IKS-G6524A/G6824A Series Quick Installation Guide

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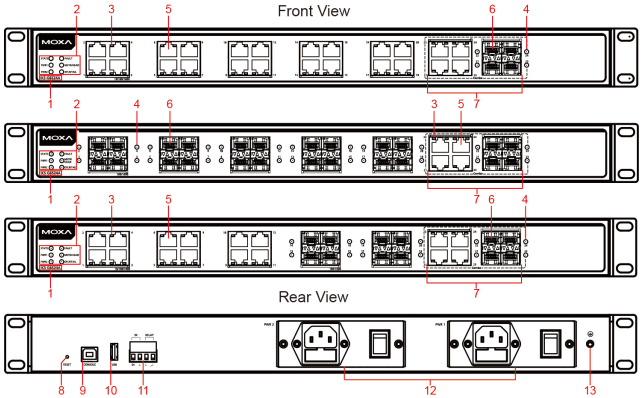
Package Checklist

The Moxa IKS-G6524A/G6824A Series industrial rackmount switches are shipped with the following items. If any of these items are missing or damaged, please contact your customer service representative for assistance.

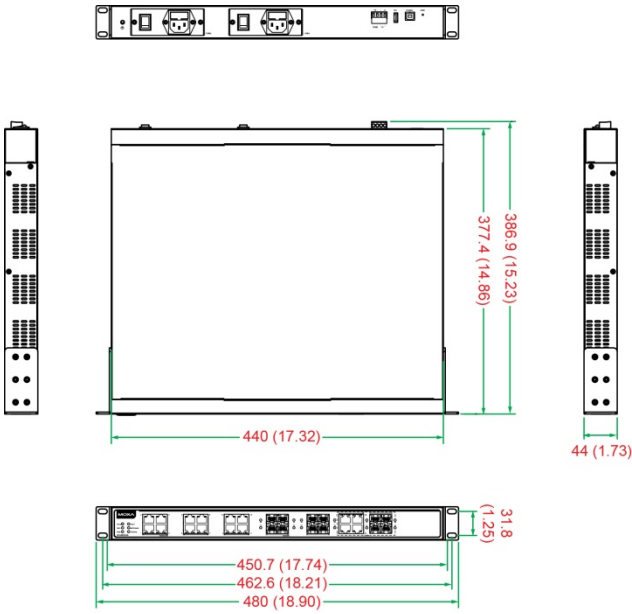
- IKS-G6524A/G6824A switch
- USB cable (Type A male to Type B male)
- Power cord
- 4 protective caps for unused ports
- 2 rackmount ears
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card

Panel Layouts



1. Model Name
2. System status LEDs
3. 10/100/1000BaseT(X) port status LEDs
4. 100/1000BaseSFP port status LEDs
5. 10/100/1000BaseT(X) port
6. 100/1000BaseSFP slot
7. 10/100/1000BaseT(X) or 100/1000BaseSFP slot combo ports
8. Reset button
9. USB serial console port
10. USB storage port (ABC-02-USB)
11. Terminal block for Relay Output, Digital Input
12. AC power sockets for power inputs
13. Grounding screw

Dimensions (unit = mm)

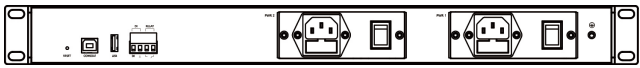


Grounding the Industrial Rackmount Switch

Grounding and wire routing help limit the effects of noise due to electromagnetic interference (EMI). Run the ground connection from the ground screw to the grounding surface prior to connecting devices.

Connecting the Power Inputs

The IKS-G6524A/G6824A series of switches supports dual redundant power supplies: *Power Supply 1 (PWR1)* and *Power Supply 2 (PWR2)*. The connections for PWR1 and PWR2 are located on the rear side (shown below). Be sure to use a standard power cord with an IEC C13 connector, which is compatible with the AC power inlet.



Wiring the Relay Contact

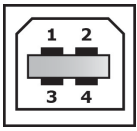
Each IKS-G6524A/G6824A switch has one relay output.

FAULT:
The relay contact of the 4-pin terminal block connector is used to detect user-configured events. The two wires attached to the fault contacts form an open circuit when a user-configured event is triggered. If a user-configured event does not occur, the fault circuit remains closed.

USB Console Connection

The IKS-G6524A/G6824A series has one USB console port (type B connector), located on the top panel. Use the USB cable (provided in the product package) to connect the IKS-G6524A/G6824A's console port to your PC's USB port and install the USB driver (available in the software CD) on the PC. You may then use a console terminal program, such as Moxa PComm Terminal Emulator, to access the IKS-G6524A/G6824A's console configuration utility.

USB Console Port (Type B Connector) Pinouts

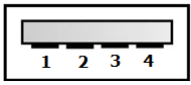


Pin	Description
1	D– (Data -)
2	VCC (+5V)
3	D+ (Data+)
4	GND (Ground)

USB Storage Connection

The IKS-G6524A/G6824A series has one USB storage port (type A connector) on the front panel. Use the Moxa ABC-02-USB automatic backup configurator to connect the IKS-G6524A/G6824A's USB storage port for configuration backup, firmware upgrade, or system log file backup.

USB Storage Port (Type A Connector) Pinouts



Pin	Description
1	VCC (+5V)
2	D– (Data -)
3	D+ (Data+)
4	GND (Ground)

NOTE DO NOT pull out the ABC-02-USB automatic backup configurator from the USB port while writing or reading data.

The Reset Button

Press the Reset button for five continuous seconds to load the factory default settings. Use a pointed object, such as a straightened paper clip or toothpick, to press the Reset button. When you do so, the STATE LED will start to blink about once per second. Continue to press the STATE LED until it begins blinking more rapidly, indicating that the button has been pressed continuously for five seconds. You can now release the Reset button to load factory default settings.

NOTE DO NOT power off the switch when loading default settings.

LED Indicators

The front panel of the IKS-G6524A/G6824A Series switch contains several LED indicators. The function of each LED is described in the following table.

LED	Color	State	Description
System LEDs			
STATE	GREEN	On	The system has passed the self-diagnosis test on boot-up and is ready to run.
		Blinking	1. System is undergoing the self-diagnosis test. 2. Blinks continuously when pressing the reset button 5 seconds to reset to factory default. 3. Blinks slowly when an ABC-02 automatic backup device is detected.
	RED	On	The system failed self-diagnosis on boot-up.
PWR1	AMBER	On	Power is being supplied to the main module's power input PWR1.
		Off	Power is not being supplied to the main module's power input PWR1.
PWR2	AMBER	On	Power is being supplied to the main module's power input PWR2.
		Off	Power is not being supplied to the main module's power input PWR2.
FAULT	RED	On	The system has failed, or is under quick inspection.
		Off	The system is operating normally.
MSTR/ HEAD	GREEN	On	The switch is set as the Master of the Turbo Ring, or as the Head of the Turbo Chain.
		Blinking	The switch has become the Ring Master of the Turbo Ring, or the Head of the Turbo Chain, after the Turbo Ring or the Turbo Chain is down.
		Off	The switch is not the Master of this Turbo Ring or is set as a Member of the Turbo Chain
CPLR/TAIL	GREEN	On	The switch's coupling function is enabled to form a back-up path, or when it's set as the Tail of the Turbo Chain.
		Blinking	Turbo Chain is down
		Off	The switch disables the coupling function.
When the system is importing/exporting data from or to an ABC-02 automatic backup device, the FAULT, MSTR/HEAD, and CPLR/TAIL LEDs will blink in sequence.			

LED	Color	State	Description
Port Status LEDs			
10/100/1000M (TP ports)	GREEN	On	The corresponding port's link is active.
		Blinking	Data is being transmitted.
		Off	The corresponding port's link is inactive.
100/1000M (Fiber Optic ports)	GREEN	On	The corresponding port's link is active at 1000 Mbps.
		Blinking	Data is being transmitted at 1000 Mbps.
		Off	The corresponding port's link is inactive.
	AMBER	On	The corresponding port's link is active at 100 Mbps.
		Blinking	Data is being transmitted at 100 Mbps.
		Off	The corresponding port's link is inactive.

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
Protocols	IGMPv1/v2, GMRP, GVRP, SNMPv1/v2c/v3, DHCP Server/Client, BootP, TFTP, SNTP, SMTP, RARP, RMON, HTTP, HTTPS,Telnet, Syslog, DHCP Option 66/67/82, SSH, LLDP, IEEE 1588 PTP V2, EtherNet/IP, Modbus/TCP, PROFINET, SNMP Inform, NTP Server/Client, IPv6 (IKS-G6524A)
Layer 3 Switching (IKS-G6824A)	Static routing, RIP V1/V2, OSPF, DVMRP, PIM-DM, PIM-SM, PIM-SSM
Layer 3 Switching Redundancy (IKS-G6824A)	VRRP
MIB	MIB-II, Ethernet-like MIB, P-BRIDGE MIB, Q-BRIDGE MIB, Bridge MIB, RSTP MIB, RMON MIB Groups 1, 2, 3, 9
Flow Control	IEEE 802.3x flow control, back pressure flow control

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)
LED Indicators	STATE, PWR1, PWR2, FAULT, MSTR/HEAD, CPLR/TAIL
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 +30V for state "1" • -30 to +1V for state "0" • Max.input current: 8 mA
Power Requirements	
Input Voltage	110/220 VAC (85 to 264 VAC)
Input Current	Max. 0.79/0.44 A @ 110/220 VAC
Overload Current Protection	Present
Reverse Polarity Protection	Present
Physical Characteristics	
Housing	IP 30 protection
Dimensions	440 x 44 x 386.9 mm (17.32 x 1.73 x 15.23 in)
Installation	19" rack mounting
Environmental Limits	
Operating Temp.	Standard Models: -10 to 60°C (14 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temp.	-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
EMI	FCC Part 15 Subpart B Class A, EN 55032 Class A
EMS	EN 61000-4-2 (ESD) Level 3 EN 61000-4-3 (RS) Level 3 EN 61000-4-4 (EFT) Level 3 EN 61000-4-5 (Surge) Level 3 EN 61000-4-6 (CS) Level 3 EN 61000-4-8 EN 61000-4-11
Rail Traffic	EN 50121-4
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Warranty	
Warranty Period	5 years
Details	See www.moxa.com/warranty

Rack Mounting Instructions

1. **Elevated Operating Ambient:** If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (Tma) specified by the manufacturer.
2. **Reduced Air Flow:** Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
3. **Mechanical Loading:** Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
4. **Circuit Overloading:** Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
5. **Reliable Earthing:** Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips)."

Restricted Access Locations

- This equipment is intended to be used in Restricted Access Locations, such as a computer room, with access limited to SERVICE PERSONAL or USERS who have been instructed on how to handle the metal chassis of equipment that is so hot that special protection may be needed before touching it. The location should only be accessible with a key or through a security identity system.
- External metal parts of this equipment are extremely hot!! Before touching the equipment, you must take special precautions to protect your hands and body from serious injury.