



# Installation Instructions

## KVM2EXT-BLK-N4-USB60 or KVM2EXT-SS-N4X-USB60

### Rear-Mounted USB KVM Extender

#### ➔ IMPORTANT!

To identify computer related issues and prevent costly troubleshooting, bench test your monitor, KVM Extender, Keyboard, and/or mouse with your computer with the provided 25' CAT5 cables. For touch screen units, ensure drivers are installed prior to installation of the kvm extender.

This KVM Extender is sold as a set. The remote module lists the serial numbers for each USB and VGA local module. For warranty purposes, do not mismatch different sets of KVM extenders.

Note on maximum cable length and cable type:

Use shielded Category 5e or higher cable to connect the Local Modules to the Remote Module. The length of the cables should not exceed:

- 60 m (198') when extending USB and VGA
- 150 m (500') when extending VGA only

1. Connect the USB Local Module's USB cable to an available USB port on the computer.
2. Connect the VGA Local Module's red USB cable to another available USB port on the computer. Also connect the VGA cable to the video output port on the computer.

**NOTE: If your KVM Extender is used only to support a remote monitor (no keyboard, mouse, touch screen, or any other USB device), you only need to connect the VGA Local Module to the computer. You will also only need to run one CATx cable to the Remote Module.**

3. Connect the CATx cables to the USB and VGA Local Modules. Many issues with KVM Extender performance can be linked to partial or failing RJ45 crimps. We recommend using high quality crimpers and RJ45 connectors such as:

- LCom PN TDS8PC6 Connectors (for Shielded, Solid or Stranded, CAT6 cables)
- LCom PN TDS8PC5 Connectors (for Shielded, Solid or Stranded, CAT5E cables)
- LCom PN HTS2500 or Hanlong PN HT-236Q Modular Crimper

**NOTE: Your KVM Extender includes "VGA" and "USB" CATx cable markers that should be applied to each end of your CATx cables. Doing so correctly will eliminate mismatching VGA and USB extenders.**

**NOTE: Do not use your KVM Extender to link between different buildings. Linking between different buildings that do not share a common earth ground is not supported and may damage your KVM Extender.**

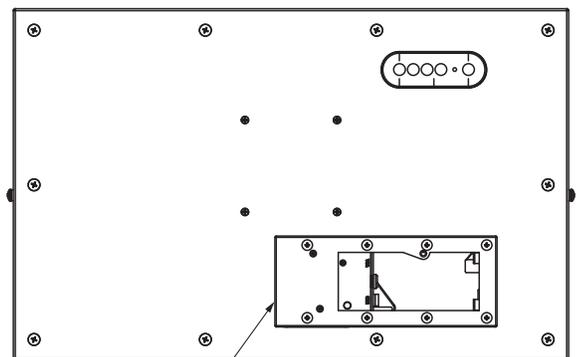
4. Lay the remote monitor face down on a clean work surface with the bottom of the monitor facing you. Use a soft cloth or piece of foam as a pad to prevent scratching the front of the monitor.
5. Remove the eight existing screws around the cable access opening on the rear cover of the monitor.
6. For monitors with a permanently installed keyboard, install the keyboard by following the installation instructions that shipped with the keyboard.
7. Orient the KVM Remote Module so that the video and USB cables are exiting the gasket side of the KVM enclosure and install the video cable into the monitor, securing the screw locks.



USB LOCAL MODULE



VGA LOCAL MODULE



KVM REMOTE MODULE (COVER PLATE NOT SHOWN FOR CLARITY)



## Rear-Mounted USB KVM Extender Instructions (continued)

8. Connect power to the monitor.
  - a. For AC powered monitors: Loosen the retaining clip for the power cable in the monitor's cable well and route the monitor power cable through the KVM Remote Module to the monitor, then insert it into the power inlet. Retighten the retaining clip to secure the monitor power cable.
  - b. For DC powered monitors: Route the monitor power cable through the KVM Remote Module to the monitor, then insert it into the power inlet. Secure the monitor power cable to the DC power inlet with a Phillips head screwdriver.
9. For touch screen units, connect the USB cable from the KVM Remote Module to the monitor's touch screen port. A cable retention bracket comes installed on the USB port on the monitor and will help to secure the cable and ensure adequate strain relief. Without removing the retention bracket, route the USB cable through the end of the bracket and into the USB input port on the monitor. Continue to step 11.
10. For non-touch screen units, ensure the touch USB cable is positioned safely away from any internal components in the monitor cable well.
11. For monitors with a permanently installed keyboard, connect the USB cable from the keyboard to the unused USB extension cable on the KVM Remote Module. Secure the USB connectors with the provided wire retaining clip as shown in the figure below.

**NOTE: This KVM is a USB 1.1 device that has been tested to operate with all Hope Industrial Systems keyboards, mice, and touch screen monitors to a maximum distance of 60 meters (198'). The maximum rated power output at the Remote Module is 300mA. Therefore, this KVM Extender will work with any combination of one keyboard, one mouse, and one touch screen monitor. Different devices can be connected as long as the total power requirement does not exceed the rated power output of 300mA. A 25' shielded CAT5 cable has been provided for bench testing purposes. When connecting any non-Hope Industrial devices, it is recommended that the device be fully tested with the actual cable and length that will be used in service.**

12. Insert the KVM Remote Module into the opening of the rear panel by sliding the right hand locking tabs in all the way to the right.
13. Press down firmly and slide the KVM Remote Module to the left until it stops with both left hand locking tabs securely inside the rear panel.
14. Install the CATx cables from the USB and VGA Local Modules into the correctly labeled inlets on the KVM Remote Module.
15. At this time, check for proper operation of the KVM Extender:
  - a. Turn on or reboot computer.
  - b. If extending USB, the USB Power LED on the Remote Module should be lit green.
  - c. The VGA CATx inlet on the Remote Module should be lit green.
  - d. The VGA Local Module should have a green and yellow LED lit (green represents data and yellow represents power).
  - e. Check the image on the remote monitor to see if it is being displayed properly. If necessary, adjust the Sharpness adjustment screw on the KVM Remote Module to achieve the best possible image.

**NOTE ON RESOLUTION DATA:** Resolution information is not transmitted from the remote monitor when using this KVM Extender. Instead, the local unit holds a standard set of resolutions, which are suitable for most monitors. If the standard resolutions are not suitable, temporarily connect the VGA Local Module directly to the monitor that is to be emulated and power on the monitor. Note: the VGA Local Module must be powered via its USB connection.

If the resolution information is different to that already held, the yellow indicator will flicker rapidly for 2 to 3 seconds while the new information is stored.

If a problem occurs while attempting to harvest resolution information, the yellow indicator on the VGA Local Module will show a number of distinct flashes. Note the number of flashes in case you need to contact technical support, but otherwise retry the procedure.

- f. If extending USB, test all USB devices for correct operation.
16. Install the cover plate using the provided eight sealing screws. Tighten screws with a torque of 1.13-1.7 N-m (10-15 inch-pounds) or until both cover plate and KVM gaskets are 1.6 to 2.4 mm (1/16" to 3/32") thick.

