Brocade ICX 6430-C Compact Switch

Hardware Installation Guide

Supporting FastIron Software Release 08.0.10

BROCADE

Contents

Preface

Document conventions

The document conventions describe text formatting conventions, command syntax conventions, and important notice formats used in Brocade technical documentation.

Text formatting conventions

Text formatting conventions such as boldface, italic, or Courier font may be used in the flow of the text to highlight specific words or phrases.

Format	Description
bold text	Identifies command names
	Identifies keywords and operands
	Identifies the names of user-manipulated GUI elements
	Identifies text to enter at the GUI
italic text	Identifies emphasis
	Identifies variables and modifiers
	Identifies paths and Internet addresses
	Identifies document titles
`Courier font`	Identifies CLI output
	Identifies command syntax examples

Command syntax conventions

Bold and italic text identify command syntax components. Delimiters and operators define groupings of parameters and their logical relationships.

Convention	Description
bold text	Identifies command names, keywords, and command options.
italic text	Identifies a variable.

Convention	Description
value	In Fibre Channel products, a fixed value provided as input to a command option is printed in plain text, for example, **--show** WWN.
[ ]	Syntax components displayed within square brackets are optional.
	Default responses to system prompts are enclosed in square brackets.
{ **x** | **y** | **z** }	A choice of required parameters is enclosed in curly brackets separated by vertical bars. You must select one of the options.
	In Fibre Channel products, square brackets may be used instead for this purpose.
x | **y**	A vertical bar separates mutually exclusive elements.
< >	Nonprinting characters, for example, passwords, are enclosed in angle brackets.
...	Repeat the previous element, for example, *member*[*member*...].
\	Indicates a "soft" line break in command examples. If a backslash separates two lines of a command input, enter the entire command at the prompt without the backslash.

Notes, cautions, and warnings

Notes, cautions, and warning statements may be used in this document. They are listed in the order of increasing severity of potential hazards.

NOTE
A note provides a tip, guidance, or advice, emphasizes important information, or provides a reference to related information.

ATTENTION
An Attention statement indicates potential damage to hardware or data.

CAUTION
A Caution statement alerts you to situations that can be potentially hazardous to you or cause damage to hardware, firmware, software, or data.

DANGER
A Danger statement indicates conditions or situations that can be potentially lethal or extremely hazardous to you. Safety labels are also attached directly to products to warn of these conditions or situations.

Brocade resources

Visit the Brocade website to locate related documentation for your product and additional Brocade resources.

You can download additional publications supporting your product at www.brocade.com.

- Adapter documentation is available on the Downloads and Documentation for Brocade Adapters page. Select your platform and scroll down to the Documentation section.
- For all other products, select the Brocade Products tab to locate your product, then click the Brocade product name or image to open the individual product page. The user manuals are available in the resources module at the bottom of the page under the Documentation category.

To get up-to-the-minute information on Brocade products and resources, go to MyBrocade. You can register at no cost to obtain a user ID and password.

Release notes are available on MyBrocade under Product Downloads.

White papers, online demonstrations, and data sheets are available through the Brocade website.

Getting technical help

You can contact Brocade Support 24x7 online, by telephone, or by e-mail.

For product support information and the latest information on contacting the Technical Assistance Center, go to http://www.brocade.com/services-support/index.html.

Use one of the following methods to contact the Brocade Technical Assistance Center.

Online	Telephone	E-mail
Preferred method of contact for non-urgent issues: - My Cases through MyBrocade - Software downloads and licensing tools - Knowledge Base	Required for Sev 1-Critical and Sev 2-High issues: - Continental US: 1-800-752-8061 - Europe, Middle East, Africa, and Asia Pacific: +800-AT FIBREE (+800 28 34 27 33) - For areas unable to access toll free number: +1-408-333-6061 - Toll-free numbers are available in many countries.	support@brocade.com Please include: - Problem summary - Serial number - Installation details - Environment description

Document feedback

To send feedback and report errors in the documentation you can use the feedback form posted with the document or you can e-mail the documentation team.

Quality is our first concern at Brocade and we have made every effort to ensure the accuracy and completeness of this document. However, if you find an error or an omission, or you think that a topic needs further development, we want to hear from you. You can provide feedback in two ways:

• Through the online feedback form in the HTML documents posted on www.brocade.com.
• By sending your feedback to documentation@brocade.com.

Provide the publication title, part number, and as much detail as possible, including the topic heading and page number if applicable, as well as your suggestions for improvement.

About This Guide

Introduction

This guide includes procedures for installing and maintaining the hardware. The hardware procedures show how to install or assemble the various hardware components with the necessary precautions, warnings, and regulatory statements. This guide also describes the required device specifications for running the hardware.

Supported Software

For information about the features supported on a hardware platform, refer to the appropriate configuration guide.

Supported Software

Product Overview

Hardware features
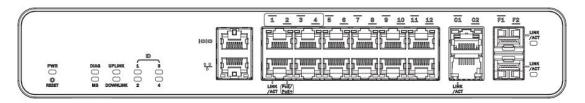
The following sections describe the physical characteristics of an ICX 6430-C device. For more details about physical dimensions and power supply specifications, refer to the "Hardware Specifications" chapter.

ICX 6430-C models

There is one ICX 6430-C model:

• ICX 6430-C12: 12 x 1G Compact Switch (4 PoE/PoE+ capable ports), 4 x 100/1G Uplinks RJ45 & SFP, Fanless

FIGURE 1 ICX 6430-C12 front panel
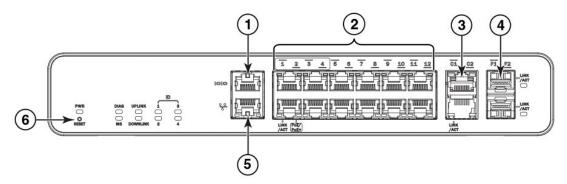
FIGURE 2 ICX 6430-C12 rear panel

Network and management interfaces

The ICX 6430-C12 device includes the following management interfaces, and a reset button on the front panel of the device:

- Console management interface (RJ45 serial port)
- Out-of-band management interface (RJ45 port)
- Reset button

1	Console port	**4**	Slot 3 (SFP uplink ports)
2	Slot 1 (10/100/1000 Mbps ports)	**5**	Out-of-band management port
3	Slot 2 (Copper uplink ports)	**6**	Reset button

FIGURE 3 Management interfaces on an ICX 6430-C12 device

Console management interface

The console management interface is an RJ45 serial port that allows you to configure and manage the device using a third-party terminal emulation application from a directly connected PC.

Out-of-band management interface

The out-of-band management interface is an RJ45 port that allows you to configure and manage the device from the network.

Reset button

The reset button allows you to restart the system without switching the power supplies off and on or using the CLI. When the reset button is pressed, the system resets and the software is reloaded. The button is directly below the power LED on the very left of the device's front panel.

Network interfaces for a ICX 6430 device device

An ICX 6430-C device contains the following interfaces:

- 12 1GbE ports with RJ45 copper connectors (Slot 1, Ports 1- 12)

  - Ports 1- 4 are dedicated PoE/PoE+ ports.

    Standard 802.3at PoE+ ports support up to 30W per port.

    Standard 802.3af PoE ports support up to 15.4W per port.

    Total PoE power capacity is 68W.

    Some possible PoE/PoE+ configuration combinations include:

    - 2 standard PoE ports supporting full capacity (15.4W x 2 = 30.8W)

1 standard PoE+port supporting full capacity (30W)

1 PoE or PoE+ port supporting partial capacity, no greater than 7W (7W)

Total PoE/PoE+ power: 67.8W
- 2 standard PoE+ ports supporting full capacity (30W x 2 = 60W)

1 PoE or PoE+ port supporting partial capacity, no greater than 7W (7W)

Total PoE/PoE+ power: 67W
- 4 standard PoE ports supporting full capacity (15.4W x 4 = 62W)

Total PoE power: 62W
- 4 100/1GbE uplink ports:

  - 2 100/1GbE RJ45 uplink ports (Slot 2, ports C1-C2)
  - 2 100/1GbE SFP uplink ports (Slot 3, ports F1-F2)

Slot designations

Refer to Network and management interfaces on page 9 for the location of slots 1- 3 on the front panel of an ICX 6430-C device.

TABLE 1 Slot designations for a ICX 6430-C device

Device	Slot 1 (1GbE RJ45 ports)	Slot 2 (100/1GbE RJ45 ports)	Slot 3 (100/1GbE SFP ports)
ICX 6430-C12	1GbE ports 1-12	100/1GbE ports C1- C2	100/1GbE SFP ports F1-F2

1GbE RJ45 ports

An ICX t6430-C device provides 12 RJ45 ports that reside on Slot 1 of the device. The 12 RJ45 ports operate at 10 Mbps or 100 Mbps half or full duplex, or at 1000 Mbps full duplex. Because all ports support automatic MDI or MDI-X operation, you can use straight-through cables for all network connections to PCs or servers, or to other devices or hubs. In addition, it is ideal (and preferred) to use straight-through cables for switch-to-switch connections.

Each port supports auto-negotiation, so the optimum transmission mode (half or full duplex), and the data rate (10, 100, or 1000 Mbps) can be selected automatically. If a device connected to one of these ports does not support auto-negotiation, the communication mode of the port can be configured manually.

100/1GbE uplink ports

An ICX 6430-C device provides 4 independent 100Mbps/1GbE uplink ports.

100/1GbE RJ45 ports C1 and C2, residing on slot 2 of the device, can be used as uplink ports or additional network connections.

Additionally, an ICX 6430-C device contains two 100Mbps/1GbE small form factor pluggable (SFP) ports (ports F1 and F2). These ports reside on slot 3 of the switch and can be used as uplink ports. In future releases they can be used for stacking, though the stacking functionality is not available in release 08.0.00. The SFP ports support 100Mbps/1GbE port speeds.

For information about supported SFP transceivers, refer to the following Brocade website:
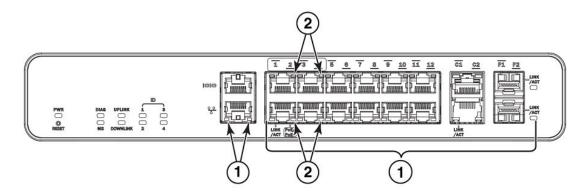
http://www.brocade.com/downloads/documents/data_sheets/product_data_sheets/Optics_DS.pdf

Port, system, and power status LEDs

An ICX 6430-C device include LEDs that indicate the status of device components:

Port status LEDs

1   Port status LEDs
2   PoE/PoE+ LEDs

FIGURE 4 Port status LEDs an ICX 6430-C12 device
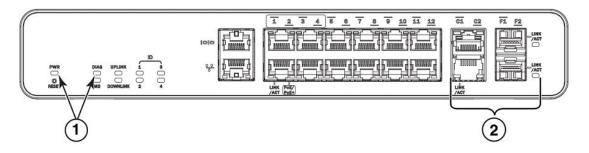
TABLE 2   Port status LEDs

LED	Condition	Status
Out-of-band management port (2 LEDs)	Off (right side)	Offline
	On/Flashing (left side)	Link-up. Flashing indicates the port is transmitting and receiving user packets.
	On/Green (right side)	1 Gbps Link-up
	Right LED off, left LED on or flashing	10/100 Mbps Link-up. Flashing indicates the port is transmitting and receiving user packets.
1GbE ports (1 - 12, Slot 1) Link/Act	Off (right side)	The right LED on the ports indicates PoE/PoE+ activity and is only active on ports 1-4. On non-PoE/PoE+ ports, the right LED remains off.
	Off (left side)	A link is not established with a remote port.
	On/Flashing Green (left side)	The port has established a valid link at 10, 100 or 1000 Mbps. Flashing indicates the port is transmitting and receiving user packets.
PoE/PoE+(1 - 4)	On/Green (right side)	The port is providing PoE or PoE+ power to a connected device.

TABLE 2 Port status LEDs (Continued)

LED	Condition	Status
	Off (right side)	The port is not providing PoE or PoE+ power.
100/1GbE RJ45 ports(C1 - C2, Slot 2) Link/Act	On/ Flashing Green	The port is operating at 1 Gbps. Flashing indicates the port is transmitting and receiving user packets at 1 Gbps.
	Off	A link is not established with a remote port.
100/1GbE SFP ports(F1 - F2, Slot 3) Link/Act	On/ Flashing Green	The SFP port is operating at 1 Gbps. Flashing indicates the port is transmitting and receiving user packets at 1 Gbps.
	Off	A link is not established with a remote port.

System status LEDs

1 System status LEDs

FIGURE 5 System status LEDs on an ICX 6430-C12 device

TABLE 3 System status LEDs

LED	Condition	Status
PWR (Power)	Green	Power supply is operating normally.
	Amber	Power supply fault.
	Off	Power supply off.
Diag (Diagnostic)	Flashing Green	System self-diagnostic test in progress. System reloads automatically.
	Steady Amber	System self-diagnostic test has detected a fault. (Fan, thermal, or any interface fault.) The user must reload the system.
	Steady Green	System self-diagnostic test passed.
Uplink (Reserved for future use)	Off	LED is reserved for future use.

TABLE 3   System status LEDs (Continued)

LED	Condition	Status
Downlink (Reserved for future use)	Off	LED is reserved for future use.
ID (1-4) (Reserved for future use)	Off	LED is reserved for future use.

Network connection status LEDs

After you install the network cables, you can observe certain LEDs to determine if the network connections are functioning properly. The table below outlines the LEDs related to the network connections, the desired state of each LED, possible abnormal states of each LED, and what to do if an LED indicates an abnormal state.

TABLE 4   Network connection-related LED states

LED	Desired state	Meaning	Abnormal state	Meaning or action
Ethernet(1-12, Slot 1) Link/Act	On or flashing (Green)	The port has established a valid link at 10, 100 or 1000 Mbps. Flashing indicates the port is transmitting and receiving user packets.	Off	A link is not established with the remote port. You can do the following: • Verify that the connection to the other network device has been properly made. Also, make certain that the other network device is powered on and operating correctly. • Verify that the port has not been disabled through a configuration change. You can use the CLI. If you have configured an IP address on the device, you also can use the Web management interface or Brocade Network Advisor. • If the other actions do not resolve the problem, try using a different port or a different cable.
PoE/PoE+ (1-4, Slot 1)	On (Green)	The port is providing PoE or PoE+ power to a connected device.	Off	A link is not established with the PoE device. You can do the following: • Verify that the connection to the other network device has been properly made. • If the other actions do not resolve the problem, try using a different port or a different cable.

TABLE 4 Network connection-related LED states (Continued)
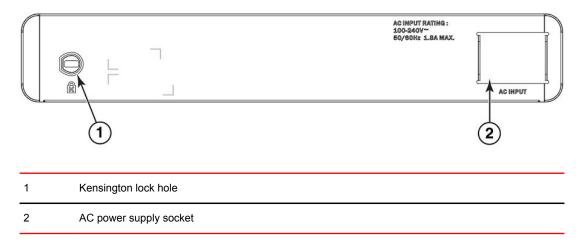
LED	Desired state	Meaning	Abnormal state	Meaning or action
SFP(F1 - F2, Slot 3)	On or flashing (Green)	The SFP port is operating. Flashing green indicates the port is transmitting and receiving user packets.	Off	A link is not established with the remote port. You can do the following: • Verify that the connection to the other network device has been properly made. Also, make certain that the other network device is powered on and operating correctly. • Verify that the transmit port on the device is connected to the receive port on the other network device, and that the receive port on the device is connected to the transmit port on the other network device. If you are not certain, remove the two cable connectors from the port connector and reinsert them in the port connector, reversing their order. • Dust may have accumulated in the cable connector or port connector. • Verify that the port has not been disabled through a configuration change. • If the other actions do not resolve the problem, try using a different port or a different cable.
Uplink ports (C1-C2, Slot 2)	On or flashing (Green)	The ports are operating. Flashing green indicates the port is transmitting and recieving user packets.	Off	A link is not established with the remote port. You can do the following: • Verify that the connection to the other network device has been properly made. Also, make certain that the other network device is powered on and operating correctly. • Verify that the port has not been disabled through a configuration change. You can use the CLI. If you have configured an IP address on the device, you also can use the Web management interface or Brocade Network Advisor. • If the other actions do not resolve the problem, try using a different port or a different cable.

If a problem persists after taking these actions, contact Brocade Technical Support.

Power supplies

An ICX 6430-C device has one standard power supply receptacle on the rear panel of the device for the AC power cord.

FIGURE 6 ICX 6430-C AC power connection

1	Kensington lock hole
2	AC power supply socket

Power supply usage

The maximum power capacity of the ICX 6430-C12 device is 100W. 23W drawn from the AC line power supply input (of the total 100W capacity of the device) are necessary to power the ICX 6430-C12 device. PoE/PoE+ power capacity and output capability is 68W.

ICX6430-C Installation

Items included with an ICX 6430-C device

DANGER

The procedures in this manual are intended for qualified service personnel.

DANGER

Before beginning the installation, see the precautions in **Power precautions** *on page 19.*

The device ships with all of the following items included in your shipping container. Verify the contents of your shipping container. If any items are missing, contact the place of purchase.

- ICX 6430-C device
- Wall mounting kit containing two wall-mount screws and two plastic anchors
- One AC power cord - US only
- Power cable clip
- Console cable
- Four rubber feet
- China ROHS sheet
- Read Me First document
- Wall Mount Holes Location template (single sheet)

Additional mounting options available for order include the following:

- A wall mount option is available to order for a secure wall mount, in addition to the basic wall mount.
- An additional rack-mounting kit is available to order to mount the device in a two-post rack.
- A magnet mount option is available to order to mount the device securely on a metal surface.

Summary of installation tasks

TABLE 5   Installation tasks

Task number	Task	Where to find more information
1	Ensure that the physical environment that will host the device has the proper cabling, ventilation, and clearance.	Preparing the installation site on page 19
2	Unpack the device and all included accessories,	Items included with an ICX 6430-C device on page 17
3	Install the device on a desktop, in an equipment rack, on a wall, or on a metal surface.	Installing the device on page 20
4	Once the device is installed, plug the device into a nearby power source that adheres to the regulatory requirements outlined in this manual.	Powering on the system on page 35

Installation precautions

Follow all precautions when installing a device.

General precautions

DANGER

All fiber-optic interfaces use Class 1 lasers.

CAUTION

Do not install the device in an environment where the operating ambient temperature might exceed 40 o C (104 o F).

CAUTION

Make sure the airflow around the front, sides, and back of the device is not restricted.

CAUTION

Never leave tools inside the device.

Lifting precautions

DANGER

Make sure the rack or cabinet housing the device is adequately secured to prevent it from becoming unstable or falling over.

DANGER

Mount the devices you install in a rack or cabinet as low as possible. Place the heaviest device at the bottom and progressively place lighter devices above.

Power precautions

CAUTION

Ensure that the device does not overload the power circuits, wiring, and over-current protection. To determine the possibility of overloading the supply circuits, add the ampere (amp) ratings of all devices installed on the same circuit as the device. Compare this total with the rating limit for the circuit. The maximum ampere ratings are usually printed on the devices near the input power connectors.

DANGER

Disconnect the power cord from all power sources to completely remove power from the device.

CAUTION

Before plugging a cable to any port, be sure to discharge any static charge stored on the cable by touching the electrical contacts to ground surface.

DANGER

If the installation requires a different power cord than the one supplied with the device, make sure you use a power cord displaying the mark of the safety agency that defines the regulations for power cords in your country. The mark is your assurance that the power cord can be used safely with the device.

Preparing the installation site

Before installing the device, plan its location and orientation relative to other devices and equipment.

Cabling infrastructure

Ensure that the proper cabling is installed at the site. For information about supported SFP and SFP+ transceivers and cable lengths and types, refer to the following Brocade website:

http://www.brocade.com/downloads/documents/data_sheets/product_data_sheets/Optics_DS.pdf

Installation location

Devices can be mounted in a standard 19-inch equipment rack, on a flat surface, on a wall, or on a metal surface.

The site should meet the following requirements:

- Maintain the operating environment as specified in the section Environmental considerations on page 42.
- Allow a minimum of 7.62 cm (3 in.) of space above the device and between the front and the back of the device and walls or other obstructions for proper airflow.
- Allow at least 7.62 cm (3 in.) of space at the front and back of the device for the twisted-pair, fiber-optic, and power cabling.
- The site should be accessible for installing, cabling and maintaining the devices.
- Allow the status LEDs to be clearly visible.
- Allow for twisted-pair cables to be routed away from power lines, fluorescent lighting fixtures, and other sources of electrical interference, such as radios and transmitters.
- Allow for the unit to be connected to a separate grounded power outlet that provides 100 to 240 VAC, 50 to 60 Hz, is within 2 m (6.6 ft) of each device, and is powered from an independent circuit breaker. As with any equipment, a filter or surge suppressor is recommended.
- For a 2-post rail mount configuration, order the appropriate mounting kit and refer to the kit documentation.
- When using the magnet mount installation to install the device on a metal surface, the device cannot be installed above 1.9 meters.

Rack-mount installation considerations

Before mounting the device in a rack, ensure that the following rack-mount installation requirements are met:

- Allow a minimum of 7.62 cm (3 in.) of space above the device and between the front and the back of the device and walls or other obstructions for proper airflow.
- Temperature: Because the temperature within a rack assembly may be higher than the ambient room temperature, check that the rack-environment temperature is within the specified operating temperature range. (Refer to Operating environment on page 42.)
- Mechanical loading: Do not place any equipment on top of a rack-mounted unit.
- Circuit overloading: Be sure that the supply circuit to the rack assembly is not overloaded.
- Grounding: Rack-mounted equipment should be properly grounded.

Installing the device

You can install the device on a desktop, an equipment rack, a wall, or on a metal surface:

DANGER
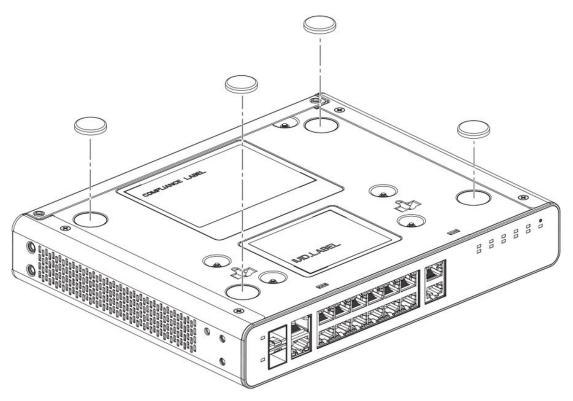
Mount the devices you install in a rack or cabinet as low as possible. Place the heaviest device at the bottom and progressively place lighter devices above.

Desktop installation

Complete the following steps to install the ICX 6430-C device on a desktop or other flat surface.

FIGURE 7 Attaching the adhesive feet

1. Attach the four adhesive feet to the bottom of the device.
2. Set the device on a flat desktop, table, or shelf near an AC power source. Make sure that adequate ventilation is provided for the system. A 7.62 cm (3-inch) clearance is recommended on each side.
3. If installing a single device only, go to the "Powering on the system" task. If installing multiple devices, place each device squarely on top of the one below.
4. If installing multiple devices, attach the adhesive feet to each device.

Rack mount installation

The devices use stationary mounting when mounted in a rack. The rack-mount kit is not included with the device and is available to order separately.

⚠️ **DANGER**

Make sure the rack or cabinet housing the device is adequately secured to prevent it from becoming unstable or falling over.

⚠️ **CAUTION**

Ensure that a minimum of 7.62 cm (3 in.) of space above the device and between the front and the back of the device and walls or other obstructions for proper airflow.
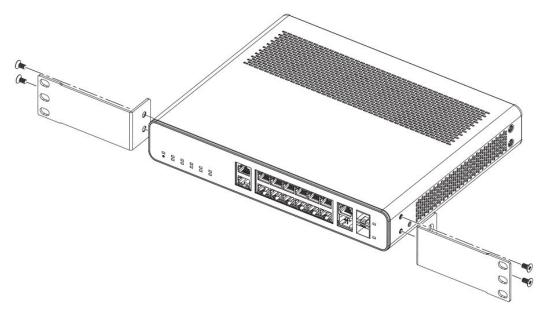
NOTE
You need a #2 Phillips screwdriver for rack mount installation.

Complete the following steps to mount devices in rack.
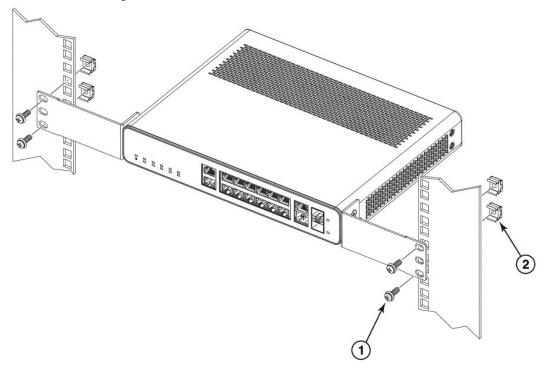
1. Remove the rack mount kit from the shipping carton. The kit contains two L-shaped mounting brackets and six sink-head screws.

2. Using a Phillips screwdriver, attach the mounting brackets to the sides of the device using six sink-head screws.

   FIGURE 8 Attaching the mounting brackets for an ICX 6430-C device

3. Remove the two-post rack kit from the shipping carton. The kit contains four rack-mounting screws and four cage nuts.

4. Insert the cage nuts in the two-post rack where you want to mount the device. See the figure above.

5. Using a Phillips screwdriver, mount the device in a two-post rack using four rack-mounting screws, as illustrated in the figure below.

| 1 | Rack-mounting screws |
| 2 | Cage nuts |

FIGURE 9 Installing the device in a two-post rack

6. If installing a single device only, go to the "Powering on the system" task. If installing multiple devices, mount them in the rack, one below the other.

Wall mount installation

Use the following items to wall mount the device directly to a wall:

- #2 Phillips screwdriver
- Hammer
- Drill
- Wall mount anchors
- Wall mount screws
- Wall Mount Holes Location template
- tape

To mount the device to a wall using the wall mount brackets, see the "Wall mount installation using wall mount brackets" task.
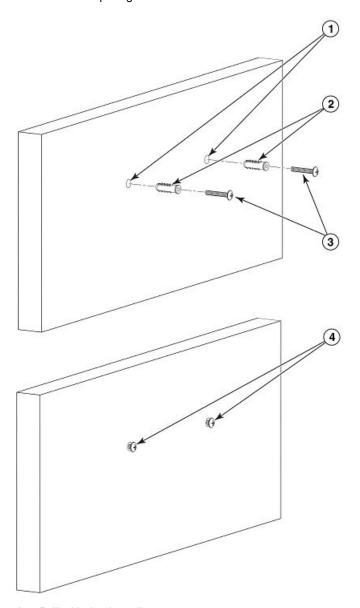
NOTE
When mounting the device on a wall, Brocade recommends that you mount the device with the port side down.

Complete the following steps to mount the device directly to a wall.

1. Use tape to place the Wall Mount Holes Location template against the wall, in the same position that you plan to place the device against the wall. The Wall Mount Holes Location template serves as a guide to drilling the screws and mount anchors into the correct location on the wall in order to place the device in the desired location.

2. Using the Wall Mount Holes Location template as a guide, drill two holes in the wall where you want to mount the device.

3. Hammer the wall mount anchors into the two holes.

4. Use the #2 Phillips screwdriver to secure the two wall mount screws into the wall mount anchors. Leave a gap of 4.0 to 4.5 mm between the screw head and the wall.

FIGURE 10 Preparing to wall mount the device

1. Drilled holes in wall
2. Wall mount anchors

3. Wall mount screws
4. 0- 4.5 mm space between screw head and wall

5. With the port side of the device facing down, aim the mounting holes on the bottom panel of the device towards the wall mounting screws on the wall and hang the device securely against the wall, so that the wall mount screws are inserted into the mounting holes.

FIGURE 11 Wall mounting the ICX 6430-C device - View of rear panel
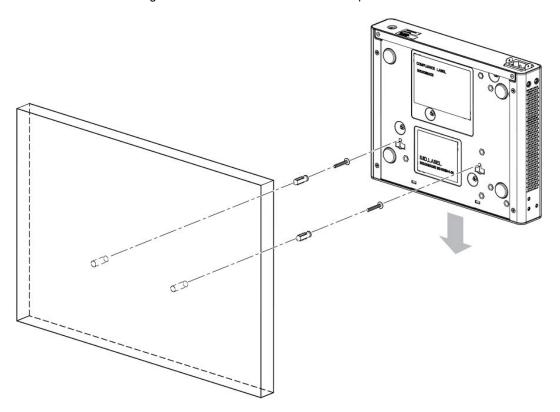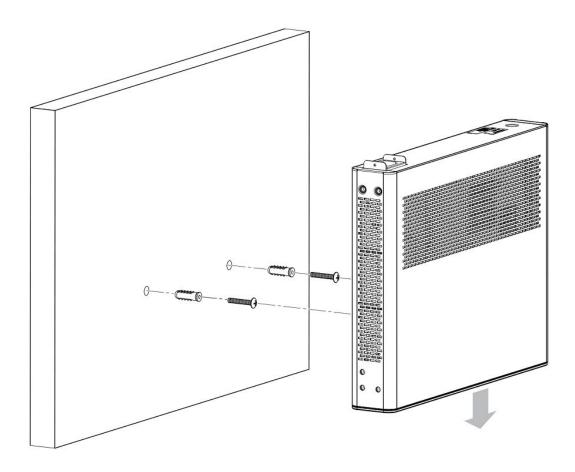
FIGURE 12 Wall mounting the ICX 6430-C device - View of the top panel

Wall mount installation using wall mount brackets

NOTE
You need a #2 Phillips screwdriver, a hammer, and a drill for wall mount installation.

NOTE
When mounting the device on a wall, Brocade recommends that you mount the device with the port side down.
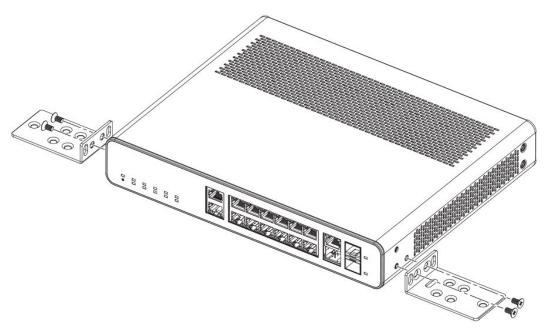
To mount the ICX 6430-C device to a wall, use the rack-mount kit that can be ordered separately from the device (Brocade Part Number: ICX6400-RMK). The rack-mount kit is not included with the device. Brocade recommends that you wall mount the device with the port side down.
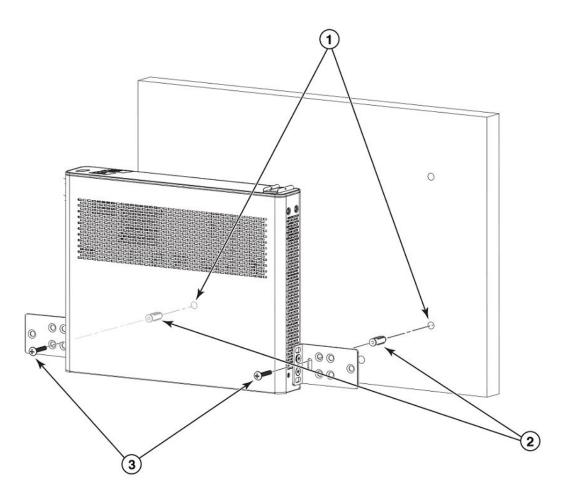
Complete the following steps to mount the device to a wall.

1. Using a Phillips screwdriver, attach the wall mount brackets to the sides of the device using four sink-head screws.

   FIGURE 13 Attaching the wall mount brackets for an ICX 6430-C device

2. Drill two holes on the wall where you want to mount the device.
3. Hammer two wall mount anchors into the holes on the wall.
4. Use the two wall mount screws to fasten the device to the wall mount anchors.

1   Drilled holes
2   Wall mount anchors
3   Wall mount screws

FIGURE 14 Wall mounting the ICX 6430-C device

Mounting the device with a magnet

⚠ **CAUTION**

Ensure that adequate ventilation is provided for the system. A 3 cm clearance is recommended above the device and 8 cm clearance is recommended on each side.

⚠ **CAUTION**

Do not install the switch in a position where it can easily become unstable and fall, causing injury or damage to the switch.

Use the magnet mount kit to mount the device on a metal wall or a metal surface, including underneath a metal desk. The magnet mount kit is available for order separately from the device and consists of a single magnet sheet.

Before mounting the device to a metal surface using the magnet sheet, ensure that the following requirements are met:

- Adequate ventilation is provided for the system. Allow 3 cm. of clearance above the device and 8 cm. of clearance on each side.
- The magnet sheet is attached to the bottom panel of the device. See Attaching the magnet sheet to the device on page 29.
- Ensure that the device is not installed above a height of 110 mm. from the floor.

Note the following important installation considerations before installing the device on a metal surface using the magnet mount:

- The strength of the magnet will vary depending on the the surface it is used on.
- The magnet's force might weaken over time. Please check the strength of the magnet regularly, for about one year. Please move the device up and down and confirm strength.

When adequate ventilation is provided and the magnet is attached to the device, you can securely mount the device in the following locations:

- A metal wall or metal surface. See Mounting the device on a metal surface or metal wall on page 30.
- Underneath a metal desktop. See Mounting the device under a metal desk on page 32.

Attaching the magnet sheet to the device

Before mounting the device to a metal surface, place the logo side of the magnet sheet (displaying the Brocade logo) squarely against the bottom panel of the device to attach the device to the magnet sheet.

CAUTION

The magnet sheet can only be placed against the bottom panel of the device. Do not attempt to attach the magnet sheet to any other panels on the device.

FIGURE 15 Attaching the logo side of the magnet sheet to the bottom panel of the ICX 6430-C device

NOTE
Do not install the rubber feet or remove the rubber feet if they are already installed.

Mounting the device on a metal surface or metal wall

NOTE
When mounting the device on a vertical metal surface, Brocade recommends that you mount the device with the port side down.

Complete the following steps to securely mount an ICX 6430-C device on a metal surface or metal wall:

1. Ensure that the magnet sheet is attached to the bottom panel of the device. See Mounting the device with a magnet on page 28 and Attaching the magnet sheet to the device on page 29.

2. Place the magnet sheet (with the logo side now attached to the bottom panel of the device) against the metal surface or metal wall. See the following two figures.

FIGURE 16 Mounting an ICX 6430-C device to a metal surface using the magnet mount
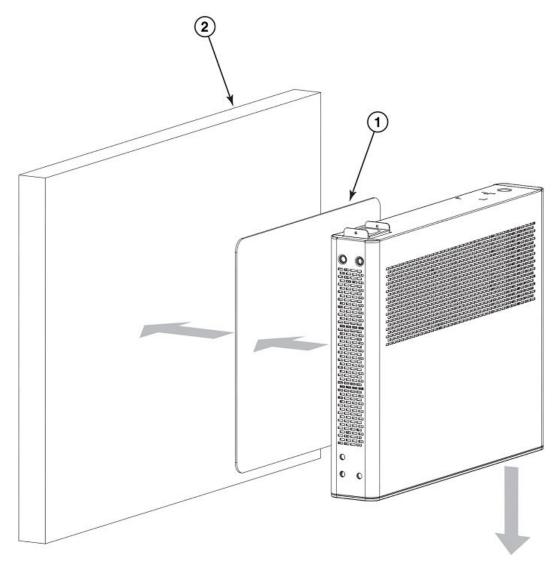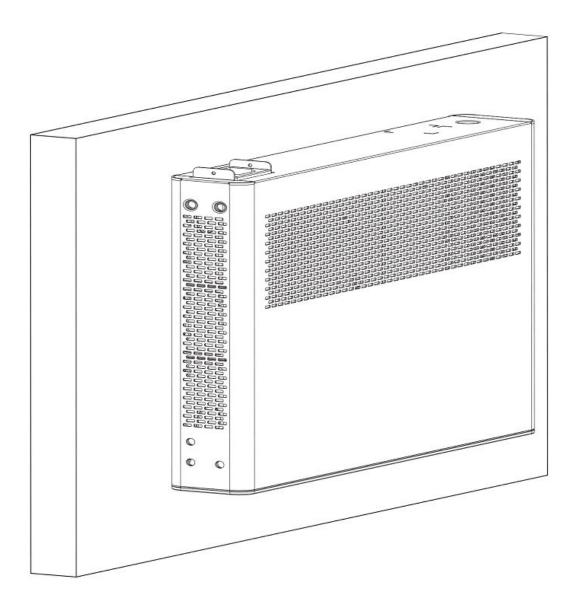
FIGURE 17 An ICX 6430-C device securely mounted on a metal surface with ports facing down

Mounting the device under a metal desk

NOTE
When mounting the device on a vertical metal surface, Brocade recommends that you mount the device with the port side down.

CAUTION

Do not mount the ICX 6430-C device directly underneath a desktop surface with the top panel facing downward. Only mount the ICX 6430-C device underneath a desktop by attaching it to the metal side surface of the desk, with the front panel and ports facing downward.
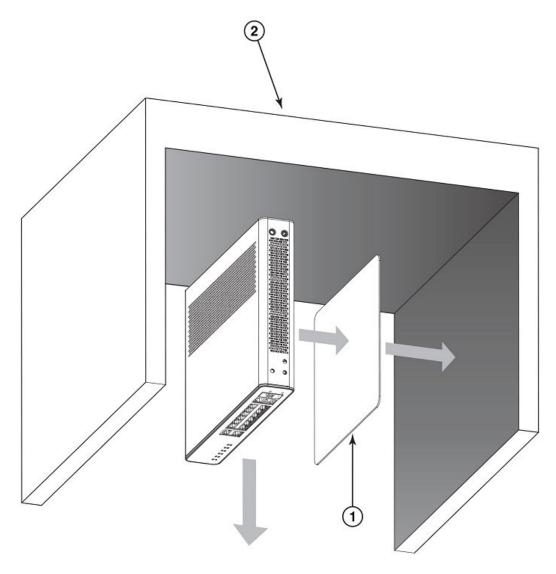
Complete the following steps to securely mount an ICX 6430-C device under a metal desktop:

1. Ensure that the magnet sheet is attached to the bottom panel of the device. See Mounting the device with a magnet on page 28 and Attaching the magnet sheet to the device on page 29.

2. Place the bottom panel of the device with the magnet sheet attached under the metal desk, against the side of the device. Ensure that the front panel (port side) of the device is facing downard. See the following two figures.

CAUTION
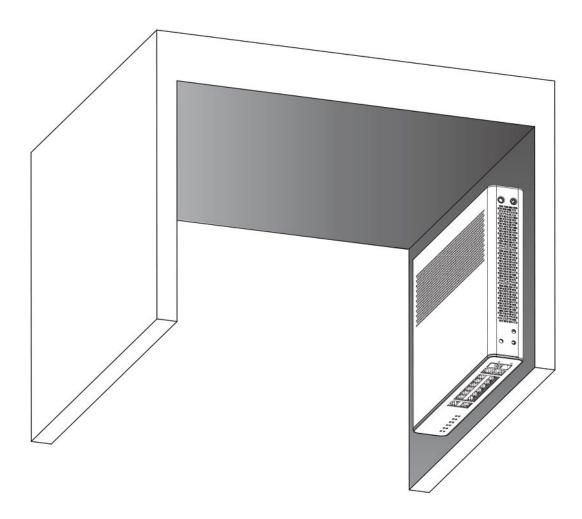
Ensure that adequate ventilation is provided for the system. A 7.62 cm (3-inch) clearance is recommended on each side.

1 Magnet
2 Metal desk

FIGURE 18 Mounting an ICX 6430-C device underneath a metal desktop using the magnet mount

FIGURE 19 The ICX 6430-C device securely mounted underneath a metal desk with the port side facing down

Powering on the system

After you complete the physical installation, you can power on the system.

NOTE
The socket should be installed near the equipment and should be easily accessible.

---

1. Remove the power cord from the shipping container.
2. Attach the AC power cord to the AC connector on the rear panel.
3. Insert the power cord plug into a 100V-240V outlet.

NOTE
To turn the system off, simply unplug the power cord or cords.

Powering on the system

Configuring an ICX 6430-C device

IP address configuration

You must configure at least one IP address using the serial connection to the CLI before you can manage the system using the other management interfaces.

Brocade devices support both classical IP network masks (Class A, B, and C subnet masks, and so on) and Classless Interdomain Routing (CIDR) network prefix masks.

- To enter a classical IP network mask, enter the mask in IP address format. For example, enter "209.157.22.99 255.255.255.0" for an IP address with a Class C subnet mask.
- To enter a prefix number for a network mask, enter a forward slash (/) and the number of bits in the mask immediately after the IP address. For example, enter "209.157.22.99/24" for an IP address that has a network mask with 24 significant ("mask") bits.

By default, the CLI displays network masks in classical IP address format (for example, 255.255.255.0). You can change the display to the prefix format.

IP address configuration

Managing an ICX 6430-C device

- Temperature settings... 39

Temperature settings

The device contains temperature sensors that the software reads based on a configurable device poll time. The device has two automatic speed fan control settings based on the temperature. To protect the device from overheating, the following temperature threshold levels exist:

- The warning level is the temperature at which the device generates a syslog message. It is configurable up to 83°C.
- The shutdown level is the temperature at which the device reboots. It is set by the device and is not configurable. When the device temperature reaches the shutdown level, it generates a warning message that the device's temperature is over the shutdown level and the device will shutdown in 5 minutes. The system restarts 5 minutes after the device reaches the temperature shutdown level.

TABLE 6 Temperature thresholds

Model	Warning level temperature threshold (°C)	Critical (shutdown) temperature threshold (°C)
ICX 6430-C12	Brocade recommends setting the warning level temperature no higher than 83°C.	88°C

Displaying the temperature

To display the temperature of a device, enter the **show chassis** command at any level of the CLI. The **show chassis** command displays the power supply status, and temperature threshold levels for fan speed.

NOTE
The displayed temperature reflects the temperature of the board inside the device.

```
device# show chassis
The stack unit 1 chassis info:
Power supply present, status ok
Fanless model
Sensor B Temperature Readings:
      Current temperature : 55.0 deg-C
Sensor A Temperature Readings:
      Current temperature : 50.0 deg-C
      Warning level.......: 76.0 deg-C
      Shutdown level......: 83.0 deg-C
Boot Prom MAC : 748e.f8ea.0360
Management MAC: 748e.f8ea.0360
=====
```

Syntax: show chassis

Changing the temperature warning level

To change the temperature at which the device sends a warning message, enter a command similar to the following at the Privileged EXEC level of the CLI.

```
device# temperature warning 83
```

Syntax: temperature warning *value*

The *value* variable is the temperature warning level, in Celsius. You cannot set this level higher than 83°C . The temperature warning level must be at least 5 degrees Celsius less than the temperature shut down level, which is automatically set by the device.

The following console and syslog message is displayed when the temperature reaches the warning level:

!!! Temperature is over warning level on stack unit 1!!!

Temperature shutdown levels

When the temperature crosses the critical (shutdown) threshold levels, the device will reset after 5 minutes. The following console and syslog message is displayed:

```
!!! Temperature is over shutdown level, please shutdown your stack unit 1 to avoid
hw damage!!!
```

NOTE
Brocade recommends that you shut down your stack unit to avoid any hardware damage.

Hardware Specifications

AC power supply specifications

All devices ship with one embedded AC power supply unit with a standard IEC type (IEC320) input connector, operating universal or wide input.

TABLE 7 ICX 6430-C AC Power specifications

Model	Input voltage range (AC)	Internal power supply rating (watts)
ICX 6430-C12	100 - 240 V	100 Watts

TABLE 8 ICX 6430-C MAX Power with 100% Traffic Throughput and Maximum PoE Load

AC Input Voltage	Switch Only Consumption Input Current	Switch Only Consumption Input Watts	Switch BTU/Hr	Switch & PoE AC Input Current	Switch & PoE Input Watts	Total BTU/Hr
100VAC	0.40 Amp	17.71 W	60.25	0.94 Amp	91.69 W	372.84
120VAC	0.34 Amp	17.66 W	60.08	0.79 Amp	91.18 W	370.93
200VAC	0.25 Amp	17.86 W	60.76	0.50 Amp	92.05 W	374.58
240VAC	0.22 Amp	18.11 W	61.61	0.43 Amp	92.60 W	377.30

Physical dimensions and weight

TABLE 9 ICX 6430-C12 Physical dimensions and weight

Model	Height	Width	Depth	Weight
ICX 6430-C12	43.94 mm (1.73 in.)	269.24 mm (10.6 in.)	213.36 mm (8.4 in.)	1.9 kg (4.19 lbs)

Environmental considerations

For optimal performance, operate or store your device in compliance with the following environmental conditions.

Operating environment

TABLE 10   ICX 6430-C Operating and storage environment specifications

Operating temperature	Storage temperature
0° - 40 ºC (32° - 104 ºF)	-40 to 70 ºC (-40 to 158°F)

TABLE 11   ICX 6430-C Humidity environment specifications

Relative humidity
5 to 95%, non-condensing

TABLE 12   ICX 6430-C Storage altitude environment specifications

Storage altitude
15,000 ft (4572 m) maximum

Pinouts and signalling

For more information about the management ports, see Network and management interfaces on page 9.

TABLE 13   Console serial RJ45 management port pinouts

Pin number	Definition	Notes
1	NC	
2	NC	
3	UART0_TX	Console Port
4	GND	
5	GND	
6	UART0_RX	Console Port

TABLE 13   Console serial RJ45 management port pinouts (Continued)

Pin number	Definition	Notes
7	NC	
8	NC	

Cable specifications

For information about supported transceivers and cable lengths and types, refer to the following Brocade website at:

http://www.brocade.com/downloads/documents/data_sheets/product_data_sheets/Optics_DS.pdf

NOTE
Cable installation and network configuration affects overall transmission capability. For network-specific recommendations, consult your local Brocade reseller or system engineer.

Power cords

NOTE
Brocade recommends that you use the power cord that is shipped with the device.

For an ICX 6430-C device to operate at 100V, the power cord should be C13 type connector with 10A rating or better (NEMA-5-15 plug).

For an ICX 6430-C device to operate at 240V, the power cord should be C13 type connector with 10A rating or better.

All devices ship with United States compatible power cords at the time of order. United Kingdom- and European-compatible power cords are also available.

Power cords

Troubleshooting

Diagnosing switch indicators

TABLE 14 Troubleshooting chart

Symptom	Action
Power LED is Off	• Internal power supply is disconnected. • Check connections between the device, the power cord, and the wall outlet. • Contact Technical Support.
Power LED is Amber	Internal power supply has failed. Contact Technical Support.
Diag LED is Amber	• The device self test has detected a fault. • Power cycle the device to try and clear the condition. If the condition persists, contact Technical Support.
Link LED is Off	• Verify that the device and attached device are powered on. • Be sure the cable is plugged into both the device and corresponding device. • Verify that the proper cable type is used and its length does not exceed specified limits. • Check the adapter on the attached device and cable connections for possible defects. Replace the defective adapter or cable if necessary.

Power and cooling problems

If the power indicator does not turn on when the power cord is plugged in, you may have a problem with the power outlet, power cord, or internal power supply. However, if the unit powers off after running for a while, check for loose power connections, power losses or surges at the power outlet, and use the **show chassis** command to verify that the temperature is below the shutdown threshold. If you still cannot isolate the problem, then the internal power supply may be defective. In this case, contact Technical Support for assistance.

Installation

Verify that all system components have been properly installed. If one or more components appear to be malfunctioning (such as the power cord or network cabling), test them in an alternate environment where you are sure that all the other components are functioning properly.

Installation

Regulatory Statements

USA (FCC CFR 47 Part 15 Warning)

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CAUTION

Changes or modifications made to this device which are not expressly approved by the party responsible for compliance could void the authority of the user to operate the equipment.

Industry Canada statement

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

English translation of above statement

This Class A digital apparatus complies with Canadian ICES-003.

Europe and Australia (CISPR 22 Class A Warning)

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Germany (Noise Warning)

Machine noise information regulation - 3. GPSGV, the highest sound pressure level value is 70.0 dB(A) in accordance with EN ISO 7779.

Maschinenlärminformations-Verordnung - 3. GPSGV, der höchste Schalldruckpegel beträgt 70.0 dB(A) gemäss EN ISO 7779.

Japan (VCCI)

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラス A 情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるように要求されることがあります。

English translation of above statement

This is Class A product based on the standard of the Voluntary Control Council For Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, the user may be required to take corrective actions.

Japan power cord

注意 − 添付の電源コードを他の装置や用途に使用しない
添付の電源コードは本装置に接続し、使用することを目的として設計され、その安全性が確認されているものです。決して他の装置や用途に使用しないでください。火災や感電の原因となる恐れがあります。

English translation of above statement

ATTENTION: Never use the power cord packed with your equipment for other products.

Korea

A급 기기 (업무용 방송통신기기): 이 기기는 업무용(A급)으로 전자파적합등록을 한 기기이오니 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정외의 지역에서 사용하는 것을 목적으로 합니다.

English translation of above statement

Class A device (Broadcasting Communication Device for Office Use): This device obtained EMC registration for office use (Class A), and may be used in places other than home. Sellers and/or users need to take note of this.

China

⚠ China-CCC Warning statements

在维修的时候一定要断开所有电源 (English translation"disconnect all power sources before service")

For non tropical use:

安全说明和标记	汉文	"仅适用于非热带气候条件下安全使用。"
	藏文	《ཨ་ / སྐ / ○ སྐ hiuu hiuu / ○ / hiuu་ ○་ / hiuu hiuu hiuu ○ ○ ○ ○ ○ 》 ○
	蒙古文	"ཚ་པའི་ས་ཁུལ་གྱི་གནམ་གཤིས་མིན་པའི་ས་ཁུལ་ཁོ་ན་ར་ཉེན་མེད་བེད་སྤྱོད་བྱས་འཐུས།"
	壮文	Dan hab yungh youq gij dienheiq diuzgen mbouj dwg diegndat haenx ancienz sawjyungh.
	维文	غەيرى ئىسسىق بەلباغ ھاۋا كىلىماتى شارائىتىندىلا بىخەتەر ئىشلەتكىلى بولىدۇ

For altitude 2000 meter and below:

安全说明和标记	汉文	仅适用于海拔2000m以下地区安全使用。
	藏文	《2000m hiuu / hiuu hiuu / hiuu hiuu hiuu / ○ hiuu ○ ○ ○ ○ 》 ○
	蒙古文	"རྒྱ་མཚོའི་ངོས་ལས་མཐོ་ཚད་སྨྲ2000མན་གྱི་ས་ཁུལ་ཁོ་ན་ར་ཉེན་མེད་བེད་སྤྱོད་བྱས་འཐུས།"
	壮文	Dan hab yungh youq gij digih haijbaz 2000m doxroengz haenx ancienz sawjyungh.
	维文	دېڭىز يۈزىدىن 2000 مېتر تۆۋەن رايونلاردىلا بىخەتەر ئىشلەتكىلى بولىدۇ

Warning for Class A:

声 明

此为 A 级产品，在生活环境中，该产品可能会造成无线电干扰。在这种情况下，可能需要用户对其干扰采取切实可行的措施。

English translation of above statement

This is a Class A product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

BSMI statement (Taiwan)

警告使用者：
這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，
在這種情況下，使用者會被要求採取某些適當的對策。

English translation of above statement

Warning: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Regulatory compliance

The table below lists the Electromagnetic Compatibility (EMC), Immunity standards, and safety agency approvals for the FastIron family of switches.

TABLE 15   Regulatory compliance and safety approvals

Certifications
Emissions: • ICES-003, Electromagnetic Emission   • FCC Part 15 Class A   • EN 55022/CISPR 22 Class A   • VCCI Class A   • EN 61000-3-2, Power Line Harmonics   • EN 61000-3-3, Voltage Fluctuation & Flicker   • EN 61000-6-3, Electromagnetic Compatibility, Generic Standard   • AS or NZS CISPR 22, Electromagnetic Compatibility   Immunity: • EN 61000-6-1, Electromagnetic Compatibility, Generic Standard   • EN 55024, Information Technology equipment - Immunity Characteristics   Safety: • BI-NAT CSA 60950-1-07/UL 60950-1 Second Edition   • EN 60950-1:2006   • IEC 60950-1:2005

Cautions and Danger Notices

Cautions

A caution calls your attention to a possible hazard that can damage equipment.

"Vorsicht" weist auf die Gefahr einer möglichen Beschädigung des Gerätes in.

Une mise en garde attire votre attention sur un risque possible d'endommagement de l'équipement. Ci-dessous, vous trouverez les mises en garde utilisées dans ce manuel.

Un mensaje de precaución le advierte sobre un posible peligro que pueda dañar el equipo. Las siguientes son precauciones utilizadas en este manual.

CAUTION	**Do not install the device in an environment where the operating ambient temperature might exceed 40°C (104°F).**
VORSICHT	Das Gerät darf nicht in einer Umgebung mit einer Umgebungsbetriebstemperatur von über 40°C (104°F) installiert werden.
MISE EN GARDE	N'installez pas le dispositif dans un environnement où la température d'exploitation ambiante risque de dépasser 40°C (104°F).
PRECAUCIÓN	No instale el instrumento en un entorno en el que la temperatura ambiente de operación pueda exceder los 40°C (104°F).

CAUTION	**Make sure the airflow around the front, sides, and back of the device is not restricted.**
VORSICHT	Stellen Sie sicher, dass an der Vorderseite, den Seiten und an der Rückseite der Luftstrom nicht behindert wird.
MISE EN GARDE	Vérifiez que rien ne restreint la circulation d'air devant, derrière et sur les côtés du dispositif et qu'elle peut se faire librement.
PRECAUCIÓN	Asegúrese de que el flujo de aire en las inmediaciones de las partes anterior, laterales y posterior del instrumento no esté restringido.

CAUTION	**Use a separate branch circuit for each AC power cord, which provides redundancy in case one of the circuits fails.**
VORSICHT	Es empfiehlt sich die Installation eines separaten Stromkreiszweiges für jede Wechselstrom-Elektroschnur als Redundanz im Fall des Ausfalls eines Stromkreises.

CAUTION	Use a separate branch circuit for each AC power cord, which provides redundancy in case one of the circuits fails.
MISE EN GARDE	Utilisez un circuit de dérivation différent pour chaque cordon d'alimentation C.A. Ainsi, il y aura un circuit redondant en cas de panne d'un des circuits.
PRECAUCIÓN	Use un circuito derivado separado para cada cordón de alimentación de CA, con lo que se proporcionará redundancia en caso de que uno de los circuitos falle.

CAUTION	Ensure that the device does not overload the power circuits, wiring, and over-current protection. To determine the possibility of overloading the supply circuits, add the ampere (amp) ratings of all devices installed on the same circuit as the device. Compare this total with the rating limit for the circuit. The maximum ampere ratings are usually printed on the devices near the input power connectors.
VORSICHT	Stromkreise, Verdrahtung und Überlastschutz dürfen nicht durch das Gerät überbelastet werden. Addieren Sie die Nennstromleistung (in Ampere) aller Geräte, die am selben Stromkreis wie das Gerät installiert sind. Somit können Sie feststellen, ob die Gefahr einer Überbelastung der Versorgungsstromkreise vorliegt. Vergleichen Sie diese Summe mit der Nennstromgrenze des Stromkreises. Die Höchstnennströme (in Ampere) stehen normalerweise auf der Geräterückseite neben den Eingangsstromanschlüssen.
MISE EN GARDE	Assurez-vous que le dispositif ne risque pas de surcharger les circuits d'alimentation, le câblage et la protection de surintensité. Pour déterminer le risque de surcharge des circuits d'alimentation, additionnez l'intensité nominale (ampères) de tous les dispositifs installés sur le même circuit que le dispositif en question. Comparez alors ce total avec la limite de charge du circuit. L'intensité nominale maximum en ampères est généralement imprimée sur chaque dispositif près des connecteurs d'entrée d'alimentation.
PRECAUCIÓN	Verifique que el instrumento no sobrecargue los circuitos de corriente, el cableado y la protección para sobrecargas. Para determinar la posibilidad de sobrecarga en los circuitos de suministros, añada las capacidades nominales de corriente (amp) de todos los instrumentos instalados en el mismo circuito que el instrumento. Compare esta suma con el límite nominal para el circuito. Las capacidades nominales de corriente máximas están generalmente impresas en los instrumentos, cerca de los conectores de corriente de entrada.

CAUTION	Use the erase startup-config command only for new systems. If you enter this command on a system you have already configured, the command erases the configuration. If you accidentally do erase the configuration on a configured system, enter the write memory command to save the running configuration to the startup-config file.
VORSICHT	Verwenden Sie den Befehl "Erase startup-config " (Löschen Startup-Konfig) nur für neue Systeme. Wenn Sie diesen Befehl in ein bereits konfiguriertes System eingeben, löscht der Befehl die Konfiguration. Falls Sie aus Versehen die Konfiguration eines bereits konfigurierten Systems löschen, geben Sie den Befehl "Write Memory " (Speicher schreiben) ein, um die laufende Konfiguration in der Startup-Konfig-Datei zu speichern.
MISE EN GARDE	N'utilisez la commande erase startup-config que pour les nouveaux systèmes. Si vous entrez cette commande sur un système que vous avez déjà configuré, elle efface la configuration. Si vous effacez la configuration par accident sur un système configuré, entrez la commande write memory pour enregistrer la configuration actuelle dans le fichier startup-config.

CAUTION	Use the **erase startup-config** command only for new systems. If you enter this command on a system you have already configured, the command erases the configuration. If you accidentally do erase the configuration on a configured system, enter the **write memory** command to save the running configuration to the startup-config file.
PRECAUCIÓN	Use el comando **erase startup-config** (borrar configuración de inicio) para sistemas nuevos solamente. Si usted introduce este comando en un sistema que ya ha configurado, el comando borrará la configuración. Si usted borra accidentalmente la configuración en un sistema ya configurado, introduzca el comando **write memory** (escribir memoria) para guardar la configuración en ejecución en el archivo startup-config.

CAUTION	Never leave tools inside the chassis.
VORSICHT	Lassen Sie keine Werkzeuge im Chassis zurück.
MISE EN GARDE	Ne laissez jamais d'outils à l'intérieur du châssis.
PRECAUCIÓN	No deje nunca herramientas en el interior del chasis.

CAUTION	Changes or modifications made to this device that are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
VORSICHT	Falls dieses Gerät verändert oder modifiziert wird, ohne die ausdrückliche Genehmigung der für die Einhaltung der Anforderungen verantwortlichen Partei einzuholen, kann dem Benutzer der weitere Betrieb des Gerätes untersagt werden.
MISE EN GARDE	Les éventuelles modifications apportées à cet équipement sans avoir été expressément approuvées par la partie responsable d'en évaluer la conformité sont susceptibles d'annuler le droit de l'utilisateur à utiliser cet équipement.
PRECAUCIÓN	Si se realizan cambios o modificaciones en este dispositivo sin la autorización expresa de la parte responsable del cumplimiento de las normas, la licencia del usuario para operar este equipo puede quedar anulada.

CAUTION	Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.
VORSICHT	Es besteht Explosionsgefahr, wenn ein unzulässiger Batterietyp eingesetzt wird. Verbrauchte Batterien sind entsprechend den geltenden Vorschriften zu entsorgen.
MISE EN GARDE	Risque d'explosion en cas de remplacement de la pile par un modèle incorrect. Débarrassez-vous des piles usagées conformément aux instructions.
PRECAUCIÓN	Riesgo de explosión si se sustituye la batería por una de tipo incorrecto. Deshágase de las baterías usadas de acuerdo con las instrucciones.

CAUTION	**Ensure that adequate ventilation is provided for the system. A 3 cm clearance is recommended above the device and 8 cm clearance is recommended on each side.**
VORSICHT	Assurez-vous que le circuit est correctement ventilé. Il est recommandé de conserver un espace de 3 cm au-dessus du dispositif, et de 8 cm sur chaque côté.
MISE EN GARDE	Stellen Sie sicher, dass das System ausreichend belüftet wird. Über dem Gerät wird 3 cm Freiraum, auf beiden Seiten jeweils 8 cm Freiraum empfohlen.
PRECAUCIÓN	Asegúrese de proporcionar una ventilación adecuada al sistema. Se recomienda dejar 3 cm de espacio libre por encima del dispositivo y 8 cm a cada lado.

CAUTION	**Do not mount the ICX 6430-C device directly underneath a desktop surface with the top panel facing downward. Only mount the ICX 6430-C device underneath a desktop by attaching it to the metal side surface of the desk, with the front panel and ports facing downward.**
VORSICHT	N'installez pas le dispositif ICX 6430-C directement sous une surface de bureau, en orientant la face supérieure vers le bas. Faites-le uniquement en le plaçant sous un bureau et en le reliant à la surface latérale métallique du bureau, en orientant la face avant et les ports vers le bas.
MISE EN GARDE	Installieren Sie den ICX 6430-C nicht über Kopf (Oberseite weist nach unten) direkt unter einer Tischplatte. Der ICX 6430-C darf nur unter einer Tischplatte installiert werden, indem er an der metallenen Seitenwand des Schreibtisches befestigt wird, wobei die Vorderseite und die Anschlüsse nach unten weisen.
PRECAUCIÓN	No monte el dispositivo ICX 6430-C directamente debajo de la superficie de un escritorio con el panel superior orientado hacia abajo. Solo se debe montar el dispositivo ICX 6430-C debajo de la superficie de un escritorio sujetándolo a la superficie lateral metálica del escritorio, con el panel frontal y los puertos orientados hacia abajo.

CAUTION	**The magnet sheet can only be placed against the bottom panel of the device. Do not attempt to attach the magnet sheet to any other panels on the device.**
VORSICHT	Il est uniquement possible de placer la feuille magnétique contre la face inférieure du dispositif. Ne tentez pas de placer la feuille magnétique à d'autres endroits.
MISE EN GARDE	Die magnetische Matte kann nur an der Unterseite des Geräts angebracht werden. Versuchen Sie nicht, die magnetische Matte an den anderen Seiten des Geräts anzubringen.
PRECAUCIÓN	La hoja magnética solo se puede colocar sobre el panel inferior del dispositivo. No intente conectar la hoja magnética a ningún otro panel del dispositivo.

CAUTION	**Before plugging a cable to any port, be sure to discharge the voltage stored on the cable by touching the electrical contacts to ground surface.**
VORSICHT	Avant de brancher un câble à un port, assurez-vous de décharger la tension du câble en reliant les contacts électriques à la terre.
MISE EN GARDE	Bevor Sie ein Kabel in einen Anschluss einstecken, entladen Sie jegliche im Kabel vorhandene elektrische Spannung, indem Sie mit den elektrischen Kontakten eine geerdete Oberfläche berühren.

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CAUTION	**Before plugging a cable to any port, be sure to discharge the voltage stored on the cable by touching the electrical contacts to ground surface.**
PRECAUCIÓN	Antes de conectar un cable en cualquier puerto, asegúrese de descargar la tensión acumulada en el cable tocando la superficie de conexión a tierra con los contactos eléctricos.

Danger notices

A danger notification calls your attention to a possible hazard that can cause injury or death. The following are the warnings used in this manual.

"Gefahr" weist auf eine mögliche Gefährdung hin, die zu Verletzungen oder Tod führen können. Sie finden die folgenden Warnhinweise in diesem Handbuch.

Un danger attire votre attention sur un risque possible de blessure ou de décès. Ci-dessous, vous trouverez les avertissements utilisés dans ce manuel.

Una señal de peligro le llama la atención sobre cualquier posible peligro que pueda ocasionar daños personales o la muerte. A continuación se dan las advertencias utilizadas en este manual.

DANGER	**The procedures in this manual are for qualified service personnel.**
GEFAHR	Die Verfahren in diesem Handbuch sind nur für qualifiziertes Wartungspersonal gedacht.
DANGER	Les procédures décrites dans ce manuel doivent être effectuées par le personnel de service qualifié uniquement.
PELIGRO	Los procedimientos de este manual se han hecho para personal de servicio cualificado.

DANGER	**Before beginning the installation, see the precautions in "Power precautions."**
GEFAHR	Vor der Installation siehe Vorsichtsmaßnahmen unter "Power Precautions" (Vorsichtsmaßnahmen in Bezug auf elektrische Ablagen).
DANGER	Avant de commencer l'installation, consultez les précautions décrites dans "Power Precautions" (Précautions quant à l'alimentation).
PELIGRO	Antes de comenzar la instalación, consulte las precauciones en la sección "Power Precautions" (Precauciones sobre corriente).

DANGER	**All fiber-optic interfaces use Class 1 lasers.**
GEFAHR	Alle Glasfaser-Schnittstellen verwenden Laser der Klasse 1.
DANGER	Toutes les interfaces en fibres optiques utilisent des lasers de classe 1.
PELIGRO	Todas las interfaces de fibra óptica utilizan láser de clase 1.

DANGER	**Make sure the rack or cabinet housing the device is adequately secured to prevent it from becoming unstable or falling over.**
GEFAHR	Stellen Sie sicher, dass das Gestell oder der Schrank für die Unterbringung des Geräts auf angemessene Weise gesichert ist, so dass das Gestell oder der Schrank nicht wackeln oder umfallen kann.
DANGER	Vérifiez que le bâti ou le support abritant le dispositif est bien fixé afin qu'il ne devienne pas instable ou qu'il ne risque pas de tomber.
PELIGRO	Verifique que el bastidor o armario que alberga el instrumento está asegurado correctamente para evitar que pueda hacerse inestable o que caiga.

DANGER	**Mount the devices you install in a rack or cabinet as low as possible. Place the heaviest device at the bottom and progressively place lighter devices above.**
GEFAHR	Montieren Sie die Geräte im Gestell oder Schrank so tief wie möglich. Platzieren Sie das schwerste Gerät ganz unten, während leichtere Geräte je nach Gewicht (je schwerer desto tiefer) darüber untergebracht werden.
DANGER	Montez les dispositifs que vous installez dans un bâti ou support aussi bas que possible. Placez le dispositif le plus lourd en bas et le plus léger en haut, en plaçant tous les dispositifs progressivement de bas en haut du plus lourd au plus léger.
PELIGRO	Monte los instrumentos que instale en un bastidor o armario lo más bajos posible. Ponga el instrumento más pesado en la parte inferior y los instrumentos progresivamente más livianos más arriba.

DANGER	**Disconnect the power cord from all power sources to completely remove power from the device.**
GEFAHR	Ziehen Sie das Stromkabel aus allen Stromquellen, um sicherzustellen, dass dem Gerät kein Strom zugeführt wird.
DANGER	Débranchez le cordon d'alimentation de toutes les sources d'alimentation pour couper complètement l'alimentation du dispositif.
PELIGRO	Para desconectar completamente la corriente del instrumento, desconecte el cordón de corriente de todas las fuentes de corriente.

DANGER	**If the installation requires a different power cord than the one supplied with the device, make sure you use a power cord displaying the mark of the safety agency that defines the regulations for power cords in your country. The mark is your assurance that the power cord can be used safely with the device.**
GEFAHR	Falls für die Installation ein anderes Stromkabel erforderlich ist (wenn das mit dem Gerät gelieferte Kabel nicht passt), müssen Sie sicherstellen, dass Sie ein Stromkabel mit dem Siegel einer Sicherheitsbehörde verwenden, die für die Zertifizierung von Stromkabeln in Ihrem Land zuständig ist. Das Siegel ist Ihre Garantie, dass das Stromkabel sicher mit Ihrem Gerät verwendet werden kann.
DANGER	Si l'installation nécessite un cordon d'alimentation autre que celui fourni avec le dispositif, assurez-vous d'utiliser un cordon d'alimentation portant la marque de l'organisation responsable de la sécurité qui définit les normes et régulations pour les cordons d'alimentation dans votre pays. Cette marque vous assure que vous pouvez utiliser le cordon d'alimentation avec le dispositif en toute sécurité.

DANGER If the installation requires a different power cord than the one supplied with the device, make sure you use a power cord displaying the mark of the safety agency that defines the regulations for power cords in your country. The mark is your assurance that the power cord can be used safely with the device.

PELIGRO Si la instalación requiere un cordón de corriente distinto al que se ha suministrado con el instrumento, verifique que usa un cordón de corriente que venga con la marca de la agencia de seguridad que defina las regulaciones para cordones de corriente en su país. Esta marca será su garantía de que el cordón de corriente puede ser utilizado con seguridad con el instrumento.

DANGER For safety reasons, the ESD wrist strap should contain a series 1 megaohm resistor.

GEFAHR Aus Sicherheitsgründen sollte ein EGB-Armband zum Schutz von elektronischen gefährdeten Bauelementen mit einem 1 Megaohm-Reihenwiderstand ausgestattet sein.

DANGER Pour des raisons de sécurité, la dragonne ESD doit contenir une résistance de série 1 méga ohm.

PELIGRO Por razones de seguridad, la correa de muñeca ESD deberá contener un resistor en serie de 1 mega ohmio.

Danger notices

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