iPGARD™

Control a Secure KVM Switch from a single USB cable with optional extension

USER MANUAL

STC-100	Secure Touch Screen KVM Controller

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FEATURES

- Compatible with any new switch from the existing Secure KVM and KM line
- Can connect to any switch, up to 16 channels, automatically detecting amount of ports
- Easily switch between channels and activate CAC up to 100 ft away from the switch
- Support for Keyboard and Mouse extension to control the connected PCs up to 100ft away
- Can easily be integrated in the future to work seamlessly between Secure and Non-Secure KVM Switches
- Clearly show the active computer
- Color LCD Touch Screen display with backlight for clear and efficient switching
- Instant synchronization with Front panel indicators on the Switch
- RS-232 for settings customization future control of other devices

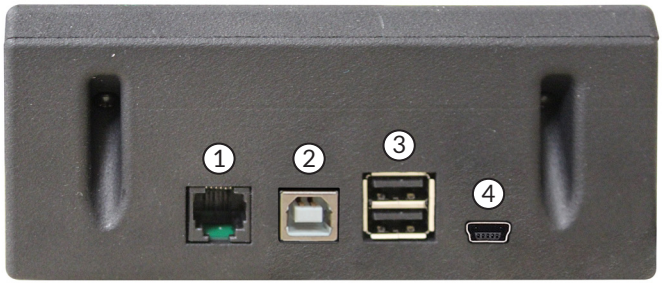
TECHNICAL SPECIFICATIONS

USB	
Signal Type	USB 1.1 and 1.0 Keyboard/Mouse only
USB Type B Inputs	Keyboard / Mouse
User Console Output Interface	(2) USB Type-A for keyboard and mouse connection only
CONTROL	
RS-232	Baud rate: 115200; data bit: 8; stop bit: 1; no parity
OTHER	
Power Supply	5V DC, 2A power supply through Mini USB
Dimensions	5.25” L x 2.75” W x 2.50” H
Weight	0.4 lbs
Operating Temperature	+32 to +104°F (0 to +40°C)
Storage Temperature	-4 to 140°F (-20 to +60°C)
Humidity	Up to 80% (no condensation)

HARDWARE DESCRIPTION

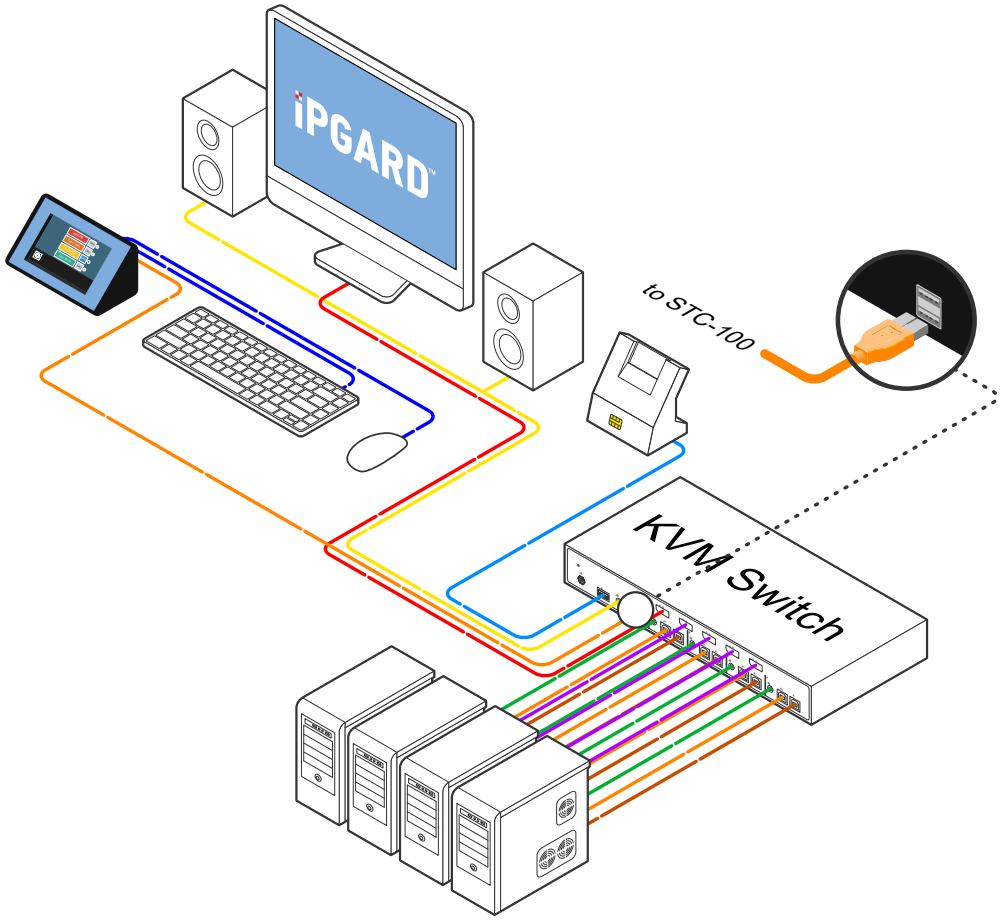
Front Panel

Rear Panel



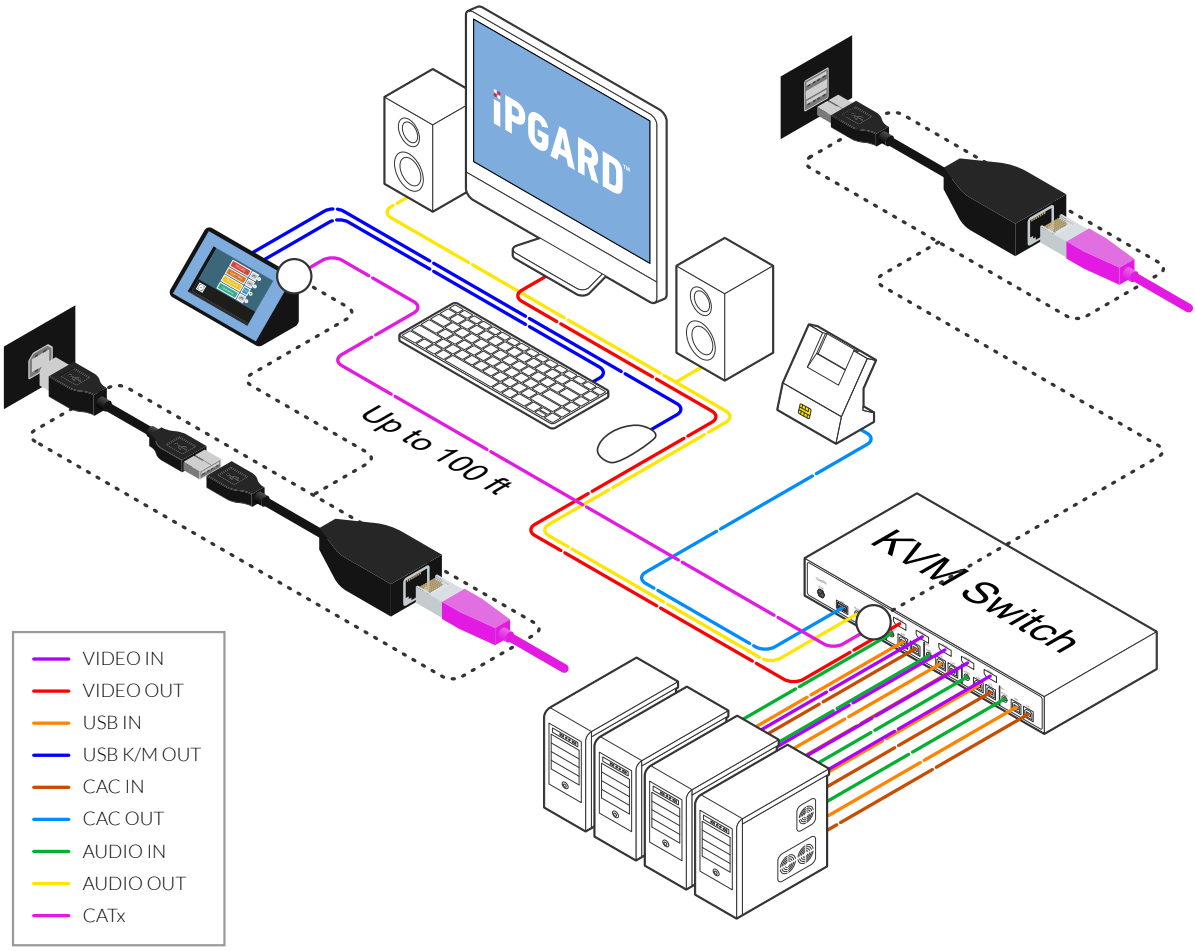
NO.	COMPONENT	DESCRIPTION
1	RS-232	RJ45 to DB9
2	To Switch	USB Connector Type B
3	KM	USB Connectors Type A
4	5V	MicroUSB Type A power supply

INSTALLATION



INSTALLATION

Refer to the following steps and diagram to set up your single-head KVM switch installation.

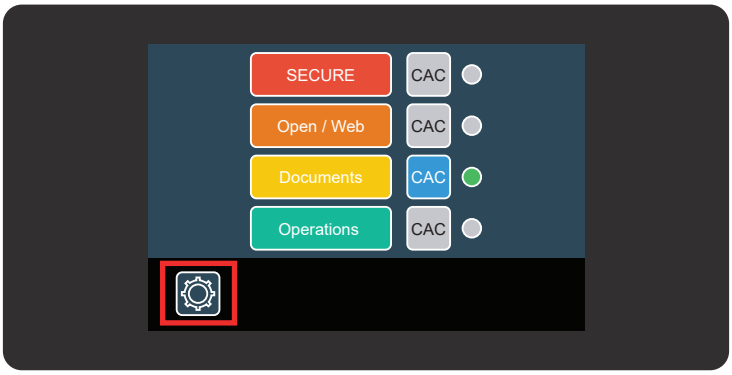


1. Connect HDMI monitor to the “HDMI Out” console port on the front panel of the KVM switch.
2. Connect your USB keyboard and USB mouse directly to the USB keyboard and mouse ports on the front panel of the KVM switch.
3. Connect the microphone and speaker to the corresponding 3.5 mm Mini Stereo console jacks on the front panel of the KVM switch.
4. Connect your USB devices into the USB ports. (Optional).
5. Be prepared with the related cables, plug the HDMI, USB, microphone, and speaker connectors into their corresponding sockets on the back panel of the KVM switch
6. At the other end of the cable set, plug the HDMI, USB, microphone, and speaker connectors into their respective ports on the first computer (PC-1).
7. Repeat above steps to add the second computer (PC-2).
8. Connect the power supply to the KVM switch, and then plug it into an appropriate power source.
9. Turn on the power to all connected devices.

SETTING CONFIGURATION

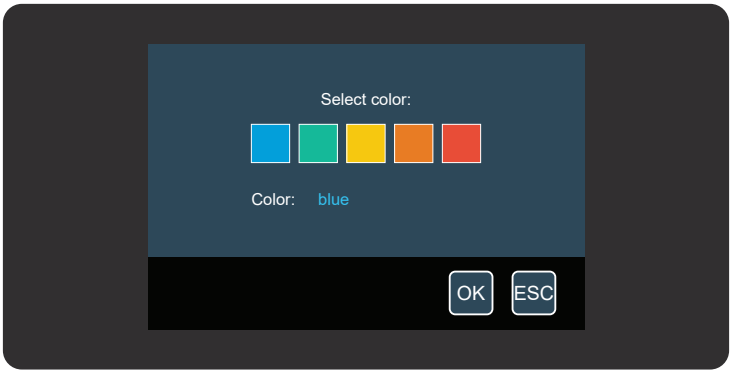
Changing computer colors

- Select the computer's name on the Touchscreen Remote.
- Click the settings icon as shown in Figure 2.



Settings icon

- Click "change color."
- Select the color you wish to use, then press "OK."



Select color

Accessing admin settings from an external computer

Initial Setup of the Serial Connection

To access the administrator settings, a RS232 / Serial connection can be established with the LCD panel to configure / switch ports using an external serial controller. There are two methods of accessing the administrator settings which are explained below.

Note: The steps below show an example when using a Windows based operating system to configure the panel. Similar steps should be taken on other operating systems, but may not be depicted here.

Using VCOM (Virtual COM)

The STC-100 is equipped with an internal USB to RS232 (serial) converter which allows the end user / administrator to configure the settings without having to use any special adapters. This connection can only be used at startup of the LCD panel for configuration only. This serial connection does not support external switching during normal operation if the keyboard/mouse is required since this is a shared / dual-use USB Port. To use this port for configuration, follow these steps below.

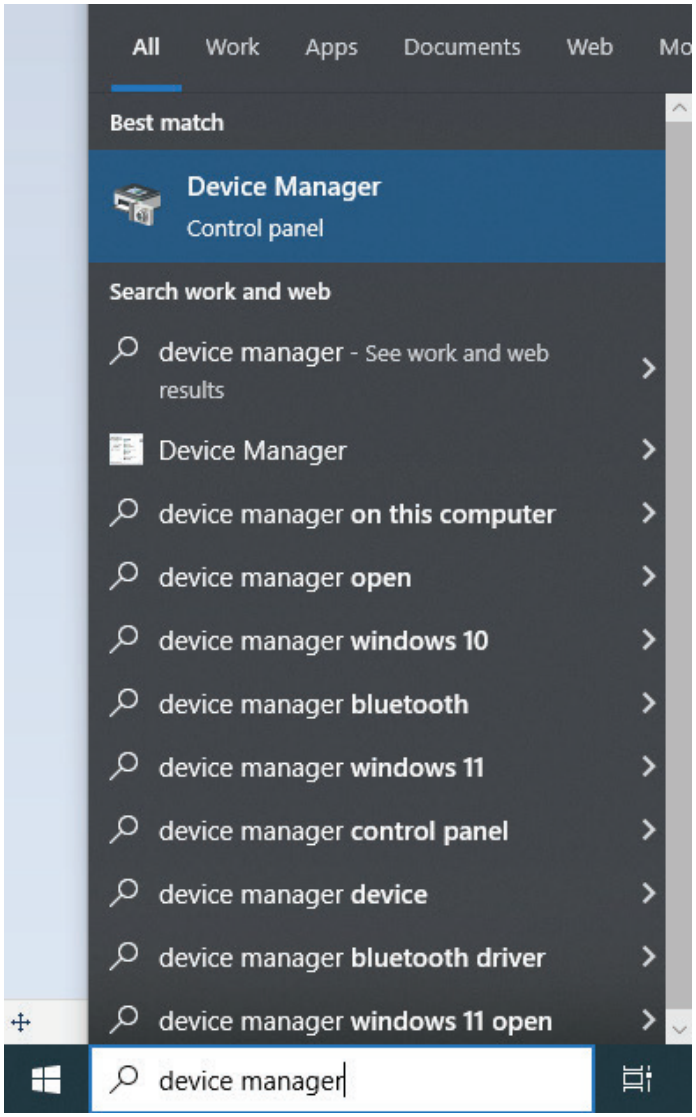
SETTING CONFIGURATION (Continued)

Physically connecting to the VCOM Port

1. Connect a USB Type A to B cable between the STC-100 and a Laptop / Computer that has a serial program (such as Putty, TeraTerm, etc.).
2. Turn on the STC-100 by plugging in the external power adapter into the barrel connector on the rear of the panel.
3. Watch the loading screen on the panel, when it says “Double tap settings for VCOM”, tap the Gear icon two times.
4. If successful, the message “Config. By VCOM” will be displayed on the screen.
5. The Laptop / Computer connected to the serial port will enumerate the COM connection automatically and you will see USB popups and USB notifications if sound is enabled.
6. You will have to configure the Virtual COM Port in your Device Manager on the Laptop / Computer now. Use the reference steps below.

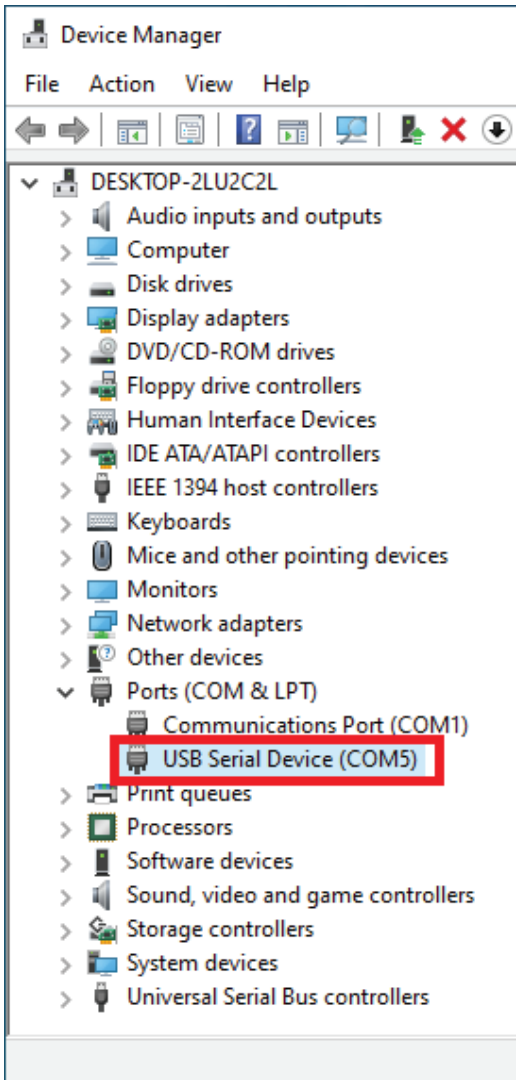
Configuring the VCOM Port

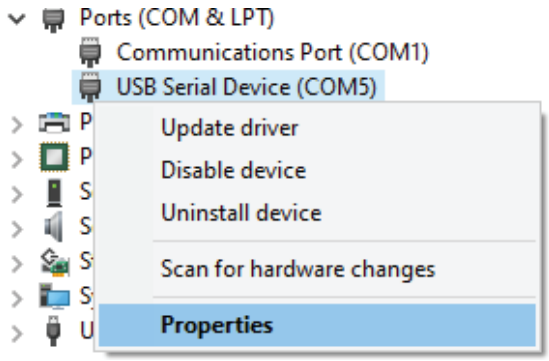
1. On the Laptop / Computer that is running the serial program, navigate to the Start Menu and type “device manager”, then when found, select it.



SETTING CONFIGURATION (Continued)

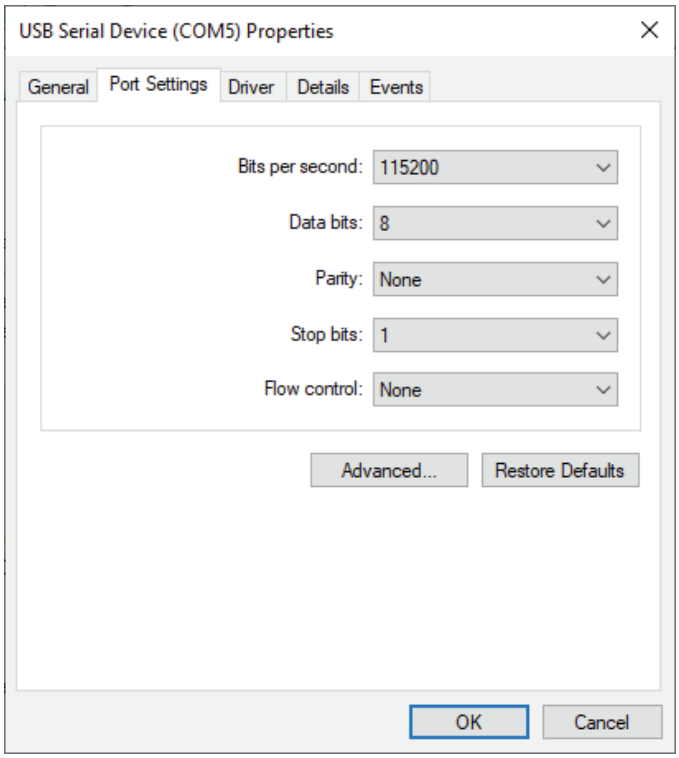
2. In Device Manager, expand the “Ports (COM & LPT)”, and right click on the entry that says “USB Serial Device (COM#)” where # is a number between 1-25 usually randomly assigned, then click properties.





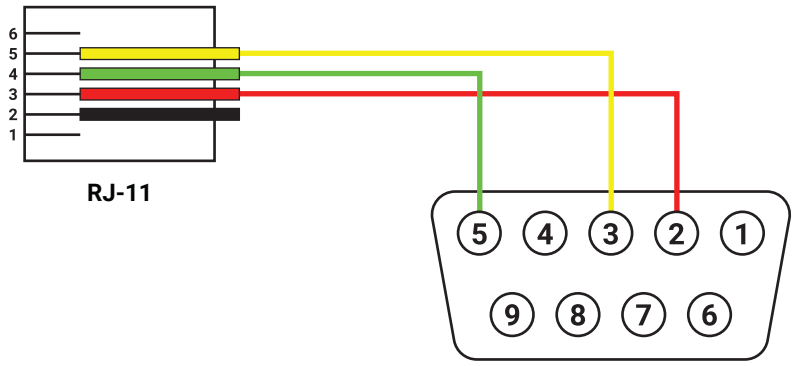
SETTING CONFIGURATION (Continued)

2. When the “USB Serial Device...” window pops up, click on the “Port Settings” tab and configure the port using the following parameters (115200, 8, None, 1, None).



Using the RJ-11 Serial Port

The STC-100 is equipped with an RJ-11 interface which can handle serial communication. This port can be used for configuration, and for external switching where a user wants to send a command from a serial controller to switch ports on the KVM. Using this RJ-11 serial port during operation will not affect the user’s keyboard and mouse input like the VCOM method. The serial port configuration parameters use (115200, 8, None, 1, None). The RJ-11 port pinning can be found below in the reference diagram.



RJ-11

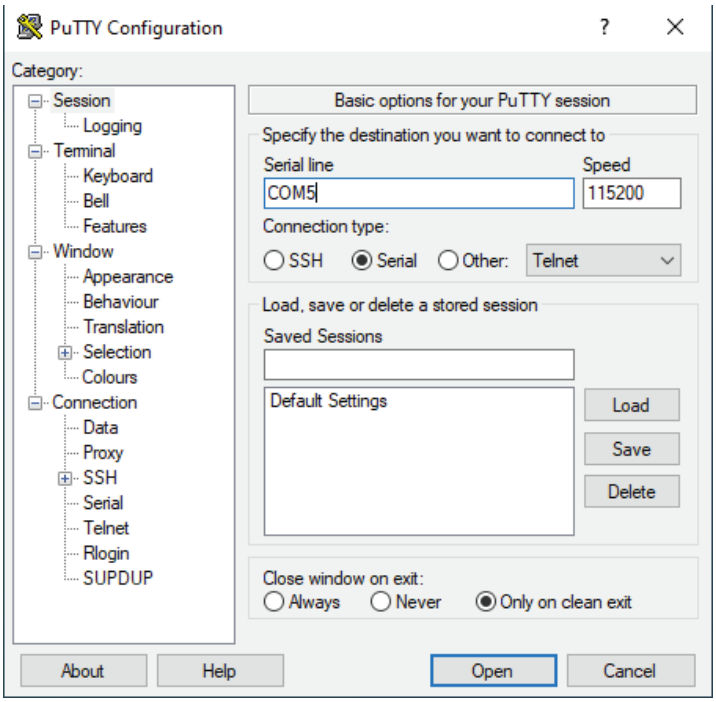
DB-9 Female

Tip: Sometimes enabling the serial program local echo helps when typing the commands. It will confirm the command is being typed correctly. If local echo is not enabled, you may still type the commands, however you won’t see what you are typing.

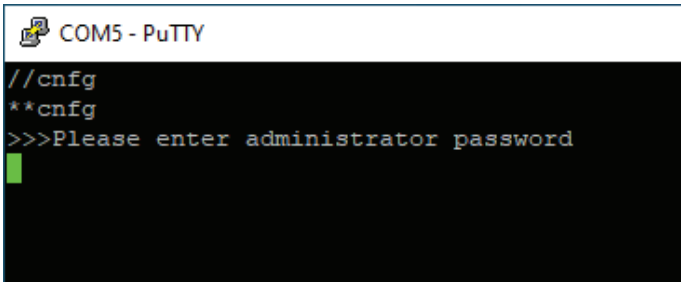
SETTING CONFIGURATION (Continued)

Serial Port Usage (Configuration)

The Serial port allows the end user or administrator to configure the panel, and support external serial switching on the KVM (for RJ-11 only). In order to use these features, the commands below can be used. To get started, open the Serial / RS-232 program to first establish a connection and log in. The steps outlined below are using Putty, however other programs will work too if they support serial / RS-232 communication using the connection parameters outlined above.

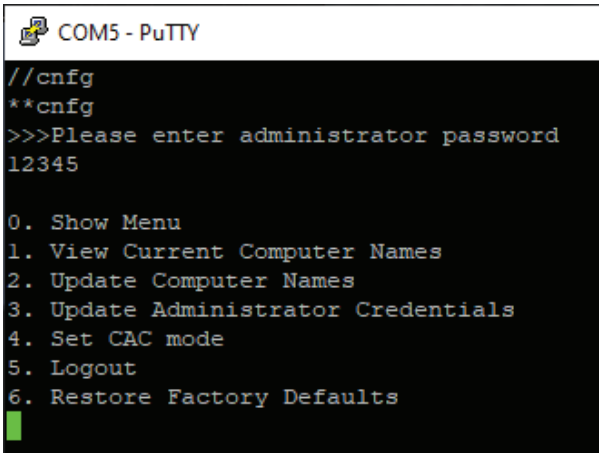


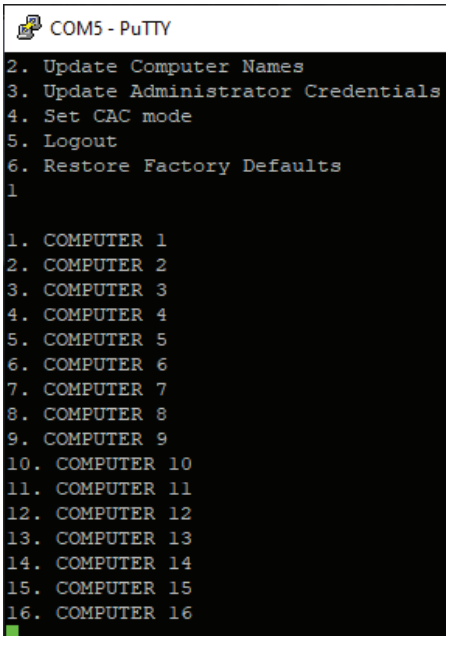
Start the connection, then when at the command prompt, type “//cnfg” in the terminal to continue.



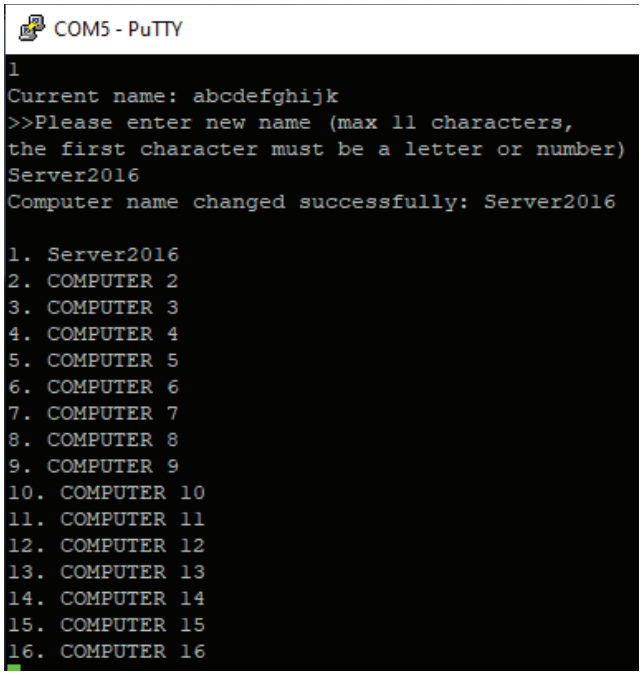
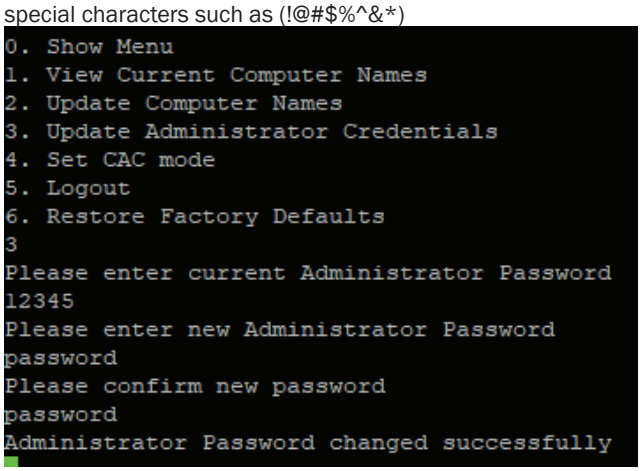
SETTING CONFIGURATION (Continued)

When prompted to enter the administrator password, type “12345” without the “”.



MENU ITEM	DESCRIPTION
SHOW MENU	Go back to the main serial menu
VIEW CURRENT COMPUTER NAMES	Prints out the current computer names. This will show all 16 names even if you have a 4- or 8- Port model. If using a smaller port count, only configure the applicable computer names, the others will be discarded. **Syntax:** Computer names can be a maximum of 11 characters long. Longer names will be truncated to 11 characters. 

SETTING CONFIGURATION (Continued)

MENU ITEM	DESCRIPTION
UPDATE COMPUTER NAMES	Edit the computer names with a custom / personalized name. This option allows all 16 computers to be edited, so only edit the computer names that apply to your switch port count. The unused computer names will not be displayed. **Syntax:** Computer names can be a maximum of 11 characters long. Longer names will be truncated to 11 characters. 
UPDATE ADMINISTRATOR CREDENTIALS	Change the default password from 12345 to something else. **Syntax:** Password can be up to 32 characters long using lower case and uppercase letters, numbers, and special characters such as (!@#$%^&*) 

SETTING CONFIGURATION (Continued)

MENU ITEM	DESCRIPTION

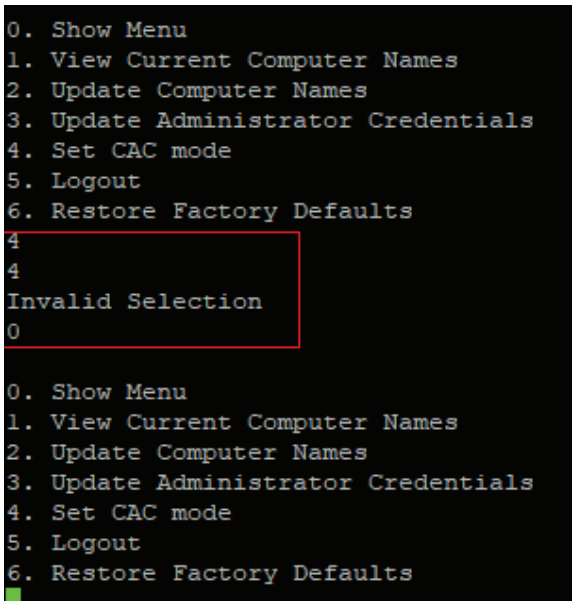
SET CAC MODE	Enable or Disable CAC switching. If the KVM switch doesn't support CAC, you can disable this feature. If the KVM switch does support CAC, this can optionally be changed.
	`0. Show Menu`
	`1. View Current Computer Names`
	`2. Update Computer Names`
	`3. Update Administrator Credentials`
	`4. Set CAC mode`
	`5. Logout`
	`6. Restore Factory Defaults`
	`4`
	`Please select CAC mode:`
	`1. CAC Mode`
	`2. Non CAC Mode`
	`2`
	`Non CAC Mode`

LOGOUT	When the session is completed, manually log out using the Logout option. This function will log the admin user out of the serial menu and close all open sessions.
	In order to log back in after issuing this command, type **//cnfg** in the terminal to login again.
	`0. Show Menu`
	`1. View Current Computer Names`
	`2. Update Computer Names`
	`3. Update Administrator Credentials`
	`4. Set CAC mode`
	`5. Logout`
	`6. Restore Factory Defaults`
	`5`
	`Logout`

RESTORE FACTORY DEFAULTS	This function will clear any user configured parameters back to defaults. It will default the computer names, colors, administrator password, and CAC mode.
	Once the Restore Factory Defaults is issued, pressing Enter or typing option 0 will bring the administrative menu back up.
	`0. Show Menu`
	`1. View Current Computer Names`
	`2. Update Computer Names`
	`3. Update Administrator Credentials`
	`4. Set CAC mode`
	`5. Logout`
	`6. Restore Factory Defaults`
	`6`
	`Are you sure you want to factory reset the KVM controller? [y/n]`
	`y`
	`Restoring factory settings`
	`//PS 00CAC settings have been set to default.`
	`Factory defaults have been restored.`

SETTING CONFIGURATION (Continued)

While using the serial / RS-232 communications port, Invalid Selection warnings will show periodically if the wrong value was entered, or is out of the range / scope of the variable. This is also a COM port, so even if you do type the correct value in the terminal, you may still get an Invalid Selection warning which is normal. To clear it, try entering the setting again, or keep typing 0 to get back to the main menu. If the terminal refuses to get back to the main menu for whatever reason, the best way to resolve this is by powering down the STC-100 and starting from the beginning in order to clear any previous errors.



SETTING CONFIGURATION (Continued)

Serial Port Usage (Switching via the RJ-11)

The RJ-11 serial port on the STC-100 can be used to accept switching commands from external serial controllers / systems. The available command syntax can be found below.

Note: <CR> is a carriage return which can also be triggered by using the Enter key in most terminals.

Switching KVM Only (not CAC)

COMMAND	DESCRIPTION	COMPATIBILITY
//m 1 <CR>	Switch KVM to port 1	All models
//m 2 <CR>	Switch KVM to port 2	All models
//m 3 <CR>	Switch KVM to port 3	All models
//m 4 <CR>	Switch KVM to port 4	All models
//m 5 <CR>	Switch KVM to port 5	8- / 16-Port models only
//m 6 <CR>	Switch KVM to port 6	8- / 16-Port models only
//m 7 <CR>	Switch KVM to port 7	8- / 16-Port models only
//m 8 <CR>	Switch KVM to port 8	8- / 16-Port models only
//m 9 <CR>	Switch KVM to port 9	16-Port models only
//m 10 <CR>	Switch KVM to port 10	16-Port models only
//m 11 <CR>	Switch KVM to port 11	16-Port models only
//m 12 <CR>	Switch KVM to port 12	16-Port models only
//m 13 <CR>	Switch KVM to port 13	16-Port models only
//m 14 <CR>	Switch KVM to port 14	16-Port models only
//m 15 <CR>	Switch KVM to port 15	16-Port models only
//m 16 <CR>	Switch KVM to port 16	16-Port models only

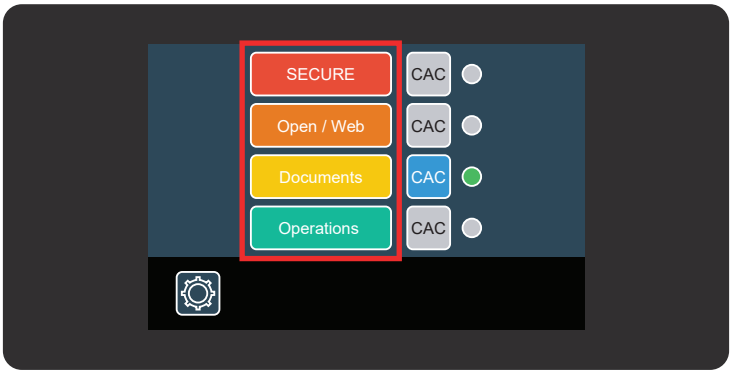
Switching KVM + CAC

COMMAND	DESCRIPTION	COMPATIBILITY
//c 1 <CR>	Switch KVM + CAC to port 1	All models
//c 2 <CR>	Switch KVM + CAC to port 2	All models
//c 3 <CR>	Switch KVM + CAC to port 3	All models
//c 4 <CR>	Switch KVM + CAC to port 4	All models
//c 5 <CR>	Switch KVM + CAC to port 5	8- / 16-Port models only
//c 6 <CR>	Switch KVM + CAC to port 6	8- / 16-Port models only
//c 7 <CR>	Switch KVM + CAC to port 7	8- / 16-Port models only
//c 8 <CR>	Switch KVM + CAC to port 8	8- / 16-Port models only
//c 9 <CR>	Switch KVM + CAC to port 9	16-Port models only
//c 10 <CR>	Switch KVM + CAC to port 10	16-Port models only
//c 11 <CR>	Switch KVM + CAC to port 11	16-Port models only
//c 12 <CR>	Switch KVM + CAC to port 12	16-Port models only
//c 13 <CR>	Switch KVM + CAC to port 13	16-Port models only
//c 14 <CR>	Switch KVM + CAC to port 14	16-Port models only
//c 15 <CR>	Switch KVM + CAC to port 15	16-Port models only
//c 16 <CR>	Switch KVM + CAC to port 16	16-Port models only

SETTING CONFIGURATION (Continued)

Switching channels

- Switch channels by pressing the name of the computer on the touchscreen. As shown in Figure 7, there are four computers named “Secure,” “Open/Web,” “Documents,” and “Operations”.

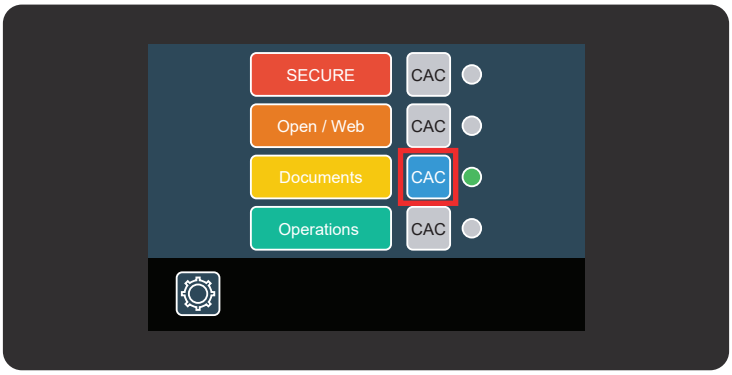


Switching channels

- A green light on the Touchscreen Remote will indicate which computer is selected. In figure above, “Documents” is the selected computer.

CAC

- To enable a CAC device on a specific computer, simply press the CAC button next to the name of the computer on the touchscreen as shown in figure below.



CAC button

- The CAC button will turn blue when CAC is enabled for a specific computer. In the above example, the computer “Documents” has CAC enabled.
- To register and configure CAC devices, refer to the document “Secure KVM Administration and Security Management Tool Guide for KVM and KM” from the following link **https://ipgard.com/documentation/niap4/**.
- CAC port configuration is detailed in section 6.2.

TECHNICAL SUPPORT

For product inquiries, warranty questions, or technical questions, please contact info@iPGARD.com.

LIMITED WARRANTY STATEMENT

A. Extent of limited warranty

iPGARD, Inc. warrants to the end-user customers that the iPGARD product specified above will be free from defects in materials and workmanship for the duration of 1 year, which duration begins on the date of purchase by the customer. Customer is responsible for maintaining proof of date of purchase.

iPGARD limited warranty covers only those defects which arise as a result of normal use of the product, and do not apply to any:

a. Improper or inadequate maintenance or modifications
b. Operations outside product specifications
c. Mechanical abuse and exposure to severe conditions

If iPGARD receives, during applicable warranty period, a notice of defect, iPGARD will at its discretion replace or repair defective product. If iPGARD is unable to replace or repair defective product covered by the iPGARD warranty within reasonable period of time, iPGARD shall refund the cost of the product.

iPGARD shall have no obligation to repair, replace or refund unit until customer returns defective product to iPGARD.

Any replacement product could be new or like new, provided that it has functionality at least equal to that of the product being replaced.

iPGARD limited warranty is valid in any country where the covered product is distributed by iPGARD.

B. Limitations of warranty

To the extent allowed by local law, neither iPGARD nor its third party suppliers make any other warranty or condition of any kind whether expressed or implied with respect to the iPGARD product, and specifically disclaim implied warranties or conditions of merchantability, satisfactory quality, and fitness for a particular purpose.

C. Limitations of liability

To the extent allowed by local law the remedies provided in this warranty statement are the customers sole and exclusive remedies.

To the extent allowed by local law, except for the obligations specifically set forth in this warranty statement, in no event will iPGARD or its third party suppliers be liable for direct, indirect, special, incidental, or consequential damages whether based on contract, tort or any other legal theory and whether advised of the possibility of such damages.

D. Local law

To the extent that this warranty statement is inconsistent with local law, this warranty statement shall be considered modified to be consistent with such law.

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NOTICE

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