IKS-6728/IKS-6726 Series

Hardware Installation Guide

Second Edition, October 2012

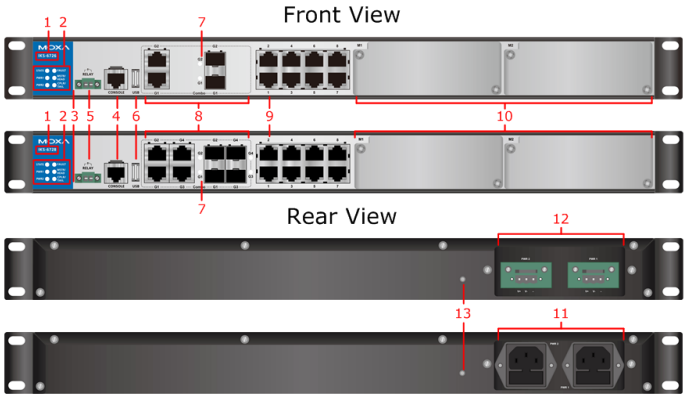
P/N: 1802067280011

Package Checklist

The Moxa IKS-6728/IKS-6726 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.

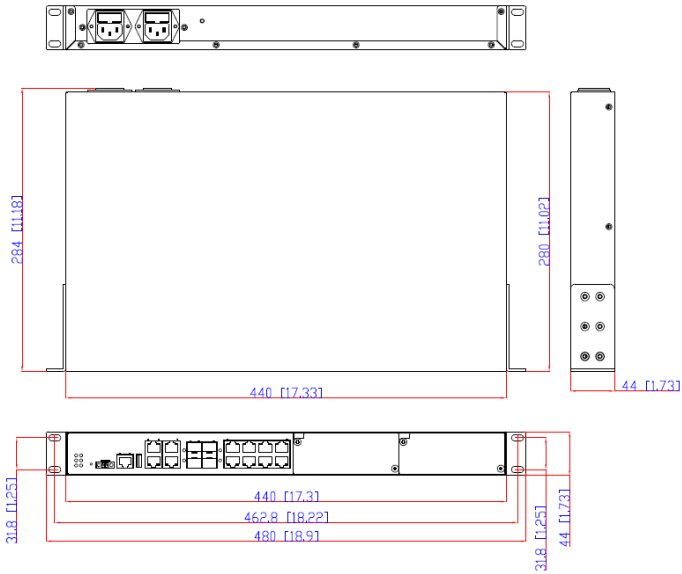
- IKS-6728 or IKS-6726 Switch
- RJ45 to DB9 console port cable
- Protective caps for unused ports
- 2 rackmount ears
- Documentation and software CD
- Hardware Installation Guide
- CD-ROM with User's Manual and SNMP MIB file
- Moxa Product Warranty Statement

Panel Layouts



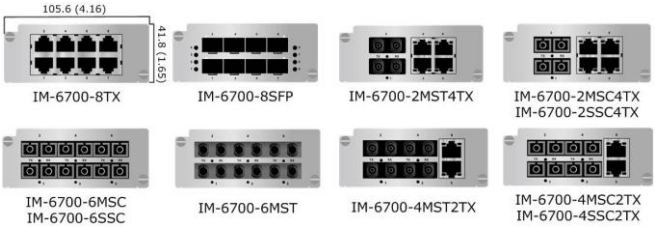
1. Model name
2. System status LEDs
3. Reset button
4. Serial console port
5. Terminal block for relay output
6. USB storage port
7. 100/1000Base SFP port status LEDs
8. 10/100/1000BaseT(X) or 100/1000Base SFP combo ports
9. 10/100BaseT(X) ports
10. Fast Ethernet Interface Modules
11. Power sockets for AC power inputs
12. Terminal blocks for DC power inputs
13. Grounding screw

Dimensions



Unit = mm (inch)

Fast Ethernet Interface Modules (IM-6700 Series)



Grounding the Moxa 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-6726/6728 series of switches supports both 110/220 VAC and 24/48 VDC power supplies.

AC Power Inlets

The connection for PWR1 (power supply 1) and PWR2 (power supply 2) 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.

DC Power Terminal Blocks

The connection for PWR1 (power supply 1) and PWR2 (power supply 2) are located on the rear side (shown below).

STEP 1: Insert the negative/positive DC wires into the V-/V+ terminals, respectively.

STEP 2: To keep the DC wires from pulling loose, use a small flat-blade screwdriver to tighten the wire-clamp screws on the front of the terminal block connector.

STEP 3: Insert the plastic terminal block connector prongs into the terminal block receptor.

Wiring the Relay Contact

Each IKS-6726/6728 switch has one relay output.

FAULT:

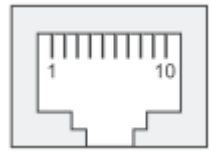
The relay contact of the 2-pin terminal block connector is used to detect user-configured events. The two wires attached to the fault contacts form an open circuit when a user-configured event is triggered. If a user-configured event does not occur, the fault circuit remains closed.

RS-232 Connection

The Moxa IKS-6726/6728 has one RS-232 (10-pin RJ45) console port, located on the front panel. Use either an RJ45-to-DB9 or RJ45-to-DB25 cable to connect Moxa IKS-6726/6728 console port to your PC's COM port. You may then use a console terminal program, such as Moxa PComm Terminal Emulator, to access Moxa IKS-6726/6728's console configuration utility.

RJ45 (10-pin) Console Port Pinouts

Pin	Description	Pin	Description
1	–	6	RxD
2	DSR	7	GND
3	–	8	–
4	GND	9	DTR
5	TxD	10	–



The Reset Button

Depress 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 depress the Reset button. When you do so, the STATE LED will start to blink about once per second. Continue to depress the STATE LED until it begins blinking more rapidly; this indicates that the button has been depressed for five seconds and you can 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 switch contains several LED indicators. The function of each LED is described in the table below.

LED	Color	State	Description
System LEDs			
STATE	GREEN	On	System has passed self-diagnosis test on boot-up and is ready to run
		Blinking	1. System is undergoing the self-diagnosis test 2. Blink continuously when pressing the reset button 5 seconds to reset to factory default
	RED	On	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	System is in the event of failure, or is under quick inspection
		Off	System is in normal operation
MSTR/ HEAD	GREEN	On	When the IKS-6726/6728 is set as the Master of the Turbo Ring, or as the Head of the Turbo Chain
		Blinking	The IKS-6726/6728 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 IKS-6726/6728 is not the Master of this Turbo Ring or is set as a Member of the Turbo Chain
CPLR/TAIL	GREEN	On	When the IKS-6726/6728 coupling function is enabled to form a back-up path, or when it's set as the Tail of the Turbo Chain
		Blinking	When the Turbo Chain is down
		Off	When this IKS-6726/6728 switch disables the coupling function
LED	**Color**	**State**	**Description**

Port Status LEDs			
10/100M or 10/100/ 1000M (TP ports)	GREEN	On	The corresponding port's link is active
		Blinking	The corresponding port's data is being transmitted
		Off	The corresponding port's link is inactive
100/1000 M (Fiber Optic ports)	GREEN	On	When the IKS-6726/6728 coupling function is enabled to form a back-up path, or when it's set as the Tail of the Turbo Chain
		Blinking	When the Turbo Chain is down
		Off	When this IKS-6726/6728 switch disables the coupling function
	AMBER	On	Fiber optic port's 100 Mbps link is active
		Blinking	Data is being transmitted at 100 Mbps
		Off	Fiber Optic port's 100 Mbps link is inactive
100M (Fiber Optic ports)	GREEN	On	The corresponding port's link is active
		Blinking	The corresponding port's data is being transmitted
		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 1000BaseX IEEE 802.3x for Flow Control IEEE 802.1D-2004 for Spanning Tree Protocol IEEE 802.1w for Rapid STP 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	IGMP v1/v2, GMRP, GVRP, SNMPv1/v2c/v3, DHCP Server/Client, BootP, TFTP, SNTP, SMTP, RARP, RMON, HTTP, HTTPS, Telnet, SSH, Syslog, DHCP Option 66/67/82, EtherNet/IP, Modbus/TCP, LLDP, IEEE 1588 PTP V2, IPv6, NTP Server/Client
MIB	MIB-II, Ethernet-like MIB, P-BRIDGE MIB, Q-BRIDGE MIB, Bridge MIB, RSTP MIB, RMON MIB Group 1, 2, 3, 9
Flow Control	IEEE 802.3x flow control, back pressure flow control
Interface	
Fast Ethernet	8-port 10/100Base T(X) 2 modular slots for any 8-, or 6-port Interface Modules with 10/100BaseT(X), 100BaseFX (SC/ST connector), or 100Base SFP
Gigabit Ethernet	2- or 4-port 10/100/1000BaseT(X) or 100/1000Base SFP
Console Port	RS-232 (RJ45 connector)
LED Indicators	STATE, PWR1, PWR2, FAULT, MSTR/HEAD,

	CPLR/TAIL
Alarm Contact	1 relay output with current carrying capacity of 3 A @ 30 VDC or 3 A @ 240 VAC
Power Requirements	
Input Voltage	24 VDC (18 to 36 V), or 48 VDC (36 to 72 V), or 110/220 VAC (85 to 264 VAC)
Input Current (without IM-6700 modules installed)	Max. 0.42 A @ 24 VDC Max. 0.22 A @ 48 VDC Max. 0.32/0.16 A @ 110/220 VAC
Overload Current Protection	Present
Reverse Polarity Protection	Present
Physical Characteristics	
Housing	IP30 protection
Dimensions	440 x 44 x 280 mm (17.32 x 1.37 x 11.02 in)
Weight	4100 g
Installation	19'' rack mounting
Environmental Limits	
Operating Temp.	-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 (Pending), EN 60950-1 (Pending)
EMI	FCC Part 15 Subpart B Class A, EN 55022 Class A
Rail Traffic	EN50121-4
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 Grounding:** Reliable grounding 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.

Technical Support Contact Information
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