



BLACK BOX
NETWORK SERVICES

LGB4005A

Gigabit 5-Port Switch

Provides five Gigabit ports.

Designed for small to medium workgroups.



Customer Support Information

Order toll-free in the U.S.: Call 877-877-BBOX (outside U.S. call 724-746-5500) • FREE technical support 24 hours a day, 7 days a week: Call 724-746-5500 or fax 724-746-0746 • Mailing address: Black Box Corporation, 1000 Park Drive, Lawrence, PA 15055-1018
Web site: www.blackbox.com • E-mail: info@blackbox.com

Gigabit 5-Port Switch

FEDERAL COMMUNICATIONS COMMISSION AND INDUSTRY CANADA RADIO FREQUENCY INTERFERENCE STATEMENTS

Class B Digital Device. This equipment has been tested and found to comply with the limits for a Class B computing device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. This equipment generates, uses, and can radiate radio frequency energy, and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. If this equipment does cause harmful interference to radio or telephone reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult an experienced radio/TV technician for help.

Caution:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

To meet FCC requirements, shielded cables and power cords are required to connect this device to a personal computer or other Class B certified device.

This digital apparatus does not exceed the Class B limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de classe B prescrites dans le Règlement sur le brouillage radioélectrique publié par Industrie Canada.

Normas Oficiales Mexicanas (NOM) Electrical Safety Statement INSTRUCCIONES DE SEGURIDAD

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.
2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.
3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.
4. Todas las instrucciones de operación y uso deben ser seguidas.
5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc.
6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.
7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.
8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá a lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.
9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.
10. El equipo eléctrico deber ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.
11. El aparato eléctrico deberá ser conectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.

Gigabit 5-Port Switch

12. Precaución debe ser tomada de tal manera que la tierra física y la polarización del equipo no sea eliminada.
13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.
14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.
15. En caso de existir, una antena externa deberá ser localizada lejos de las líneas de energía.
16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.
17. Cuidado debe ser tomado de tal manera que objetos líquidos no sean derramados sobre la cubierta u orificios de ventilación.
18. Servicio por personal calificado deberá ser provisto cuando:
 - A: El cable de poder o el contacto ha sido dañado; u
 - B: Objetos han caído o líquido ha sido derramado dentro del aparato; o
 - C: El aparato ha sido expuesto a la lluvia; o
 - D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o
 - E: El aparato ha sido tirado o su cubierta ha sido dañada.

Table of Contents/Trademarks Used in this Manual

Table of Contents

1. Specifications	6
2. Overview	7
2.1 Introduction	7
2.2 Features.....	7
2.3 What's Included.....	7
2.4 Hardware Description	8
2.4.1 Front Panel.....	8
2.4.2 Back Panel	9
3. Installation	10
3.1 Connecting a Switch/Hub to the 5-Port Gigabit Switch.....	10
3.2 Connecting PC or Other Devices to the Gigabit Switch.....	10
4. LED Indicators	11

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Gigabit 5-Port Switch

1. Specifications

Buffer Memory: 104 KB

Certifications: FCC Class B, CE

Filtering/Forwarding Rates: 1000 Mbps port: 1,488,000 pps;
100 Mbps port: 148,800 pps;
10 Mbps port: 14,880 pps

Jumbo Frames: 9 KB

MAC Address: 1K

Standards: IEEE 802.3 10BASE-T, IEEE 802.3u 100BASE-TX,
IEEE 802.3ab 1000BASE-T, IEEE 802.3x flow control

Transmission Media: 10BASE-T CAT3/4/5 UTP/STP;
100BASE-TX CAT5 UTP/STP; 1000BASE-T CAT5e UTP/STP

Transmission Method: Store and Forward

Connectors: (5) RJ-45

Indicators: (6) LEDs: (5) LINK/ACT, (1) Power

Temperature Tolerance: Operating: 32 to 131° F (0 to 55° C);
Storage: -4 to 194° F (-20 to 90° C)

Relative Humidity: 10 to 90%, noncondensing

Power: 120–240 VAC, 50–60 Hz power supply, 8.25 watts maximum

Size: 1.7"H x 4.8"W x 8.9"D (4.4 x 12.3 x 22.8 cm)

Weight: 2.6 lb. (1.2 kg)

2. Overview

2.1 Introduction

The Gigabit 5-Port Switch provides five 10-/100-/1000-Mbps Ethernet ports. Use the switch for high-performance networks with increasing numbers of users.

The compact desktop-sized switch is easy to install. It's ideal for small to medium workgroups, and you can install it where space is limited.

Plus, the switch supports USB port-powered operation, so you can use it in rooms that have limited power outlets.

2.2 Features

- Autonegotiates speed between 10, 100, and 1000 Mbps
- Housed in a 9" desktop-sized metal case
- Installs in a 10"/19" cabinet using rackmount kits
- Automatically learns networking configurations
- Automatically detects full-/half-duplex modes for any port'
- Provides dedicated 2000-Mbps bandwidth
- Uses store-and-forward switching methods
- Offers IEEE 802.x flow control for full-duplex and backpressure flow control for half-duplex
- Includes non-blocking and non-head-of-line blocking full-wire-speed forwarding
- Provides Auto MDI/MDI-X function for any port, so you don't need crossover cables
- Easy to install, just plug-and-play

2.3 What's Included

Your package should include the following items. If anything is missing or damaged, contact Black Box Technical Support at 724-746-5500 or info@blackbox.com.

- Gigabit Ethernet switch
- Power adapter
- USB cable
- This user's manual

Gigabit 5-Port Switch

2.4 Hardware Description

2.4.1 Front Panel

Figure 2-1 shows the front panel of the switch. Table 2-1 describes its components.

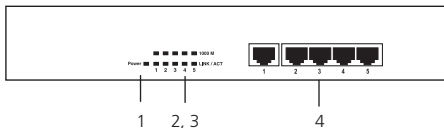


Figure 2-1. LGB4005A front panel.

Table 2-1. LGB4005A front-panel components.

Number	Component	Description
1	Power LED	Lights when the unit's power is on
2	(5) LEDs	LINK/ACT LEDs flash when data is being transmitted or received
3	(5) LEDs	1000 M LEDs light when the ports are operating at 1000 Mbps
4	(5) RJ-45 ports	Link to switch/hubs, PCs, or other devices

2.4.2 Back Panel

Figure 2-2 shows the back panel of the switch. Table 2-2 describes its components.

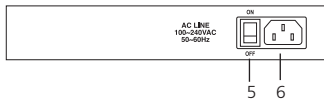


Figure 2-2. LGB4005A back panel.

Table 2-2. Back-panel components.

Number	Component	Description
5	Switch	Power On/Off
6	Outlet	Connects to 100–240 VAC power source

Gigabit 5-Port Switch

3. Installation

3.1 Connecting Switch/Hubs to the 5-Port Gigabit Ethernet Switch

This switch features Auto-MDI/MDI-X, so it's easy to link to another switch without crossover cable.

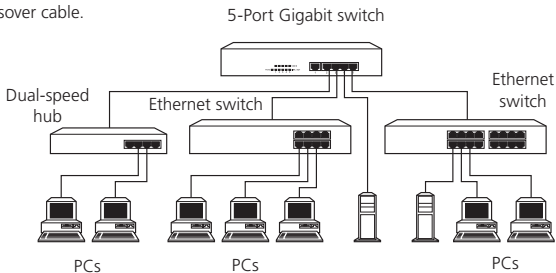


Figure 3-1. Connecting a switch/hub.

3.2 Connecting PCs/Other Devices to the Gigabit Ethernet Switch

Use straight-through twisted-pair cable to connect the switch to PCs, servers, and other devices.

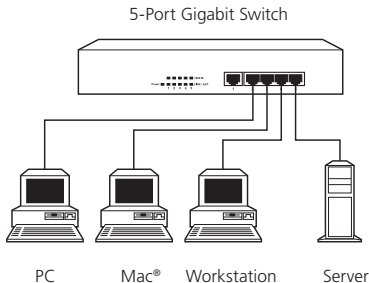


Figure 3-2. Connecting PCs/other devices.

4. LED Indicators

Table 4-1 describes the LED indicators' functions.

LED	Status	Operation
Power	On	Power is on.
	Off	Power is off.
LINK/ACT	On	Port is connected.
	Off	Port is not connected.
	Flashing	Data is being transmitted or received.
1000 M	On	Port is operating at 1000 Mbps.
	Off	Port is operating at 10/100 Mbps.

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