

SICOM6648G-LITE Series



Product Overview

SICOM6648G-LITE Series is a next-generation aggregation 10GE switch introduced by Kyland. 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 and ROS software platform with Kyland own independent intellectual property rights. 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 Ethering, ensuring this switch series meets application requirements in all kinds of complicated sites. It also supports layer-3 routing protocol.

SICOM6648G-LITE Series has 5 models:

SICOM6648G-LITE-4GX24GE, SICOM6648G-LITE-4X24GP, SICOM6648G-LITE-6X48GE and SICOM6648G-LITE-6X48GP.

Product Characteristics

Innovative Virtual Cluster Switching Technique

Innovative KVSS (Kyland Virtual Switch System): SICOM6648G-LITE Series virtualizes 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, SICOM6648G-LITE Series can support continuous layer-3 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.

Industrial Ethernet Ring with Zero Delay and Zero Packet Loss

Supports industry-level EAPS and their protection shift 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.

Telecom-Level Ethernet Switch

Supports the telecom-level Ethernet-ring protection protocol with a protection shift time of less than 50ms, STP/RSTP/MSTP, backup of active and standby uplinks and LACP link aggregation to cater to the requirements of high reliability of carriers.

Support Ethernet standard 802.3u, 802.3x, 802.3ad,

802.1d, 802.1p, 802.1q, 802.1w, 802.1ad.
Support system status LED, port dynamic IED
Provides the perfect Ethernet OAM mechanism to monitor the network running status in real time for rapid trouble locating and detection.
Supports powerful ACL functions to access and control L2-L7 data based on physical port, VLAN, MAC, IP and protocol port ID, and providing carriers flexible and various policy control methods.
Supports In-Service Software Upgrade (ISSU) to ensure the unremitting data forwarding during system upgrade.

Supports various L2 multicast functions, including IGMP-Snooping, fast-leave and trans-vlan

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 to realize automatic equipment discovery, network topology management, equipment configuration management, performance data statistics and analysis and trouble management.

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.

Supports provides 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.

Supports 8 priority queues by each port.

Supports multiple queue schedule algorithms such as SP, WRR, and SP+WRR”.

Versatile IPv6 Solutions

Supports the IPv6 protocol suite, IPv6 neighbor discovery, ICMPv6, path MTU discovery, etc.

Supports Ping, Traceroute, Telnet, SSH, ACL and so like on the basis of IPv6, meeting IPv6 networks' equipment management requirements and service control requirements.

Perfect Security Mechanisms

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.

Supports perfect security authentication mechanisms: IEEE 802.1x, Radius and Tacacs+.

Supports storm/multicast/unicast limit to ensure the normal running of equipment in harsh network conditions.

Supports a perfect ring detection mechanism to ensure the long-term stable running of network.

Supports port isolation within the same VLAN, DHCP-Snooping, and IP plus MAC plus Port binding for ensuring user data security;

Intelligent PoE+

SICOM6648G-LITE-4X24GP and SICOM6648G-LITE-6X48GP support IEEE 802.3af/at PoE standard, and power mapping scales up to a maximum of 740W of PoE+ power; SICOM6648G-LITE-4X24GP and SICOM6648G-LITE-6X48GP support PoE non-stop power supply. The PoE+ power is maintained during a switch reload. SICOM6648G-LITE-4X24GP and SICOM6648G-LITE-6X48GP support manual and dynamic PoE power allocation; SICOM6648G-LITE-4X24GP and SICOM6648G-LITE-6X48GP support up to 6KV thunder-proof of the PoE port and power supply.

» Product Specifications

ITEM		4X24GE	4X24GP	6X48GE	6X48GP
Interface		24 GE TX	24 GE POE	48 GE TX	48 GE TX
		4 10GE/GE	4 10GE/GE	6 10GE/GE	6 10GE/GE
		SFP+	SFP+	SFP+	SFP+
Console (RJ45)		1	1	1	1
Backplane (Gbps)		128	128	216	216
Forwarding rate (Mpps)		96	96	162	162
Chassis	Dimensions (W x Dx H) (mm)	440x180x44	440x210x44	440x280x44	440x300x44
	Weight (KG) (empty)	2.6	3	4.6	5.2
Power consumption	No-load	< 22W	< 25W	< 25W	< 25W
	Full-load	35W	<408W	<48W	<48W (Without POE)
Power supply	AC: 100-240V	45W	410W	50W	450W AC
	DC: 36-72V				800W DC
POE power budget		/	370W	/	370W AC 740W DC
Total output BTU (1000BTU/H=293W)		153.58	1392.49	163.82	2730.38 DC 1535.84 AC
Fan number		/	2	2	2
Noise@25°C(dBA)		0	37.5	45	45
MTBF(H)		> 200000	> 200000	> 200000	> 200000
Forwarding mode		Store-forward	Store-forward	Store-forward	Store-forward
Flash (MB)		16	16	16	16
DRAM (MB)		256	256	512	512
MAC		16K	16K	16K	16K
Buffer size (MB)		1.5	1.5	1.5	1.5
Interface vlan		64	64	64	64
Routing table		512	512	512	512
Jumbo frame		9K	9K	9K	9K

» Features

VLAN

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

Spanning Tree

802.1D (STP)
802.1W (RSTP) and 802.1S (MSTP)
BPDU guard, root guard and loopback guard

Multicast

IGMP v1/v2/v3
IGMP Snooping
IGMP Fast Leave
MVR, IGMP filter

IPv4

Static route
RIP, OSPF
IPv4/v6 dual stack

IPv6

ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet
IPv6 neighbor discovery, Path MTU discovery
MLD V1, 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
EAPS and ERPS
ISSU uninterrupted system upgrade
KVSS, ups to 16-units per stack
VRRP
UDLD

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