

# DATA SHEET

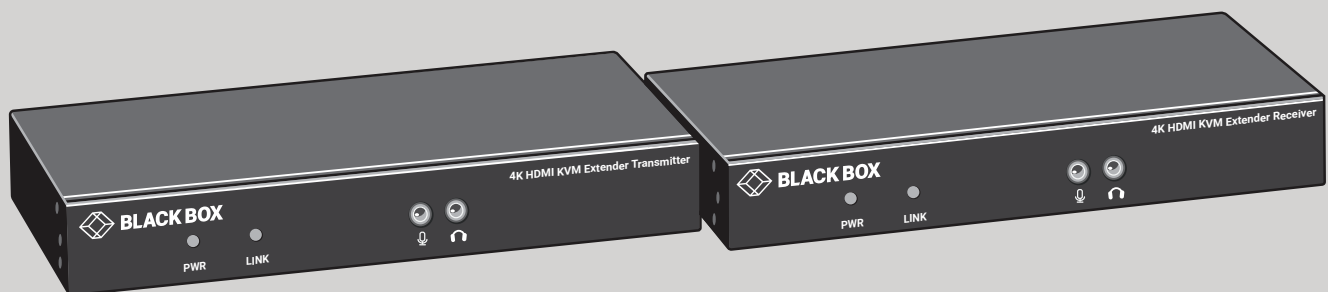
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KVXLCH-100, KVXLCHF-100, KVXLCHDP-200, KVXLCHDPF-200

# KVX SERIES 4K HDMI KVM EXTENDERS

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# OVERVIEW

## KVX SERIES 4K HDMI KVM EXTENDERS DATA SHEET

### INTRODUCTION

The KVX Series are the Black Box® low-cost 4K HDMI KVM extenders. In a point-to-point configuration, the single-head models enable you to locally use an HDMI monitor, USB keyboard/mouse/other devices, speaker and microphone to operate a remote computer, server, or other IT device. The dual-head models enable you to use an HDMI and/or DisplayPort input and local output. Operation is plug-and-play.

Four versions are available:

- KVX Series 4K HDMI Single-Head KVM CATx Extender (KVXLCH-100)
- KVX Series 4K HDMI Single-Head KVM Fiber Extender (KVXLCHF-100)
- KVX Series 4K HDMI DisplayPort Dual-Head KVM CATx Extender (KVXLCHDP-100)
- KVX Series 4K HDMI DisplayPort Dual-Head KVM Fiber Extender (KVXLCHDPF-100)

### FEATURES

- SINGLE-HEAD MODELS OFFER HDMI INPUT AND HDMI OUTPUT VIDEO QUALITY UP TO 4K @ 30 HZ
- DUAL-HEAD MODELS OFFER HDMI AND DISPLAYPORT INPUT AND DUAL HDMI OUTPUT VIDEO QUALITY UP TO 4K @ 30 HZ
- VIDEO/USB/RS-232/AUDIO BASIC EXTENSION DISTANCE IS 330 FEET (100 METERS) OVER CAT5E/6/7
- VIDEO/USB/RS-232/AUDIO BASIC EXTENSION DISTANCE IS UP TO 18.6 MILES (30 KM) USING A SINGLE-MODE SFP TRANSCEIVER MODULE OR MULTIMODE SFP FOR SHORTER DISTANCES
- THE HDMI KVM CONSOLE EXTENDER LETS YOU CONTROL AN HDMI OR DISPLAYPORT SERVER, OR COMPUTER OVER SINGLE-MODE OR MULTIMODE FIBER OPTIC CABLE AT DISTANCES OF UP TO 30 KM (DEPENDING ON THE SFP USED, FIBER TYPE, AND FIBER BANDWIDTH\*)
- SUPPORTS TRANSPARENT USB EXTENSION VIA TWO USB 2.0 PORTS PLUS TWO USB 1.1 PORTS FOR USB HUBS OR USB HIDS SUCH AS TOUCHSCREENS, PRINTERS, BARCODE READERS, KEYBOARDS AND MICE
- SUPPLIES BIDIRECTIONAL ANALOG LINE-IN/LINE-OUT EXTENSION AND SERIAL RS-232 EXTENSION
- SUPPORTS 4K HDMI LOCAL VIDEO OUTPUT ON SINGLE-HEAD TRANSMITTERS AND (1) HDMI AND (1) DISPLAYPORT LOCAL OUTPUTS ON DUAL-HEAD TRANSMITTERS
- DUAL-HEAD MODELS SUPPORT (1) HDMI AND (1) DISPLAYPORT INPUTS ON THE TRANSMITTERS TO ACCOMMODATE VIDEO CARDS WITH MULTIPLE OUTPUTS, AND (2) HDMI OUTPUTS ON THE RECEIVERS

\*NOTE: Reference the supported SFP chart on page 4.

## COMPARISON CHART

FEATURES COMPARISON CHART				
	KVXLCDP-100	KVXLCDPF-100	KVXLCHDP-200	KVXLCHDPF-200
AUDIO	YES	YES	YES	YES
RS-232	YES	YES	YES	YES
TX LOCAL OUT CONNECTORS	(1) HDMI	(1) HDMI	(1) HDMI, (1) DISPLAYPORT	(1) HDMI, (1) DISPLAYPORT
TX INPUT CONNECTORS	(1) HDMI	(1) HDMI	(1) HDMI, (1) DISPLAYPORT	(1) HDMI, (1) DISPLAYPORT
RX OUTPUT CONNECTORS	(1) HDMI	(1) HDMI	(2) HDMI	(2) HDMI
MEDIA	TWISTED-PAIR	FIBEROPTIC	TWISTED-PAIR	FIBEROPTIC
MAXIMUM DISTANCE	328 FEET (100 M)	UP TO 18.6 MILES (30 KM), DEPENDING ON SFP USED	328 FEET (100 M)	UP TO 18.6 MILES (30 KM), DEPENDING ON SFP USED
LEVEL	ENTRY-LEVEL	ENTRY-LEVEL	ENTRY-LEVEL	ENTRY-LEVEL



# SPECIFICATIONS

## KVX SERIES HDMI KVM CATX EXTENDERS (KVXLCH-100)

FRONT VIEW



CATx Transmitter

BACK VIEW



CATx Transmitter

FRONT VIEW



CATx Receiver

BACK VIEW



CATx Receiver

### WHAT'S INCLUDED WITH THE KVXLCH-100

- (1) HDMI KVM CATX EXTENDER TRANSMITTER
- (1) HDMI KVM CATX EXTENDER RECEIVER
- (2) POWER SUPPLIES (INCLUDES US, EU, UK AND AU PLUG TYPES)
- (1) 4K HDMI CABLE (4-FT./1.2-M)
- (1) 3.5-MM AUDIO CABLE (6-FT./1.8-M)
- (1) USB-B TO USB-A CABLE (6-FT./1.8-M)

### SPECIFICATIONS FOR KVX SERIES HDMI KVM CATX EXTENDER (KVXLCH-100)

SPECIFICATION	CATX TRANSMITTER	CATX RECEIVER
<b>CONNECTORS</b>	Host connection: Video Input: (1) HDMI female Serial Control Port: (1) DB9 female Link Port: (1) RJ-45 female USB: (1) USB Type B female Audio: (1) Line in, (1) Line out; Local Video Output: (1) HDMI female	Console connection: Video Output: (1) HDMI female Serial Control Port: (1) DB9 male Link Port: (1) RJ-45 female USB 2.0: (4) USB Type A female Audio: (1) Mic In, (1) Speaker Out
<b>DISTANCE</b>	CATx cable: Up to 328 ft. (100 m)	CATx cable: Up to 328 ft. (100 m)
<b>INDICATORS</b>	(1) Power LED (red), (1) Link LED (green)	(1) Power LED (red), (1) Link LED (green)
<b>MAXIMUM RESOLUTION</b>	4K @ 30 Hz, 3840 x 2160 @ 30 Hz	4K @ 30 Hz, 3840 x 2160 @ 30 Hz
<b>DDC SUPPORTED</b>	DDC, DDC2, DDC2B	DDC, DDC2, DDC2B
<b>HOUSING MATERIAL</b>	Metal chassis	Metal chassis
<b>OPERATING SYSTEM</b>	OS independent	OS independent
<b>ENVIRONMENTAL</b>	Operating Temperature: 32 to 122° F (0 to 50° C); Storage Temperature: -4 to +140° F (-20 to +60° C); Operating Humidity: 0 to 80%, noncondensing	Operating Temperature: 32 to 122° F (0 to 50° C); Storage Temperature: -4 to +140° F (-20 to +60° C); Operating Humidity: 0 to 80%, noncondensing
<b>POWER</b>	External 5-VDC, 2-A power supply	External 5-VDC, 2-A power supply
<b>DIMENSIONS</b>	0.83" H x 7.09" W x 3.27" D (2.1 x 18 x 8.3 cm)	0.83" H x 7.09" W x 3.27" D (2.1 x 18 x 8.3 cm)
<b>WEIGHT</b>	0.82 lb. (0.372 kg)	0.83 lb. (0.378 kg)



# SPECIFICATIONS

## KVX SERIES HDMI KVM FIBER EXTENDERS (KVXLCHF-100)



### WHAT'S INCLUDED WITH THE KVXLCHF-100

- (1) HDMI KVM FIBER EXTENDER TRANSMITTER
- (1) HDMI KVM FIBER EXTENDER RECEIVER
- (2) POWER SUPPLIES (INCLUDES US, EU, UK AND AU PLUG TYPES)
- (1) 4K HDMI CABLE (4-FT./1.2-M)
- (1) 3.5-MM AUDIO CABLE (6-FT./1.8-M)
- (1) USB-B TO USB-A CABLE (6-FT./1.8-M)

NOTE: SFP not included, must be ordered separately. See the chart below.

SPECIFICATIONS FOR KVX SERIES HDMI KVM FIBER EXTENDER (KVXLCHF-100)		
SPECIFICATION	FIBER TRANSMITTER	FIBER RECEIVER
<b>CONNECTORS</b>	Host connection: Video Input: (1) HDMI female Serial Control Port: (1) DB9 female Link Port: (1) SFP cage USB: (1) USB Type B female Audio: (1) Line in, (1) Line out; Local Video Output: (1) HDMI female	Console connection: Video Output: (1) HDMI female Serial Control Port: (1) DB9 male Link Port: (1) SFP cage USB 2.0: (4) USB Type A female Audio: (1) Mic In, (1) Speaker Out
<b>DISTANCE</b>	Fiber optic cable: Up to 18.6 miles (30 km), depending on SFP used	Fiber optic cable: Up to 18.6 miles (30 km), depending on SFP used
<b>INDICATORS</b>	(1) Power LED	(1) Power LED
<b>MAXIMUM RESOLUTION</b>	4K @ 30 Hz, 3840 x 2160 @ 30 Hz	4K @ 30 Hz, 3840 x 2160 @ 30 Hz
<b>DDC SUPPORTED</b>	DDC, DDC2, DDC2B	DDC, DDC2, DDC2B
<b>HOUSING MATERIAL</b>	Metal chassis	Metal chassis
<b>OPERATING SYSTEM</b>	OS independent	OS independent
<b>ENVIRONMENTAL</b>	Operating Temperature: 32 to 122° F (0 to 50° C); Storage Temperature: -4 to +140° F (-20 to +60° C); Operating Humidity: 0 to 80%, noncondensing	Operating Temperature: 32 to 122° F (0 to 50° C); Storage Temperature: -4 to +140° F (-20 to +60° C); Operating Humidity: 0 to 80%, noncondensing
<b>POWER</b>	External 5-VDC, 2-A power supply	External 5-VDC, 2-A power supply
<b>DIMENSIONS</b>	0.83" H x 7.09" W x 3.27" D (2.1 x 18 x 8.3 cm)	0.83" H x 7.09" W x 3.27" D (2.1 x 18 x 8.3 cm)
<b>WEIGHT</b>	0.82 lb. (0.372 kg) (no SFP)	0.83 lb. (0.378 kg) (no SFP)

NOTE: SFP not included, must be ordered separately. See the chart below.

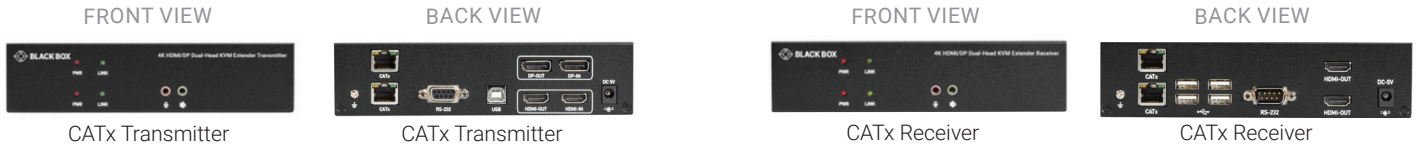
COMPATIBLE SFP MODULES		
PART NUMBER	DESCRIPTION	DISTANCE
<b>1-GBPS CONNECTIONS</b>		
LFP441	SFP 1.25-Gb, 850-nm Multimode Fiber, LC	550 m
LFP442	SFP 1.25-Gb, 1310-nm Single-mode Fiber, LC	20 km
LFP412	SFP with Extended Diagnostics - 1250-Mbps Multimode Fiber, 1310-nm	2 km
LFP413	SFP with Extended Diagnostics - 1250-Mbps Single-Mode Fiber, 1310-nm	10 km
LFP414	SFP with Extended Diagnostics - 1250-Mbps, Singlemode Fiber, 1310-nm	30 km
LFP416	SFP 1250-Mbps, Extended Diagnostics, 10/100/1000BASE-T, SGMII Interface, RJ-45	100 m

NOTE: Other SFPs may work but have not been validated by Black Box, we recommend you use the suggested SFPs to avoid technical incompatibilities.



# SPECIFICATIONS

## KVX SERIES HDMI DUAL-HEAD KVM CATX EXTENDERS (KVXLCHDP-200)



### WHAT'S INCLUDED WITH THE KVXLCHDP-200

- (1) HDMI DUAL-HEAD KVM CATX EXTENDER TRANSMITTER
- (1) HDMI DUAL-HEAD KVM CATX EXTENDER RECEIVER
- (2) POWER SUPPLIES (INCLUDES US, EU, UK AND AU PLUG TYPES)
- (2) 4K HDMI CABLES (4-FT./1.2-M)
- (2) 4K DISPLAYPORT CABLES (4-FT./1.2-M)
- (1) 3.5-MM AUDIO/MIC CABLE (6-FT./1.8-M)
- (1) USB-2.0 CABLE (6-FT./1.8-M)

### SPECIFICATIONS FOR KVX SERIES HDMI/DP DUAL-HEAD KVM CATX EXTENDER (KVXLCHDP-200)

SPECIFICATION	CATX TRANSMITTER	CATX RECEIVER
<b>CONNECTORS</b>	Host connection: Video Input: (1) HDMI female, (1) DisplayPort female Serial Control Port: (1) DB9 female Link Port: (1) RJ-45 female USB: (1) USB Type B female Audio: (1) Line in, (1) Line out; Local Video Output: (1) HDMI female, (1) DisplayPort female	Console connection: Video Output: (2) HDMI female Serial Control Port: (1) DB9 male Link Port: (1) RJ-45 female USB 2.0: (4) USB Type A female Audio: (1) Mic In, (1) Speaker Out
<b>DISTANCE</b>	CATx cable: Up to 328 ft. (100 m)	CATx cable: Up to 328 ft. (100 m)
<b>INDICATORS</b>	(1) Power LED (red), (1) Link LED (green)	(1) Power LED (red), (1) Link LED (green)
<b>MAXIMUM RESOLUTION</b>	4K @ 30 Hz, 3840 x 2160 @ 30 Hz	4K @ 30 Hz, 3840 x 2160 @ 30 Hz
<b>DDC SUPPORTED</b>	DDC, DDC2, DDC2B	DDC, DDC2, DDC2B
<b>HOUSING MATERIAL</b>	Metal chassis	Metal chassis
<b>OPERATING SYSTEM</b>	OS independent	OS independent
<b>ENVIRONMENTAL</b>	Operating Temperature: 32 to 122° F (0 to 50° C); Storage Temperature: -4 to +140° F (-20 to +60° C); Operating Humidity: 0 to 80%, noncondensing	Operating Temperature: 32 to 122° F (0 to 50° C); Storage Temperature: -4 to +140° F (-20 to +60° C); Operating Humidity: 0 to 80%, noncondensing
<b>POWER</b>	External 5-VDC, 2-A power supply	External 5-VDC, 2-A power supply
<b>DIMENSIONS</b>	1.71" H x 7.09" W x 3.27" D (4.4 x 18 x 8.3 cm)	1.71" H x 7.09" W x 3.27" D (4.4 x 18 x 8.3 cm)
<b>WEIGHT</b>	0.84 lb. (0.381 kg)	0.85 lb. (0.386 kg)

# SPECIFICATIONS

## KVX SERIES HDMI DUAL-HEAD KVM FIBER EXTENDERS (KVXLCHDPF-200)



### WHAT'S INCLUDED WITH THE KVXLCHDPF-200

- (1) HDMI DUAL-HEAD KVM FIBER EXTENDER TRANSMITTER
- (1) HDMI DUAL-HEAD KVM FIBER EXTENDER RECEIVER
- (2) POWER SUPPLIES (INCLUDES US, EU, UK AND AU PLUG TYPES)
- (2) 4K HDMI CABLES (4-FT./1.2-M)
- (2) 4K DISPLAYPORT CABLES (4-FT./1.2-M)
- (1) 3.5-MM AUDIO/MIC CABLE (6-FT./1.8-M)
- (1) USB-2.0 CABLE (6-FT./1.8-M)

NOTE: SFP not included, must be ordered separately. See the chart below.

SPECIFICATIONS FOR KVX SERIES HDMI/DP DUAL-HEAD KVM FIBER EXTENDER (KVXLCHDPF-200)		
SPECIFICATION	FIBER TRANSMITTER	FIBER RECEIVER
<b>CONNECTORS</b>	Host connection: Video Input: (1) HDMI female, (1) DisplayPort female Serial Control Port: (1) DB9 female Link Port: (1) SFP cage USB: (1) USB Type B female Audio: (1) Line in, (1) Line out; Local Video Output: (1) HDMI female, (1) DisplayPort female	Console connection: Video Output: (2) HDMI female Serial Control Port: (1) DB9 male Link Port: (1) SFP cage USB 2.0: (4) USB Type A female Audio: (1) Mic In, (1) Speaker Out
<b>DISTANCE</b>	Fiberoptic cable: Up to 18.6 miles (30 km), depending on SFP used	Fiberoptic cable: Up to 18.6 miles (30 km), depending on SFP used
<b>INDICATORS</b>	(1) Power LED	(1) Power LED
<b>MAXIMUM RESOLUTION</b>	4K @ 30 Hz, 3840 x 2160 @ 30 Hz	4K @ 30 Hz, 3840 x 2160 @ 30 Hz
<b>DDC SUPPORTED</b>	DDC, DDC2, DDC2B	DDC, DDC2, DDC2B
<b>HOUSING MATERIAL</b>	Metal chassis	Metal chassis
<b>OPERATING SYSTEM</b>	OS independent	OS independent
<b>ENVIRONMENTAL</b>	Operating Temperature: 32 to 122° F (0 to 50° C); Storage Temperature: -4 to +140° F (-20 to +60° C); Operating Humidity: 0 to 80%, noncondensing	Operating Temperature: 32 to 122° F (0 to 50° C); Storage Temperature: -4 to +140° F (-20 to +60° C); Operating Humidity: 0 to 80%, noncondensing
<b>POWER</b>	External 5-VDC, 2-A power supply	External 5-VDC, 2-A power supply
<b>DIMENSIONS</b>	1.71" H x 7.09" W x 3.27" D (4.4 x 18 x 8.3 cm)	1.71" H x 7.09" W x 3.27" D (4.4 x 18 x 8.3 cm)
<b>WEIGHT</b>	0.84 lb. (0.381 kg) (no SFP)	0.85 lb. (0.386 kg) (no SFP)

NOTE: SFP not included, must be ordered separately. See the chart below.

COMPATIBLE SFP MODULES		
PART NUMBER	DESCRIPTION	DISTANCE
<b>1-GBPS CONNECTIONS</b>		
LFP441	SFP 1.25-Gb, 850-nm Multimode Fiber, LC	550 m
LFP442	SFP 1.25-Gb, 1310-nm Single-mode Fiber, LC	20 km
LFP412	SFP with Extended Diagnostics - 1250-Mbps Multimode Fiber, 1310-nm	2 km
LFP413	SFP with Extended Diagnostics - 1250-Mbps Single-Mode Fiber, 1310-nm	10 km
LFP414	SFP with Extended Diagnostics - 1250-Mbps, Singlemode Fiber, 1310-nm	30 km
LFP416	SFP 1250-Mbps, Extended Diagnostics, 10/100/1000BASE-T, SGMII Interface, RJ-45	100 m

NOTE: Other SFPs may work but have not been validated by Black Box, we recommend you use the suggested SFPs to avoid technical incompatibilities.



# ORDERING INFORMATION

ITEM	CODE
KVX HDMI KVM CATx Extenders	
Single-Head Transmitter and Receiver Kit	<b>KVXLCH-100</b>
KVX HDMI DisplayPort KVM CATx Extenders	
Dual-Head Transmitter and Receiver Kit	<b>KVXLCHDP-200</b>
KVX HDMI KVM Fiber Extenders	
Single-Head Transmitter and Receiver Kit	<b>KVXLCHF-100</b>
KVX HDMI DisplayPort KVM Fiber Extenders	
Dual-Head Transmitter and Receiver Kit	<b>KVXLCHDPF-200</b>
Accessories	
Rackmount Kit	<b>KVXLC-RMK</b>
Desktop Mounting Bracket Kit	<b>KVXLC-DMK</b>
DIN Rail Mounting Bracket	<b>KVXLC-DRM</b>
Spare Power Supply	<b>KVXLC-PS</b>
NOTE: Kits contain (1) Transmitter and (1) Receiver	

NOTES

**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.

**ABOUT BLACK BOX**

Black Box is a world leading technology solutions provider specializing in complete high-performance KVM, professional A/V signal distribution and extension and switching solutions for mission-critical applications. Black Box is dedicated to delivering superior project engineering, technical support, and 24/7 customer service you can rely on for your most critical operations.

Every day, our customers trust us to design, integrate, and maintain reliable control room solutions for broadcasting, post-production, stadiums & arenas, medical, air traffic control, oil & gas, government & military, and utility industries. Leave the tech to us and our comprehensive technology solutions will deliver secure connections, fast-response times, real-time collaboration and more.

