USB/VGA Cat 5 UTP Console Extender

SV565UTPU
SV565UTPUGB
SV565UTPUEU

Instruction Manual



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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 KVM extender. This product allows a computer to control a host system from a remote location at a distance of up to 500 feet (150 meters). For ease of installation, this product uses standard Category 5, 5E, or 6 network cabling that fits easily into almost any existing network infrastructure. For added versatility, the KVM extender supports either PS/2 or USB computer interfaces. Console support is provided using standard USB and VGA connectors.

Features

- Can be used with a single computer or connected to an existing KVM switch
- Easy installation using industry-standard UTP network cable
- Intuitive hotkey commands
- Supports auto-switching between host and remote users or dedicated control
- USB computers are supported at the host and remote locations (USB keyboard and mouse required for remote console)

System Requirements

1 x integrated KVM cable each for the host and remote computers. Longer cables are available from StarTech.com, part numbers: SVECONx (PS/2), SVECONUSx (USB)

- Unshielded Category 5/5e/6 twisted pair (UTP) straight-through network cable terminated at each end with RJ-45 connectors (if using surface cabling)

  OR

- Unshielded Category 5/5e/6 twisted pair (UTP) straight-through network cable terminated at each end in a wall-mounted outlet, with a standard Category 5/5e/6 patch cable, at both locations (if using premises cabling)

NOTE: The total length of cable between the Host and Remote Units

cannot exceed 500 feet (150 meters), including patch cables (if used). Category 5e and 6 cabling is compatible with this product and may improve performance.

NOTE: Long cable lengths between the Host 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 cabling between locations as possible and avoid practices such as "coiling" unused cable in a ceiling.

This product will also control a KVM switch, allowing you to manage more than one computer remotely. In this configuration, you can connect the KVM extender's *Host* Unit to the "console" ports on the KVM. You must use the provided power adapters if using this configuration. You should set the *Host* Unit to Compatibility Mode before connecting it to a KVM that uses the [*Ctrl*] key as its hotkey sequence; see page 8 for details.

Package Contents

1 x Host Unit

1 x Remote Unit

1 x Instruction Manual

1 x Power adapter

2 x 6 ft. 2-in-1 USB VGA KVM cables

1 x Set of rubber mounting feet

Connecting Your KVM Extender

Preparing Your Site

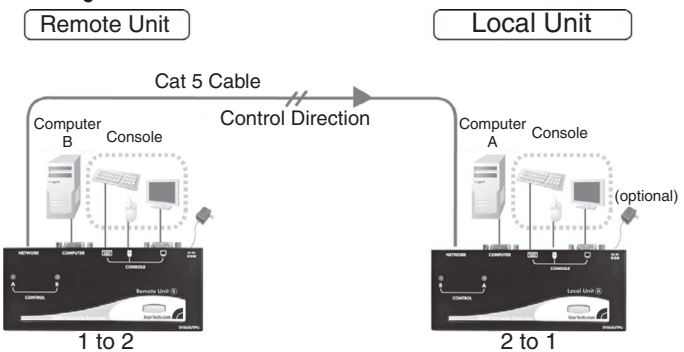
Before you can install the the product, you need to prepare your site.

1. Determine where the *host* computer will be located and set up the computer.
2. Determine where the console devices (mouse, keyboard, monitor) will be located and place them appropriately.
3. a) If you are using surface cabling, ensure you have enough Category 5 unshielded twisted pair (UTP) network cabling to connect the *Host* Unit to the Remote Unit's location, and that each end is terminated with a RJ-45 connector.

   OR

3. b) If you are using premises cabling, ensure that the Category 5 unshielded twisted pair (UTP) network cabling between the *Host* 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 *Host* Unit to their respective outlets.

Installing the Host Unit



1. Place the *Host* Unit near the computer.
2. Switch off the computer and disconnect any connected devices.
3. Using the provided StarTech.com integrated KVM cable (see page 15 for alternative part numbers), connect the end of the cable that has two (USB) or three (PS/2 + VGA) connectors to the VGA Out connector and the USB or mouse and keyboard PS/2 connectors on the computer as appropriate. (The PS/2 version of the cable is color-coded.) Connect the opposite end of the cable with a single connector to the gray-coded connector marked COMPUTER on the *Host* Unit of the KVM extender.
4. If you wish to have console access to the *host* computer, connect a USB mouse, keyboard, and VGA monitor to the indicators marked as CONSOLE on the *Host* Unit.
5. Connect the UTP cable connection for Remote Unit to the NETWORK RJ-45 connector on the *Host* Unit. Connect the opposite end to a terminated wall outlet (if you are using premises cabling).

Installing the Remote Unit

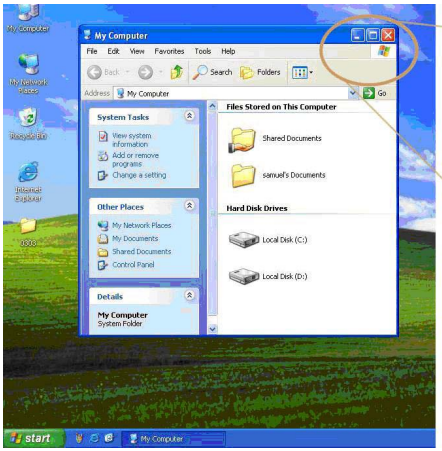
1. Place the Remote Unit near the computer.
2. Switch off the computer and disconnect any existing VGA and input connections.
3. Using a StarTech.com integrated KVM cable (see page 15 for part numbers), connect the end of the cable that has two (USB) or three (PS/2) connectors to the VGA Out connector and the USB or mouse and keyboard PS/2 connectors on the computer as appropriate. (The PS/2 version of the cable is color-coded.) Connect the opposite end of the cable with a single connector to the gray-coded connector marked COMPUTER on the Remote Unit of the KVM extender.
4. Connect a USB mouse, keyboard, and a VGA monitor to the indicators marked as CONSOLE on the Remote Unit.
5. Connect the UTP cable connection for Remote Unit to the NETWORK RJ-45 connector on the Remote Unit. Connect the opposite end to a terminated wall outlet (if using premises cabling).

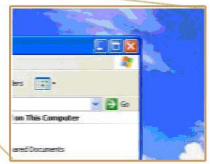


CAUTION: The UTP network cables that connect the Host and Remote Units carry electrical current and should not be plugged in to other devices, as they may cause damage. We strongly recommend marking the cables you are using with this product at both locations for easy identification.

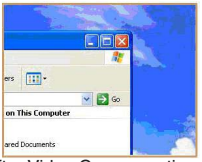
Video Compensation

Video Compensation allows the user to adjust the equalization on the *Remote* Unit to optimize video performance based on the length of cable being used, as well as other factors that may affect . There are five segments of various lengths of CAT 5 cables from which to chose; to achieve the best visibility, please refer to the section titled *Keyboard Shortcut Command Sequences,* to adjust the video compensation.





Before Video Compensation



After Video Compensation

First, note the length of CAT 5 cable you used. Then, use the hotkeys to adjust the video compensation accordingly. You can use the hotkey sequence as outlined in the section titled *Keyboard Shortcut Command Sequences*.

Using the KVM Extender

This section details how to use your KVM extender at both the *host* and remote locations.

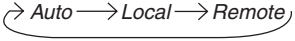
Using the Host Unit

The *Host* Unit allows users connected to the *Host* and *Remote* units to share control of devices (hosts, computers, KVM Switches) connected to it.

The *Host* Unit has three modes that control which user may access the system at a given time: *Auto* (the KVM extender looks for keyboard or mouse activity from both A and B and automatically accepts input from the active console), *Local* (only the user seated at the *Host* unit can access the system), and *Remote* (only the user at the *Remote* station can access the system).

You can use either keyboard shortcuts (if there is a keyboard and mouse attached) or the mode switch on the top of the *Host* Unit to control which user has access to devices connected to the *Host* unit, by pressing the button in sequence.

By default, the *Host* Unit operates in *Auto* mode, and switches to the next mode in the sequence each time the switch is pressed as follows:



Having a keyboard and mouse attached to the console ports on the *Host* Unit is recommended, since it offers access to a number of extended features.

LED Indicators

Mode	**A** Indicator	**B** Indicator
Auto (Auto senses activity)	Flashing	Flashing
Local (User at Local Unit has exclusive control)	On (solid)	Off
Remote (User at Remote Unit has exclusive control)	Off	On (solid)

Keyboard Shortcut Command Sequences

Standard Command	With Compatibility Mode Enabled	Description
[Ctrl] - [Ctrl] - [T]	[Ctrl] - [Ctrl] - [T]	Toggles control of Computer A between *Auto*, *Local*, and *Remote* modes
[Ctrl] - [Ctrl] - [Esc]	[Ctrl] - [Ctrl] - [Esc]	Cancels the hotkey sequence
[Ctrl] - [Ctrl] - [Alt]+[E]	[Ctrl] - [Ctrl] - [Alt]+[E]	*Enables* (2 beeps) or *disables* (1 beep) Compatibility Mode so that the KVM extender will work with a KVM switch that also uses a [Ctrl] hotkey sequence
[Ctrl] - [Ctrl] - [1]	[Ctrl] - [Ctrl] - [E] - [1]	**Local Mode**: Allows the user at Local Unit *A* exclusive access to the system; remote access from Remote Unit *B* (*Remote* Unit B) is disabled
[Ctrl] - [Ctrl] - [2]	[Ctrl] - [Ctrl] - [E] - [2]	**Remote Mode:** Allows the console at Remote Unit *B* exclusive access to Computer *A*; access to the computer from the Host Unit is disabled
[Ctrl] - [Ctrl] - [3]	[Ctrl] - [Ctrl] - [E] - [3]	**Auto Mode:** Wait for console activity
[Ctrl] - [Ctrl] - [F3]	[Ctrl] - [Ctrl] - [E] - [F3]	Sets the interval of inactivity in seconds that the Host Unit will wait before returning to Auto Mode after a Unit has assumed control
[Ctrl] - [Ctrl] - [F4]	[Ctrl] - [Ctrl] - [E] - [F4]	Adjusts the typematic rate for improved keyboard responsiveness (PS/2 keyboard only)

Standard Command	With Compatibility Mode Enabled	Description
[Ctrl] - [Ctrl] - [F6]	[Ctrl] - [Ctrl] - [E] - [F6]	**Privacy Setting:** **A. Local Unit in Local mode** (LED B: Off, LED A: On) 1 beep: Reset to Factory Default. 2/3 beeps: Disable the Local Unit output video signal. **B. Local Unit in Auto mode** (LED A&B flashes alternately) 1 beep: Reset to Factory Default. 2 beeps: Upon keyboard/ mouse activation, disables the Local Unit video output temporarily. (Set for 5,15,30 or 60 second interval) 3 beeps: Upon keyboard/ mouse activation the Remote Unit or Local Unit users can disable the output video signal temporarily. (The user can protect their privacy for 5,15,30,60 seconds)
[Ctrl] - [Ctrl] - [F12]	[Ctrl] - [Ctrl] - [E] - [F12]	Resets PS/2 mouse synchro-nization

Beep Codes

Some of the keyboard command sequences you issue to the *Host* Unit have multiple possible settings. The unit will beep to indicate what setting you have selected for the command you issued. (A short beep followed by a long beep indicates an invalid command.)

[Ctrl] - [Ctrl] - [Alt]+[E] (Compatibility Mode)

1 beep: disabled

2 beeps: enabled

[Ctrl] - [Ctrl] - [F3] (Inactivity Interval for *Auto* Mode)

1 beep: 5 seconds

2 beeps: 15 seconds

3 beeps: 30 seconds

4 beeps: 60 seconds

[Ctrl] - [Ctrl] - [F4] (Typematic Rate)

1 beep: 6 characters/sec.

2 beeps: 12 characters/sec.

3 beeps: 20 characters/sec.

4 beeps: 30 characters/sec.

Note: Commands described in the [Key] - [Key] format are keys that must be pressed in order on the keyboard. Commands described in the [Key]+[Key] format must be pressed simultaneously.

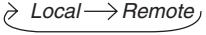
Note: If the *Num Lock*, *Caps Lock*, and *Scroll Lock* lights are flashing in unison on the keyboard, the other Unit has control of Computer A. You will not be able to use the computer or issue commands until the other unit has finished using the computer.

Note: If the Extender is operating in *Compatability Mode* ([Ctrl] - [Ctrl] - [E] hotkey sequence), you must enter [Ctrl] - [Ctrl] - [E] - [E] to access port E on the attached KVM switch.

Using the Remote Unit

The *Remote* Unit allows a user at the *Remote* Unit to assume control of devices connected to the *Host* Unit, if the *Host* Unit is set to *Auto* or *Remote* mode, and it also permits the user seated at the *Remote* Unit to use any connected system as though the KVM Extender was transparent.

You can use either keyboard shortcuts or the mode switch on the top of the *Host* Unit to alternate control between A and B. Unlike the *Host* Unit, however, the switch on top of the Remote unit only offers two selectable modes:



LED Indicators

Mode	**A** Indicator	**B** Indicator
Remote Access (Computer A)	On (solid)	Off
Local Access (Computer B)	Off	On (solid)

Keyboard Shortcut Command Sequences

Standard Command	With Compatibility Mode Enabled	Description
[Ctrl] - [Ctrl] - [T]	[Ctrl] - [Ctrl] - [T]	Toggles console control between Computer A and Computer B
[Ctrl] - [Ctrl] - [Esc]	[Ctrl] - [Ctrl] - [Esc]	Cancels the hotkey sequence
[Ctrl] - [Ctrl] - [Alt]+[E]	[Ctrl] - [Ctrl] - [Alt]+[E]	Enables (2 beeps) or disables (1 beep) Compatibility Mode so that the KVM extender will work with a KVM switch that also uses a [Ctrl] hotkey sequence

Standard Command	With Compatibility Mode Enabled	Description
[Ctrl] - [Ctrl] - [1]	[Ctrl] - [Ctrl] - [E] - [1]	Switches control to Computer B
[Ctrl] - [Ctrl] - [2]	[Ctrl] - [Ctrl] - [E] - [2]	Switches control to Computer A (input allowed only if the Host Unit is in *Remote* or Auto mode)
[Ctrl] - [Ctrl] - [F2]	[Ctrl] - [Ctrl] - [E] - [F2]	Toggles console control between Computer A and Computer B
[Ctrl] - [Ctrl] - [F4]	[Ctrl] - [Ctrl] - [E] - [F4]	Adjusts the typematic rate for improved keyboard responsiveness (PS/2 keyboard only)
[Ctrl] - [Ctrl] - [F11]	[Ctrl] - [Ctrl] - [E] - [F11]	Adjusts remote video quality based on the length of UTP cabling between the two computers (available only when switched to Computer A)
[Ctrl] - [Ctrl] - [F12]	[Ctrl] - [Ctrl] - [E] - [F12]	Reset PS/2 mouse synchronization

Beep Codes

Some of the keyboard command sequences you issue to the Remote Unit have multiple possible settings. The Unit will beep to indicate what setting you have selected for the command you issued. (A short beep followed by a long beep indicates an invalid command.)

[Ctrl] - [Ctrl] - [Alt]+[E] (Compatibility Mode)

1 beep: disabled

2 beeps: enabled

[Ctrl] - [Ctrl] - [F11] (Remote Image Quality Adjustment)

1 beep: 0 ~ 130 feet (0 ~ 40 meters) of UTP cable length

2 beeps: 130 ~ 260 feet (40 ~ 80 meters) of UTP cable length

3 beeps: 260 ~ 390 feet (80 ~ 120 meters) of UTP cable length

4 beeps: 390 ~ 500 feet (120 ~ 150 meters) of UTP cable length

[Ctrl] - [Ctrl] - [F4] (Typematic Rate)

1 beep: 6 characters/sec.

2 beeps: 12 characters/sec.

3 beeps: 20 characters/sec.

4 beeps: 30 characters/sec.

Note: Commands described in the [Key] - [Key] format are keys that must be pressed in order on the keyboard. Commands described in the [Key]+[Key] format must be pressed simultaneously.

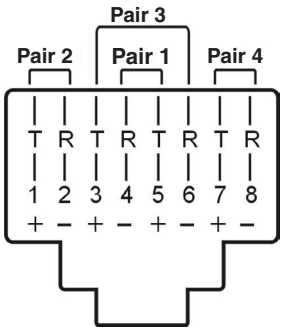
Note: If the Num Lock, Caps Lock, and Scroll Lock lights are flashing in unison on the keyboard, the other Unit has control of Computer A. You will not be able to use A until the other Unit releases access to that computer.

Note: If the Extender is operating in Compatability Mode ([Ctrl] - [Ctrl] - [E] hotkey sequence), you must enter [Ctrl] - [Ctrl] - [E] - [E] to access port E on the attached KVM switch.

Specifications

Maximum Resolution	1024 x 768 (at maximum UTP cable length) Actual maximum resolution varies by network cable length
Maximum Range	500 feet (150 meters)
Network Cabling Type	Straight-through Unshielded Twisted Pair (UTP) Cat. 5+
Connectors	Each, Host and Remote Unit 2 x HD-15 female (1 x KVM, 1 x console VGA) 1 x RJ-45 2 x USB keyboard/mouse (for console) 1 x Power (optional)
Power Adapter	9V DC, 600mA, center positive (per Unit) (Optional; only required when connected using a conventional KVM switch)

RJ-45 Connector Pinout



Pin	Wire Color	Pair	Function
1	White/ Orange	2	T
2	Orange	2	R
3	White/ Green	3	T
4	Blue	1	R
5	White/ Blue	1	T
6	Green	3	R
7	White/ Brown	4	T
8	Brown	4	R

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.



R45PATCH35
35 ft Blue Snagless Category 5e (350 MHz) UTP Patch Cable



R45PATCH50
50 ft Blue Snagless Category 5e (350 MHz) UTP Patch Cable



R45PATCH75
75 ft Blue Snagless Category 5e (350 MHz) UTP Patch Cable



R45PATCH100
100 ft Blue Snagless Category 5e (350 MHz) UTP Patch Cable



SVECONUS6
6 ft Ultra-Thin USB 2-in-1 KVM Cable



SVECONUS10
10 ft Ultra-Thin USB 2-in-1 KVM Cable



SVECONUS15
15 ft Ultra-Thin USB 2-in-1 KVM Cable

Technical Support

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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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