

# USER MANUAL

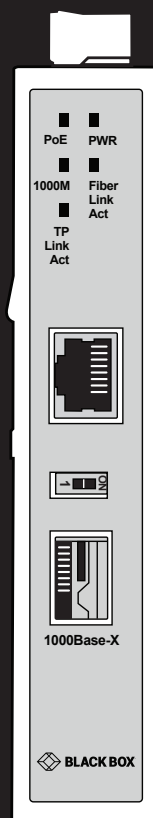
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LGC5400A

# UPOE CONVERTER

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24/7 TECHNICAL SUPPORT AT 1.877.877.2269 OR VISIT [BLACKBOX.COM](http://BLACKBOX.COM)



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## CHAPTER 1: SPECIFICATIONS

## 1.1 GENERAL

TABLE 1-1. GENERAL SPECIFICATIONS

SPECIFICATION	DESCRIPTION
<b>Approvals</b>	
EMI	CE Mark, commercial; FCC Part 15 Class A; VCCI Class A
EMS	EN61000-4-2 (ESD); EN61000-4-3 (RS); EN61000-4-4 (EFT); EN61000-4-5 (Surge); EN61000-4-6 (CS); EN61000-4-8; EN61000-4-11
<b>General</b>	
Connectors	Twisted-pair: (1) 10/100/1000BaseT(X) RJ-45, Fiber: (1) 1000Base-X SFP open slot <b>NOTE:</b> A compatible fiber SFP module installs in the SFP open slot. See Table 1-2 for details.
Data Transfer Rate	2000 Mbps/full-duplex and 1000 Mbps/half-duplex
Dimensions	5.1"H x 0.94"W x 3.8"D (13 x 2.4 x 9.6 cm)
Housing	IP30
Jumbo Frames	9K bytes
Indicators	(5) LEDs: TX port: (1) 1000 Mbps green LED, (1) Link/Activity green LED, (1) PoE ON green LED; FX port: (1) Link/Activity green LED; Per unit: (1) Power amber LED
Mounting	Via DIN rail kit installed on unit
Power	Input: 44–57 VDC via (1) 2-pin terminal block or (1) optional 5-mm DC jack; Includes 100–240 VAC, 50/60 Hz input, 56 VDC output, 1.2 A power adapter
Standards	IEEE 802.3ab 10Base-T; IEEE 802.3u 100Base-TX; IEEE 802.3ab 1000Base-T; IEEE 802.3z 1000Base-X; IEEE 802.3x Flow Control

TABLE 1-1 (CONTINUED). GENERAL SPECIFICATIONS

SPECIFICATION	DESCRIPTION
<b>General (continued)</b>	
Transmission Media	1000BaseTX: CAT5 UTP/STP or above, up to 100 m 1000BaseX: Multimode 50/125- $\mu$ m or 62.5/125- $\mu$ m fiber optic cable; Single-mode 9/125- $\mu$ m or 10/125- $\mu$ m Fiber optic cable
User Controls	(1) DIP switch: ON: UPoE enable, LLDP enable: OFF: UPoE disable, LLDP disable
Weight	0.68 lb. (0.31 kg)
<b>Environmental</b>	
Temperature Tolerance	Operating: -4 to +158° F (-20 to +70° C); Storage: -40 to +185° F (-40 to +85° C)
Relative Humidity	10 to 90%, noncondensing



# CHAPTER 1: SPECIFICATIONS

## 1.2 COMPATIBLE SFPS

**TABLE 1-2. COMPATIBLE SFPS SPECIFICATIONS**

PRODUCT CODE	PRODUCT NAME	WAVELENGTH (NM)	DISTANCE	TX POWER (DBM)	RX SENSITIVITY (DBM)	LINK BUDGET (DBM)
LFP411	SFP, 1250-Mbps Fiber with Extended Diagnostics, 850-nm Multimode, LC, 550 m	850 nm	1804 ft. (550 m)	-6.5 dBm	-17 dBm	10.5 dBm
LFP412	SFP, 1250-Mbps Fiber with Extended Diagnostics, 1310-nm Multimode, LC, 2 km	1310 nm	1.2 mi. (2 km)	-5 dBm	-19 dBm	14 dBm
LFP413	SFP, 1250-Mbps Fiber with Extended Diagnostics, 1310-nm Single-Mode, LC, 10 km	1310 nm	6.2 mi. (10 km)	-6.5 dBm	-20 dBm	13.5 dBm
LFP414	SFP, 1250-Mbps Fiber with Extended Diagnostics, 1310-nm Single-Mode, LC, 30 km	1310 nm	18.6 mi. (30 km)	1 dBm	-23 dBm	24 dBm
LFP418	SFP - 1250-Mbps Fiber with Extended Diagnostics, 1550-nm Single-Mode, LC, 80 km	1550 nm	49.7 mi. (80 km)	1 dBm	-23 dBm	24 dBm
LFP420	SFP - Simplex, 1250-Mbps Fiber with Extended Diagnostics, 1550-nm TX, 1310-nm RX, Single-Mode, LC, 10 km	1550 nm	6.2 mi. (10 km)	-6 dBm	-20 dBm	14 dBm

**NOTE:** One SFP module is required for operation of the unit.

## CHAPTER 2: OVERVIEW

### 2.1 INTRODUCTION

The Industrial UPoE Media Converter used with a multimode or single-mode SFP drives a twisted-pair signal over fiber cable up to 50 mi. (80 km).

### 2.2 FEATURES

- ◆ The RJ-45 Port complies with IEEE 802.3at PoE+ and supports Cisco UPoE, up to 60 W power delivery.
- ◆ Has one 10/100/1000Base-T(X) Gigabit RJ-45 port and one 1000Base-X SFP port.
- ◆ The Fiber Port supports either multimode or single-mode fiber.
- ◆ The twisted-pair port supports full-duplex, auto-MDI/MDI-X and auto-negotiation.
- ◆ Uses jumbo frame 9K bytes.
- ◆ Operating temperature ranges from -4 to +158° F (-20 to +70° C).
- ◆ Mounts on a DIN rail.

### 2.3 WHAT'S INCLUDED

Your package should include the following items. If anything is missing or damaged, contact Black Box Technical Support at 877-877-2269 or [info@blackbox.com](mailto:info@blackbox.com)

- ◆ One PoE Media converter (Including Terminal Block)
- ◆ One Quick Installation Guide
- ◆ One Power Adaptor (Optional)



## CHAPTER 2: OVERVIEW

### 2.4 HARDWARE DESCRIPTION

Figure 2-1 shows the Industrial UPoE Media Converter. Table 2-1 describes its components.

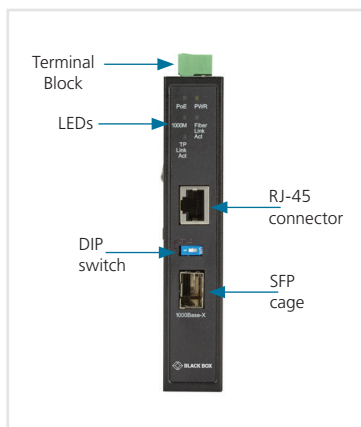


FIGURE 2-1. INDUSTRIAL UPOE MEDIA CONVERTER (LGC5400A)

TABLE 2-1. INDUSTRIAL UPOE MEDIA CONVERTER COMPONENTS

COMPONENT IN FIGURE 2-1	DESCRIPTION	INDICATION
<b>LEDS</b>		
	(1) 1000 Mbps LED	1000 Mbps LED lights green when data is being transmitted at 1000 Mbps
	(1) TX Link Activity LED	Lights green when there is data activity on the twisted-pair link
	(1) PoE ON LED	Lights green when the unit is using Power over Ethernet
	(1) FX Link/Activity LED	Lights green when there is data activity on the fiber link
	(1) Power LED	Lights amber when power to the unit is ON
<b>USER CONTROLS</b>		
	(1) DIP switch	ON: UPoE enable, LLDP enable: OFF: UPoE disable, LLDP disable
<b>CONNECTORS</b>		
	RJ-45 connector	Connects to twisted-pair link
	SFP cage	Houses SFP module (required)
<b>POWER</b>		
	Power connector	Links to power source
	Terminal block	Links to power source

**NOTES:** Use either the power connector or the terminal block for external power (not both at the same time).

Input power terminal block is not polarity sensitive, either terminal can be used for positive or negative connection.

## CHAPTER 3: REGULATORY INFORMATION

### 3.1 FCC WARNING

This device has been tested and found to comply with limits for a Class A digital device, pursuant to Part 15 of 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 and radiates radio frequency energy and, if not installed and used in accordance with the user's manual, it may cause interference in which case users will be required to correct interference at their own expenses.

### 3.2 CE 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.





# NOTES

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