

USER MANUAL

LGC220A

10GBASE-T TO 10GBASE-FX MEDIA CONVERTER

24/7 TECHNICAL SUPPORT AT 1.877.877.2269 OR VISIT BLACKBOX.COM

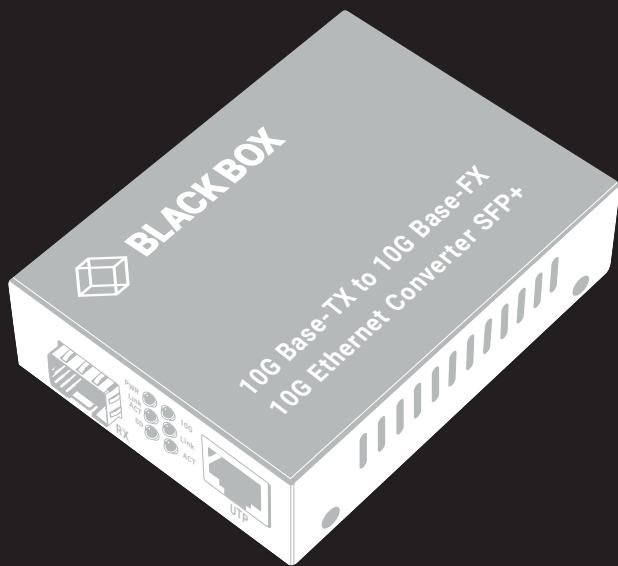


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CHAPTER 1: SPECIFICATIONS**TABLE 1-1. SPECIFICATIONS**

SPECIFICATION	DESCRIPTION
Approvals	FCC Class B, Subpart B, CE, RoHS
Description	Pure Networking Copper to Fiber Media Converter - 10GBASE-T to 10G SFP+
Connectors	(1) RJ-45, (1) SFP slot
Media Supported	1000BASE-T: CAT5 UTP/STP, max. 328 ft. (100 m); 2.5GBASE-T: CAT5e UTP/STP, max. 164 ft. (50 m); 5GBASE-T: CAT5e UTP/STP, max. 164 ft. (50 m); 10GBASE-T: CAT6a UTP/STP, max. 164 ft. (50 m)
Distance	CATX: 328 ft. (100 m)
Wavelength	Depends on SFP installed
Forwarding Rate	10 Mbps: 14,880 pps, 100 Mbps: 148,800 pps, 1000 Mbps: 1,480,000 pps, 10 Gbps: 14,800,000 pps
Frame Sizes	Up to 16883 bytes
Power	Media converter: 12 VDC, 12 W, barrel connector; External power adapter included: Wall type, 100-240 VAC, 50/60 Hz, 12 VDC, 1A with 4 plug clips for US, EU, UK, AU
Standards	802.3ab 1000BASE-T, 802.3z 1000BASE-X, 802.3an 10GBASE-T, 802.3ae 10GE over fiber
Dimensions	1" H x 3.7" W x 2.7" D (2.5 x 9.4 x 6.9 cm)
Weight	0.7 lb. (0.3 kg)
Operating Temperature	Operating: 32 to 122° F (0 to 50° C); Storage: -4 to +158° F (-20 to +70° C)
Mounting	Standalone

CHAPTER 2: OVERVIEW

2.1 INTRODUCTION

The 10GBASE-T to 10GBASE-FX Media Converter supports two types of media for network connection, such as 10GBASE-T and 10GBASE-FX. The bridge media converter is designed with a 10GBASE Ethernet PHY chip that connects two types of segments for smooth operation. This converter is used as a standalone unit.

2.2 WHAT'S INCLUDED

Before you start installing the Converter, verify that the package contains the following:

- ♦ The TP-Fiber Converter
- ♦ 12-VDC Power Adapter

If anything is missing or damaged, contact Black Box Technical Support at 877-877-2269 or info@blackbox.com

2.3 HARDWARE DESCRIPTION

Figures 2-1 and 2-2 show the front and back panels of the converter. Tables 2-1 and 2-2 describe its components.

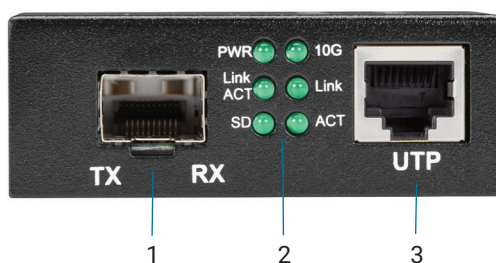


FIGURE 2-1. FRONT PANEL



FIGURE 2-2. BACK PANEL

CHAPTER 2: OVERVIEW**TABLE 2-1. MEDIA CONVERTER COMPONENTS**

NUMBER IN FIGURE 2-1 OR 2-2	COMPONENT	DESCRIPTION
1	SFP cage	SFP module installs here
2	LED indicators	See Table 2-2
3	RJ-45 connector	Links to RJ-45 cable
4	Barrel connector for power	Links to 12-VDC power supply

TABLE 2-2. LED INDICATORS

LED NAME	STATUS	DESCRIPTION
PWR	ON	Power is ON and normal
FX Link/ACT	ON	Connection Status display for fiber link. ON indicates that the fiber link is correctly connected
	Blinking	Packet is being transmitted through the FX end
SD	ON	Fiber signal is detected
10G	ON	Link is operating at 10 Gbps
	OFF	Link is operating at 10 Mbps
TX Link	ON	Connection status display for copper link. ON indicates that the link is correctly connected
TX ACT	Blinking	Active status display of copper link. Packet is being transmitted through the TX end

TABLE 2-3. COMPATIBLE SFPS

PART NUMBER	DESCRIPTION
LSP421	SFP+ - 10-Gb, Extended Diagnostics, 850-nm Multimode Fiber, 300-m, LC
LSP422	SFP+ - 10-Gb, Extended Diagnostics, 1310-nm Single-Mode Fiber, 10-km, LC
LSP431	SFP+ - 10-Gb, Extended Operating Temperature & Diagnostics, 850-nm Multimode Fiber, 300-m

CHAPTER 3: INSTALLING THE CONVERTER

1. Verify that the DC adapter conforms to your country's DC power requirement and insert the power plug.
2. Connect the media cable to the network.

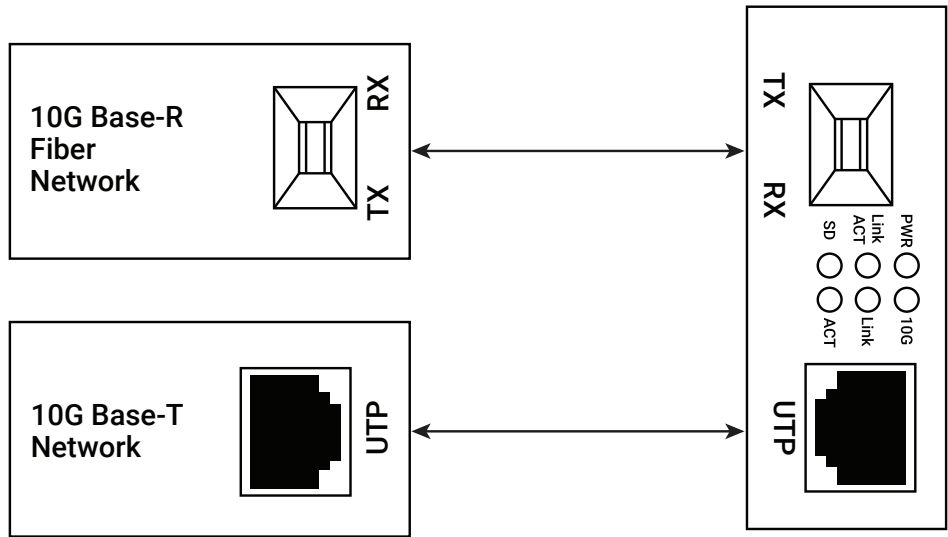


FIGURE 3-1. BASIC NETWORK CONNECTION

APPENDIX A: REGULATORY INFORMATION

A.1 FCC STATEMENT

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.

APPENDIX A: REGULATORY INFORMATION

A.2 NOM STATEMENT

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.
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.



APPENDIX B: DISCLAIMER/TRADEMARKS

B.1 DISCLAIMER

Black Box Corporation shall not be liable for damages of any kind, including, but not limited to, punitive, consequential or cost of cover damages, resulting from any errors in the product information or specifications set forth in this document and Black Box Corporation may revise this document at any time without notice.

B.2 TRADEMARKS USED IN THIS MANUAL

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