# Instruction Manual

HDMI KVM Extender Over CAT5/IP 1080P

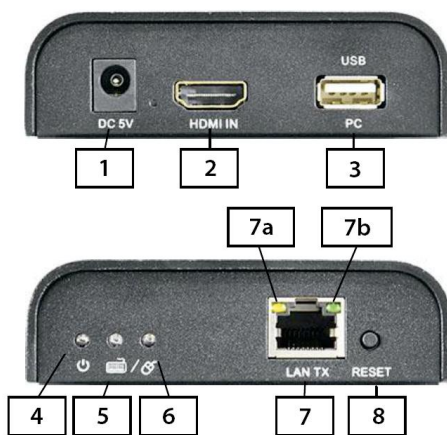HDM220 / HDM216 / HDM216

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## Introduction

The HDMI KVM extender allows for viewing of HDMI video and USB control from up to 120m away from your DVR using your existing CAT5/6 set-up.

The HDMI Mules can be used for point-to-point access (1 cable between each unit and no switch) or in cascade mode with additional monitors/receivers connected through a network switch, letting multiple users have USB control from different receivers.
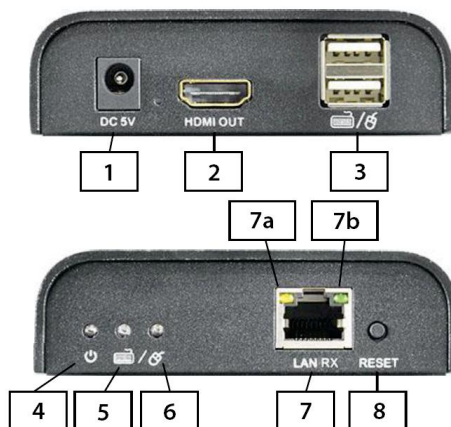
## Connections

### HDM217 - Transmitter

1. 5v DC power input
2. HDMI input port
3. USB output port
4. LED power indicator
5. LED keyboard indicator
6. LED mouse indicator
7. LAN RJ45 Socket
    7a. data LED
    7b. bandwidth / connection LED
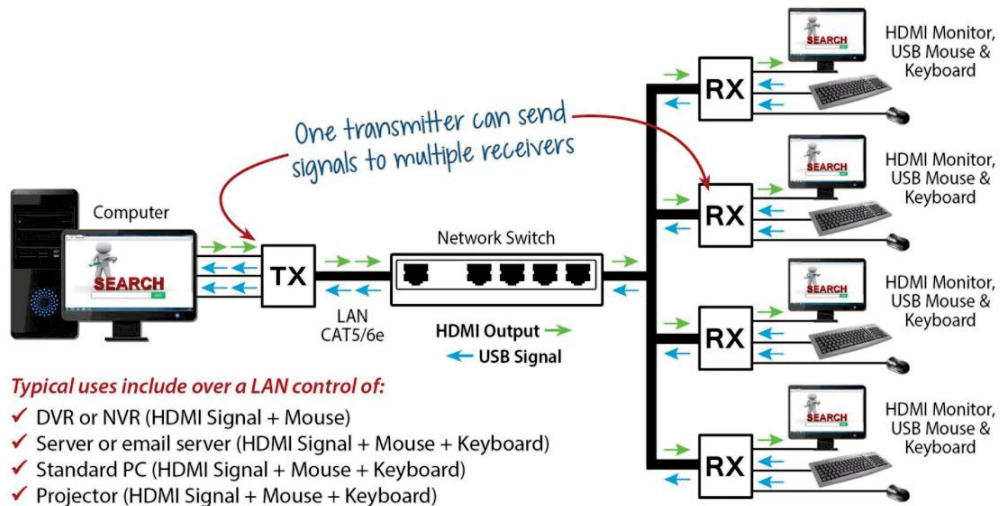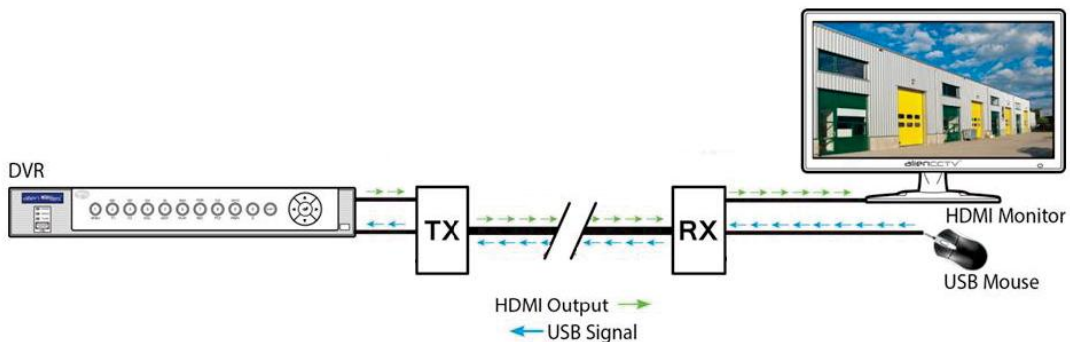8. Reset button

### HDM216 - Receiver

1. 5v DC power input
2. HDMI output port
3. USB dual input ports
4. LED power indicator
5. LED keyboard indicator
6. LED mouse indicator
7. LAN RJ45 Socket
    7a. data LED
    7b. bandwidth / connection LED
8. Reset button

# Installation

1) Connect an HDMI cable from the source (DVR) to the transmitter. Ensure that HDMI cable is no longer than 5 metres for a 1080P input signal or 10 metres for a 720P input signal.

2) Connect the HDMI cable output from the receiver to the HDMI monitor/HD TV, ensure that the HDMI cable run is no longer than 15 metres.

3) Connect a network cable between the transmitter and receiver of no longer than 80 metres using CAT5, 100 metres using CAT5E or 120 metres using CAT6.

4) Connect the 5V Power Supplies to the transmitter and receiver (included with the product). The power LEDs will light up. When the signal LEDs light and flicker, the equipment is ready to use.

5) If using a USB mouse or keyboard plug them into the USB ports on the receiver. Fit the USB cable between the transmitter and DVR, or item you are controlling with the mouse. The USB cable is also included.



Note: Avoid using the HDM220's on a main LAN network, there may be network resource considerations, so in some instances it may be necessary to separate them using a separate network switch.

# Frequently Asked Questions

**Troubleshooting**

Live Status: When running correctly the Yellow LAN LED is flashing and the Green LED is on.
If the Transmitter is not network connected, a message "Searching TX" displays.
If network connected but no video input, a message "Check TX's input signal" displays.
Note that the speed of the flashing Yellow LAN LED will depend on the network resources
available so may differ from one site and another.

## 4.1 Yellow LED on LAN ports are flashing slowly?

Answer:
1) Ensure the video source is connected to the HDMI Transmitter and not Receiver;
2) Ensure the video source is an HDMI Signal that is supported on the HDM220;
3) Try a different HDMI Cable between the source device and the HDMI Transmitter.

## 4.2 Yellow LED on LAN ports is flashing quickly but no display?

Answer:
1) Check the resolution from the HDMI source device agrees with the supported resolution of the
display device;
2) Ensure that the HDMI Cable between the HDMI Receiver and the display device is connected
properly.
3) Try a different HDMI Cable between the source device and the HDMI Receiver.

## 4.3 Yellow LED on LAN ports is not lighting up?

Answer:
1) Ensure all cables are well connected;
2) Try a short network cable to confirm equipment is okay and problem is not cable length.

## 4.4 Abnormal or flashing colours

Answer:
1) Please press the reset button on the HDMI transmitter and receiver;
2) Please make sure the network cable meets the IEE-568B standard.

## 4.5 USB does not work?

Answer:
1) Check the USB device or mouse works in the source device;
2) Ensure the USB cables are properly connected;
3) Reset the HDMI transmitter or receiver.

## Specifications

| | |
|---|---|
| HDMI Version | HDMI 1.3 |
| HDCP Version | HDCP 1.2 |
| Video Bandwidth | ≤ 70Mbps |
| Supported HDMI Resolutions | 640*480@60Hz 800*600@60Hz 1024*768@60Hz 1280*720@60Hz 1360*768@60Hz 1440*900@60Hz 1400-1050@60Hz 1680*1050@60Hz 1920*1080@60Hz |
| Audio | PCM (44.1KHz, 48KHz) |
| HDMI Connector | Type A, 19 pin, Female |
| LAN Connector | RJ45 |
| Power Supplies | 2 x 5vDC/1A |
| Power Consumption | HDM217 Transmitter 700mA HDM216 Receiver 700mA |
| Power Connection on TX & RX | 2.1mm DC Jack |
| Network Connection | RJ45 cable CAT5/CAT5E/CAT6 max run 80m/100m/120m |
| HDMI cable run to HDM217 Transmitter | If source 1080P max run 5 metres – if 720P max run 10 metres |
| HDMI cable run from HDM216 Receiver | 15 metres |
| Operating temperature Range | 0°C ~ +50°C |
| Operating Humidity Range | 10% ~ 95% (Non condensing) |
| Transmission | One HDM217 TX can transmit video & audio to multiple HDM216 RXs |
| Weight | Transmitter:240g Receiver:240g |
| Dimensions | 109.6(L) x 89.5(W) x 26.3(H)mm *2pcs |
| Colour | Black |

## Conditions

All specifications are approximate. System Q Ltd reserves the right to change product specifications or features without notice. Whilst every effort is made to ensure that these instructions are complete and accurate, System Q Ltd cannot be held responsible for any losses, no matter how they arise, from errors or omissions in these instructions, or the performance or non-performance of the equipment refered to.

This symbol indicates that equipment must not be mixed with general household waste. For treatment, recovery and recycling  please return to your local designated WEE/CG0783SS collection point as defined by your local council.