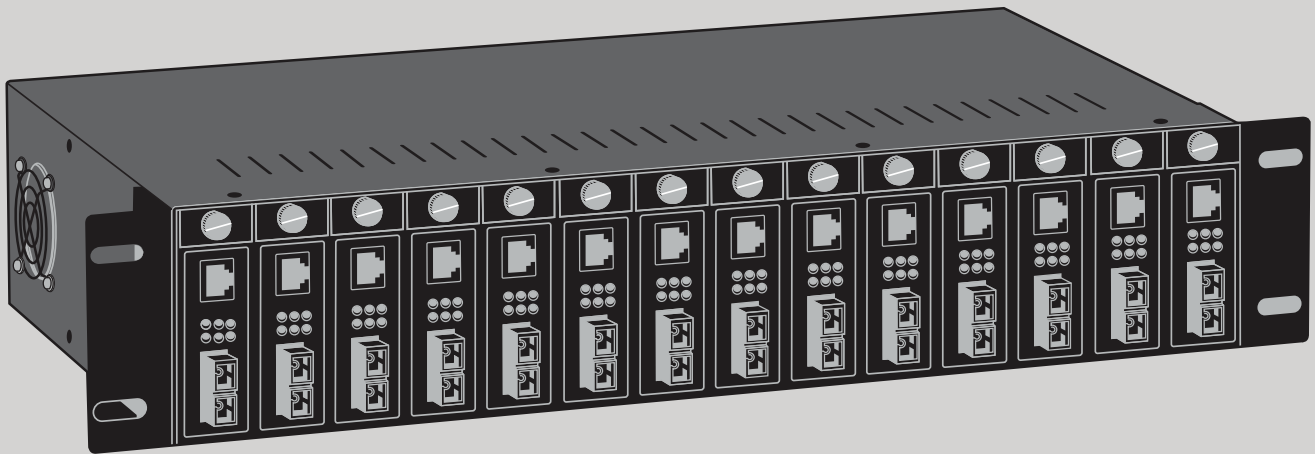


DATA SHEET

LHC210A, LHC211A, LHC212A, LGC210A, LGC211A, LGC212A, LHGC-RACK, LGC215A, LGC220A

MEDIA CONVERTERS AND CHASSIS

24/7 TECHNICAL SUPPORT AT 877.877.2269 OR VISIT BLACKBOX.COM



OVERVIEW

MEDIA CONVERTERS DATA SHEET

INTRODUCTION

Black Box Media Converters enable you to connect twisted-pair networks or devices to fiber optic network links. This allows you to transfer data over secure, high-speed fiber optic cable.

Choose from three groups of Black Box Media Converters:

- FAST ETHERNET AND GIGABIT ETHERNET MEDIA CONVERTERS WITH FIXED AND SFP OPTICS, STANDALONE AND CHASSIS
- GIGABIT ETHERNET POE+ MEDIA CONVERTER
- 10 GIGABIT ETHERNET MEDIA CONVERTER

FEATURES

- FAST ETHERNET MEDIA CONVERTERS SUPPORT UP TO 100 MBPS
- GIGABIT ETHERNET MEDIA CONVERTERS SUPPORT UP TO 1000 MBPS
- CHASSIS ENABLES YOU TO SECURELY HOUSE UP TO 14 FAST ETHERNET OR GIGABIT ETHERNET MEDIA CONVERTERS IN TWO RACK UNITS (3.50") OF 19" RACK SPACE
- POE MEDIA CONVERTER PROVIDES DATA AND POWER OVER THE RJ-45 INTERFACE
- 10G MEDIA CONVERTERS ALLOW YOU TO BRIDGE TWO HIGH SPEED 10G NETWORKS TOGETHER OR ATTACH A HIGH SPEED 10G DEVICE TO A 10G NETWORK

COMPARISON CHART

SPECIFICATION COMPARISON CHART					
PRODUCT CODE	STANDALONE	RACKMOUNTABLE	SPEED	MEDIA/CONNECTOR	POE
LHC210A	YES	YES	10/100 MBPS	TP, FIBER SFP	NO
LHC211A	YES	YES	10/100 MBPS	TP, FIBER MM 1310 NM SC	NO
LHC212A	YES	YES	10/100 MBPS	TP, FIBER SM 1310 NM SC	NO
LGC210A	YES	YES	10/100/1000 MBPS	TP, FIBER SFP	NO
LGC211A	YES	YES	10/100/1000 MBPS	TP, FIBER MM 850 NM SC	NO
LGC212A	YES	YES	10/100/1000 MBPS	TP, FIBER SM 1310 NM SC	NO
LGC215A	YES	NO	10/100/1000 MBPS	TP, FIBER SFP	YES
LGC220A	YES	NO	10 GBPS	TP, FIBER SFP	NO
LHGC-RACK	NO	YES	N/A	N/A	NO



SPECIFICATIONS

LHC210A: 10/100BASE-TX TO 100BASE-FX MEDIA CONVERTER WITH ONE SFP SLOT



TOP VIEW



FRONT VIEW



BACK VIEW

SPECIFICATIONS FOR LHC210A	
APPROVALS	FCC Class B, CE, RoHS
DESCRIPTION	Pure Networking Copper to Fiber Media Converter - 10/100BASE-TX to 100BASE-FX SFP
CONNECTORS	(1) RJ-45, (1) SFP cage
MEDIA SUPPORTED	CATx UTP/STP; Multimode fiber (50/125 μm , 62.5/125 μm); Single-mode fiber (8.3/125 μm , 9/125 μm , 10/125 μm)
DISTANCE	CATx: 328 ft. (100 m)
WAVELENGTH	Depends on SFP installed
FORWARDING RATE	10 Mbps: 14,880 pps, 100 Mbps: 148,800 pps
FRAME SIZE	Up to 9016 bytes
POWER	Media converter: 5 VDC, 2.5 W, barrel connector; External power adapter included: Wall type, 100-240 VAC, 50/60 Hz, 5 VDC, 1A with 4 plug clips for US, EU, UK, AU
STANDARDS	IEEE 802.3, IEEE 802.3U, 10/100BASE-TX, 100BASE-FX, IEEE 802.3x flow control for full-duplex mode
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)
TEMPERATURE	Operating: 32 to 122° F (0 to 50° C); Storage: -4 to +158° F (-20 to +70° C)
MOUNTING	Standalone or in LHGC-RACK
WHAT'S INCLUDED	(1) 10/100BASE-TX to 100BASE-FX Media Converter with One SFP Slot, (1) 5- VDC power adapter

COMPATIBLE SFPS	
PART NUMBER	DESCRIPTION
LFP401	SFP - 155-Mbps, Extended Diagnostics, 850-nm Multimode Fiber, 2-km, LC
LFP402	SFP - 155-Mbps, Extended Diagnostics, 1310-nm Multimode Fiber, 2-km, LC
LFP403	SFP - 155-Mbps, Extended Diagnostics, 1310-nm Single-Mode Fiber, 30-km, LC
LFP404	SFP - 155-Mbps, Extended Diagnostics, 1310-nm Single-Mode Fiber, 60-km, LC

SPECIFICATIONS

LHC211A: 10/100BASE-TX TO 100BASE-FX FAST ETHERNET MEDIA CONVERTER, MULTIMODE



TOP VIEW

LHC211A



FRONT VIEW



BACK VIEW

SPECIFICATIONS FOR LHC211A

APPROVALS	FCC Class B, CE, RoHS
DESCRIPTION	Pure Networking Copper to Fiber Media Converter - 10/100BASE-TX to 100BASE-FX, Multimode SC, 1310-nm, 2-km
CONNECTORS	(1) RJ-45, (1) pair of SC
MEDIA SUPPORTED	CATx UTP/STP; Multimode fiber (50/125 μm, 62.5/125 μm)
DISTANCE	CATx: 328 ft. (100 m); MM fiber: 1.2 mi. (2 km)
WAVELENGTH	1310 nm
FORWARDING RATE	10 Mbps: 14,880 pps, 100 Mbps: 148,800 pps
FRAME SIZE	Up to 9016 bytes
POWER	Media converter: 5 VDC, 2.5 W, barrel connector; External power adapter included: Wall type, 100-240 VAC, 50/60 Hz, 5 VDC, 1A with 4 plug clips for US, EU, UK, AU
STANDARDS	IEEE 802.3, IEEE 802.3U, 10/100BASE-TX, 100BASE-FX, IEEE 802.3x flow control for full-duplex mode
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)
TEMPERATURE	Operating: 32 to 122° F (0 to 50° C); Storage: -4 to +158° F (-20 to +70° C)
MOUNTING	Standalone or in LHGC-RACK
WHAT'S INCLUDED	(1) 10/100BASE-TX to 100BASE-FX Fast Ethernet Media Converter, Multimode, (1) 5-VDC power adapter



SPECIFICATIONS

LHC212A: 10/100BASE-TX TO 100BASE-FX FAST ETHERNET MEDIA CONVERTER, SINGLE-MODE



TOP VIEW



FRONT VIEW



BACK VIEW

SPECIFICATIONS FOR LHC212A

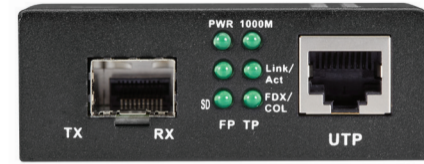
APPROVALS	FCC Class B, CE, RoHS
DESCRIPTION	Pure Networking Copper to Fiber Media Converter - 10/100BASE-TX to 10/100BASE-FX, Singlemode SC, 1310-nm, 10-km
CONNECTORS	(1) RJ-45, (1) pair of SC
MEDIA SUPPORTED	CATx UTP/STP; Single-mode fiber (8.3/125 μ m, 9/125 μ m, 10/125 μ m)
DISTANCE	CATx: 328 ft. (100 m); SM fiber: 6.2 mi. (10 km)
WAVELENGTH	1310 nm
FORWARDING RATE	10 Mbps: 14,880 pps, 100 Mbps: 148,800 pps
FRAME SIZE	Up to 9016 bytes
POWER	Media converter: 5 VDC, 2.5 W, barrel connector; External power adapter included: Wall type, 100-240 VAC, 50/60 Hz, 5 VDC, 1A with 4 plug clips for US, EU, UK, AU
STANDARDS	IEEE 802.3, IEEE 802.3U, 10/100BASE-TX, 100BASE-FX, IEEE 802.3x flow control for full-duplex mode
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)
TEMPERATURE	Operating: 32 to 122° F (0 to 50° C); Storage: -4 to +158° F (-20 to +70° C)
MOUNTING	Standalone or in LHGC-RACK
WHAT'S INCLUDED	(1) 10/100BASE-TX to 100BASE-FX Fast Ethernet Media Converter, Single-mode, (1) 5-VDC power adapter

SPECIFICATIONS

LGC210A: 10/100/1000BASE-TX TO 1000BASE-FX MEDIA CONVERTER WITH ONE SFP SLOT



TOP VIEW



FRONT VIEW



BACK VIEW

SPECIFICATIONS FOR LGC210A

APPROVALS	FCC Class B, CE, RoHS
DESCRIPTION	Pure Networking Copper to Fiber Media Converter - 10/100/1000BASE-TX to 1000BASE-X SFP
CONNECTORS	(1) RJ-45, (1) SFP cage
MEDIA SUPPORTED	CATx UTP/STP; Multimode fiber (50/125 μ m, 62.5/125 μ m); Single-mode fiber (8.3/125 μ m, 9/125 μ m, 10/125 μ 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
FRAME SIZES	Up to 9216 bytes
POWER	Media converter: 5 VDC, 2.5 W, barrel connector; External power adapter included: Wall type, 100-240 VAC, 50/60 Hz, 5 VDC, 1 A with 4 plug clips for US, EU, UK, AU
STANDARDS	IEEE 802.3, IEEE 802.3U, 10/100BASE-TX, 100BASE-FX, IEEE 802.3x flow control for full-duplex mode, 802.3ab 1000BASE-T, 802.3z 1000BASE-X
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)
TEMPERATURE	Operating: 32 to 122° F (0 to 50° C); Storage: -4 to +158° F (-20 to +70° C)
MOUNTING	Standalone or in LHGC-RACK
WHAT'S INCLUDED	(1) 10/100/1000BASE-TX to 1000BASE-FX Media Converter with One SFP Slot, (1) 5-VDC power adapter

COMPATIBLE SFPS

PART NUMBER	DESCRIPTION
LFP411	SFP - 1250-Mbps, Extended Diagnostics, 850-nm Multimode Fiber, 550-m, LC
LFP412	SFP - 1250-Mbps, Extended Diagnostics, 1310-nm Multimode Fiber, 2-km, LC
LFP413	SFP - 1250-Mbps, Extended Diagnostics, 1310-nm Single-Mode Fiber, 10-km, LC
LFP414	SFP - 1250-Mbps, Extended Diagnostics, 1310-nm Single-Mode Fiber, 30-km, LC
LFP418	SFP - 1250-Mbps, Extended Diagnostics, 1550-nm Single-Mode Fiber, 80-km, LC
LFP420, LFP421 (USED IN PAIRS)	SFP - 1250-Mbps, Extended Diagnostics, 1550-nm TX, 1310-nm RX, Simplex, Single-Mode Fiber, 10-km, LC; SFP - 1250-Mbps, Extended Diagnostics, 1310-nm TX, 1550-nm RX, Simplex Single-Mode Fiber, 10-km, LC
LFP416	SFP - 1250-Mbps, Extended Diagnostics, 10/100/1000BASE-T, SGMII Interface, RJ-45

NOTE: LFP420, LFP421 are single-strand fiber SFPs, so they must be used in pairs.

NOTE: Use the LFP416 for a copper interface.



SPECIFICATIONS

LGC211A: 10/100/1000BASE-TX TO 1000BASE-FX GIGABIT ETHERNET MEDIA CONVERTER, MULTIMODE



TOP VIEW

LGC211A



FRONT VIEW



BACK VIEW

SPECIFICATIONS FOR LGC211A	
APPROVALS	FCC Class B, CE, RoHS
DESCRIPTION	Pure Networking Copper to Fiber Media Converter - Multimode SC 1000-Mbps 850-nm 500-m to RJ45 10/100/1000-Mbps
CONNECTORS	(1) RJ-45; (1) pair of SC
MEDIA SUPPORTED	CATx UTP/STP; Multimode fiber (50/125 μm, 62.5/125 μm)
DISTANCE	CATx: 328 ft. (100 m), MM fiber: 1640 ft. (500 m)
WAVELENGTH	850 nm
FORWARDING RATE	10 Mbps: 14,880 pps, 100 Mbps: 148,800 pps, 1000 Mbps: 1,480,000 pps
FRAME SIZES	Up to 9216 bytes
POWER	Media converter: 5 VDC, 2.5 W, barrel connector; External power adapter included: Wall type, 100-240 VAC, 50/60 Hz, 5 VDC, 1A with 4 plug clips for US, EU, UK, AU
STANDARDS	IEEE 802.3, IEEE 802.3U, 10/100BASE-TX, 100BASE-FX, IEEE 802.3x flow control for full-duplex mode, 802.3ab 1000BASE-T, 802.3z 1000BASE-X
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)
TEMPERATURE	Operating: 32 to 122° F (0 to 50° C); Storage: -4 to +158° F (-20 to +70° C)
MOUNTING	Standalone or in LHCG-RACK
WHAT'S INCLUDED	(1) 10/100/1000BASE-TX to 1000BASE-FX Media Converter, Multimode, (1) 5-VDC power adapter

SPECIFICATIONS

LGC212A: 10/100/1000BASE-TX TO 1000BASE-FX GIGABIT ETHERNET MEDIA CONVERTER, SINGLE-MODE



TOP VIEW



FRONT VIEW



BACK VIEW

SPECIFICATIONS FOR LGC212A	
APPROVALS	FCC Class B, CE, RoHS
DESCRIPTION	Pure Networking Copper to Fiber Media Converter - 10/100/1000BASE-TX to 1000BASE-LX Singlemode SC, 1310-nm, 20-km
CONNECTORS	(1) RJ-45; (1) pair of SC
MEDIA SUPPORTED	CATx UTP/STP; Single-mode fiber (8.3/125 μm, 9/125 μm, 10/125 μm)
DISTANCE	CATx: 328 ft. (100 m), SM fiber: 12.4 mi. (20 km)
WAVELENGTH	1310 nm
FORWARDING RATE	10 Mbps: 14,880 pps, 100 Mbps: 148,800 pps, 1000 Mbps: 1,480,000 pps
FRAME SIZES	Up to 9216 bytes
POWER	Media converter: 5 VDC, 2.5 W, barrel connector; External power adapter included: Wall type, 100-240 VAC, 50/60 Hz, 5 VDC, 1A with 4 plug clips for US, EU, UK, AU
STANDARDS	IEEE 802.3, IEEE 802.3U, 10/100BASE-TX, 100BASE-FX, IEEE 802.3x flow control for full-duplex mode, 802.3ab 1000BASE-T, 802.3z 1000BASE-X
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)
TEMPERATURE	Operating: 32 to 122° F (0 to 50° C); Storage: -4 to +158° F (-20 to +70° C)
MOUNTING	Standalone or in LHCG-RACK
WHAT'S INCLUDED	(1) 10/100/1000BASE-TX to 1000BASE-FX Media Converter, Single-mode, (1) 5-VDC power adapter



SPECIFICATIONS

LHGC-RACK: MEDIA CONVERTER CHASSIS



MAIN VIEW

LHGC-RACK



FRONT VIEW



BACK VIEW

SPECIFICATIONS FOR LHGC-RACK

NUMBER OF SLOTS	14
COMPATIBLE MEDIA CONVERTERS	LHC210A, LHC211A, LHC212A, LGC210A, LGC211A, LGC212A
MEDIA SUPPORTED	10/100/1000BASE-TX: CAT5 UTP/STP, max. 328 ft. (100 m); 1000BASE-FX
CONNECTORS	Depends on media converters installed
POWER	Dual Power supplies included: (1) LHGC-RACK-PS-L and (1) LHGC-RACK-PS-R; Input: 100-240 VAC, 50/60 Hz, 3.0 A; Output: 5 VDC, 12 A, 60 W; Connector: IEC320 C14 on each power supply; Circuit breaker for overvoltage or short circuit protection
TEMPERATURE	Operating: 32 to 122° F (0 to 50° C); Storage: -4 to +185° F (-20 to +85° C)
RELATIVE HUMIDITY	5 to 95%, noncondensing
DIMENSIONS	3.5" H (2U) x 19" W x 9.1" D (8.9 x 48.2 x 23.1 cm)
WEIGHT	15.4 lb (7.0 kg)
MOUNTING	Chassis comes with blanks and mounting hardware for 14 converters
WHAT'S INCLUDED	(1) Media Converter Chassis (unpopulated), (2) 5-VDC power supplies, (14) blank panels, (14) rackmount brackets

COMPATIBLE MEDIA CONVERTERS

PART NUMBER	DESCRIPTION
LHC210A	10/100BASE-TX to 100BASE-FX Media Converter with one SFP slot
LHC211A	10/100BASE-TX to 100BASE-FX Fast Ethernet Media Converter, MM 1310 SC
LHC212A	10/100BASE-TX to 100BASE-FX Fast Ethernet Media Converter, SM 1310 SC
LGC210A	10/100/1000BASE-TX to 1000BASE-FX Media Converter with one SFP slot
LGC211A	10/100/1000BASE-TX to 1000BASE-FX Gigabit Ethernet Media Converter, MM 850 SC
LGC212A	10/100/1000BASE-TX to 1000BASE-FX Gigabit Ethernet Media Converter, SM 1310 SC

NOTE: LGC215A and LGC220A Media Converters are not compatible with the LHGC-RACK Chassis.

SPECIFICATIONS

LGC215A: 1000BASE-X TO 10/100/1000BASE-T TO 1000BASE-X POE+ GBE MEDIA CONVERTER



TOP VIEW



FRONT VIEW



BACK VIEW

SPECIFICATIONS FOR LGC215A

APPROVALS	FCC Class B, CE, RoHS
DESCRIPTION	Pure Networking Copper to Fiber Media Converter - 10/100/1000BASE-TX to 1000BASE-X SFP PoE+
CONNECTORS	(1) RJ-45; (1) SFP cage
MEDIA SUPPORTED	CATx UTP/STP; Multimode fiber (50/125 μm, 62.5/125 μm); Single-mode fiber (8.3/125 μm, 9/125 μm, 10/125 μm)
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
FRAME SIZES	Up to 9216 bytes
POWER	Media converter: 47–57 VDC, 33 W max., barrel connector; External power adapter included: In-line type, 100-240 VAC, 50/60 Hz, 48 VDC, 1.5 A, IEC320 C13/C14, with US power cord
STANDARDS	IEEE 802.3, IEEE 802.3U, 10/100BASE-TX, 100BASE-FX, IEEE 802.3x flow control for full-duplex mode, 802.3ab 1000BASE-T, 802.3z 1000BASE-X, 802.3at PoE+ (25W)
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)
TEMPERATURE	Operating: 32 to 122° F (0 to 50° C); Storage: -4 to +158° F (-20 to +70° C)
MOUNTING	Standalone
WHAT'S INCLUDED	(1) PoE Media Converter, (1) 48-VDC power supply, (1) power cord

COMPATIBLE SFPS

PART NUMBER	DESCRIPTION
LFP411	SFP - 1250-Mbps, Extended Diagnostics, 850-nm Multimode Fiber, 550-m, LC
LFP412	SFP - 1250-Mbps, Extended Diagnostics, 1310-nm Multimode Fiber, 2-km, LC
LFP413	SFP - 1250-Mbps, Extended Diagnostics, 1310-nm Single-Mode Fiber, 10-km, LC
LFP414	SFP - 1250-Mbps, Extended Diagnostics, 1310-nm Single-Mode Fiber, 30-km, LC
LFP418	SFP - 1250-Mbps, Extended Diagnostics, 1550-nm Single-Mode Fiber, 80-km, LC
LFP420, LFP421 (USED IN PAIRS)	SFP - 1250-Mbps, Extended Diagnostics, 1550-nm TX, 1310-nm RX, Simplex, Single-Mode Fiber, 10-km, LC; SFP - 1250-Mbps, Extended Diagnostics, 1310-nm TX, 1550-nm RX, Simplex Single-Mode Fiber, 10-km, LC
LFP416	SFP - 1250-Mbps, Extended Diagnostics, 10/100/1000BASE-T, SGMII Interface, RJ-45

NOTE: LFP420, LFP421 are single-strand fiber SFPs, so they must be used in pairs.

NOTE: Use the LFP416 for a copper interface.

NOTE: Only the built-in copper interface will do PoE.



SPECIFICATIONS

LGC220A: 10GBASE-T TO 10GBASE-FX MEDIA CONVERTER, SFP+



TOP VIEW

LGC220A



FRONT VIEW



BACK VIEW

SPECIFICATIONS FOR LGC220A

APPROVALS	FCC Class B, CE, RoHS
DESCRIPTION	Pure Networking Copper to Fiber Media Converter - 10GBASE-T to 10G SFP+
CONNECTORS	(1) RJ-45, (1) SFP cage
MEDIA SUPPORTED	CATx UTP/STP; Multimode fiber (50/125 μm , 62.5/125 μm); Single-mode fiber (8.3/125 μm , 9/125 μm , 10/125 μm)
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 16383 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)
TEMPERATURE	Operating: 32 to 122° F (0 to 50° C); Storage: -4 to +158° F (-20 to +70° C)
MOUNTING	Standalone
WHAT'S INCLUDED	(1) 10GBASE-T to 10GBASE-FX Media Converter, (1) 12-VDC power supply, (1) power cord

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

