Hall Research Technologies, Inc
1163 Warner Ave.
Tustin, CA 92780
Phone: (714) 641-6607
Fax: (714) 641-6698

User's Manual

Model U97-H2
KVM Extension over UTP (Cat5) for Dual Video PCs

Extend PC's
Dual-Video Ports, keyboard, mouse, audio, and serial port
to 500 feet using only 2 Cat5 Cables
Sender Station, features Local ports for KVM optional hookup

April 15, 2006

UMA1095 Rev. n/c

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Product Description

The ***U97-H2*** is a KVVM+audio+RS-232 extender. The U97-H2 extends dual video outputs, keyboard, mouse, audio and RS-232 to the remote station with a local station as well. It allows a local user and a remote user to work on the same PC. The remote user can be up to 500' away via a Catx cable connected between the Sender and the Receiver units of the U97-H2. The Receiver unit of the U97-H2 has independent digital video compensation control for both the A and B video outputs. The digital compensation control is controlled via hot keys on the remote keyboard. The Sender unit of the U97-H2 has an external control switch that will allow only local control, or only remote control, or either station control. The Sender unit also has 2 LEDs to indicate which station, local or remote, currently has control. Both Sender and Receiver units have an LED that when a Catx cable is connected and both units are powered on, the LED will light up indicating successful communication via the Catx cable.

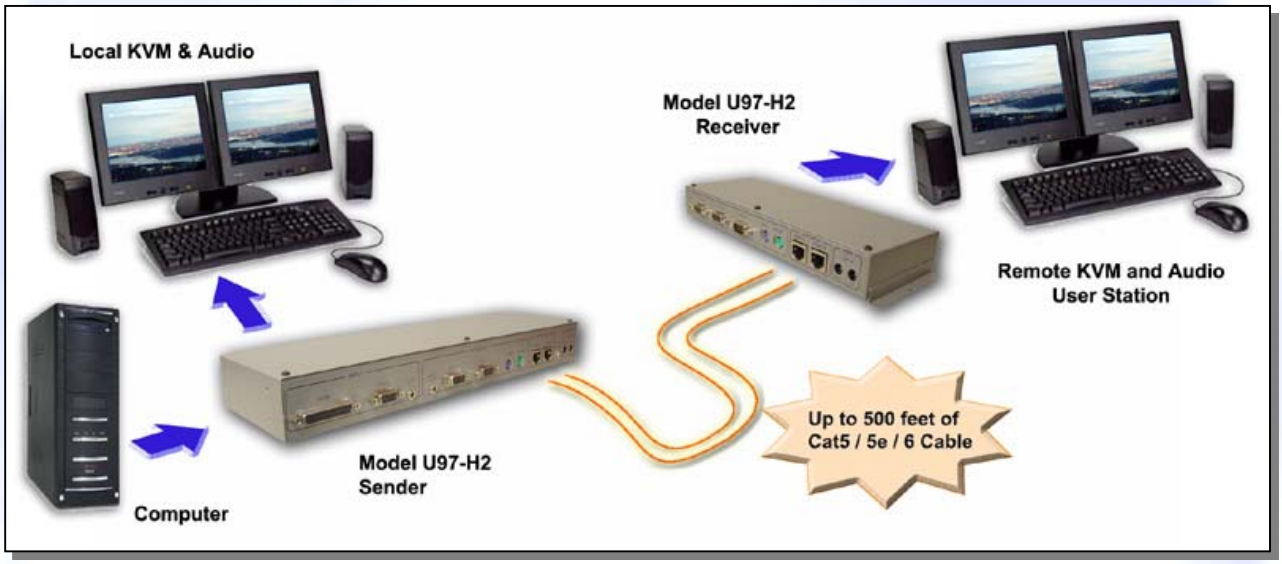

Figure 1. U97-H2 Block Diagram

Features

- Local or remote control LED indicators on the Sender unit
- Sender unit has local ports for 2 video outputs, keyboard, mouse and audio
- Remote ports for 2 video outputs, keyboard, mouse , audio, and RS-232 Serial Port
- Sender unit comes with rack mount brackets and fits in a standard 1RU
- Receiver (remote) unit has "L" brackets and can be screwed down
- Link LED indicators on both Sender and Receiver units
- Independent video compensation for both the A & B video outputs on Receiver unit
- Digital adjustment controlled via Receiver keyboard hot keys
- Compact, Rugged, Reliable, and Economical
- Full PS/2 keyboard and mouse command set emulation
- Dynamic hot plug ability of mouse and keyboard and recovery of Catx cable
- Made in USA

Setup

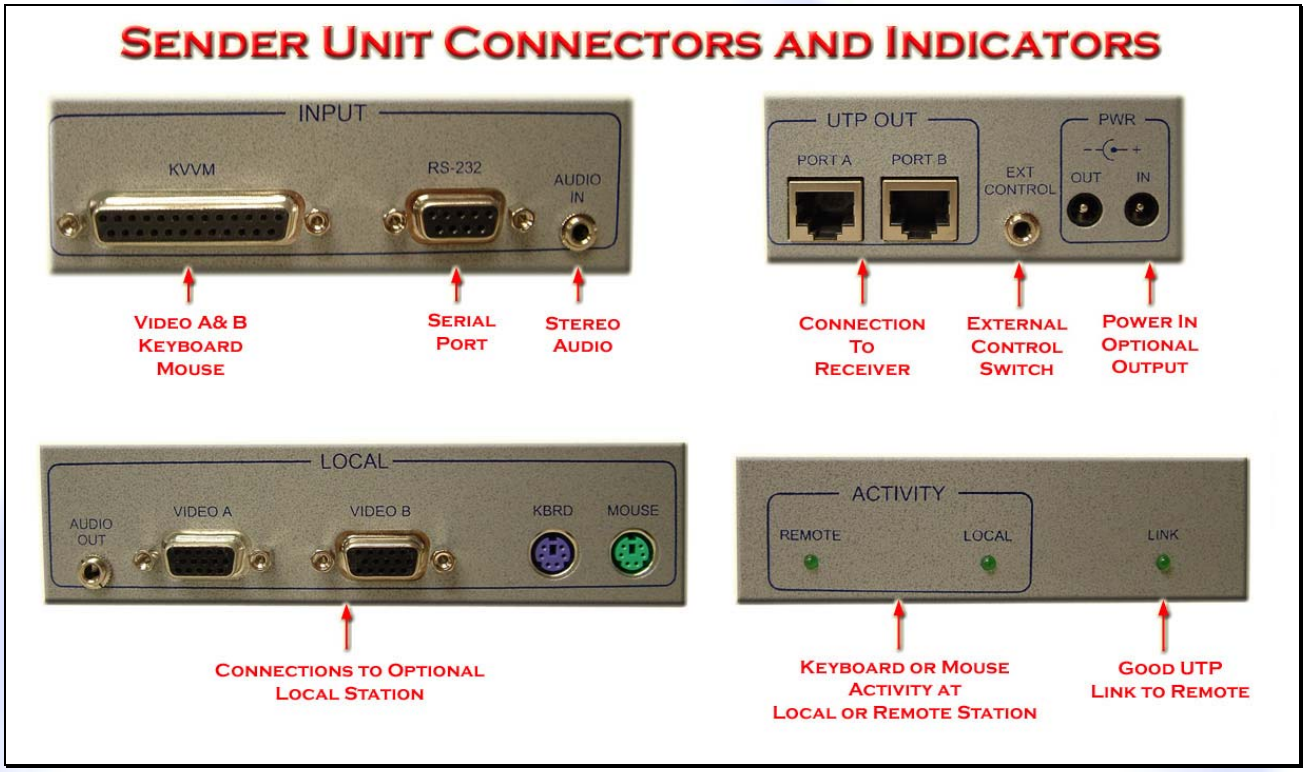

Figure 2 U97-H2 Sender Connector and Indicator Functions

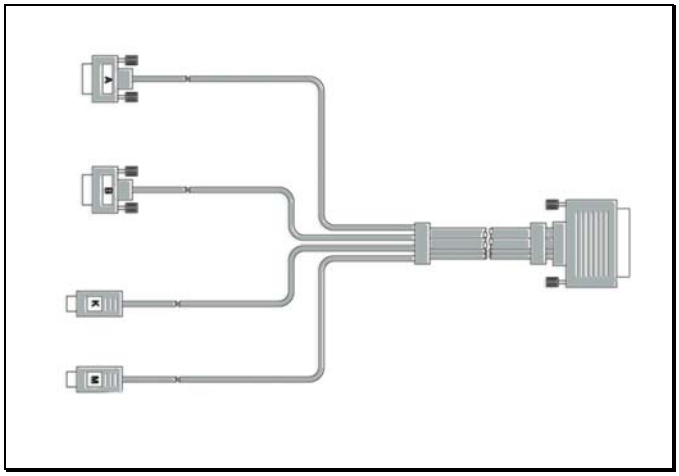

Figure 3 Cable for connection to PC

1. Power down the PC
2. Use the special "KVVM" (4-in-1) cable to connect the Sender unit to the PC.
   a. The end with the 4 connections connects to the PC
   b. The other end connects to the Sender via the DB25-15 connector labeled "INPUT"

   NOTE: The connection between the PC and the Sender is NOT hot-pluggable.
3. Connect the audio output from the PC to the audio input on the Sender via the "INPUT" label on the Sender unit with a male-to-male mini-stereo cable

4. Connect the RS-232 (serial) output from the PC to the RS-232 input on the Sender via the "RS-232" label on the Sender unit with a male-to-female DB9 cable

5. Connect any combination of keyboard, mice, video A, video B, audio, or RS-232 to the Sender and Receiver to control the PC

    a. Connect a keyboard and/or mouse and/or video and/or audio and/or RS-232 to the Sender unit via the connections labeled "Local" if local control is desired.

    b. Connect a keyboard and/or mouse and/or video and/or audio and/or RS-232 to the Receiver unit if remote control is desired.

    NOTE: The Receiver does not have to be connected to use the Local station

    NOTE: The Sender does not have to have a local keyboard or a local mouse connected for the Receiver to function

6. Connect the Sender and the Receiver units with a Catx cable

    a. NOTE: Port A of the UTP carries the keyboard, mouse, audio, RS-232 handshake lines and video channel A.

    b. NOTE: Port B of the UTP carries the video channel B and the RS-232 TX and RX lines

7. Power on the Receiver unit with the supplied power supply (GS-385)

8. Power on the PC.

Figure 4 Receiver (Remote) Unit's Connections to User's Console

Operation

The U97-H2 will allow only the local or remote to communicate with the PC at any given time. After either stations stops sending keyboard or mouse data, there is a 2 second delay before the other station can start sending data to the PC. If the Local LED on the Sender is lit then only the local station may communicate with the PC. If the Remote LED on the Sender is lit then only the remote station may communication with the PC. If neither LED is lit then either station may communicate with the PC. As soon as one station begins to communication with the PC, that LED will be lit and the other station will not be able to communicate with the PC.

The Link LED on the Sender and the Link LED on the receiver indicate when there is a successful link between the Sender and Receiver units. If the Link LED's are on then there is a successful link between the Sender and Receiver.

How to control the video compensation

The digital video compensation is controlled by hot keys on the remote keyboard. The hot key sequence is "Scroll Lock" "Scroll Lock" "a" for the A video channel or "Scroll Lock" "Scroll Lock" "b" for the B video channel . You will have 2 seconds between each keystroke to successfully complete the hot key sequence. Once the hot key sequence has been successfully completed, you will see the Num Lock, Scroll Lock, and Caps Lock LED's cycling on the Remote Keyboard. This will indicate you are in the video adjustment mode. Use the "+" and "-" keys to increase or decrease the video compensation as necessary. Pressing the "Enter" key will adjust the video compensation to full compensation. Pressing the "Esc" key will adjust the video compensation to no compensation. Press any key other than "+", "-", "Enter", or "Esc" to exit the hot key sequence. When you exit the hot key sequence, the LED's on the keyboard will stop cycling and will return to their previous state

Specifications

Dimensions

Sender Unit

Width X Height X Depth	14 X 1-3/4 X 4-1/8 Single Rack Unit (1RU) construction with included rack mounting brackets

Receiver Unit

Width X Height X Depth	10 X 1-3/8 X 3-9/16 (not including 2 mounting flanges 3/8 each added to the 10)

Video

Max Resolution	1600 X 1200
Coupling	DC
Video Level	0.7 V p-p
Video Gain	1; double-terminated
Bandwidth	250 MHz
Drive	0 to 500 ft. on Zero Skew Cat5/6 UTP cable

Keyboard

Connector:	Mini Din 6-pin Female
Type	All AT and Windows® compatible keyboards
Mode	All modes supported by the operating system
Communication	Bi-directional

Mouse

Connector	Mini Din 6-pin Female
Mouse Type	Any PS2 mouse or pointing device

Federal Communications Commission (FCC) Statement

This equipment generates, uses and radiates radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. This equipment has been designed to comply with the limits for a Class A computing device, pursuant to Part 15 of the FCC rules. Harmful interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user, at his own expense, will be required to take whatever measures are necessary to correct the interference.

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Products Designed and Made in the USA

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