

VGA Video Extender over Cat 5 with Audio and RGB SKEW Calibration

ST122UTPAL



DE: Bedienungsanleitung - de.startech.com

FR: Guide de l'utilisateur - fr.startech.com

ES: Guía del usuario - es.startech.com

IT: Guida per l'uso - it.startech.com

NL: Gebruiksaanwijzing - nl.startech.com

PT: Guia do usuário - pt.startech.com

FCC Compliance Statement

This equipment has been tested and found to comply with the limits 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 in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

Use of Trademarks, Registered Trademarks, and other Protected Names and Symbols

This manual may make reference to trademarks, registered trademarks, and other protected names and/or symbols of third-party companies not related in any way to StarTech.com. Where they occur these references are for illustrative purposes only and do not represent an endorsement of a product or service by StarTech.com, or an endorsement of the product(s) to which this manual applies by the third-party company in question. Regardless of any direct acknowledgement elsewhere in the body of this document, StarTech.com hereby acknowledges that all trademarks, registered trademarks, service marks, and other protected names and/or symbols contained in this manual and related documents are the property of their respective holders.

Table of Contents

Introduction.....	1
Packaging Contents	1
System Requirements	1
Side View 1	2
Side View 2	2
Installation.....	3
Preparing Your Site.....	3
Installing the Local Unit	4
Installing the Remote Unit	4
Driver Installation	5
How to Use.....	5
Mode A Configuration.....	6
Mode B Configuration	6
EDID Copy.....	6
Specifications.....	8
Technical Support.....	9
Warranty Information.....	9

Introduction

This VGA and audio over Cat5 video extender allows you to extend a VGA signal using Cat5 / Cat5e cabling to 4 (2 local and 2 remote) monitors to be connected to a single PC. This transmitter and receiver pair is unique because it offers a rotary control wheel that allows you toggle on/off the display signal to connected display devices on the receiver and adjust audio output volume. Plus, the rotary control wheel can be used to help you fine tune the video signal by offering RGB (red, green, blue) skew calibration, gain, and equalizer controls.

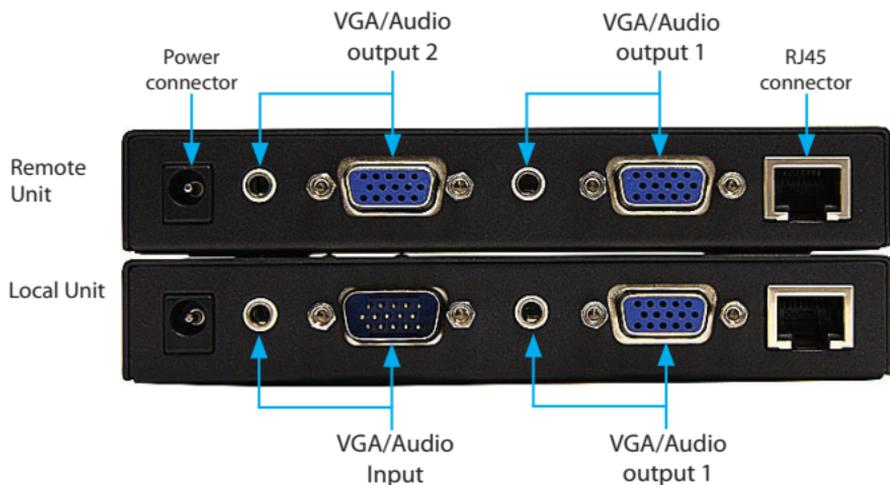
Packaging Contents

- 1 x ST122UTPAL local unit
- 1 x ST122UTPAL remote unit
- 2 x Power Adapter
- 2 x Grounding Wire
- 1 x Instruction Manual

System Requirements

- VGA enabled display device
- VGA enabled video source
- Stereo audio source with 3.5mm mini-jack plug (optional)
- Stereo speakers with 3.5mm mini-jack plug (optional)
- Available electrical power outlet at local and remote locations

Side View 1



Side View 2



Installation

NOTE: To prevent potential electrical damage to the units in some environments, ensure that the chassis is properly grounded. Place cables away from fluorescent lights, air conditioners, and machines that are likely to generate electrical noise.

This product is composed of two different units: the Local Unit and the Remote Unit. The Local Unit takes the output from an analog audio and VGA video signal source (usually a computer) and transmits it to the Remote Unit over UTP Ethernet cable. The remote display(s) (monitor, projector, etc) and speaker(s) connect to the Remote Unit using standard VGA and 3.5mm mini-jack connections respectively and displays the image and audio from the local computer onto the remote display(s) and speaker(s).

Preparing Your Site

1. Determine where the local computer will be located and set up the computer.
2. Determine where the remote display(s) will be located and place/mount them appropriately.
3. If you are using surface cabling, ensure you have enough unshielded twisted pair (UTP) Ethernet cabling to connect the Local Unit to the Remote Unit's location, and that each end is terminated with a RJ45 connector. Make sure the cabling does not go through any standard networking equipment (i.e. routers, modems, switches, etc).

OR

If you are using premise cabling, ensure that the unshielded twisted pair (UTP) Ethernet Cabling between the Local Unit and the Remote Unit has been properly terminated in a wall outlet in each location and there is a patch cable long enough to connect the Remote Unit and the Local Unit to their respective outlets. Make sure the cabling does not go through any standard networking equipment (i.e. routers, modems, switches, etc).

Installing the Local Unit

1. Make sure to power off any display devices and the video source device before attempting the installation.
2. Place the Local Unit near the local video/audio source device.
3. Use a male/female DE-15 VGA cable (not included) to connect the VGA source device (i.e. computer system) to the input on the ST122UTPAL transmitter unit. If using audio, connect a 3.5mm mini-jack cable from the audio input connector to the audio source (i.e. sound card).
4. If using a local monitor, connect a VGA monitor to one of the output connectors on the transmitter unit. If using audio, connect a set of speakers/headphones with a 3.5mm mini-jack connector to the audio output connector. Both sets of outputs on the Local unit are identical.
5. Connect the UTP Ethernet cable to the RJ45 connector on the Local unit.
6. Connect the power adapter from an available power outlet to the Local unit.

Installing the Remote Unit

1. Connect the Remote Unit to the UTP cable connected from the Local Unit.
2. Connect a VGA cable from the remote display to one of the VGA output connectors on the remote unit. If using audio, connect speakers to the 3.5mm mini-jack port from the same set of outputs.
OPTIONAL: A second set of display and speakers can be connected to the Remote Unit via the second set of outputs. Both outputs are identical.
3. Connect the Power Adapter (provided) into an appropriate power source and plug the opposite end into the power connector on the Remote Unit.
CAUTION: The UTP Ethernet cables that connect the Local and Remote Units carry electrical current and should not be plugged into any other devices, as they may cause damage. We strongly recommend marking the Ethernet cables you are using with this product at both locations for easy identification.

Driver Installation

No driver installation is required for the video extender as it is an external hardware-only solution, invisible to the computer system.

How to Use

The rotary wheel on the Remote Unit is used to access the various features available on the video extender. There are two configuration mode available.

Mode A: This mode allows for selection of the physical connector on the unit to adjust (VGA or 3.5mm mini-jack) as well as volume control and video ON/OFF.

Mode B: This mode allows for adjustments to the video signal output, including Equalization, Gain and RGB skew calibration.

To activate the configuration modes, follow these steps:

1. After installing and powering on the Local and Remote units, the Power LED on the Remote Unit should light up solid green.
2. Press and hold the rotary wheel on the Remote Unit for several seconds and the set of LED indicators under Output 1 and 2 should start flashing. This indicates the unit is in configuration Mode A.
3. Continuing to hold the rotary wheel for another several seconds will cause the Equalizer/Gain/Skew LEDs to start flashing. This indicates the unit is in configuration Mode B.
4. Release the rotary wheel when the unit enters the desired configuration mode.

NOTE: The unit will return to normal operating mode if left idle for 20 seconds.

Mode A Configuration

When in Mode A, each press of the rotary wheel will switch between the different physical ports available on the unit (VGA and audio). When selected to a video output, rotating the wheel will toggle the output ON or OFF. When selected to an audio output, rotating the wheel will increase or decrease the volume output accordingly. The LED strength will reflect the volume level (i.e. brighter indicates higher volume).

Mode B Configuration

When in Mode B, each press of the rotary wheel switches between the different signal calibration modes: equalization, gain, red skew, green skew and blue skew. Rotating the wheel in any of these calibration modes will adjust the output signal accordingly.

NOTE: Before selecting Mode B, first enter Mode A and select a video output connector. Then when entering Mode B, the video calibration will affect that output only. If using both outputs on the Remote unit, this process will need to be done to both separately.

EDID Copy

In some cases display problems may arise due to incorrect EDID communication between the display device and the computer graphics card or insufficient EDID data programmed into the display device. The Local Unit provides an "EDID Copy" feature that allows the Local Unit to read the necessary EDID information from the locally attached display device and then provide it, at all times, to the attached video source. If no new EDID information is available from a display device, a default profile built into the Local Unit is automatically provided.

Load Default EDID

When using a non-EDID compliant display device, the ST122UTPAL can automatically select viable EDID data from the Unit's default EDID profile to set the EDID information up. Users can enable this default EDID profile by following the instructions below:

1. Press and Hold the button "EDID Copy" on the side panel of the Local Unit.
2. Plug in the provided power adapter to the Local Unit, while still holding the button.
3. Release the "EDID Copy" button immediately after one confirmation beep. The power LED light will be steady green, indicating that the EDID copy (communication) is completed and the default profile loaded.

4. Connect the monitor(s) to the output port on the Local Unit. The Local Unit is ready to operate now.

Copy EDID (Port 1 only)

When using an EDID compliant display device, the ST122UTPAL's EDID Copy function will enable proper EDID communication between the monitor and the computer's video card for optimal video quality. Users can enable this EDID communication by following the instructions below:

1. Plug in the provided power adapter to the Local Unit.
2. Connect the EDID compliant display device to the "Port 1" output on the Local Unit.
3. Press and hold the "EDID Copy" button on the side panel of the Local Unit for about two (2) seconds. Release button "EDID Copy" immediately after two confirmation beeps.
4. If one long beep occurs, it means that the display device is not properly connected to "Port 1" on the Local Unit or does not contain proper EDID information. Please repeat Step 2 to 3 to try again or attempt with a different display device.

Specifications

Video Signal	VGA (RGBHV)
Connectors (Transmitter Unit)	2 x DE-15 VGA female 1 x DE-15 VGA male 3 x 3.5mm mini-jack 1 x RJ45 1 x DC Power
Connectors (Receiver Unit)	2 x DE-15 VGA female 2 x 3.5mm mini-jack 1 x RJ45 1 x DC Power
LEDs (Transmitter Unit)	Power/EDID Copy, Video input
LEDs (Receiver Unit)	Skew/Video Input, Gain, EQ, Video Output 1, Video Output 2, Audio Output 1, Audio Output 2
Maximum Video Resolution	1920x1200@300m
Maximum Cable Length	300m/950ft
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)
Storage Temperature	-20°C ~ 60°C (-4°F ~ 140°F)
Humidity	0 ~ 80% RH
Power Adapter	9~12VDC, 1500mA
Dimensions (each)	140.0mm x 104.6mm x 23.0mm
Weight (each)	970g

Technical Support

StarTech.com's lifetime technical support is an integral part of our commitment to provide industry-leading solutions. If you ever need help with your product, visit www.startech.com/ support and access our comprehensive selection of online tools, documentation, and downloads.

Warranty Information

This product is backed by a two year warranty.

In addition, StarTech.com warrants its products against defects in materials and workmanship for the periods noted, following the initial date of purchase. During this period, the products may be returned for repair, or replacement with equivalent products at our discretion. The warranty covers parts and labor costs only. StarTech.com does not warrant its products from defects or damages arising from misuse, abuse, alteration, or normal wear and tear.

Limitation of Liability

In no event shall the liability of StarTech.com Ltd. and StarTech.com USA LLP (or their officers, directors, employees or agents) for any damages (whether direct or indirect, special, punitive, incidental, consequential, or otherwise), loss of profits, loss of business, or any pecuniary loss, arising out of or related to the use of the product exceed the actual price paid for the product. Some states do not allow the exclusion or limitation of incidental or consequential damages. If such laws apply, the limitations or exclusions contained in this statement may not apply to you.

StarTech.com

Hard-to-find **made easy**®

Hard-to-find made easy. At StarTech.com, that isn't a slogan. It's a promise.

StarTech.com is your one-stop source for every connectivity part you need. From the latest technology to legacy products — and all the parts that bridge the old and new — we can help you find the parts that connect your solutions.

We make it easy to locate the parts, and we quickly deliver them wherever they need to go. Just talk to one of our tech advisors or visit our website. You'll be connected to the products you need in no time.

Visit **www.startech.com** for complete information on all StarTech.com products and to access exclusive resources and time-saving tools.

StarTech.com is an ISO 9001 Registered manufacturer of connectivity and technology parts. StarTech.com was founded in 1985 and has operations in the United States, Canada, the United Kingdom and Taiwan servicing a worldwide market.