

***Value Added Services
HRT Remote
Multi-Video Solution***

**For IntelliVue Information Center
& IntelliVue Information Center iX & Patient
Information Center Systems**

Installation Note & Service Guide

English

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PHILIPS

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New editions of this document will incorporate all material updated since the previous edition.

The documentation printing date and part number indicate its current edition. The printing date changes when a new edition is printed. (Minor corrections and updates which are incorporated at reprint do not cause the date to change.) The document part number changes when extensive technical changes are incorporated.

Ninth Edition.....June 2018

Abbreviations and Terminology

Abbreviations

HRT	Hall Research Technologies
KVM	Keyboard-Video-Mouse
PIC iX	Patient Information Center
PIIC	Philips IntelliVue Information Center
PIIC iX	Philips IntelliVue Information Center iX
UPS	Uninterruptable Power Supply
UTP	Unshielded Twisted Pair
VAS	Value Added Services

Terminology

Clinical operator work area

This is typically a central location in a clinical environment where nurses, doctors and clinicians have access to the display where patient information is available. This area is often referred to as a Central Station.

Remote KVM

A hardware solution that extends keyboard, video and mouse functionality up to 328' from a PC, typically over Cat cabling. This solution consists of both a Remote KVM Sender and a Remote KVM Receiver.

Service position

The Service position is an equipment room or wiring closet where the PIIC/PIIC iX/PIC iX PC, the VAS Remote KVM Sender and Remote Multi-Video Extender/Splitter is physically located.

Video Extender

A Video Extender is a device which receives a source video signal and then sends this signal to a single remote location/display via CatX cabling.

Video Splitter

A Video Splitter is a device which receives a source video signal and then sends this signal to multiple remote locations/displays via CatX cabling.

Video Receiver

A Video Receiver is a device which receives video from a Video Splitter via CatX cabling. Video outputs from the Video Receiver connect to a display.

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VAS HRT Remote Multi-Video Solution Overview

The VAS HRT Remote Multi-Video Solution extends video to remote displays up to 328 feet via Cat5/5e/6 UTP cabling from the PIIC/PIIC iX/PIC iX PC.

Note

- A maximum of eight remote displays are supported per PIIC/PIIC iX/PIC iX
- This solution is limited to a maximum display resolution of 1280x1024 for the following configurations:
 - PIIC Releases K, L, M and N.00/N.01
 - PIIC iX on the HP rp5700 Turbo platform
 - PIIC iX on the HP rp5800 or HP rp5810 that includes a VAS U97-A or U97-H2 Remote KVM solution
 - PIC iX on the HP rp5810
- This solution will support display resolutions of both 1280 x 1024 and 1920 x 1080 when deployed as a standalone configuration on an HP rp5800 or HP rp5810 based PIIC iX/PIC iX system. (Mixed display resolutions are not supported).
- This solution will support display resolutions of both 1280 x 1024 and 1920 x 1080 when deployed with a VAS U97-Ultra-2 Remote KVM solution on an HP rp5800 or HP rp5810 based PIIC iX/PIC iX system. (Mixed display resolutions are not supported).
- The VAS HRT Remote Multi-Video Solution is supported on the following Releases:
 - PIIC Release K on the HP rp5700 and rp5700-Turbo.
 - PIIC Releases L, M, and N.00/N.01 on the HP rp5700, rp5700-Turbo, rp5800.
 - PIIC iX Release A.0x on the HP rp5700-Turbo, rp5800.
 - PIIC iX Release B.0x on the HP rp5800 and rp5810
 - PIC iX Release C.0x on HP rp5810

Warning

The Multi-Video Solution may provide a view of protected health information/personal and sensitive data AND the customer should locate the viewing screen in locations that are only accessible by authorized personnel.

See Figure 1 for a basic illustration of the VAS HRT Remote Multi-Video Solution¹.

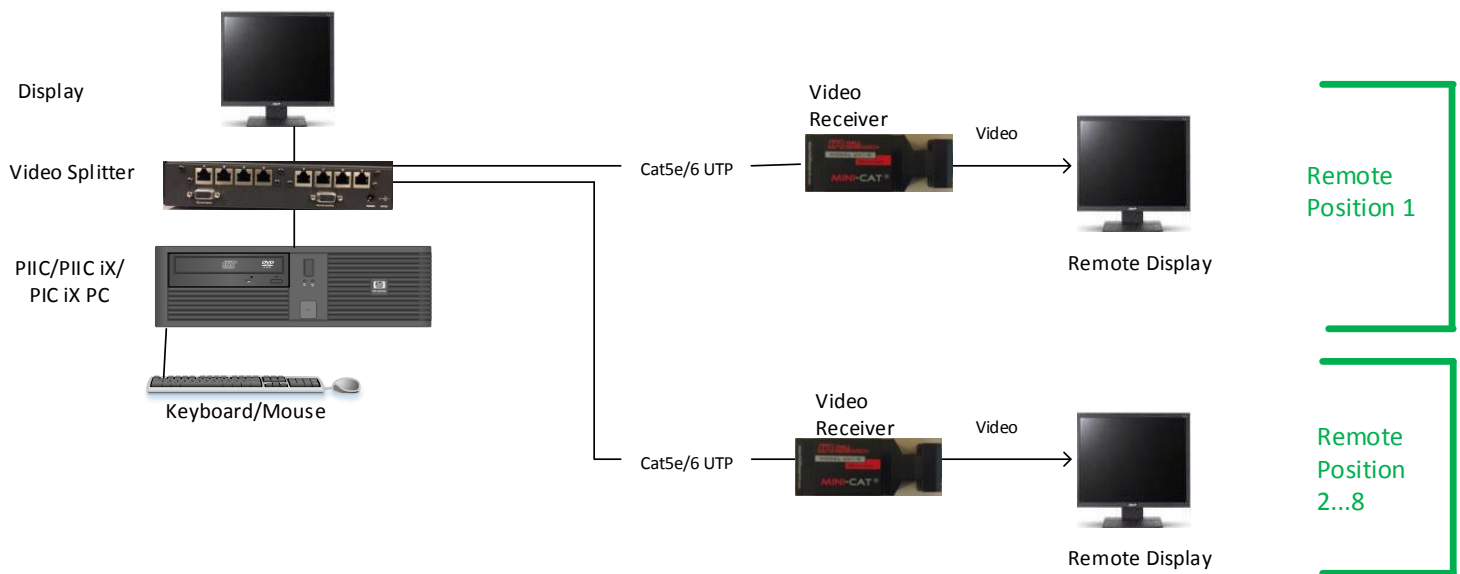


Figure 1 – HRT Remote Multi-Video Solution Overview

¹UPSs, interconnecting cables and other details are not included in this overview diagram.

Solution Components

UV1-S-PE1, UV2-S-PE1, UV4-S-PE1 & UV8-S-PE1 Video Extender and Splitters

- The UV1-S-PE1 is a single channel Video Extender. It extends VGA video to a remote VGA display via Cat5/5e/6 cabling.
- The UV2-S-PE1 is a 2-Port Video Splitter. It extends VGA video to a maximum of two remote displays via Cat5/5e/6 cabling.
- The UV4-S-PE1 is a 4-Port Video Splitter. It extends VGA video to a maximum of four remote displays via Cat5/5e/6 cabling.
- The UV8-S-PE1 is an 8-Port Video Splitter. It extends VGA video to a maximum of eight remote displays via Cat5/5e/6 cabling.

The maximum Cat cable length between the video splitters and the video receiver is 328 feet. The supported display resolutions are configuration dependent (see Table 1).

The UV2-S-PE1, UV4-S-PE1 and the UV8-S-PE1 provide a local VGA video output for a locally connected display. The UV1-S-PE1 extender does not provide a local VGA video output.

These devices are desk mountable and can also be located in an equipment room rack shelf. The extender and splitters must be connected to a battery backup UPS outlet.

Caution: The Solution power supply provides 9V DC power to devices. The 511-PS9016A is the only supported power supply for this Solution. 6V power supplies are not supported.

Configuration	Supported Display Resolutions	
	1280 x 1024	1920 x 1080
PIIC – Releases K, L, M and N.00/N.01	Yes	No
PIIC iX Rel A.0x – HP rp5700 Turbo	Yes	No
PIIC iX Rel A.0x & B.0x – HP rp5800 with U97-A or U97-H2 Remote KVM Solution	Yes	No
PIIC iX Rel B.0x – HP rp5810 with U97-A or U97-H2 Remote KVM Solution	Yes	No
PIIC iX Rel A.0x & B.0x – HP rp5800 with U97-Ultra-2 Remote KVM Solution	Yes	Yes
PIIC iX Rel B.0x – HP rp5810 with U97-Ultra-2 Remote KVM Solution	Yes	Yes
PIIC iX Rel A.0x & B.0x – HP rp5800 without Remote KVM Solution	Yes	Yes
PIIC iX Rel B.0x – HP rp5810 without Remote KVM Solution	Yes	Yes
PIC iX Rel C.0x – HP rp5810 without Remote KVM Solution	Yes	Yes

Table 1 - Supported Display Resolutions



Figure 2 – UV1-S-PE1 Video Extender



Figure 3 – UV2-S-PE1 Video Splitter – Front and Rear View



Figure 4 - UV4/8-S-PE1 Video Splitter - Front and Rear View

UV1-R Video Receiver

The UV1-R Video receiver provides VGA video to the display located at the remote position.

The receiver provides the ability to adjust the picture quality (compensation) at the remote display. An optional skew corrector (P/N SKU-RGB) is available for lengthy Cat cable runs. The skew corrector provides the ability to adjust the individual red, green and blue components of a color VGA signal providing optimal image quality. The manufacturer recommends the skew corrector for Cat cable runs exceeding 300 feet.

The receiver does not ship with an AC adapter. Power is supplied to the receiver from the extender or splitter.

The receiver ships with a warning label (P/N 453564433801) and a warning label Instruction Sheet (P/N 453564429461).

The warning label is to be affixed to the lower front bezel of the display that connects to the receiver.

The receiver is intended to be installed within five feet of the display.



Figure 5 – UV1-R Video Receiver

VAS 19" 1280x1024 Remote Display

The VAS ELO 19" display and the HP E190i are the HRT Remote Multi-Video Solution displays for configurations that support a display resolution of 1280 x 1024.



Figure 6 - VAS 19" 1280x1024 Displays

A warning label must be applied to the lower front bezel of the Remote display at the time of installation. The label (P/N 453564433801) and installation instructions (P/N 453564429461) will be provided with the UV1-R receiver.

 **WARNING:** Not Intended for Primary Monitoring. No Audible Alarms.
Clinical observation of a patient must be conducted at the bedside before administering interventions.

Figure 7 - 453564433801 Remote Display Warning Label

VAS 23" 1920 x 1080 Remote Display

The VAS HP LA2306x, E231, E231i, NEC E231W-BK, E232, E233WM, E233, E233WMI 23" displays are HRT Remote Multi-Video Solution displays for configurations that support a display resolution of 1920 x 1080.



Figure 8 - VAS 23" 1920 x 1080 Displays

A warning label must be applied to the lower front bezel of the Remote display at the time of installation. The label (P/N 453564433801) and installation instructions (P/N 453564429461) will be provided with the UV1-R receiver.



Figure 9 - 453564433801 Remote Display Warning Label

VAS 32" 1920 x 1080 Remote Display

The VAS NEC V323/V323-2 32" display is an HRT Remote Multi-Video Solution display for configurations that support a display resolution of 1920 x 1080.

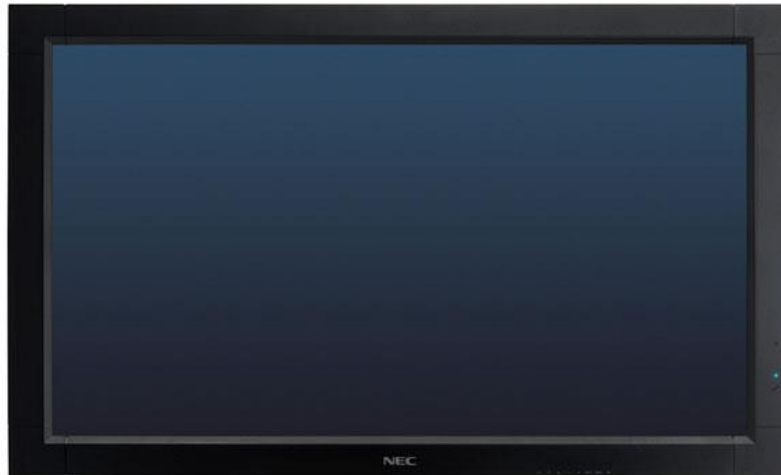


Figure 10 - VAS 32" 1920 x 1080 Display

A warning label must be applied to the lower front bezel of the Remote display at the time of installation. The label (P/N 453564433801) and installation instructions (P/N 453564429461) will be provided with the UV1-R receiver.

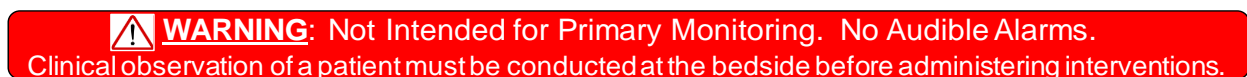


Figure 11 - 453564433801 Remote Display Warning Label

VAS 42"/43" 1920 x 1080 Remote Display

The VAS HP LD4201 and NEC V423 42" displays and the Panasonic 43" TH-43LFE8U display are HRT Remote Multi-Video Solution displays for configurations that support a display resolution of 1920 x 1080.



Figure 12 - VAS 42" 1920 x 1080 Display

A warning label must be applied to the lower front bezel of the Remote display at the time of installation. The label (P/N 453564433801) and installation instructions (P/N 453564429461) will be provided with the UV1-R receiver.



Figure 13 - 453564433801 Remote Display Warning Label

Supported Configurations

VAS HRT Remote Multi-Video Solution – Standalone

VAS HRT Remote Multi-Video Solution (Standalone Configuration) for PIIC and PIIC iX

Notes:
 Remote audio not shown
Underlined> devices are powered via signal cables
 ▶ Devices that must be powered by a UPS
 The maximum CatX cable length between the A/V Splitter and A/V Receiver is 100m (328')

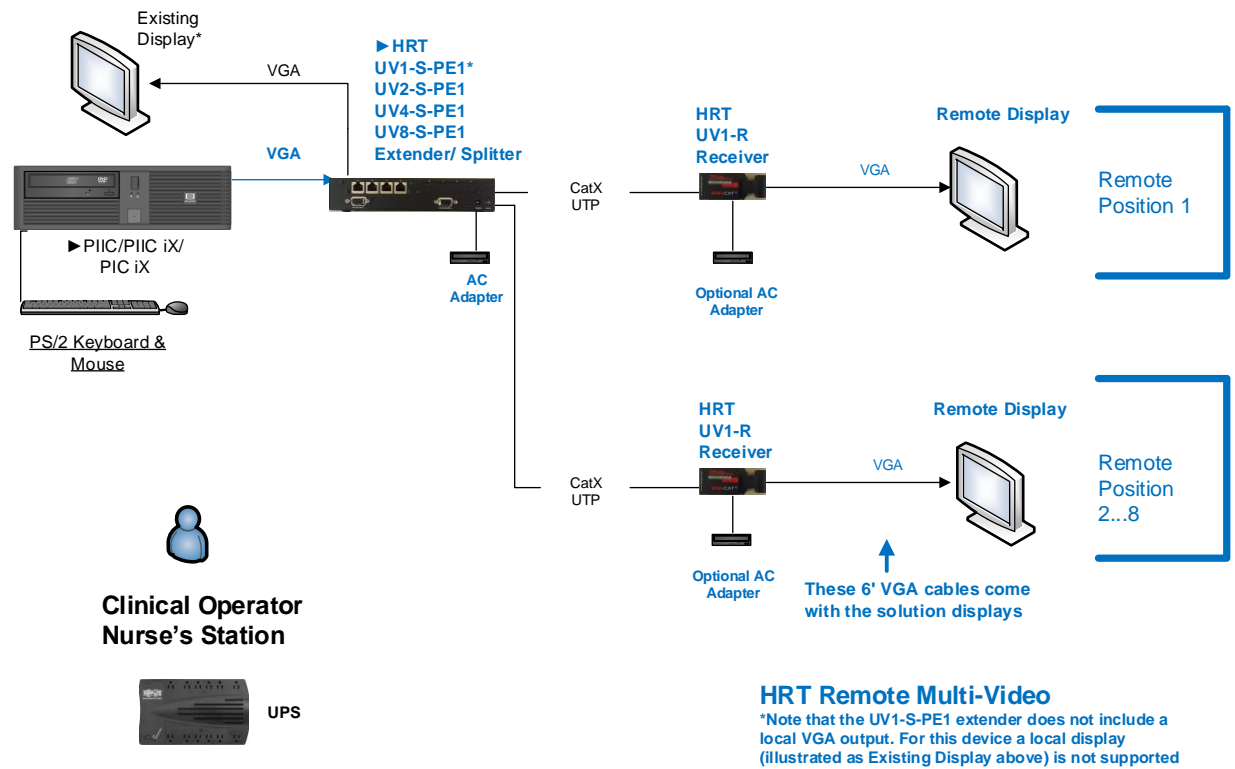


Figure 14 - HRT Remote Multi-Video Standalone Configuration

Notes:

- A maximum of 8 Remote Multi-Video displays are supported per PIIC/PIIC iX/PIC iX.
- The display resolutions supported are configuration dependent. See Table 1 on page 8.
- The maximum CatX cable length between Extender/Splitter and Receiver is 328 feet.
- Mixed resolutions are not supported.
- The optional HRT Skew Corrector is not shown.
- Factory audio is not shown.

VAS HRT Remote Multi-Video Solution with Remote KVM

VAS HRT Remote Multi-Video Solution (with Remote KVM Solution) for PIIC and PIIC iX

Notes:

Remote audio not shown

Underlined devices are powered via signal cables

▶ Devices that must be powered by a UPS

The maximum CatX cable length between the Remote Senders and Receivers is 100m (328 ft)

The maximum CatX cable length between the A/V Splitter and A/V Receiver is 100m (328 ft)

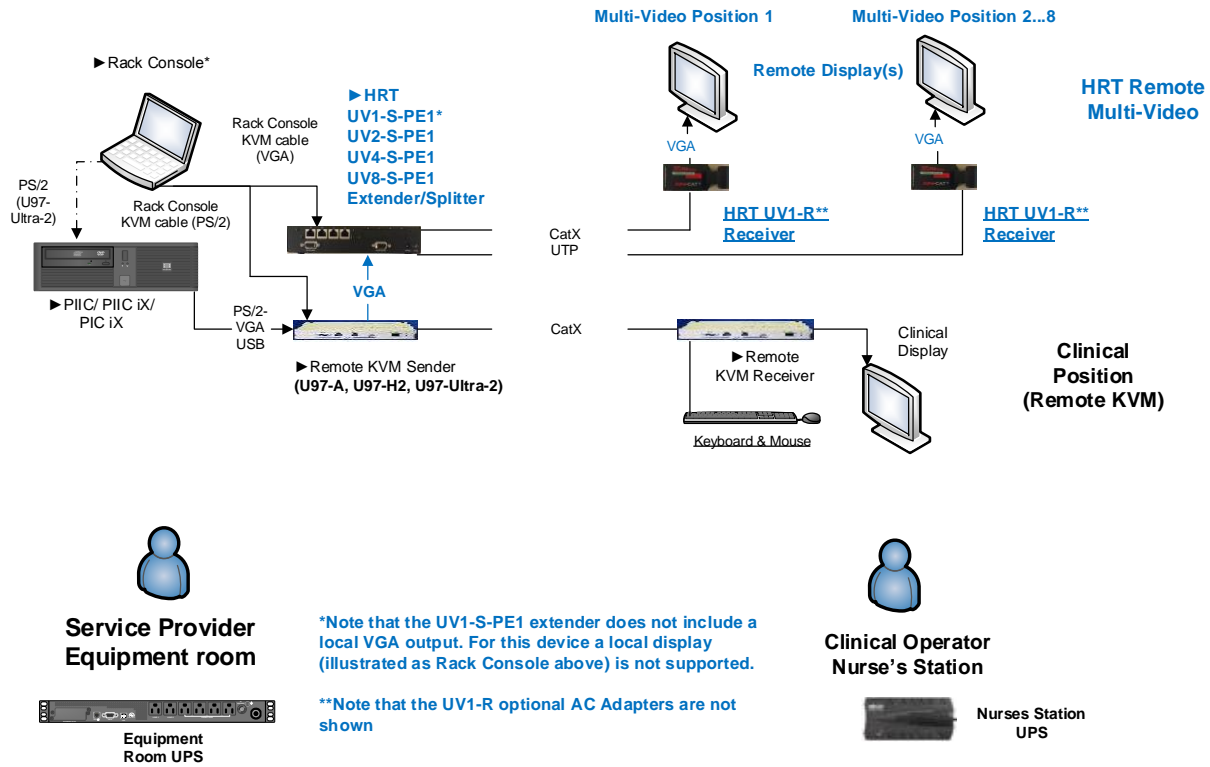


Figure 15 - HRT Remote Multi-Video with Remote KVM Configuration

Notes:

- A maximum of 8 Remote Multi-Video displays are supported per PIIC/PIIC iX/PIC iX.
- The display resolutions supported are configuration dependent. See Table 1 on page 8.
- The maximum CatX cable length between Splitter and Receiver is 328 feet.
- Mixed display resolutions are not supported.
- The optional HRT Skew Corrector is not shown.
- Factory remote audio is not shown.

Hardware Installation Overview

All installation guidelines that apply to the PIIC/PIIC iX/PIC iX also apply to the HRT Remote Multi-Video Solution. Refer to the appropriate PIIC/PIIC iX/PIC iX Installation and Service Manual prior to using this installation instruction.

Cable Plant Noise Immunity

UTP Cat5/5e/6 cable has excellent immunity from noise when installed correctly.

To achieve this quality you must keep all UTP cables and active components as far away as possible from all sources of electrical noise.

These sources include all RF sources and AC powered devices and their power cables.

Data signals can become corrupt and may produce unpredictable results on the networks they support when UTP cables receive excessive electrical noise (e.g. line power surges or spikes).

During cable plant installation all UTP cables, patch panels, wall boxes, and active components should not be:

- In wiring closets where RF transmission sources are used, and
- Within 1 m (3 ft.) of any AC device or AC power cord except where necessary to connect them to workstations or the server.

Do not coil excess data cable – excess cable should be serpentine carefully without bending the cable.

Data Cable Connections

All data connectors should be securely seated in their sockets.

Cables with plugs not firmly attached by screw connectors must be secured to prevent accidental unplugging. When securing cables be sure to provide cable strain relief loops and cinch cable ties securely.

Warning Label

A warning label (P/N 453564433801) must be attached to the lower front bezel of each display that is part of the HRT Remote Multi-Video configuration. This label and associated installation instruction sheet are included with each UV1-R receiver. Additional instructions are provided in the following sections:

- Hardware Installation – Standalone Configuration
- Hardware Installation – Configuration with Remote KVM

The warning label installation instruction sheet (P/N 453564429461) is included for reference at the end of this document.

Video Extender and Splitters

The video extender or video splitter can be installed in an equipment room rack shelf or on a desk top.

Note:

- The extender/splitter must be connected to a battery backup UPS power outlet. For the equipment room UPS see Figure 16; for the Clinical Position UPS see Figure 17.



Figure 16 - Equipment Room UPS Battery Backup Power Outlets

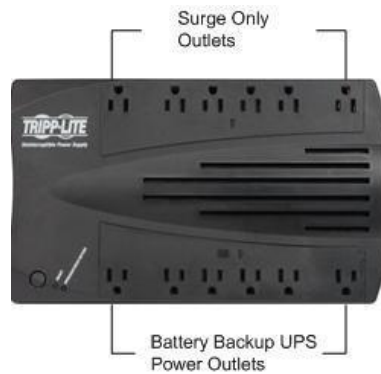


Figure 17 - Clinical Position UPS Battery Backup Power Outlets

UV1-R Video Receiver

The UV1-R receiver is to be installed in a GCX Dual Channel Power Supply mount (P/N WM-0024-05) at the same wall channel where the Remote Multi-Video display is installed. (See figure 18).



Figure 18 – UV1-R Video Receiver Mounting

Note: Ensure that the receiver is accessible for video adjustments as required.

Remote Display(s)

- The 19" and 23" Remote Displays are to be installed using a GCX M Series 8" Pivot Arm (GCX P/N: FLP-0009-01) or an M Series Tilt Only Flush Mount (GCX P/N: FLP-0001-11) at the same wall channel where the UV1-R receiver is installed.
- The HP LD4201 42" Remote Display requires a GCX Flush Wall Mount for Large Flat Panel Displays (GCX P/N: FLP-0010-01) and the Larger Flat Panel Adapter (GCX P/N: FLP-0010-19).
- The NEC V323 32" Remote Display requires a GCX Flush Wall Mount for Large Flat Panel Displays (GCX P/N: FLP-0010-20).
- The NEC V423 42" Remote Display requires a GCX Flush Wall Mount for Large Flat Panel Displays (GCX P/N: FLP-0010-20) and an Adapter (GCX P/N: the FLP-0010-21)
- The Panasonic TH-43LFE8U 43" Remote Display requires a GCX Flush Wall Mount for Large Flat Panel Displays (GCX P/N: FLP-0010-20).

WARNING

- It is the customer's responsibility to have the attachment of the mounting hardware to the ceiling, wall or mounting rail and the construction of the ceiling, wall or mounting rail evaluated for structural integrity and compliance with all local, state and any other required codes by a registered, professional, structural and/or mechanical engineer.

- Ensure that this commitment has been met before assembling mounts.
- Incorrect mounting and use of inappropriate mounting material may lead to injury. It is the customer's responsibility to ensure that the mounting procedures have been performed correctly and the appropriate mounting devices have been used.

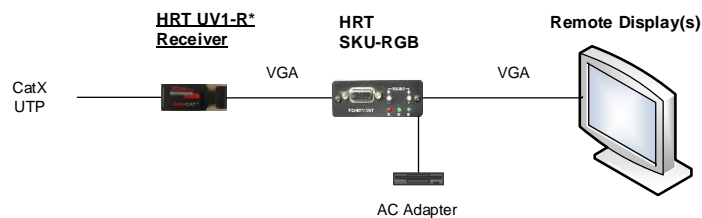
Optional Skew Corrector (SKU-RGB)

The skew corrector is to be located with the UV1-R video receiver.

- Securely connect the skew corrector's VGA male to male cable from the receiver's VGA output connector to the skew correctors PC/HDTV IN connector.
- Securely connect a VGA male to male cable from the skew corrector's PC/HDTV OUT connector to the display's VGA connector
- Attach the AC adapter to the skew corrector and connect to AC power.

VAS HRT Remote Multi-Video Solution for PIIC, PIIC iX, and PIC iX
 Optional Skew Corrector (SKU-RGB)

Underlined devices are powered via signal cables
 ► Devices that must be powered by a UPS
 The maximum CatX cable length between the Remote Senders and Receivers is 100m (328 ft)
 The maximum CatX cable length between the A/V Splitter and A/V Receiver is 100m (328 ft)



*Note that the UV1-R optional AC Adapter is not shown

Figure 19 - Optional Skew Corrector Configuration

Hardware Installation – Standalone Configuration

Video Extender/Splitter

Connect the extender/splitter to the PIIC/PIIC iX/PIC iX PC using the following steps. (See Figures 20, 21)

1. Using the supplied VGA cable, securely connect the PIIC/PIIC iX/PIC iX VGA output* to the VGA input connector of the extender/splitter.
2. Securely connect the local display to the VGA output connector at the splitter.
3. Connect Cat cabling as required.
4. Attach the AC adapter to the extender/splitter and connect to a battery backup UPS outlet.

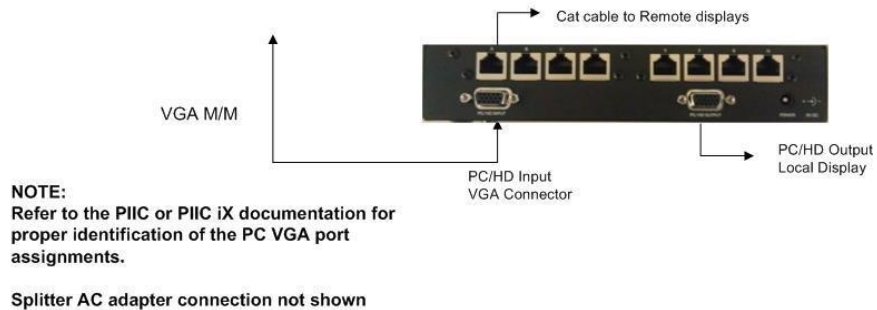
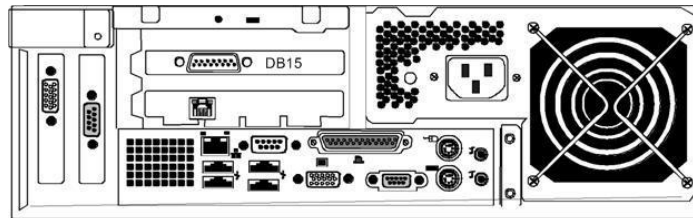
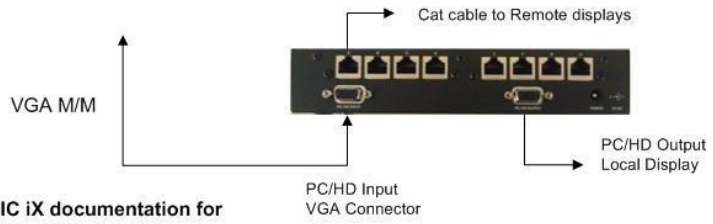
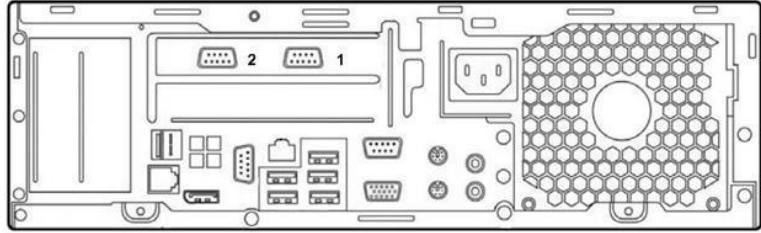


Figure 20 - HP rp5700/rp5700-Turbo Standalone Configuration Interconnection Diagram

*Refer to the PIIC or PIIC iX documentation for proper identification of the PC VGA port assignments.



NOTE:
 Refer to the PIIC or PIIC iX documentation for proper identification of the PC VGA port assignments.

Splitter AC adapter connection not shown

Figure 21 - HP rp5800/HP rp5810 Standalone Configuration Interconnection Diagram

Video Receiver

Connect the receiver to the display using the following steps. (See Figure 22)

1. Securely connect the VGA cable from the receiver's VGA output connector to the display's VGA connector.
2. Connect the Cat cable.
3. Should the optional AC adaptor be required, attach the AC adaptor to the receiver and connect it to an AC outlet.
4. Attach the Warning label (P/N: 453564433801) to the lower front bezel of the display – centered, as shown below. (See Figure 23)



NOTE: Optional receiver AC adaptor connection not shown

Figure 22 - Video Receiver to Display Interconnection diagram

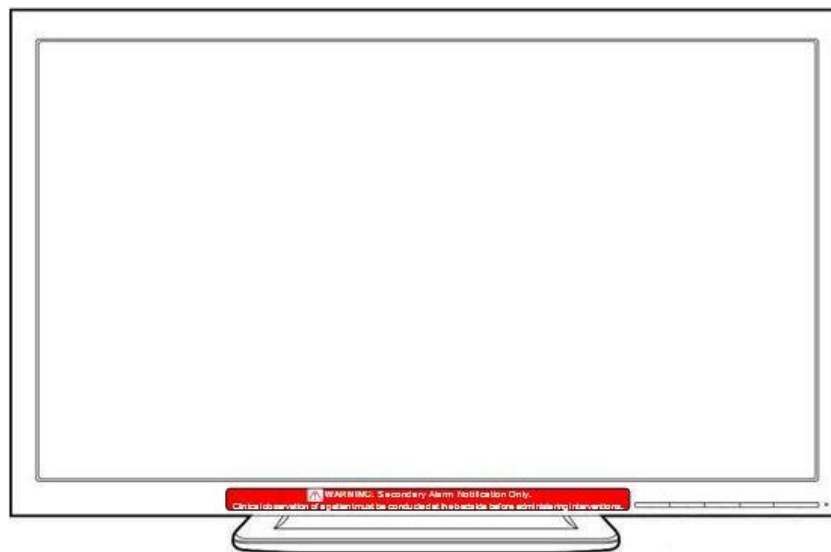


Figure 23 - Remote Display with Warning Label attached

Hardware Installation – Configuration with Remote KVM

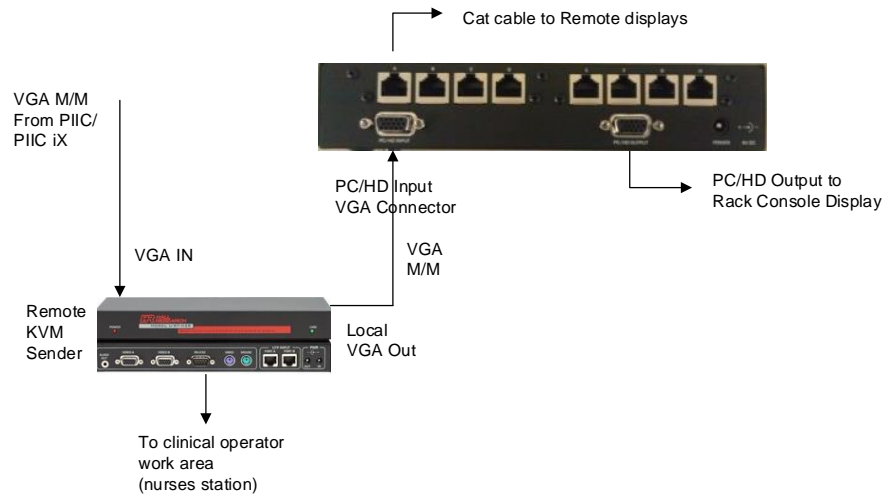
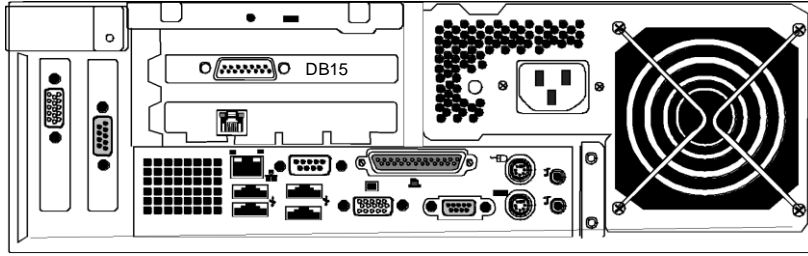
Note: The installation procedure for this configuration is similar to the Standalone configuration as described within the previous section. The major difference is as follows:

- For this configuration the extender/splitter receives video from the local output of the Remote KVM sender as opposed to the PIIC/PIIC iX/PIC iX. The splitter then sends this video to the Rack console in the equipment room via the local VGA output. All downstream connections to remote Multi-Video displays via Cat cabling are the same as described in the previous section.

Video Extender/Splitter

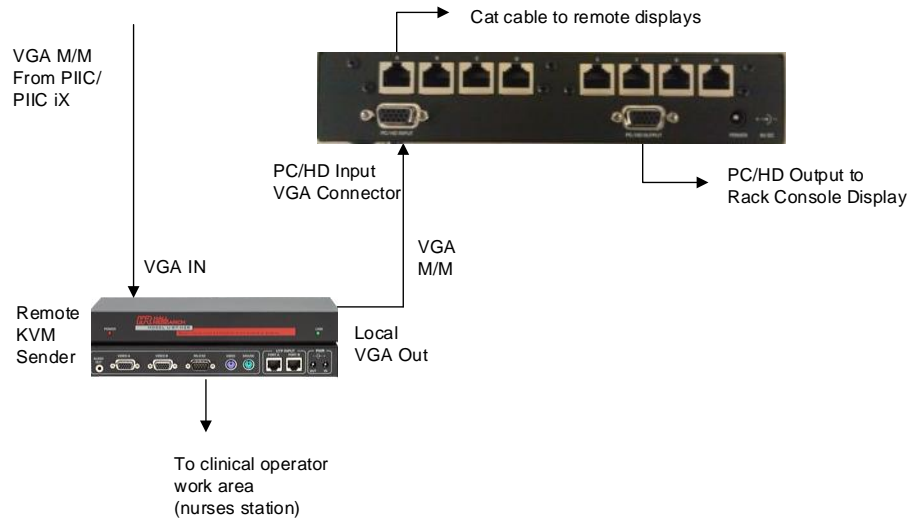
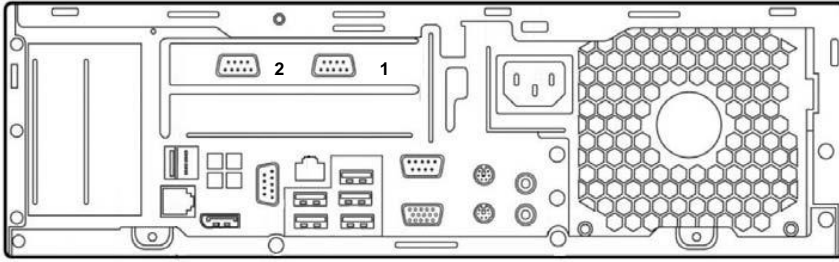
Connect the Extender/Splitter to the PIIC/PIIC iX/PIC iX using the following steps. (See Figures 24 and 25.)

1. Using the supplied VGA cable, securely connect the Remote KVM sender's Local VGA output to the VGA input connector the extender/splitter.
2. Securely connect the VGA segment of the Rack Console KVM cable to the VGA output connector at the splitter.
3. Connect the Cat cabling as required.
4. Attach the AC adapter to the extender/splitter and connect to a battery backup UPS outlet.
5. Continue with any necessary installation steps required for the Remote KVM solution.



NOTE:
 Refer to the PIIC/PIIC iX documentation for proper identification of the PC VGA port assignments
 Splitter AC adapter connection not shown

Figure 24 - HP rp5700/rp5700-Turbo HRT Remote Multi-Video and Remote KVM Interconnection diagram



NOTE:
 Refer to the PIIC/PIIC iX/PIC iX documentation for proper identification
 of the PC VGA port assignments
 Splitter AC adapter connection not shown

Figure 25 - HP rp5800/HP rp5810 HRT Remote Multi-Video and Remote KVM Interconnection diagram

Video Receiver

Connect the receiver to the Remote display using the following steps. (See Figure 26)

1. Securely connect the VGA cable from the receiver's VGA output connector to the display's VGA connector.
2. Connect the Cat cable.
3. Should the optional AC adapter be required, attach the AC adapter to the receiver and connect it to an AC outlet.
4. Attach the Warning label (P/N: 453564433801) to the lower front bezel of the display – centered, as shown below. (See Figure 27)



NOTE: Optional receiver AC adaptor connection not shown

Figure 26 - Video Receiver to Display Interconnection diagram

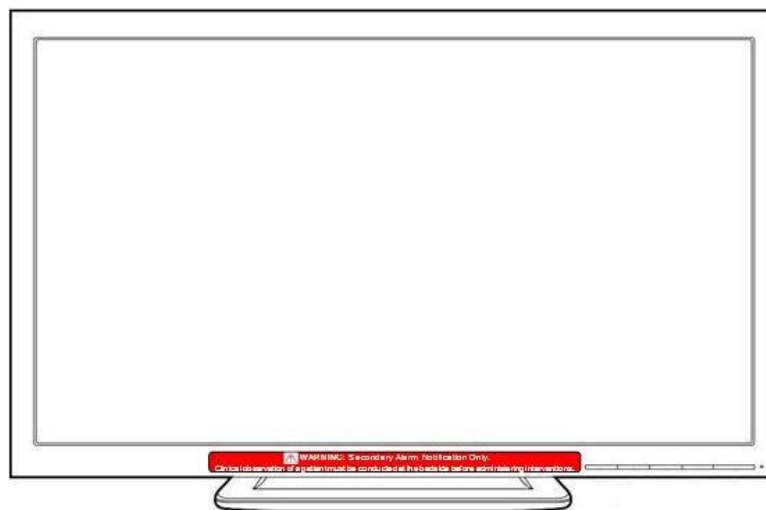


Figure 27 - Remote Display with Warning Label attached

Startup

1. Apply power to remote displays and receivers (if equipped with external AC adapters).
2. For configurations that include a VAS Remote KVM Solution, apply power to all Remote KVM devices.
3. Apply power to the extender/splitter. Apply power to the PIIC/PIIC iX/PIC iX PC.
4. Verify that the PIIC/PIIC iX/PIC iX begins normal startup.

Note: The Remote Video Extender/Splitters supports a Native Resolution of 1280x1024. For Standalone PIIC iX configurations that will support a display resolution of 1920 x 1080, change the resolution from 1280 x 1024 to 1920 x 1080 from within the PIIC iX/PIC iX System Setup → Peripheral Configuration dialog (during installation) or from the Windows Screen Resolution dialog (*Right Click on the Windows desktop and choose Screen resolution*).

Once the higher resolution has been set, restart the PIIC iX/PIC iX to ensure that the change is persistent.

5. Perform the following Video adjustments.
6. After installation is complete, perform the Installation Test Blocks from the Test and Inspection Requirements as described in the PIIC/PIIC iX Installation and Service Manual.

Video Adjustments

Adjust the video at each of the remote displays. Once the video has been adjusted it is persistent and will remain in effect during restarts and power cycles of the video extender/splitters and receivers.

The UV1-R Video receiver features a potentiometer that allows adjustment of the video compensation.

To adjust the compensation:

- Pick a visual element on the display. If the IntelliVue Information Center application is running the white vertical line at the center of the display that separates patient sectors is ideal.
- Turn the adjustment potentiometer fully counter clockwise (CCW)
- Slowly adjust the potentiometer clockwise (CW) until smearing is minimized.

To adjust the skew correction using the optional Skew Corrector:

NOTE: The goal of skew correction is to ensure that the red, green and blue color components of the video image correctly overlap each other on the display.

- Pick a white visual element on the display. If the IntelliVue Information Center application is running the white vertical line at the center of the display that separates patient sectors is ideal. Note the alignment of the red, green and blue color components of the vertical white line.
- Press the SELECT button on the Skew Corrector – the red LED will illuminate.
- If the red component requires alignment use the + and - buttons to move the red component to the right or left to align it with the green and blue components.
- Press the SELECT button again. The green LED will illuminate
- If the green component requires alignment use the + and - buttons to move the green component to the right or left.
- Press the SELECT button again. The blue LED will illuminate.
- If the blue component requires alignment use the + and - buttons to move the blue component to the right or left.
- To exit the adjustment mode press the SEL button until all LEDs are off.

Invoke the Auto-Adjust feature for each remote display in the configuration. Consult the display's user guide for instructions.

NOTE: After performing video adjustments at the ELO display it is critical that the display's On Screen Display (OSD) Lockout is correctly set.

- To enable the OSD Lockout, simultaneously press and hold the Menu and Up buttons on the side of the display. A window will initialize indicating "OSD Unlock" as the buttons are pressed. Continue pressing the buttons until "OSD Lock" is indicated.
- To disable the OSD Lockout to perform adjustments, simultaneously press and hold the Menu and Up buttons on the side of the display. A window will initialize indicating "OSD Lock" as the buttons are pressed. Continue pressing the buttons until "OSD Unlock" is indicated.

System Test

After installation is complete, perform the Installation Test Blocks from the Test and Inspection Requirements as described in the PIIC/PIIC iX Installation and Service Manual.

HRT Remote Multi-Video Front Panel Indicators

The video extender/splitters and receiver include front panel LEDs to indicate that power is applied.

The optional skew corrector includes a front panel LED to indicate that power is applied and red, green and blue LEDs to aid in performing skew adjustments.

Solution Devices

Service Part Number	OEM Model Number	Description	Manufacturer
Devices			
453580442455	UV1-S-PE1	Video extender over Cat	Hall Research
453580442460	UV2-S-PE1	2-Port Video Splitter over Cat	Hall Research
453580442456	UV4-S-PE1	4-Port Video Splitter over Cat	Hall Research
453580442461	UV8-S-PE1	8-Port Video Splitter over Cat	Hall Research
453580442464	UV1-R	Video over Cat Receiver	Hall Research
453580442463	SKU-RGB	Optional Skew Corrector	Hall Research
453580442465	511-PS9016A	9V AC Adapter	Hall Research
Displays			
453580442407	E939583	ELO 19" display, gray	ELO
453580442486	E266835	ELO 19" display, gray	ELO
N/A	E190i	HP 19" 1280 x 1024 display	Hewlett-Packard
N/A	E233	HP 23" Widescreen Display (1920x1080)	Hewlett-Packard
N/A	233Wmi	NEC 23" Widescreen Display (1920x1080)	NEC
N/A	E232	HP 23" Widescreen Display (1920x1080)	Hewlett-Packard
N/A	233WM	NEC 23" Widescreen Display (1920x1080)	NEC
N/A	LA2306x	HP 23" 1920 x 1080 widescreen display	Hewlett-Packard
N/A	E231	HP 23" 1920 x 1080 widescreen display	Hewlett-Packard
N/A	E231i	HP 23" 1920 x 1080 widescreen display	Hewlett-Packard
N/A	E213W-BK	NEC 23" 1920 x 1080 widescreen display	NEC
N/A	V323	NEC 32" 1920 x 1080 widescreen display	NEC
N/A	V323-3	NEC 32" 1920 x 1080 widescreen display	NEC
N/A	V423	NEC 42" 1920 x 1080 widescreen display	NEC
N/A	LD4201	HP 42" 1920 x 1080 widescreen display	Hewlett-Packard
N/A	TH-43LFE8U	Panasonic 43" 1920x1080 widescreen display	Panasonic
UPS (as required)			
453580442416	AVR750U	Clinical Operator work area UPS	Tripp-Lite
453580442451	Smart500RT1U	Equipment room UPS	Tripp-Lite
Mounting			
N/A	FLP-0009-01	M Series 8" Pivot Arm	GCX
N/A	FLP-0001-11	M Series Tilt Only Flush Mount	GCX
N/A	WM-0024-05	Dual Channel Power Supply Mount	GCX
N/A	FLP-0010-20	Flush Wall Mount for Large Flat Panel Displays	GCX
N/A	FLP-0010-21	Large Flat Panel Adapter	GCX

Table 2 - Solution Devices

Troubleshooting

Fuzzy, blurred or ghosting image at the remote display

If you have a stable image but it looks somewhat blurred (edges are not sharp) ensure that the receiver unit's compensation potentiometer has been correctly adjusted.

Verify that recommended maximum cable length (328') has not been exceeded.

If the image appears blurred due to cable skew (where the individual red, green and blue components on the video signal are not correctly superimposed) the optional SKU-RGB skew corrector should be added to the configuration.

The splitter has multiple RJ45 output connectors. When a long Cat cable is connected to any of the outputs the splitter expects a receiver at the far end for proper termination. Do not attach any un-terminated Cat cables to the splitter.

Steady or rolling color hum bars

This is typically an indication of improper grounding either at the splitter end or the receiver end or both. Verify that the AC line is properly wired and that a protective ground is established with NO potential difference between the splitter and receiver locations. The splitter can handle up to 5 volt peak-to-peak of ground noise between the locations but no more.

Shaking image or periodically blanking display

A strong electromagnetic field can cause instability in the video signal. Usual sources are high power AC lines and data and/or control cable that run adjacent to and parallel with a substantial length of the Cat5 cable. To eliminate this place a distance between the Cat cables from the splitter and the interfering source.

Receiver power LED off

Voltage to the receiver is insufficient due to the length of the Cat cable run. Install the optional 9 Volt AC adapter (P/N: 511-PS9016A) available from Hall Research.

Specifications

UV1-S-PE1 Video Extender:

Video Formats:	RGB and YPbPr
Resolution:	Qualified to 1920 x 1080
Bandwidth:	Video: DC to 250 MHz
Maximum distance:	Qualified to 328'
Connectors:	HD15 female for video input and output RJ45 for Cat5 A/V outputs
Compliance:	CE, FCC Part 15 Subpart B Class A, IC Class
Temperature Tolerance:	Operating 32 to 122° F (0-50° C); Storage -40 to +185° F (-40 to +85° C)
Humidity:	Up to 95% non-condensing
Power:	From utility-power (mains) outlet, through included external power adapter. Output voltage: 9 DC center positive
Dimensions:	0.8"H x 1.7"W x 4.5"L

UV2-S-PE1 Video Splitter:

Video Formats:	RGB and YPbPr
Resolution:	Qualified to 1920 x 1080
Bandwidth:	Video: DC to 250 MHz
Maximum distance:	Qualified to 328'
Connectors:	HD15 female for video input and output RJ45 for Cat5 A/V outputs
Compliance:	CE, FCC Part 15 Subpart B Class A, IC Class
Temperature Tolerance:	Operating 32 to 122° F (0-50° C); Storage -40 to +185° F (-40 to +85° C)
Humidity:	Up to 95% non-condensing
Power:	From utility-power (mains) outlet, through included external power adapter. Output voltage: 9 DC center positive
Dimensions:	1.22" H x 4.86" W x 2.60" L

UV4-S-PE1 4-Port Video Splitter:

Video

Gain:	Unity
Number/Signal Type:	1 analog signal input Standard VGA output RGBHV, RGBS, RGSB, RsGsBs, component video (bi/tri-level sync)
Connectors:	4 female RJ-45 output 1 HD15 video input 1 HD15 local video output
Nominal Amplitude:	1 V p-p for Y component video 0.7 v p-p for RGB and for Pr and Pb of component video 4.0 V to 5.0 V p-p for TTL sync levels of RGBHV, RGBS
Impedance:	75 ohms
Maximum Resolution:	Qualified to 1920 x 1080
Sync Polarity:	Positive or negative

General

Power Supply:	100 VAC to 240 VAC, 50/60 Hz, external, 9VDC regulated
Compliance:	CE, FCC Class A
Temperature Tolerance:	Operating 32 to 122° F (0-50° C); Storage -40 to +158° F (-40 to +70°C)
Humidity:	10% to 90% non-condensing
Enclosure:	Steel
MTBF:	90,000 Hours (calculated estimate)
Dimensions:	1.66"H x 8.42"W x 2.60"D
Weight:	1.5 lbs
Shipping Weight:	3.0 lbs
Vibration:	ISTA 1A in carton (International Safe Transit Association)

UV8-S-PE1 8-Port Video Splitter:

Video

Gain:	Unity
Number/Signal Type:	1 analog signal input Standard VGA output RGBHV, RGBS, RGSB, RsGsBs, component video (bi/tri-level sync)
Connectors:	8 female RJ-45 output 1 HD15 video input 1 HD15 local video output
Nominal Amplitude:	1 V p-p for Y component video 0.7 v p-p for RGB and for Pr and Pb of component video 4.0 V to 5.0 V p-p for TTL sync levels of RGBHV, RGBS
Impedance:	75 ohms
Maximum Resolution:	Qualified to 1920 x 1080
Sync Polarity:	Positive or negative

General

Power Supply:	100 VAC to 240 VAC, 50/60 Hz, external, 9VDC regulated
Compliance:	CE, FCC Class A
Temperature Tolerance:	Operating 32 to 122° F (0-50° C); Storage -40 to +158° F (-40 to +70°C)
Humidity:	10% to 90% non-condensing
Enclosure:	Steel
MTBF:	90,000 Hours (calculated estimate)
Dimensions:	1.66”H x 8.42”W x 2.60”D
Weight:	1.5 lbs
Shipping Weight:	4.0 lbs
Vibration:	ISTA 1A in carton (International Safe Transit Association)

UV1-R Video Receiver:

Video Formats:	RGB and YPbPr
Resolution:	Qualified to 1920 x 1080
Bandwidth:	Video: DC to 250 MHz
Maximum distance:	Qualified to 328'
Connectors:	HD15 female for video input and output RJ45 for Cat5 A/V outputs
Compliance:	CE, FCC Part 15 Subpart B Class A, IC Class
Temperature Tolerance:	Operating 32 to 122° F (0-50° C); Storage -40 to +185° F (-40 to +85° C)
Humidity:	Up to 95% non-condensing
Power:	From utility-power (mains) outlet, through included external power adapter. Output voltage: 9 DC center positive
Dimensions:	0.8"H x 1.7"W x 4.5"L

SKU-RGB Skew Corrector:

Video Specs

Connectors:	Inputs and outputs: HD15 female
Coupling:	DC
Signal Level:	Video: 0.7 V p-p
Bandwidth:	150 MHz
Resolution:	Up to 1920 x 1080
Input Impedance:	75 ohms on RGB
Supported Signals:	VGA, RGBHV and YPbPr via HD-15
Dimensions:	2.75" W x 1.1" H x 3.1" D
Weight:	0.5 lbs
Power (included):	UL approved 120 V AC adapter 6 vDC @ 300mA DC output, 2.5MM center positive
Operating Temperature:	32 to 122° F (0-50° C)
Storage Temperature:	14 to +176° F (-10 to +80° C)
Humidity:	10% to 90%, non-condensing

Warning Label Instruction Sheet

The VAS Remote Display for PIIC Classic, PIIC iX, and PIC iX Warning Label Instruction Sheet (P/N 453564429461) is shown below for reference.

PHILIPS

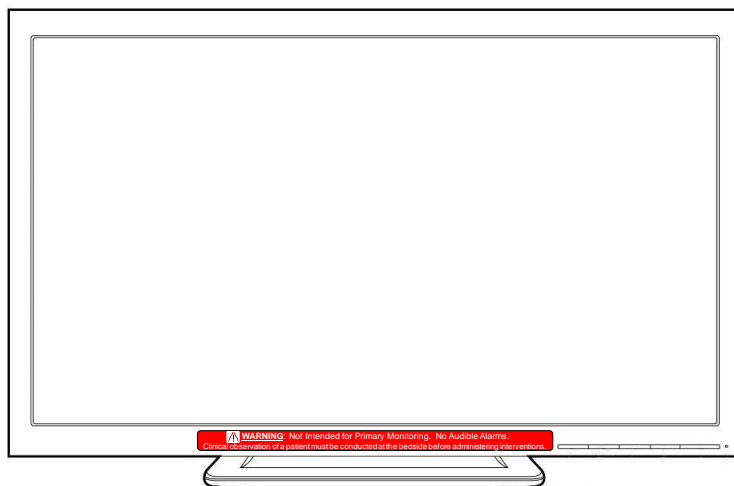
VAS Remote Displays for PIIC Classic, PIIC iX, & PIC iX Warning Label Instruction Sheet

The following warning label (P/N 453564433801) **must** be attached to each VAS display installed with PIIC Classic (Rev L and newer), PIIC iX, and PIC iX in remoted, non-clinical decision making locations.

⚠ WARNING: Not Intended for Primary Monitoring. No Audible Alarms.
Clinical observation of a patient must be conducted at the bedside before administering interventions.

The warning label (P/N 453564433801) is to be installed on the lower front bezel of the remoted VAS display – centered, as shown below.

Read Me First



Read Me First

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