

IKS-G6524A/G6824A Series

24G-port Layer 2 / Layer 3 full Gigabit managed Ethernet switches



- > Layer 3 routing interconnects multiple LAN segments (IKS-G6824A series)
- > 24 Gigabit Ethernet ports
- > Up to 24 optical fiber connections (SFP slots)
- > Fanless, -40 to 75°C operating temperature range (T models)
- > Turbo Ring and Turbo Chain (recovery time < 50 ms @ 250 switches), RSTP/STP, and MSTP for network redundancy
- > Isolated redundant power inputs with universal 110/220 VAC power supply range
- > Supports MXstudio for easy, visualized industrial network management
- > V-ON™ ensures millisecond-level multicast data and video network recovery



Introduction

Process automation and transportation automation applications combine data, voice, and video, and consequently require high performance and high reliability. The IKS-G6524A/G6824A series full Gigabit backbone switches are equipped with 24 Gigabit Ethernet ports, and support Layer 3 routing functionality to facilitate the deployment of applications across networks, making them ideal for large scale industrial networks. The IKS-G6524A/G6824A's full Gigabit

capability increases bandwidth to provide high performance and the ability to quickly transfer large amounts of video, voice, and data across a network. The switches support the Turbo Ring, Turbo Chain, and RSTP/STP redundancy protocols, and are fanless and come with an isolated redundant power supply to increase system reliability and the availability of your network backbone.

Features and Benefits

- Layer 3 switching functionality to move data and information across networks (IKS-G6824A series)
- Command line interface (CLI) for quickly configuring major managed functions
- Supports advanced VLAN capability with Q-in-Q tagging
- Software based IEEE 1588 PTPv2 (Precision Time Protocol) for time synchronization of networks
- DHCP Option 82 for IP address assignment with different policies
- Supports EtherNet/IP, Modbus/TCP, and PROFINET protocols for device management and monitoring
- Redundant Gigabit Turbo Ring and Turbo Chain (recovery time < 50 ms @ 250 switches), RSTP/STP, and MSTP for network redundancy
- IGMP snooping and GMRP for filtering multicast traffic
- IEEE 802.1Q VLAN and GVRP protocol to ease network planning
- QoS (IEEE 802.1p/1Q and TOS/DiffServ) to increase determinism
- Port Trunking for optimum bandwidth utilization
- TACACS+, SNMPv3, IEEE 802.1X, HTTPS, and SSH to enhance network security
- Access control lists (ACL) increase the flexibility and security of network management (IKS-G6824A series)
- SNMPv1/v2c/v3 for different levels of network management
- RMON for efficient network monitoring and proactive capability
- Bandwidth management prevents unpredictable network status
- Lock port function for blocking unauthorized access based on MAC address
- Port mirroring for online debugging
- Automatic warning by exception through e-mail, relay output
- Digital inputs for integrating sensors and alarms with IP networks
- Redundant, dual AC power inputs

: Specifications

Technology

Standards:

IEEE 802.3 for 10BaseT
 IEEE 802.3u for 100BaseT(X) and 100BaseFX
 IEEE 802.3ab for 1000BaseT(X)
 IEEE 802.3z for 1000BaseSX/LX/LHX/ZX
 IEEE 802.3x for Flow Control
 IEEE 802.1D-2004 for Spanning Tree Protocol
 IEEE 802.1w for Rapid Spanning Tree Protocol
 IEEE 802.1s for Multiple Spanning Tree Protocol
 IEEE 802.1Q for VLAN Tagging
 IEEE 802.1p for Class of Service
 IEEE 802.1X for Authentication
 IEEE 802.3ad for Port Trunk with LACP

Software Features

Management: IPv4/IPv6*, SNMP v1/v2c/v3, LLDP, Port Mirror, DDM, RMON, DHCP Server/Client, DHCP Option 66/67/82, BootP, TFTP, SMTP, RARP, Telnet, Syslog, SNMP Inform, Flow Control, Back Pressure Flow Control

*IPv6 only applies to IKS-G6524A series products.

Filter: 802.1Q VLAN, GVRP, IGMP v1/v2/v3, GMRP

Redundancy Protocols: STP, RSTP, MSTP, Turbo Ring v1/v2, Turbo Chain, Link Aggregation

Security: RADIUS, TACACS+, SSL, SSH, Broadcast Storm Protection, Port Lock, Access Control Lists (IKS-G6824A only)

Unicast Routing: Static Routing, RIPV1/V2, OSPF (IKS-G6824A series)

Multicast Routing: DVMRP, PIM-DM, PIM-SM, PIM-SSM (IKS-G6824A series)

Time Management: SNTP, NTP Server/Client, IEEE 1588v2 PTP (software-based)

Industrial Protocols: EtherNet/IP, Modbus/TCP, PROFINET

MIB: MIB-II, Ethernet-like MIB, P-BRIDGE MIB, Q-BRIDGE MIB, Bridge MIB, RSTP MIB, RMON MIB Groups 1, 2, 3, 9

Routing Redundancy: VRRP (IKS-G6824A series)

Switch Properties

Priority Queues: 8

Max. Number of VLANs: 256

VLAN ID Range: VID 1 to 4094

IGMP Groups: 4096

MAC Table Size: 16 K

Packet Buffer Size: 12 Mbit

DRAM Size: 128 MB

Flash Size: 16 MB

Jumbo Frame Size: 9.6 KB

Interface

Gigabit Ethernet: 10/100/1000BaseT(X) or 100/1000BaseSFP slot

Console Port: USB-serial console (Type B connector)

Storage Port: USB storage (Type A connector for ABC-02-USB)

Alarm Contact: 1 relay output with current carrying capacity of 2 A @ 30 VDC

Digital Inputs: 1 input with the same ground, but electrically isolated from the electronics.

- +13 to +30 V for state "1"
- -30 to +1 V for state "0"
- Max. input current: 8 mA

Power Requirements

Input Voltage: 110 to 220 VAC

Operating Voltage: 85 to 264 VAC

Input Current: Max. 0.67/0.38 A @ 110/220 VAC

Overload Current Protection: Present

Reverse Polarity Protection: Present

Physical Characteristics

IP Rating: IP30 protection

Dimensions: 440 x 44 x 386.9 mm (17.32 x 1.73 x 15.23 in)

Weight: 5.1 kg (11.25 lb)

Installation: 19-inch rack mounting

Environmental Limits

Operating Temperature:

Standard Models: -10 to 60°C (14 to 140°F)

Wide Temp. Models: -40 to 75°C (-40 to 167°F)

Storage Temperature: -40 to 85°C (-40 to 185°F)

Ambient Relative Humidity: 5 to 95% (non-condensing)

Standards and Certifications

Safety: UL 60950-1, EN 60950-1

EMC: EN 55032/24

EMI: CISPR 32, FCC Part 15B Class A

EMS:

IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV

IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m

IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV

IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV

IEC 61000-4-6 CS: Signal: 10 V

IEC 61000-4-8

Rail Traffic: EN 50121-4

Shock: IEC 60068-2-27

Freefall: IEC 60068-2-32

Vibration: IEC 60068-2-6

Note: Please check Moxa's website for the most up-to-date certification status.

MTBF (mean time between failures)

Time:

IKS-G6524A: 460,854 hrs

IKS-G6824A: 471,418 hrs

Standard: Telcordia (Bellcore), GB

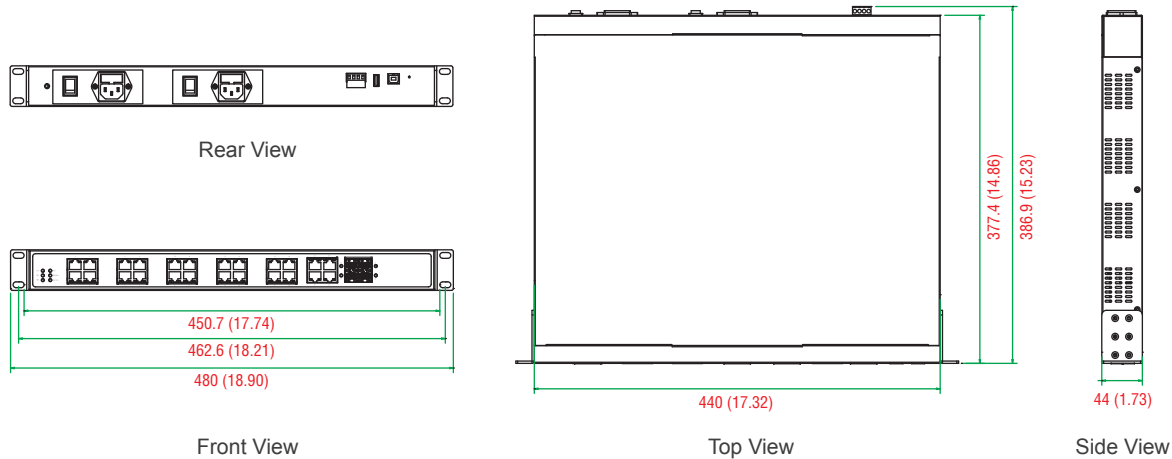
Warranty

Warranty Period: 5 years

Details: See www.moxa.com/warranty

Dimensions

Unit: mm (inch)



Ordering Information

Available Models		Port Interface			Power Supply	
Standard Temperature (-10 to 60°C)	Wide Temperature (-40 to 75°C)	Gigabit Ethernet			Isolated Power Supply 1	Isolated Power Supply 2
		10/100/1000 BaseT(X)	100/1000 BaseSFP*	Combo Port, 10/100/1000 BaseT(X) or 100/1000 BaseSFP*	HV: 85 to 264 VAC	HV: 85 to 264 VAC
IKS-G6524A Series Layer 2 Switches						
IKS-G6524A-4GTXSFP-HV-HV	IKS-G6524A-4GTXSFP-HV-HV-T	20	—	4	1	1
IKS-G6524A-8GSFP-4GTXSFP-HV-HV	IKS-G6524A-8GSFP-4GTXSFP-HV-HV-T	12	8	4	1	1
IKS-G6524A-20GSFP-4GTXSFP-HV-HV	IKS-G6524A-20GSFP-4GTXSFP-HV-HV-T	—	20	4	1	1
IKS-G6824A Series Layer 3 Switches						
IKS-G6824A-4GTXSFP-HV-HV	IKS-G6824A-4GTXSFP-HV-HV-T	20	—	4	1	1
IKS-G6824A-8GSFP-4GTXSFP-HV-HV	IKS-G6824A-8GSFP-4GTXSFP-HV-HV-T	12	8	4	1	1
IKS-G6824A-20GSFP-4GTXSFP-HV-HV	IKS-G6824A-20GSFP-4GTXSFP-HV-HV-T	—	20	4	1	1

*The IKS-G6524A/G6824A series supports 100/1000BaseSFP slots. See SFP-1G, SFP-1G Copper, and SFP-1FE datasheets for SFP module product information.

Optional Accessories (can be purchased separately)

MXview: Moxa industrial network management software with 50, 100, 250, 500, 1000, or 2000 nodes

EDS-SNMP OPC Server Pro: OPC server software that works with all SNMP devices

ABC-02-USB: Configuration backup and restoration tool for managed Ethernet switches, 0 to 60°C operating temperature

Power Cords: See Appendix A for details

Package Checklist

- IKS-G6524A or IKS-G6824A switch
- USB cable (Type A male to Type B male)
- 2 power cords (US type x 1, EU type x 1)
- Protective caps for unused ports
- 2 rackmount ears
- Documentation and software CD
- Hardware installation guide (printed)
- Warranty card