

Video/Serial Extender

VGA & RS-232 Cat 5 Extender

ST121UTP232

Instruction Manual



Actual product may vary from photo

StarTech.com

The Professionals' Source for Hard-to-Find Computer Parts

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.

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Introduction

Thank you for purchasing a StarTech.com VGA and RS-232 Serial extender. This product allows you to extend the range of a Serial and/or VGA signal source (usually a computer) up to 1000 feet (300 meters) using industry-standard Ethernet cabling, making it ideal for classrooms, meeting areas, houses of worship, and any other application that would benefit from a comprehensive multimedia or peripheral extension solution.

Features

- Reliably extends VGA and/or RS-232 Serial signals to a remote location up to 1000 feet (300 meters) from a local source
- Easy installation using standard Category 5 unshielded twisted pair (UTP) cabling
- A completely hardware-based solution: no software or drivers required
- Includes contrast and brightness adjustments for added picture quality

Before You Begin

System Requirements

- VGA and/or RS-232 Serial cable for connection between:
 - Signal source and local unit
 - Remote unit and destination (typically provided by display)
- Standard UTP cable for connection between local and remote units
- An available power receptacle for local unit
- An available power receptacle for remote unit
- Unshielded Category 5 twisted pair (UTP) straight-through Ethernet cable terminated at local and remote units with RJ45 connectors

Contents

This package should contain:

- 1 x CAT5 VGA & Data Extender Transmitter
- 1 x CAT5 VGA & Data Extender Receiver
- 2 x 12V DC, 500mA Power Adapters
- 1 x Instruction Manual
- 2 x Package of 4 rubber stoppers

Connecting Your Signal Extender

This product is composed of two separate units: the Local Unit and the Remote Unit. The Local Unit takes the output from a VGA and/or RS-232 Serial data source and transmits it to the Remote Unit over Category 5 Ethernet cable. The local signal source (VGA and/or Serial) is connected to a local unit, which transmits the signal to the remote unit, up to 300m away. The remote display connects to the Remote Unit using a standard VGA connection and displays the image from the local computer on the remote display.

NOTE: The total length of cable between the Local and Remote Units cannot exceed 1000 feet (300 meters), including patch cables (if used).

NOTE: Long cable lengths between the Local and Remote Units may adversely affect image quality at high resolutions and refresh rates. If you need to run your remote displays at high resolutions and frequencies, use as little Ethernet cabling between locations as possible and avoid practices such as “coiling” unused cable in a ceiling or behind the display.

Preparing Your Site

Prior to installation, please ensure that the site is prepared to accommodate the location of the local and remote units.

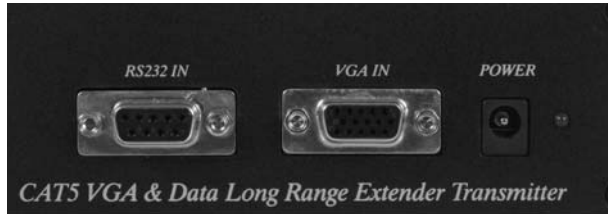
1. Determine where the local computer will be located and set up the computer.
2. Determine where the remote display(s) will be located and place/mount them appropriately.
3. If you are using surface cabling, ensure you have enough Category 5 unshielded twisted pair (UTP) Ethernet cabling to connect the Local Unit to the Remote Unit's location, and that each end is terminated with a RJ-45 connector.

OR

- 3b. If you are using premises cabling, ensure that the Category 5 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.
4. Ensure that both the remote and local units are close enough to an available power outlet, to safely connect.

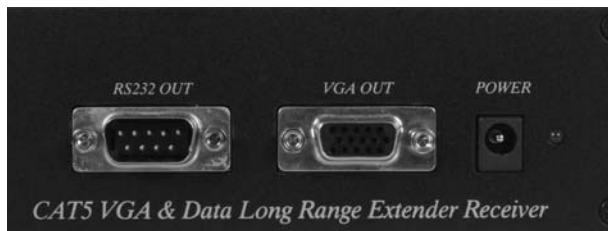
Please note that the following instructions assume that both Serial and VGA connections will be used. If you are using the extender with only serial or only VGA, please disregard any steps pertaining to the unused connection.

Installing the Local Unit



1. Place the Local Unit near the computer.
2. Switch off the computer and disconnect any existing VGA connections.
3. Connect one end of a standard VGA cable to the port marked **VGA IN**, located on the rear panel of the local unit.
4. Connect the remaining end of the VGA cable used in step 3, to the **VGA OUT** port on the computer (or other signal source).
5. Connect one end of an RS-232 Serial cable to the port marked **RS232 IN** on the Local Unit.
6. Connect the remaining end of the RS-232 cable used in step #5, to the Serial output port on the host computer.
7. Insert the round, metal connector from the 5V DC power adaptor to the port marked **POWER** on the rear panel of the local unit.
8. Connect the remaining end of the power adapter to an available power receptacle.
9. **Optional:** If you wish to locate a display near the local connection, please insert the VGA cable provided by the monitor/display to the VGA OUT port located on the front panel of the local unit.

Installing the Remote Unit



1. Place the Remote Unit near the display and/or serial peripheral you wish to use.

2. Connect the VGA display to the port marked **VGA OUT**, located on the rear panel of the remote unit.
3. Connect the **RS232 OUT** port located on the rear panel of the Remote Unit to the desired Serial peripheral.
4. Connect the rounded metal connector from the 5V DC power adapter to the port marked **POWER** on the rear panel of the remote unit.
6. Connect the remaining end of the power adapter to an available power receptacle.

Linking the Local and Remote Units

Once the Local and Remote Units have been situated and installed, connect the two devices using standard Cat5 cable terminated at both ends with an RJ45 connector. For longer transmissions, it is advisable to use as little Cat5 cable as possible (i.e. avoid using excess cable), to ensure optimum picture quality at the remote display.

Fine Tuning the image displayed on the Remote Unit

The Remote Unit provides controls for contrast and brightness. To optimize picture quality, use a slot head screw driver to rotate the brightness and contrast dials located on the front panel of the Remote Unit. Turning the respective dials in a clockwise fashion will yield an increase in the element being adjusted, while rotating the dial in a counter-clockwise fashion, will decrease the quality of the element being adjusted.

Specifications

Maximum resolution support	1600 x 1200 @ 85Hz
Transmission distance	Up to 1000ft (300m)
Video amplifier bandwidth	150MHz
Input signals	RGB Analog (75Ω, 0.7Vp-p) + DATA Sync Signal H/V Separated (TTL) RS232 Data DB9 Connector
Horizontal frequency range	30-95KHz
Vertical frequency range	50-180Hz
VGA connector	15-pin Mini D-Sub (High Density)
Link connector	RJ-45
Power supply	2 x 12V DC 500mA (External)
Power consumption	Local Unit: 150mA (Max) Remote Unit: 250mA (Max)
Cable for RJ-45	CAT 5 unshielded Twisted Pair Cable (UTP) x 1
Temperature	Operation: 0 to 55°C Storage: -20 to 85°C Humidity: up to 95%
Dimensions (W x H x D)	Local and Remote Units: 133 x 70 x 44mm
Weight	1400g (local and remote units)

Accessory Products from StarTech.com

Contact your local StarTech.com dealer or visit www.startech.com for cables or other accessories that will help you get the best performance out of your new product.

25 ft Blue Snagless Category 5e (350 MHz) UTP Patch Cable
RJ45PATCH25

35 ft Blue Snagless Category 5e (350 MHz) UTP Patch Cable
RJ45PATCH35

50 ft Blue Snagless Category 5e (350 MHz) UTP Patch Cable
RJ45PATCH50

75 ft Blue Snagless Category 5e (350 MHz) UTP Patch Cable
RJ45PATCH75

100 ft Blue Snagless Category 5e (350 MHz) UTP Patch Cable
RJ45PATCH100

(other colors and lengths available)

6 ft. Coax SVGA Monitor Cable HDDB15M/M
MXT101MMHQ

25 ft. Coax SVGA Monitor Cable HDDB15M/M
MXT101MMHQ25

50 ft. Coax SVGA Monitor Cable HDDB15M/M
MXT101MMHQ50

15 ft. Coax SVGA Monitor Extension Cable HDDB15M/F
MXT105HQ

15 ft. Coax SVGA Monitor Cable HDDB15M/M
MXT105MMHQ

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 our Web site to access our comprehensive selection of online tools, documentation, and downloads.

USA/Canada: www.startech.com/support

UK/Ireland/Europe: uk.startech.com/support

Warranty Information

This product is backed by a one-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.

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