

Support DVI/HDMI video up to 1920 x 1080 / Full HD 1080p  
 100M extension distance  
 Graphic Mode / Video Mode Selection  
 4 x USB 2.0 ports for USB extension over IP  
 Audio/Mic support & IR remote control

## CAT5 DVI Extender over IP

w/ Audio & Mic

4 x USB 2.0 device ports

## Quick Installation Guide

Thank you for purchasing the **CAT5 DVI KVM Extender over IP**. The **CAT5 DVI KVM Extender over IP** actually comprise two units – a **Transmitter (Tx) Unit** and a **Receiver (Rx) Unit**. With our highly reliable and quality product, user can enjoy lots of benefits from using it.



Transmitter (Tx) & Receiver (Rx) – Front View

## Introduction

The **CAT5 DVI KVM Extender over IP** extends your USB keyboard, mouse, DVI/HDMI video, Audio/Mic as well as two other USB devices, and even your remote control from your computer up to 100M/330ft away on a single CATx UTP cable, with a satisfying video quality up to 1920 x 1080 / Full HD (1080p).

The **CAT5 DVI KVM Extender over IP** comprises two distinct units- The **Receiver (Rx) Unit** and the **Transmitter (Tx) Unit**. The **Tx Unit** and the **Rx Unit** will be located each on one end of the CATx UTP cable. The **Transmitter** allows user to access the computer at the local end, while extending it across 100M to the Remote console on the Receiver. To connect the TX unit and the RX unit, you can use either a direct CATx UTP cable connection or you can go via a Gigabit Ethernet Switch in between. Furthermore, the CAT5 DVI KVM Extender support two display modes to suit your display requirements: *Graphic mode* is optimized for still graphic displays; while *Video mode* is best for a dynamically changing video stream.

## Package Contents

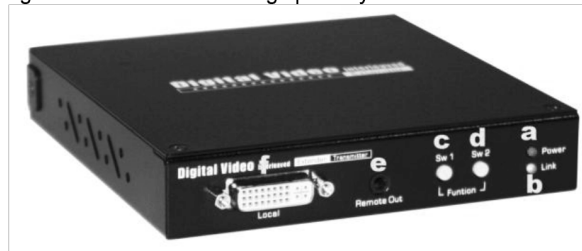
Please check whether you have all the following items within the packaging box:

- ☑ Transmitter (Tx) Unit x 1
- ☑ Receiver (Rx) Unit x 1
- ☑ DVI-D cable x 1
- ☑ USB cable (Type A-to-Type B) x 1
- ☑ Power Adapters (DC9V 1A) x 2
- ☑ This Quick Installation Guide x 1

Optional IR remote control Kit (including an emitter and a receiver attached with cables) are available for optional purchase.

## Front-panel & Rear Panel View

The front and back panels are where the various connectors are located on the two pieces of the CAT5 DVI KVM Extender Set. Before you connect these two units to any computer, cabling accessories or peripherals, you should get a glimpse of the main connectors you are going to encounter when setting up the system ....



Transmitter (Tx) Unit – Front panel



Transmitter (Tx) Unit – Backpanel  
 [Directly connected to the computer]

### Transmitter Unit

[Tx - Frontpanel]

- a. Power LED (ON: Power on / OFF: Power off)
  - b. Link LED (ON: Link OK / OFF: No Link)
  - c. Switch Button 1 (Remote Console ON/OFF)
  - d. Switch Button 2 (Graphic Mode/Video Mode)
  - e. Remote Out (connect to the IR emitter)
  - f. Local Video Console Port (DVI I connector; connect to DVI monitor)
- [Tx - Backpanel]
- g. Remote IO (RJ45; connect to CATx cable, 100M max.)
  - h. Computer DVI port (DVI-I connector; connect to computer)
  - i. USB port (USB Type B connector; connect to computer)
  - j. Power receptacle (DC9V 1A)



Receiver (Rx) Unit – Front panel



Receiver (Rx) Unit – Back panel

[Max. 100M away from the computer with no intermediate network switch]

### Receiver Unit

[Rx-frontpanel]

- 1. Power LED (ON: Power on / OFF: Power off)
  - 2. Link LED (ON: Link OK / OFF: No Link)
  - 3. Switch Button 1 (Remote Console ON/OFF)
  - 4. Switch Button 2 (Graphic Mode/Video Mode)
  - 5. Remote In (connect to the IR receiver)
  - 6. Audio Out (connect to speakers)
  - 7. Mic In (connect to microphone)
- [RX-backpanel]
- 8. Remote IO (RJ45; connect to CATx cable - 100M max.)
  - 9. Monitor DVI Port (DVI-I connector; connect to monitor)
  - 10 ~ 13. USB device ports x 4 (USB Type A connector; connect to devices)
  - 14. Power receptacle (DC9V 1A)

## Preparation before Installation

**Before you install the two pieces of the CAT5 KVM Extender Set, you should have these items on the checklist ready:**

- 1. You should check the display mode of the computer to be within 1920 x 1080/Full HD 1080p dimension. And refresh rate to be one that is more commonly used such as 60Hz, etc.
- 2. Prepare 1 set of keyboard, mouse, monitor for remote console (on RX), and if you want, you can also add another monitor to the local console (on TX). Note that on the TX unit, it provides only a video console without keyboard /mouse, since one can always add keyboard and mouse by direct connection to the computer USB interface.
- 3. The two monitors used (one on the Tx side and the other on the Rx side) for display should better be of the same resolution, or even better of the same type, make and model.

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- Use good quality CATx UTP cable (max. 100M/330ft). Note that good quality cable will give better video outcome with longer distance span.
- If you need an extension distance of more than 100M, you should use a gigabit network switch to serve as a bridge to extend the distance upward to another 100M..
- There should be power outlets near where you locate the extender.

## Out-of-the-box Installation

Take the package items out of the box and begin installation....

### Plan the layout path and deploy the UTP cable for extension

**Step 1.** Plan the path through which the CATx UTP cable will be deployed across the distance between the **Transmitter** and the **Receiver**.

**Step 2.** Lay out the UTP cable according to your planned path.

Or if you have already your network cabling infrastructure to utilize, then you can just go ahead to install your extender. Note that it takes a gigabit switch to fully boost the performance of the extender connection. A 10/100Mbps network switch will suffer undue latency, thus not recommended for use in between for connection.

### Configure Transmitter Console (Video Console 1)

**Step 3.** Connect one end of the CATx UTP cable to the CAT5 Extension port of the **Transmitter**. (Connector g)

**Step 4.** Connect the power adapter to the **Transmitter** to power it up before connecting any computer or cables to it. (connector j)

**Step 5.** Connect the **Transmitter** to the computer's DVI output port and the USB port by using a DVI cable (connector h), and a TypeA-to-TypeB USB cable (connector i). If you have purchased the optional IR control kit, you can also attach the IR emitter to the Remote Out port (connector e)

**Step 6.** Set up Video Console 1: Connect a DVI monitor to the **Transmitter's** Local Video Console port (connectors f).

If you need to have keyboard and mouse control on the TX side, you can always connect physical keyboard and mouse directly to the computer itself.

**Step 7.** Power on the computer, and check the (keyboard, mouse,) video on the monitor connected to the Video Console to see if it works fine. If should work fine before you proceed to next steps.

### Configure the Receiver Console (Keyboard, Mouse and Video Console2)

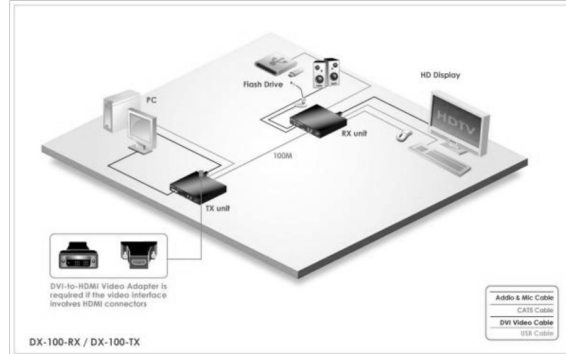
**Step 8.** Connect the other end of the UTP cable to the CAT5 Extension port of the **Receiver** (connector 8).

**Step 9.** Connect the power adapter to the **Receiver** (connector 14) to power it up before connecting any devices to it.

**Step 10** Set up Console 2: Connect a set of USB keyboard, mouse, monitor, and speakers and microphone to the **Receiver's** Console ports. (The USB keyboard and mouse can be connected to any two of the connector 10 ~ 13; the monitor should be connected to the connector 9; and the speakers

should be connected to connector 6, and the microphone to connector 7). If you have purchased the optional IR control kit, you can also attach the IR receiver to the Remote In port (connector 5)

There are 4 x USB device ports in total on the RX side. You can connect whatever USB 2.0 devices to any of them, including USB keyboard, mouse, webcam, printer, etc.

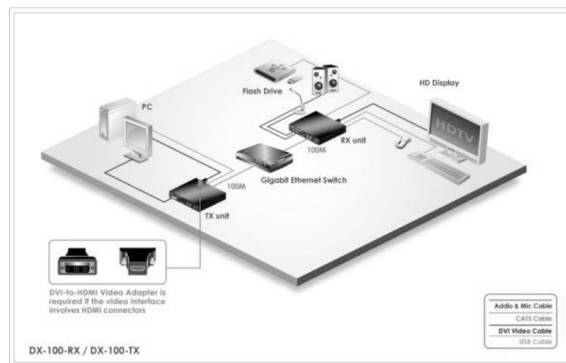


Direct cable connection between TX and RX Configuration Diagram I

**Step 11.** Check the keyboard, mouse, video, audio output and mic input (and if available, also the IR control) on Console 2 to see if it works fine. If the connection works, you should see a clean video with immediate keyboard and mouse control. Next, try the audio and mic function to see if they work too.

**Step 12.** Select the display mode according to your preference: A press on the Switch Button 2 can toggle between the **Graphic Mode** and **Video Mode**..

Since DVI video can be compatible with HDMI by adding a DVI-to-HDMI adapter, one can use such an adapter with this extender set to extend the HDMI display!



Connection with a Gigabit Network switch in between TX and RX Configuration Diagram II

**Step 13.** If you need to extend the distance further beyond 100M, you can try to use a gigabit network switch in between the TX and RX units, so that you can further boost the extension distance up to another 100M.

Note that, within a same network segment, you can use only one set of the CAT5 DVI KVM switch extender over IP.

Now, you have set up the whole system and can operate immediately ....

## Resolution Modes Supported

The resolution modes supported by the Extender set are as follows:

Graphic Modes Supported	
800 x 600 @ 59Hz, 60Hz, 72Hz, 75Hz, 56Hz	1280 x 1024 @ 59Hz, 60Hz
1024 x 768 @ 59Hz, 60Hz, 70Hz, 75Hz	1366 x 768 @ 59Hz, 60Hz
1152 x 864 @ 59Hz, 60Hz, 75Hz	1440 x 900 @ 59Hz, 60Hz
1280 x 720 @ 59Hz, 60Hz	1600 x 1200 @ 59Hz, 60Hz
1280 x 768 @ 59Hz, 60Hz	1680 x 1050 @ 59Hz, 60Hz
1280 x 960 @ 59Hz, 60Hz	1920 x 1080 @ 59Hz, 60Hz, 50Hz

If you experience a problem on the video display on the TX while your resolution is within the biggest 1920 x 1200, you can try to adjust the Vsync frequency to be consistent with what we have here in this table above.

## Select Video Mode / Graphic Mode

According to the display contents, you can choose either Video Mode or Graphic Mode to be utilize on the Video of the Receiver unit. To toggle between these two mode, just press Switch Button 2 to toggle select. When you press the Switch Button, there will be an OSD reminder popping to show you which mode is selected. Note that the Video mode is especially adapted to dynamic display contents such as movies and other video clips that has more contents changes during a short time; while the Graphic mode is adapted to still graphic display such as high definition photos.

## FCC / CE Statements

**FCC Statement :** This equipment has been tested and found to comply with the regulations for a Class B digital device, pursuant to Part 15 of the 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, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this Quick Installation Guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case, the user will be required to correct the interference at his/her own expense.

**CE Statement :** This is a Class B product in a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

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