





## Make decisions in real time. No matter the distance. Take total control.

KVM Extension technology is the universal standard for distributing video and control signals over long distances. The continued adoption of KVM technologies lies in an unmatched ability to connect users to complex systems via Human Interface Devices (keyboard, video and mouse) to allow remote operation of computer systems.

#### Scalable for the future

Mission critical environments require flexible switching between different transmission paths. Modular systems can be implemented that allow a large number of source devices to be connected to multiple displays providing each user with access to a specific source device at the touch of a button. These systems use cascading and flexible configurations of multiple KVM switches to create modular solutions that support multiple platforms, increasing flexibility and simplifying any future extension.

#### Maximum speeds

The increasing demand for high resolutions and image quality in IT & AV environments is determining the transmission technology used. High resolution content must be switchable without any time delay and users must be able to use a keyboard, mouse, touch screen or other USB control devices. Transmission technologies must be deployed that meet the increasing bandwidth and distance requirements. To deliver signals up to 20km, fibre optic technology can be used, the key advantages of fibre optic solutions are the higher bandwidth capacities and immunity to electromagnetic interference.

#### Modular KVM solutions

This document will explain the technology required to create high performance, fully integrated KVM solutions for the extension and distribution of video and control signals. The document also takes a closer look at Lindy's DVI-D KVM Extender products and how, through combined connectivity, Lindy sets the standard for KVM technology in a diverse range of environments.

### **SEAFARING & MARINE** EXTREME PERFORMANCE. EXTREME ENVIRONMENTS.

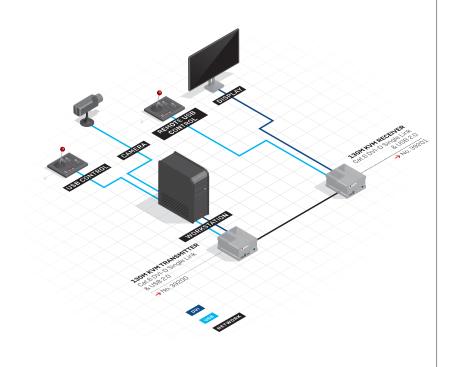
EXAMPLE

In this example, on a container ship, a crane is controlled by a PC. A camera on the crane is also connected directly to the same PC. The Lindy Remote Extender is located 80 metres away in a control room. The user has a keyboard, mouse and a joystick to control the crane and a display to view the camera feed. No additional USB extension product is required, as the Extender already offers USB 2.0 and is therefore compatible with SmartCard readers, printers, tablets etc.

Lindy Extender Solution: 130m Cat.6 DVI-D Single Link & USB 2.0 KVM Extender **Lindy Part Numbers:** 

No. 39200 (TX) & No. 39201 (RX) **Additional Requirements:** 

None



### **COMMUNICATION & MEDIA TECHNOLOGY** TODAY'S TECHNOLOGY. TOMORROW'S SPEEDS.

Lindy Extenders are used as an extension between studios and broadcast rooms, where it needs to be completely silent. A matrix with 4 monitors and 4 PCs is controlled via Switching Management Software installed on a tablet. The signal extension is made over a distance of 70m. Keyboards and a mixing console are connected to the Lindy Extenders via USB.

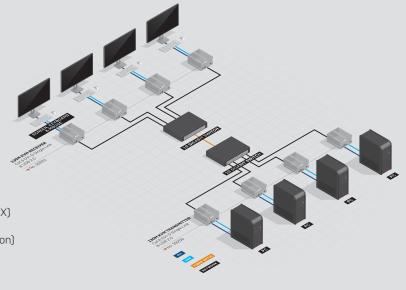
Lindy Extender Solution: 130m Cat.6 DVI-D Single Link & USB 2.0 KVM Extender

**Lindy Part Numbers:** 

4x No. 39200 (TX) & 4x No.39201 (RX)

**Additional Requirements:** 

4x No. 09208 (Matrix Switching Option)



### **EDUCATION & SEMINARS** GREAT IDEAS. BIG DATA.

In a lecture hall students are operating a workstation using a keyboard, mouse and DVI monitor. There is also a projector in the room. PCs with VGA connections are located in the server room, which is 100m away.

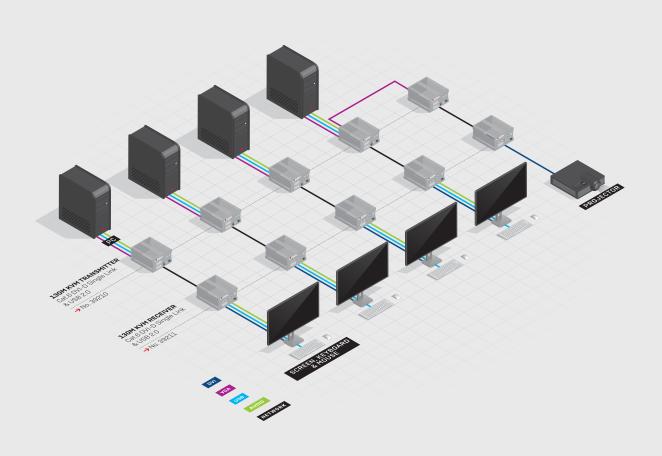
#### Lindy Extender Solutions:

130m Cat.6 DVI-D Single Link, USB 2.0 & Optional Audio or RS232 KVM Extender

#### **Lindy Part Numbers:**

5x No. 39210 (TX) & 5x No. 39211 (RX)

Additional Requirements: 5x No. 09206 (VGA Option) & 5x No. 09205 (Audio Option)



4

# INDUSTRY & AUTOMATION CONTROL PRODUCTIVITY. DESIGN EFFICIENCY.

A production facility running four PCs connected to a control room 120m away. The connection is made via fibre optic cable with RS232 and USB connections. Furthermore, a camera with DVI output is used as an additional content source.

Lindy Extender Solution:

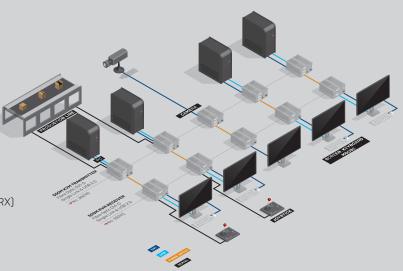
500m Fibre Optic DVI-D Single Link & USB 2.0 KVM Extender

Lindy Part Numbers:

5x No. 39240 (TX) & 5x No. 39241 (RX)

Additional Requirements:

2x No. 09207 (RS232 Option)





# TRAINING & MEETINGS CONNECTED THINKING. LOGICAL APPLICATION.

PCs are located one floor below a training room. A fibre connection is required because of potential electrical interferences. In the training room there are five workspaces each with a monitor, keyboard & mouse or touch screen. Four 95" displays surround the workstations and are connected to PCs that render video content.

Lindy Extender Solution:

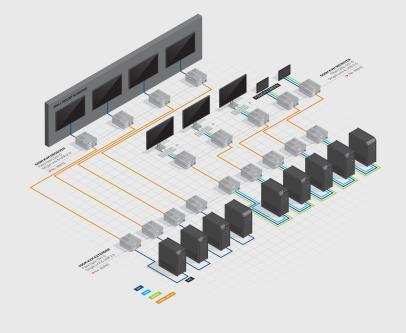
500m Fibre Optic DVI-D Single Link & USB 2.0 KVM Extender

Lindy Part Numbers:

9x No. 39240 (TX) & 9x 39241 (RX)

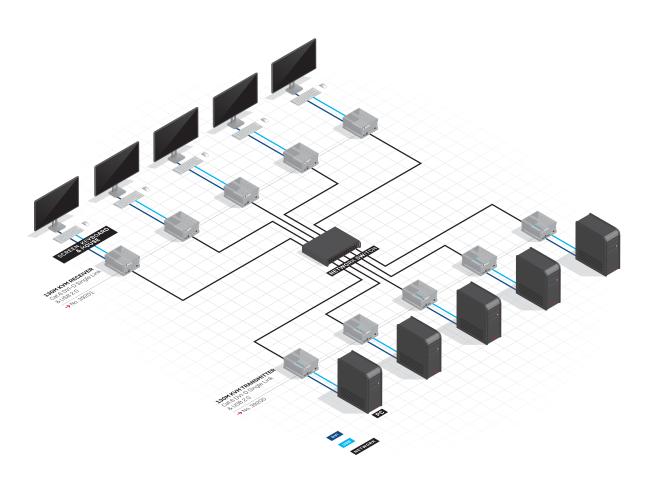
Additional Requirements:

5x No. 09205 (Audio Option)



#### FROM KVM EXTENDERS TO MATRIX SWITCHES

With an integrated switching function, the Lindy KVM Extender base models can be combined with a network switch to create a powerful and versatile KVM matrix switch system. As a result the maximum transmission distances can be reliably doubled while maintaining lossless transmission. This switching feature allows a large number of consoles to be connected so that each user can choose a specific target device at the touch of a button. This makes the DVI-D KVM Extender models comparable to high performance, conventional KVM switches.



## Key **Features**

**SWITCHING OPTION** 

- Using DVI-D KVM extenders, a real KVM matrix switch system can be realised.
- Control over multiple workstations
- Versatile switching using on-screen displays, hotkeys, RS232 and Ethernet
- Content switching with no delay
- Low latency signal transmission for real-time control of applications
- High system security with comprehensive configuration recovery after a device failure
- Freedom in the choice of transmission medium, fibre and copper solutions are supported, as well as hybrids of both

#### **DVI-D KVM EXTENDER SERIES**

#### **MODULAR FUNCTIONALITY**

Powerful, simple, flexible, scalable and, above all, reliable. These are the requirements every modern KVM solution must meet. Lindy's KVM Extenders offer everything users need to expand and distribute digital signals such as DVI and USB. A range with three basic models, each one modular in its functionality and expandable with additional performance options that can be combined in a simple way. These extenders are perfect for a variety of performance requirements.









#### 01/02 130m Cat.6 DVI-D Single Link & USB 2.0 KVM Extender

Application orientated KVM Extender with integrated upgrade options of 130m using Cat.5/6 cables for resolutions up to a maximum 1920x1200.

#### Available Upgrade Options

Software USB 2.0 Mass Storage, Matrix Switching Hardware<sup>2</sup>

#### 03/04 130m Cat.6 DVI-D Single Link, USB 2.0 & Optional Audio or RS232 KVM Extender

Perfectly tailored to suit the needs of any application with a full range of upgrade options capable of transmitting up to 130m using Cat.5/6 cables for resolutions up to a maximum 1920x1200.

#### Available Upgrade Options

Software<sup>1</sup> USB 2.0 Mass Storage, Audio, Matrix Switching, VGA

RS232 (instead of audio) Hardware<sup>2</sup>

#### 05/06 500m Fibre Optic DVI-D Single Link & USB 2.0 KVM Extender

Fully upgradable for maximum distances of up to 20km using Fibre Optic Single & Multi Mode connections. Supports resolutions up to 1920x1200.

#### Available Upgrade Options

Software<sup>1</sup> USB 2.0 Mass Storage, Audio, Matrix Switching, VGA Hardware<sup>2</sup> RS232 (instead of audio)

More options can be unlocked at any time by purhasing software upgrades Hardware options must be specified when ordering and can not be retrofitted

#### STANDARD SPECIFICATIONS

### SOFTWARE & HARDWARE UPGRADES

An uncertain future means new requirements can suddenly make technology obselete. Lindy's KVM Extenders, on the other hand, can be configured, not only when purchased, but also years later. The Lindy DVI-D KVM Extenders solutions can be expanded at any time through their modular structure.

			S	SOFTWARE & HARD	OWARE UPGRADES	5
PRODUCT NAME	MAX DISTANCE	USB STORAGE	AUDIO	VGA	RS232 (instead of audio)	MATRIX SWITCHING
130m Cat.6 DVI-D Single Link & USB 2.0 KVM Extender  → No. 39200 (TX)  → No. 39201 (RX)	130m	•	0	0	0	•
130m Cat.6 DVI-D Single Link, USB 2.0 & Optional Audio or RS232 KVM Extender → No. 39210 (TX) → No. 39211 (RX)	130m	•	•	•	•	•
500m Fibre Optic DVI-D Single Link & USB 2.0 KVM Extender → No. 39240 (TX) → No. 39241 (RX)	500m (Multi mode) 20km (Single mode)	•	•	•	•	•
			→ No. 09205	→ No. 09206	→ No. 09207	→ No. 09208

#### **MOUNTING ACCESSORIES**

**OVERVIEW** 

MOUNTING ACCESSORIES	
Under desk for 1 TX or RX	→ No. 09217
Rail mounting for 1 TX or RX	→ No. 09218
Rack Mounting incl. front panel for 4 TX or RX	→ No. 09216
Rack Mounting Option incl. front panel & power supply for 4 TX or RX	→ No. 09235
Rack Mounting Option incl. front panel & redundant power supply for 4 TX or RX	→ No. 09236



Every requirement is different.
Every sector plays by different rules.
Every project has different work-flows.
That's why solutions must be flexible
and able to react dynamically.

We are happy to help: +44 1642 754020 technical@lindy.co.uk

## PERFECT COMBINED SOLUTIONS PERFECTLY COORDINATED

Lindy offers a comprehensive portfolio of products that connect, distribute, convert and extend video and input signals. Every solution combines with other components into complex and reliable systems. These can easily integrate into distribution systems and combine with other technologies together to solve a variety of challenges in professional and harsh environments.









### 01 HDMI to DVI Cable, Gold Line (0.5m - 15m)

DVI-D to HDMI cable that connects source and destination devices to the extenders.

#### Compatible with:

-130m Cat.6 DVI-D Single Link & USB 2.0 KVM Extender

No. 36193 - 36199

### 02 DVI-D Dual Link Cable, Gold Line (0.5m - 10m)

DVI-D Dual Link cable for connecting source and target devices to extenders.

#### Compatible with:

- 130m Cat.6 DVI-D Single Link, USB 2.0 & Optional Audio or RS232 KVM Extender
- 500m Fibre Optic DVI-D Single Link & USB 2.0 KVM Extender

### 03 USB 2.0 Cable, Cromo Line (0.5m - 5m)

USB 2.0 type A/B cable to connect workstations/servers to the extender (TX).

#### Compatible with:

- 130m Cat.6 DVI-D Single Link & USB 2.0 KVM Extender
- 130m Cat.6 DVI-D Single Link, USB 2.0 & Optional Audio or RS232 KVM Extender
- 500m Fibre Optic DVI-D Single Link & USB 2.0 KVM Extender

## 04 Fibre-Duplex MM & SM Cable LC/LC

Fibre patch cable to connect the transmitter and receiver of the KVM Extender system over extremely long distances. Available from stock in lengths from 1m to 200m as Multi Mode Fibre & Single Mode Fibre.

#### Compatible with:

- 500m Fibre Optic DVI-D Single Link & USB 2.0 KVM Extender

No. 36200 - 36206

No. 41580 - 41584

No. 47450 - 47456 (Single Mode) No. 46370 - 46406 (Multi Mode)

11





### 05 DVI-I Single Link, USB 2.0 & Audio KVM Switch

KVM Switch capable of controlling multiple workstations, server monitoring and maintenance systems for multi-server and multi-functional applications.

#### Compatible with:

- 130m Cat.6 DVI-D Single Link & USB 2.0 KVM Extender
- 130m Cat.6 DVI-D Single Link, USB 2.0 & Optional Audio or RS232 KVM Extender
- 500m Fibre Optic DVI-D Single Link & USB 2.0 KVM Extender

No. 39317 (8 Port) No. 39318 (16 Port)

### 06 8 Port 10/100/1000 Gigabit Desktop Switch

Switch that works with an IP network for signal distribution. In combination with KVM Extenders, this switch can establish a KVM Matrix Switch System.

#### Compatible with:

- 130m Cat.6 DVI-D Single Link & USB 2.0 KVM Extender
- 130m Cat.6 DVI-D Single Link, USB 2.0 & Optional Audio or RS232 KVM Extender

#### 07 Cat.6 U/UTP Solid Patch Cable

Patch cable for connecting the KVM Extender transmitter and receiver over long distances.

#### Compatible with:

- 130m Cat.6 DVI-D Single Link & USB 2.0 KVM Extender
- 130m Cat.6 DVI-D Single Link, USB 2.0 & Optional Audio or RS232 KVM Extender

No. 25045

No. 44470 - 44476

## 130M CAT.6 DVI-D SINGLE LINK & USB 2.0 KVM EXTENDER

#### TECHNICAL DATA SHEET

Small format KVM Extender that is capable of creating professional point-to-point, point-to-multipoint and multipoint-to-multipoint solutions. With DVI Single Link and USB 2.0 standards, lossless signal extensions of up to 130m can be created to provide users with remote access to a variety of workstations. These extenders are a reliable solution for applications where signal quality, low latency and high scalability are required.

- DVI-D and USB signal extension via a single Cat.6 cable
- DVI-D Single Link compatible with resolutions up to 1920x1200 @60Hz
- Supports USB 1.1 for keyboard and mouse as well as USB HID devices
- Mass storage upgrade for USB pen drives and USB hard drives
- Matrix switching upgrade for point-to-multipoint applications (e.g. crossbar)
- DVI connectors with locking for secure connections
- Firmware upgrades do not require an additional cable



No. 39201 (Receiver)



#### **SPECIFICATIONS**

AV Interface	DVI-D
Console Interface	USB
Interfaces Standard	DVI-D 2.0 (Single Link), USB 2.0
Supported Bandwidth	4.95 Gbit/s
Maximum Distance	130m (426.5ft)
Maximum Resolution	1920x1200@60Hz
Supported Audio	_
Separate Audio Ports	_
Transmission Protocol	IP
Transmission Medium	1 x Cat.6-Cable
Laser Class (only for Fibre)	_
Wavelength (only for Fibre)	_
Special Features	Mass Storage and Matrix Switch features available as options

#### CONNECTORS

Transmitter KVM Interfaces [No. 39200]	2 x HDMI (Female), USB Type B (Female)
Transmitter Extension Port [No. 39200]	RJ45 (Female)
Receiver Consolle Interface (No. 39201)	HDMI (Female), 4 x USB Type A (Female)
Receiver Extension Port (No. 39201)	RJ45 (Female)
Power	5.5/2.1mm DC socket

#### PHYSICAL PROPERTIES

PHISICAL PROPERTIES	
Dimensions WxDxH	100x105x44mm (3.94x4.13x1.73in)
Housing Material	Metal
Net Weight	0.35kg (0.77lb)
Operating Temperature	0°C - 45°C (32°F - 113°F)
Storage Temperature	-25°C - 80°C (-13°F - 176°F)
Humidity	0~90% RH (non-condensing)
Power Requirements	12VDC 1A
Colour	Silver

#### **MISCELLANEOUS**

Packaging Type	Carton box
Packaging Dimensions (WxDxH) Transmitter (No. 39200)	260x170x70mm (10.24x6.69x2.76in)
Packaging Dimensions (WxDxH) Receiver (No. 39201)	215x155x50mm (8.6x6.1x1.97in)
Gross Weight	0.8kg (1.76lb)
Warranty (Years)	2
Certificated	CE, RoHS, REACH

#### PACKAGE CONTENT

Transmitter (No. 39200), Receiver (No. 39201)

8 x rubber feet

2 x self adhesive hook & loop tape

1 x USB A/B cable (approx. 2m (6.56ft))

2 x DVI-D/HDMI cable M/M, (approx. 2m (6.56ft))

 $2 \times Multi$ -Country Power Supply (EU, UK, US, AUS)

Lindy Manual

#### **PURCHASING INFORMATION**

No.	39200 (TX), 39201 (RX)
EAN	4002888392006 (No. 39200)
	4002888392013 (No. 39201)

#### 130M CAT.6 DVI-D SINGLE LINK, **USB 2.0 & OPTIONAL AUDIO OR RS232 KVM EXTENDER**

#### TECHNICAL DATA SHEET

Powerful KVM Extender for extension and effective management of DVI Single Link and USB 2.0 signals. This device provides multiple users with access to a variety of PCs, workflow monitoring and visual and peripheral elements. With upgrades for audio and RS232, the possibilites of flexible control can be increased. Extends high resolution up to 130m with the integration of an Ethernet switch enables distances of up to 260m.

- DVI-D, USB and audio or RS232 signal extension over a single Cat.6 cable
- DVI-D Single Link compatible with resolutions up to 1920x1200 @60Hz
- Supports USB 1.1 for keyboard and mouse as well as USB HID devices
- Mass storage upgrade for USB pen drives and USB hard drives
- Matrix switching upgrade for point-to-multipoint applications (e.g. crossbar)
- Audio upgrade for bidirectional stereo audio transmission
- Serial RS232 upgrade for control and monitoring of industrial applications



No. 39211 (Receiver)



#### **SPECIFICATIONS**

AV Interface	DVI-D
Console Interface	USB
Interfaces Standard	DVI 2.0 (Single Mode), USB 2.0
Supported Bandwidth	4.95 Gbit/s
Maximum Distance	130m (426.5ft)
Maximum Resolution	1920x1200@60Hz
Supported Audio	Analogue Stereo Available as an Option
Separate Audio Ports	2 x 3.5mm (Female)
Transmission Protocol	IP
Transmission Medium	1 x Cat.6 cable
Laser Class (only for Fibre)	_
Wavelength (only for Fibre)	_
Special Features	Mass Storage, Audio or RS232 and Matrix Switch features available as options

CONNECTORS	
Transmitter KVM Interfaces [No. 39210]	2 x DVI-I (Female), USB Type B (Female), 2 x 3.5mm (Female)
Transmitter Extension Port (No. 39210)	RJ-45 (Female)
Receiver Console Interface (No. 39211)	DVI-I (Female), 4 x USB Type A (Female), 2 x 3.5mm (Female)
Receiver Extension Port (No. 39211)	RJ-45 (Female)
Power	5.5/2.1mm DC socket

#### PHYSICAL PROPERTIES

PITISICAL PROPERTIES	
Dimensions (WxDxH)	100x105x44mm (3.94x4.13x1.73in)
Housing Material	Metal
Net Weight	0.35kg (0.77lb)
Operating Temperature	0°C - 45°C (32°F - 113°F)
Storage Temperature	-25°C - 80°C (-13°F - 176°F)
Humidity	0~90% RH (non-condensing)
Power Requirements	12VDC 1A
Colour	Silver

#### **MISCELLANEOUS**

Packaging Type	Carton box
Packaging Dimensions (WxDxH) Transmitter (No. 39240)	260x170x70mm (10.24x6.69x2.76in)
Packaging Dimensions (WxDxH) Receiver (No. 39241)	215x155x50mm (8.6x6.1x1.97in)
Gross Weight	0.8kg (1.76lb)
Warranty (Years)	2
Certificated	CE, RoHS, REACH

#### PACKAGE CONTENT

Transmitter (No. 39210), Receiver (No. 39211)

8 x rubber feet

2 x self adhesive hook & loop tape

 $1 \times USB A/B$  cable (approx. 2m (6.56ft))

2 x DVI-D/HDMI cable M/M, (approx. 2m (6.56ft))

2 x Multi-Country Power Supply (EU, UK, US, AUS)

Lindy Manual

#### **PURCHASING INFORMATION**

No.	39210 (TX), 39211 (RX),
EAN	4002888392402 (No. 39210)
	4002888392419 (No. 39211)

### 500M FIBRE OPTIC DVI-D SINGLE LINK **& USB 2.0 KVM EXTENDER**

#### TECHNICAL DATA SHEET

High performance KVM extender for extensions of DVI Single Link and USB 2.0 signals. With upgrades you can also extend audio or RS232 Multi mode or single mode fibre optic cable with optional SFP modules can be used to extend the signal distribution distance up to 20km. With the matrix switching upgrade, these extenders enable the simple and secure construction and management of complex matrix circuits with various connection interfaces in a wide variety of demanding environments.

- DVI-D, USB and audio or RS232 signal extension via a duplex fibre optic cable
- DVI-D Single Link compatible with resolutions up to 1920x1200 @60Hz
- Supports USB 1.1 for keyboard and mouse as well as USB HID devices
- Mass storage upgrade for USB pen drives and USB hard drives
- Matrix switching upgrade for point-to-multipoint applications (e.g. crossbar)
- Audio upgrade for bidirectional stereo audio transmission
- Serial RS232 upgrade for control and monitoring of industrial applications



No. 39241 (Receiver)



#### **SPECIFICATIONS**

AV Interface	DVI-D
Console Interface	USB
Interfaces Standard	DVI-D 2.0 (Single Link), USB 2.0
Supported Bandwidth	4.95 Gbit/s
Maximum Distance	500m (1640.4ft)
Maximum Resolution	1920x1200@60Hz
Supported Audio	Analogue Stereo Available as an Option
Separate Audio Ports	2 x 3.5mm (Female)
Transmission Protocol	IP
Transmission Medium	1x Duplex LC (50/125µm)
Laser Class (only for Fibre)	1
Wavelength (only for Fibre)	850nm
Special Features	Mass Storage, Audio, RS232 and Matrix Switch features available as options

CONNECTORS	
Transmitter KVM Interfaces (No. 39240)	2 x DVI-I (Female), ) USB Type B (Female), 2 x 3.5mm (Female)
Transmitter Extension Port (No. 39240)	SFP Slot (LC connectors)
Receiver Consolle Interface (No. 39241)	DVI-I (Female), ) 4 x USB Type A (Female), 2 x 3.5mm (Female)
Receiver Extension Port (No. 39241)	SFP Slot (LC connectors)
Power	5.5/2.1mm DC socket

#### PHYSICAL PROPERTIES

PITISICAL PROPERTIES	
Dimensions WxDxH	100x105x44mm (3.94x4.13x1.73in)
Housing Material	Metal
Net Weight	0.35kg (0.77lb)
Operating Temperature	0°C - 45°C (32°F - 113°F)
Storage Temperature	-25°C - 80°C (-13°F - 176°F)
Humidity	0~90% RH (non-condensing)
Power Requirements	12VDC1A
Colour	Silver

#### MISCELLANEOUS

Carton Box
260x170x70mm (10.24x6.69x2.76in)
215x155x50mm (8.6x6.1x1.97in)
0.8kg (1.76lb)
2
CE, RoHS, REACH

#### PACKAGE CONTENT

Transmitter (No.39240), Receiver (No.39241)

8 x rubber feet

2 x self adhesive hook & loop tape

1 x USB A/B cable (approx. 2m (6.56ft))

2 x DVI-D cable M/M (approx. 2m (6.56ft))

2 x Multi-Country Power Supply (EU, UK, US, AUS)

Lindy Manual

#### **PURCHASING INFORMATION**

No.	39240 (TX), 39241 (RX)
EAN	4002888392402 (No.39240)
	4002888392419 (No.39241)





#### **Worldwide Offices**

### United Kingdom

LINDY Electronics Ltd. Stockton-on-Tees T: +44 1642 754 000 postmaster@lindy.co.uk

#### International

LINDY International Ltd. Stockton-on-Tees T: +44 1642 754 021 postmaster@lindy.com

#### Germany

LINDY-Elektronik GmbH Mannheim T: +49 621 47005 0 info@lindy.de

#### France

LINDY France Mundolsheim T: +33 825 825 111 france@lindy.fr

#### Italy

LINDY Italia S.r.l. Olgiate Olona (VA) T: +39 0331 1601711 info@lindy.it

#### Portugal

Lidertrónica, Lda Lisboa T: +35 121 8161050 lider@lidertronica.com

#### South-Africa

Linkqage Cape Town T: +27 2151 4480 0 support@linkqage.co.za

#### Australia

LINDY Australia Pty Ltd Brisbane T: +61 7326 2903 3 info@lindy.com.au

#### Taiwan

LINDY Asia Inc. Taipei T: +88 6286 9811 41 sales@lindy.com.tw

#### China

LINDY Electronics Ltd. Ningbo, Zhejiang T: +86 5748 6995 613 info@lindy-china.cn

#### Hong Kong

LINDY China Ltd. Hong Kong T: +852 9098 9920 info@lindy.com

#### Japan

LINDY Sales Inc. Tokyo T: +81 3627 2986 0 support@lindy.co.jp

Lindy and the Lindy logotype are registered trademarks of the Lindy Group in the UK and other countries. All other trademarks are property of their respective owners. Subject to technical modifications and other changes. The contents of this brochure have been prepared with great care. No warranty or liability is accepted for the correctness, completeness, or accuracy of the information. This brochure does not constitute a contractual offer and is solely for the purpose of providing (non-binding) information. © Lindy Group