnel.

Complete Security Mechanism

Equipment-Level Security: The advanced hardware infrastructure design realizes the level-based packet schedule and packet protection, prevents DoS-/TCP-related SYN Flood, UDP Flood, Broadcast Storm or large traffic attacks, and supports level-based command line protection, endowing different levels of users with different management permissions.

Security Authentication Mechanism: IEEE 802.1x, Radius and Tacacs+ Enhanced Service Security Mechanism: supports the plaintext or MD5 authentication of relevant routing protocol, URPF, deep inspection of hardware packet, control packet and data packet and filtering technology.

Innovative Energy-Saving Design

Intelligent power management: The power system of SICOM6648G series supports real-time monitoring the device and the slow-start. It is also power-saving. Intelligent fan management system: The fan system of SICOM6648G Series supports automatic speed regulation, which efficiently slow the fan speed and mitigate the noise. Complies with the international standard IEEE 802.3a

Flexible and Convenient Management and Maintenance

Supports management modes such as the console port, Telnet, SSH, etc.

Supports the WEB management mode, which is easy and efficient so that it makes installation and debugging convenient. Supports TFTP-patterned file upload/download management.

Supports ISSU (In-Service Software Upgrade). Supports SNMP and KYLAND NMS smart network management platform to realize automatic equipment discovery, network topology management, equipment configuration management, performance data statistics and analysis and trouble management.

Industrial Ethernet Ring with Zero Delay and Zero Packet Loss

Supports industry-level EAPS and ERPS, and their protection recovery time is less than 50ms. Their high reliability is represented by the null packet loss, which has

been proved by many years of application in the Grid, rail transportation and defense systems.

Intelligent PoE+

SICOM6648G-6X48GP supports IEEE 802.3af/ at PoE standard, and power mapping scales up to a maximum of 760W of PoE+ power; SICOM6648G-6X48GP supports PoE non-stop power supply. The PoE+ power is maintained during a switch reload; SICOM6648G-6X48GP supports manual and dynamic PoE power allocation; SICOM6648G-6X48GP supports up to 6KV thunder-proof of the PoE port and power supply;

Product 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				
Console		1 RJ45 Port				
Backplane		216Gbps				
Forwarding Rate		126Mpps	138Mpps	162Mpps	162Mpps	162Mpps
Classis	Dimensions(WxDxH)(mm)	440x350x44				
Package	Dimensions(WxDxH)(mm)	576x448x94				
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°C(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				

» Features

VLAN

4K Active VLAN, QinQ & Selective QinQ, GVRP, Voice-VLAN

Spanning Tree

802.1D (STP)
802.1W (RSTP) and 802.1S (MSTP)
Root guard and loopback guard

Multicast

PIM-SM, PIM-DM,
IGMP v1/v2/v3,
IGMP Snooping,
IGMP Fast Leave,
MVR, IGMP filter

IPv4

Static routing, RIP v1/v2,
OSPF, BGP, PBR, ECMP
BFD for OSPF, BGP

IPv6

ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet
IPv6 neighbor discovery, Path MTU discovery
MLD V1/V2, MLD snooping
IPv6 Static Routing, RIPng, OSPFv3, BGP4+
Manual tunnel, ISATAP tunnel, 6 to 4 tunnel

MPLS

Multi-VRF,

Qos

CAR, HQoS, MAC/IP/TCP/UDP/VLAN/COS/DSCP/TOS based QoS,
802.1P/DSCP priority re-labeling, SP, WRR, and "SP+WRR", Tail-Drop,
WRED, flow monitoring and traffic shaping

Security

Port isolation, Port security, and "IP+MAC+port" binding, MAC sticky
DHCP Snooping and option 82, DAI & IP source guard, PPPoE+ IEEE 802.1x, Radius and Tacacs+ L2/L3/L4 ACL flow identification and filtration Anti-attack
DDoS, TCP's SYN Flood, UDP Flood, etc.
Broadcast/multicast/unknown unicast storm-control
MD5, SHA-256, RSA-1024, AES256, etc.

Reliability

Static/LACP link aggregation, Interface backup
KVSS virtual-stacking
EAPS and ERPS
URPF, LLDP, ISSU
VRRP
1+1 power backup

Management

Console, Telnet, SSH v1/2, HTTP
HTTPSSNMP v1/v2/v3, RMON
TFTP, FTP, SFTP
NTP, SPAN, RSPAN

Environment

Operating temperature/humidity: 0 °C -50°C ,10%-90% non-condensing
Storage temperature/humidity: -20°C -70°C , 5%-95% non-condensing

Certification

CE, FCC, ROHS