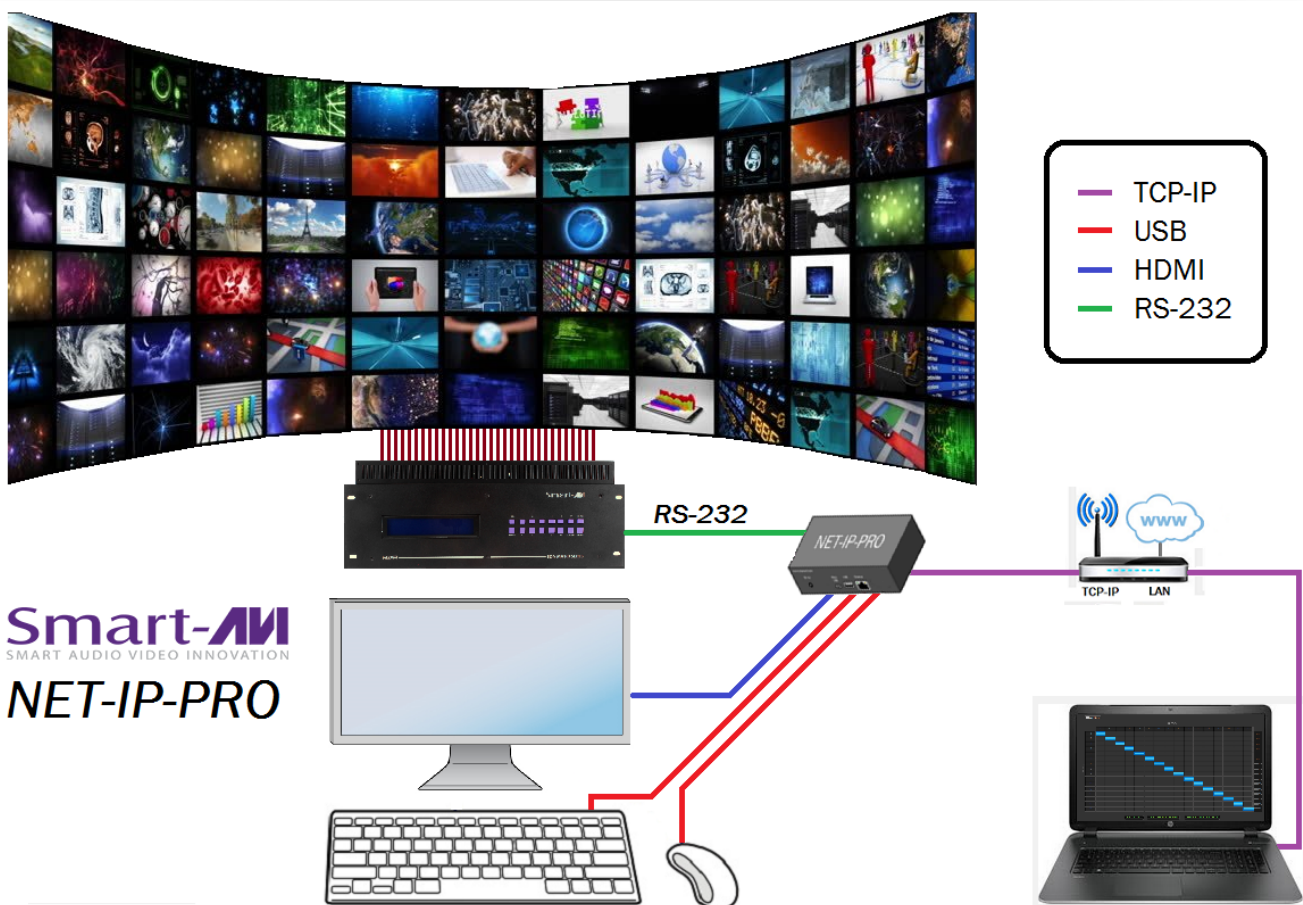


# NET-IP-PRO

## User Manual

Web-Based and/or Local Control for Smart-AVI Products



Remote and/or local control of your Smart-AVI product operations locally and/or over a local area network or via the Internet from anywhere in the world

**Smart-AVI**  
SMART AUDIO VIDEO INNOVATION

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## WHAT'S IN THE BOX?

| PART NO.   | QTY | DESCRIPTION                              |
|------------|-----|------------------------------------------|
| NET-IP-PRO | 1   | Ethernet / RS-232 Server                 |
| PS5VDC2A   | 1   | 5VDC2A Power Supply                      |
| CCRS232-X  | 1   | RS-232 Serial male to male crossed cable |
|            | 1   | Quick Start Guide                        |



NET-IP-PRO has been tested with the Chrome and Firefox web-browsers.

***Internet Explorer is not supported.***



Figure 2-1

## INTRODUCTION

The NET-IP-PRO is an RS-232 control module that allows most SmartAVI switching matrixes to be controlled remotely via HTTP or TELNET. Manage the switching functions of your matrix with ease from anywhere in the world. With the NET-IP-PRO you can save up to 10 preset input/output configurations for easy access. TELNET access provides transparent command control of your matrix, perfect for use with automated third-party control software. You can also connect a monitor to the HDMI port and a keyboard and mouse to the USB ports on the NET-IP-PRO and control your SmartAVI device.

## FEATURES

- Supports HTTP and TELNET control
- 10/100 Ethernet Interface
- Up to 10 user-definable configurations
- Password Protected
- Up to 5 Users can Control the Matrixes
- IP Configuration via TCP/IP and RS-232
- Flexible control of several types of matrixes

## APPLICATIONS

- Wall Displays
- Digital Signage
- Airports
- Dealer Rooms
- Control Rooms
- Audio/Visual Presentations
- Shopping Centers
- Security
- Point-of-Sale
- Hotels/Resorts

## TECHNICAL SPECIFICATIONS

|                       |                                  |
|-----------------------|----------------------------------|
| HDMI                  | (1) HDMI Type A 19-pin Female    |
| USB                   | (4) USB Type A 2.0, 1.1, and 1.0 |
| Ethernet              | (1) RJ45 (HDBaseT)               |
| RS-232                | (1) DB9 Female                   |
| Audio, Non functional | (1) 3.5 mm (For future use)      |
| Power Supply          | 5VDC2A                           |
| Dimensions            | 5"W x 3.13"D X 1.75"H            |
| Weight                | .35 lbs.                         |
| Operating Temp.       | 32 to 131 °F (0 to 55 °C)        |
| Storage Temp.         | -4 to 185 °F (-20 to 85 °C)      |
| Humidity              | Up to 95% (no condensation)      |



Figure 3-1

## CONNECTING THE NET-IP-PRO

**You can use option 1 and/or option 2. The options work alone or together.**

### OPTION 1

1. Power off all devices.
2. Using a CAT5/5e/6 Ethernet cable, connect the NET-IP-PRO to your local network.
3. Use an RS-232 **crossed** cable to connect the NET-IP-PRO to your Smart-AVI device.
4. Plug the power into the NET-IP-PRO.

### OPTION 2

1. Power off all devices.
2. Connect a monitor to the NET-IP-PRO HDMI port
3. Connect a USB keyboard and a USB mouse to the NET-IP-PRO USB ports.
4. Use an RS-232 **crossed** cable to connect the NET-IP-PRO to your Smart-AVI device.
5. Plug the power into the NET-IP-PRO.

## APPLICATION DIAGRAM (Option 1–TCP/IP Only)

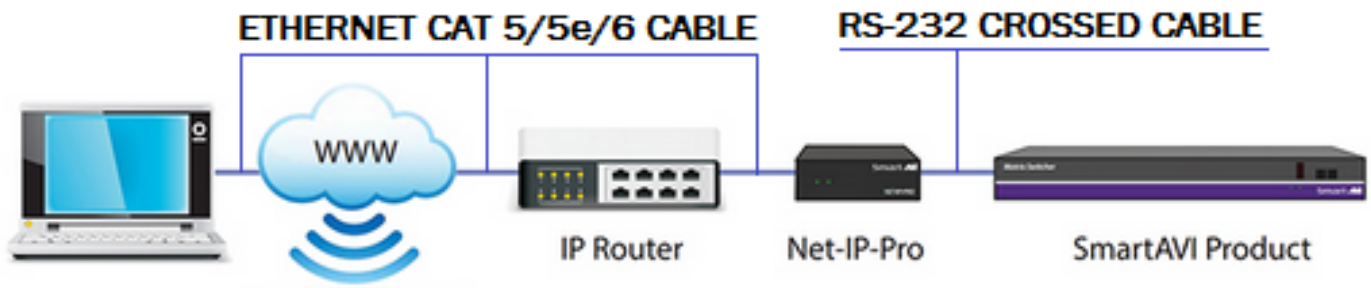


Figure 4-1

## APPLICATION DIAGRAM (Options 1 & 2)



Figure 4-2



## INITIAL SETUP

**NOTE:** While your Smart-AVI device may use an RS-232 straight thru cable when connected directly to your computer, the NET-IP-PRO requires an RS-232 crossed cable when connected to your Smart-AVI device. You can use a null modem adapter to convert your RS-232 straight thru cable to a crossed cable. Call our Smart-AVI Support Engineer if you require more information.

After connecting the NET-IP-PRO to the network and plugging in the power supply, you will need to find the IP address assigned to the NET-IP-PRO in order to connect to it. This can be done with either of two discovery tools available for download on the Smart-AVI website, [www.smartavi.com/helpful-links](http://www.smartavi.com/helpful-links)

The first, called “detect” will open up a small console application that will display the IP address of the NET-IP-PRO as shown in figure 4-1. The IP address you see will be supplied by your DHCP server and different from the example in figure 4-1 . After obtaining the IP address connect to the device with the web application of your choice by typing that IP address in the web browser or connect through telnet on port 23.

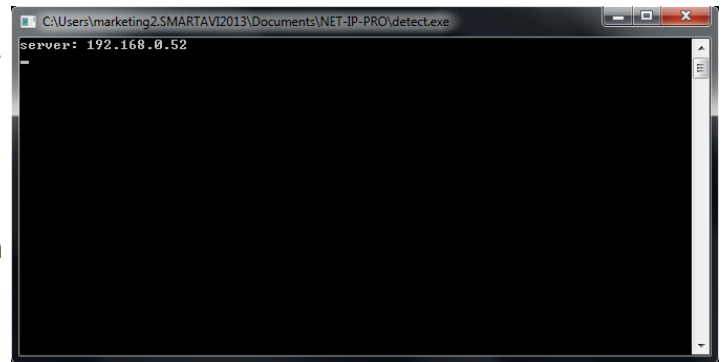


Figure 5.1

An alternative option is to use “detect\_gui,” this program will find the IP address of the NET-IP-PRO and then open up your default web browser connected to the NET-IP-PRO web interface.

Either way once you connect to the NET-IP-PRO you will be prompted to log in. **The default user name is admin and the default password is admin. The user name and password are case sensitive.** The log in screen from a browser connection is shown in figure 4-2 and a telnet log in screen is shown in figure 4-3.

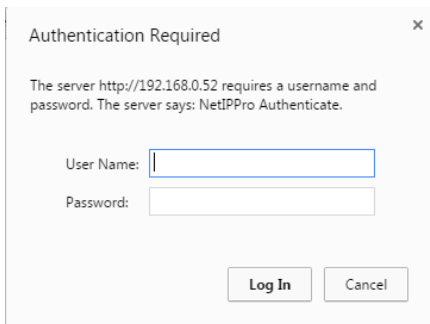


Figure 5-2

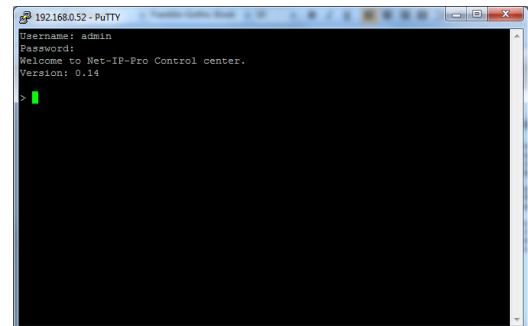


Figure 5-3

## INITIAL SETUP (Continued)

Once connected to the NET-IP-PRO, you will see the following menu of options (Figure 6-1):

- Administration
- Device Config
- Matrix
- Network Settings
- Users
- Update Firmware
- Web Console
- Web Telnet
- Logout

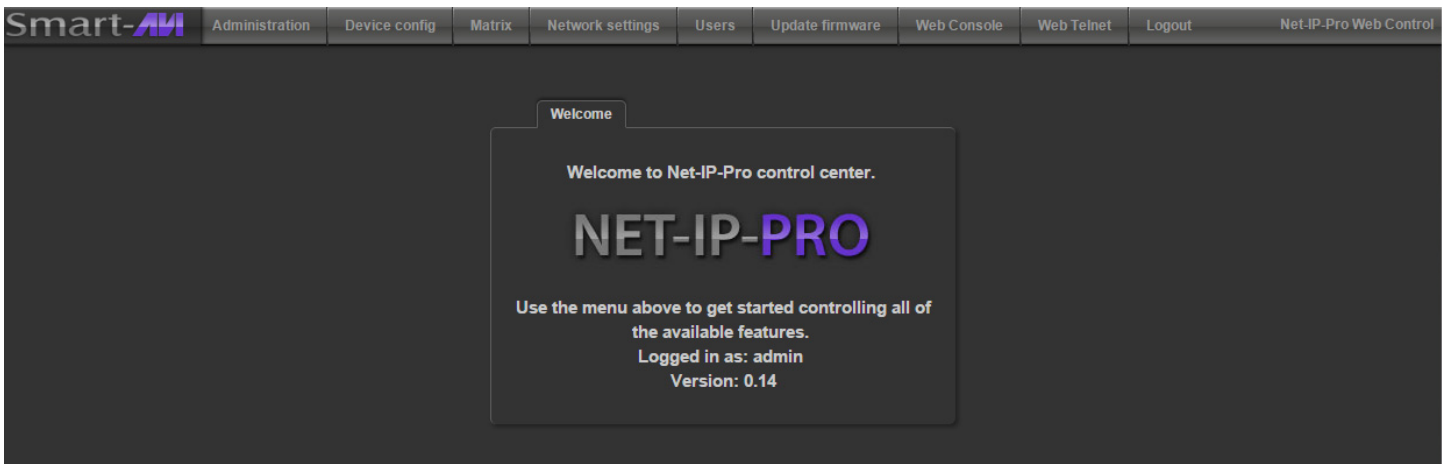


Figure 6-1

For the initial setup, click the “**Network Settings**” tab and manually assign a static IP address to the NET-IP-PRO. This will assure that the NET-IP-PRO will always have the same IP address. Be sure to choose an address that will not conflict with any other devices on the network, and that is not in the range of the DHCP server.

Once you have manually assigned an IP address, the NET-IP-PRO must be restarted before it will be accessible at that IP address.

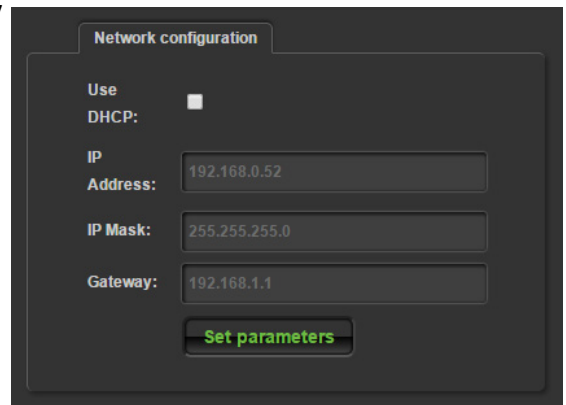
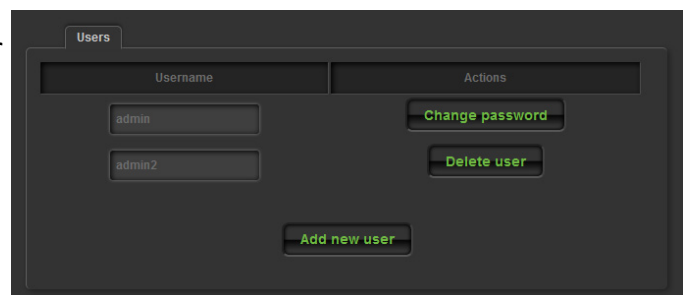


Figure 6-2

It is also recommended that you set a password for the NET-IP-PRO at this point. To change the password (and/or username) of the web interface, click on the “**Users**” tab. This sets the password for the HTTP interface only.



# INITIAL SETUP (Continued)

Connect the NET-IP-PRO to a SmartAVI video matrix using an RS-232 crossed cable (See figure 6-1) or a straight through cable with a null modem adaptor. **NOTE: While your Smart-AVI device may use an RS-232 straight thru cable when connected directly to your computer, the NET-IP-PRO requires an RS-232 crossed cable when connected to your Smart-AVI device.**

Note:  
A crossed cable (Figure 6-1) connects pin 2 on the transmit end to pin 3 on the receive end and pin 3 on the transmit end to pin 2 on the receive end .

A straight thru cable connects pin 2 on the transmit end to pin 2 on the receive end and pin 3 on the transmit end to pin 3 on the receive end .

You can use a null modem adaptor to convert a straight through to a crossed and a crossed to a straight through cable.

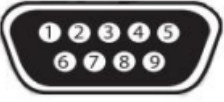
| RS-232 SPECIFICATIONS CROSSED                                                                            |     |      |                           |
|----------------------------------------------------------------------------------------------------------|-----|------|---------------------------|
| CONNECTOR                                                                                                | PIN | NAME | DESCRIPTION               |
| <br>DB9 MALE - RECEIVE  | 2   | RxD  | Receive Data on DB9 Male  |
|                                                                                                          | 3   | TxD  | Transmit Data on DB9 Male |
|                                                                                                          | 5   | SGND | Ground                    |
| <br>DB9 MALE - TRANSMIT | 2   | TxD  | Transmit Data on DB9 Male |
|                                                                                                          | 3   | RxD  | Receive Data on DB9 Male  |
|                                                                                                          | 5   | SGND | Ground                    |

Figure 7-1

If you are using a USB to COM port adapter and need to identify the COM port used do the following:

- 1. Click on the start button.
- 2. Click on Control Panel.
- 3. Click on Device Manager.
- 4. Click on the arrow next to Ports (COM & LPT).

You should see the name of your adapter and the COM port number in use.

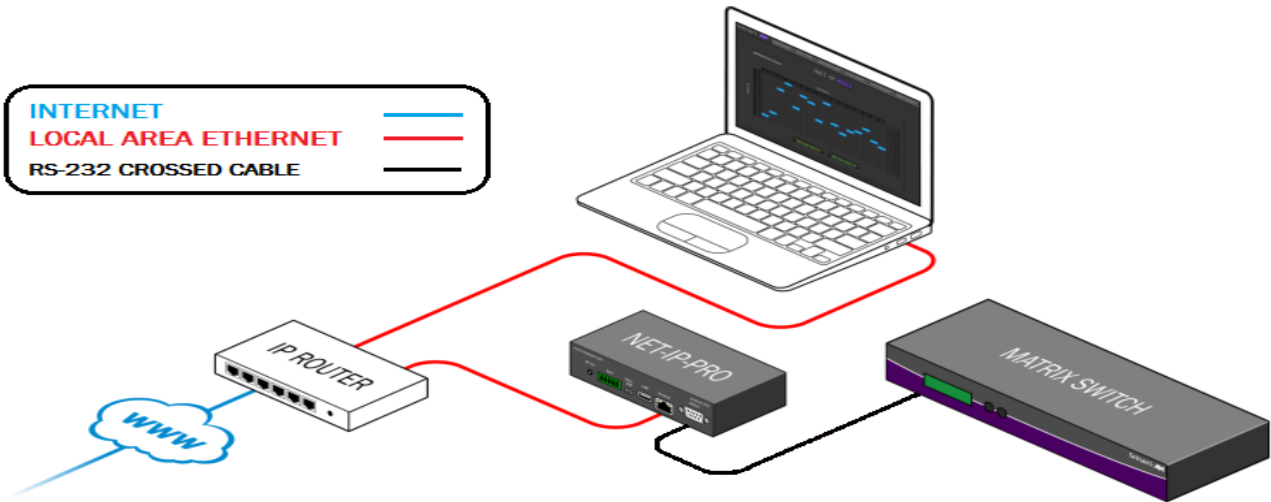


Figure 7-2

You can access the NET-IP-PRO to control your Smart-AVI Matrix on your local area network (LAN) as shown in figure 6-2 or from anywhere in the world via the internet.

# CONTROLLING THE NET-IP-PRO VIA HTTP

## Matrix Menu

The Matrix menu (figure 7-1) allows you to set the cross-points for the matrix. Cross-points are used to route signals from the individual input (signal source) to individual outputs (displays). The output channels can only have one input, but each input can have several outputs.

To select multiple outputs, in the row for any input or source, click the button under the desired outputs or displays.

Clicking Select All sets all the outputs to the input of the same row. See Figure 7-2

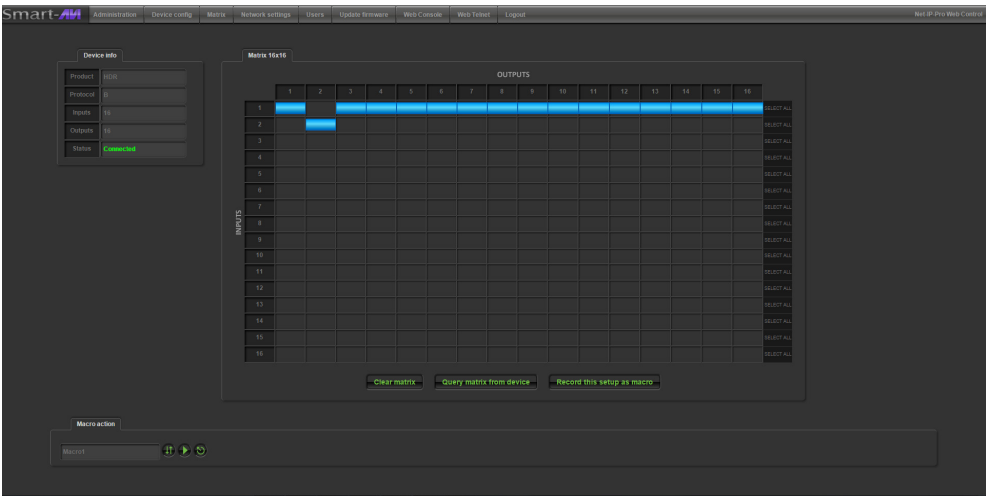


Figure 8-1

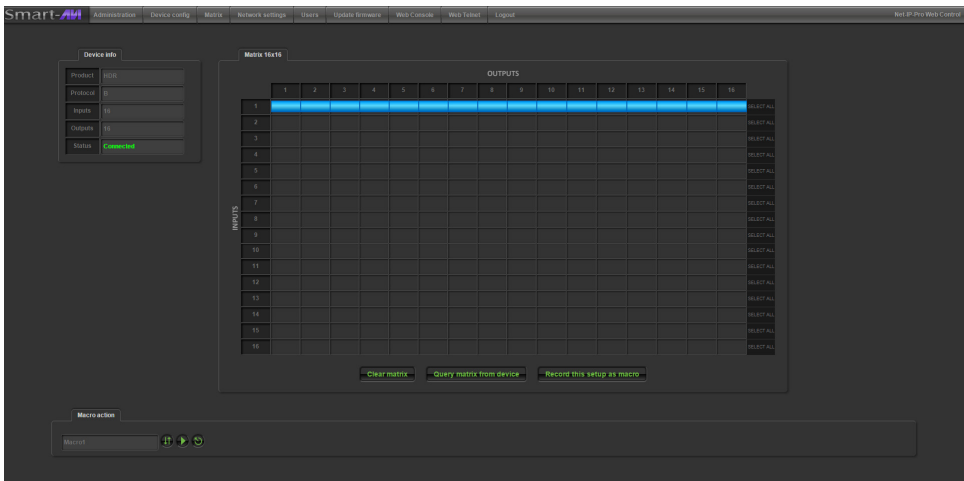


Figure 8-2

Clear matrix: Clears the cross point selections from the matrix.

Query matrix from device: Discovers the currently set matrix cross point configuration is for each input and output and displays it on the matrix screen.



# CONTROLLING THE NET-IP-PRO VIA HTTP (Continued)

## MACROS - USER DEFINED PRESETS

Record this setup as macro: allows you to save and recall cross-point configurations with the push of a button. To setup a Matrix Macros preset, you must do the following steps:

1. Click on the matrix window to set a cross point; set as many cross points as needed. This will instantly set the input to the corresponding output as indicated in the matrix.
2. Click on “record this setup as macro”
3. A new item will appear below the matrix under the “macro action” tab with a default name.  
See figure 8-1
4. To set all this newly saved cross point configuration again in the future with the click of a button, click the apply button.
5. To rename the configuration to something more familiar, simply type the new name in the text field and click the up/down arrows to save the name. To delete the item click the delete button.

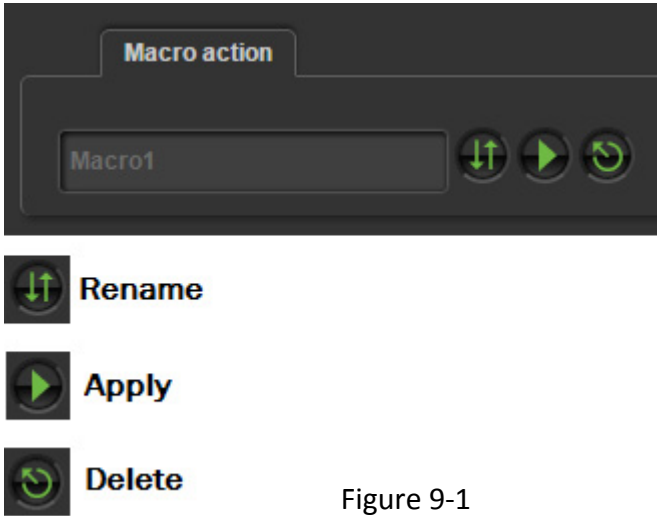


Figure 9-1

## DEVICE CONFIGURATION MENU

The Device Config menu allows you to customize the names of the Input and Output. You can simply assign names to the inputs and outputs by typing the new name in the text field and pressing “**Submit names**”. Leaving a preset blank will not exclude it from the Matrix Menu. For example, You could name an input or source “BluRay01” and an output or display “Front Lobby”. See figure 8-2

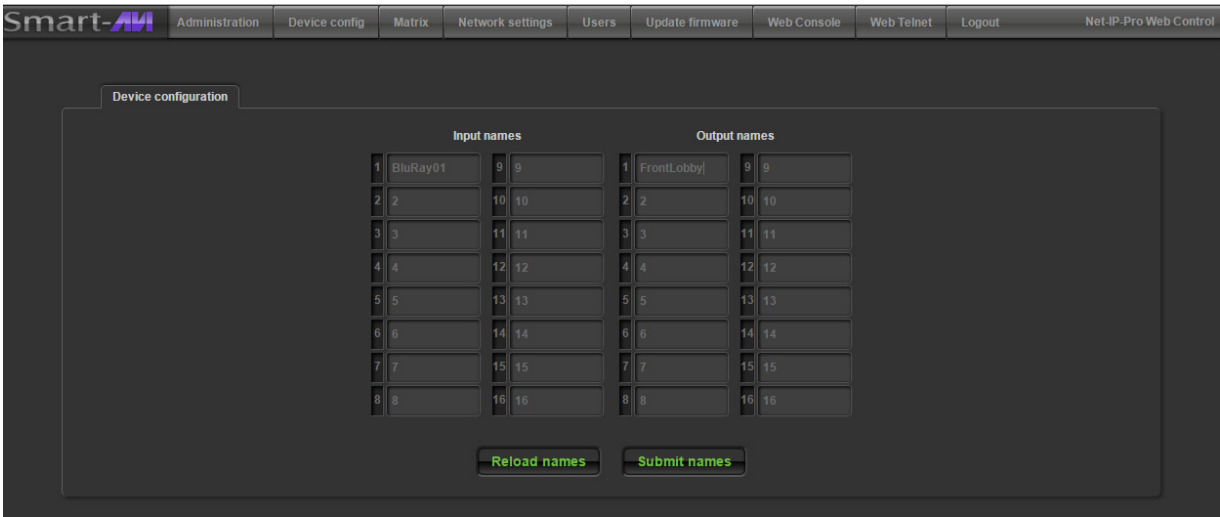


Figure 9-2

## CONTROLLING THE NET-IP-PRO VIA TELNET

Commands may be sent transparently to the matrix via a TELNET connection to the NET-IP-PRO. To use this function, use a telnet client such as Hyperterminal or PuTTY (see figure 10-1) to connect to the IP address of the NET-IP-PRO. You will be prompted for a username and password. This will be the same as the login information via HTTP. See figure 10-2. Once logged in, the NET-IP-PRO is ready to accept the standard RS-232 commands. For a list of the available commands, please see the user manual for the matrix you are using. Although the commands are not echoed to the client display, the commands are being issued to the matrix. Should you need commands to be echoed, please see the instructions for your TELNET client.

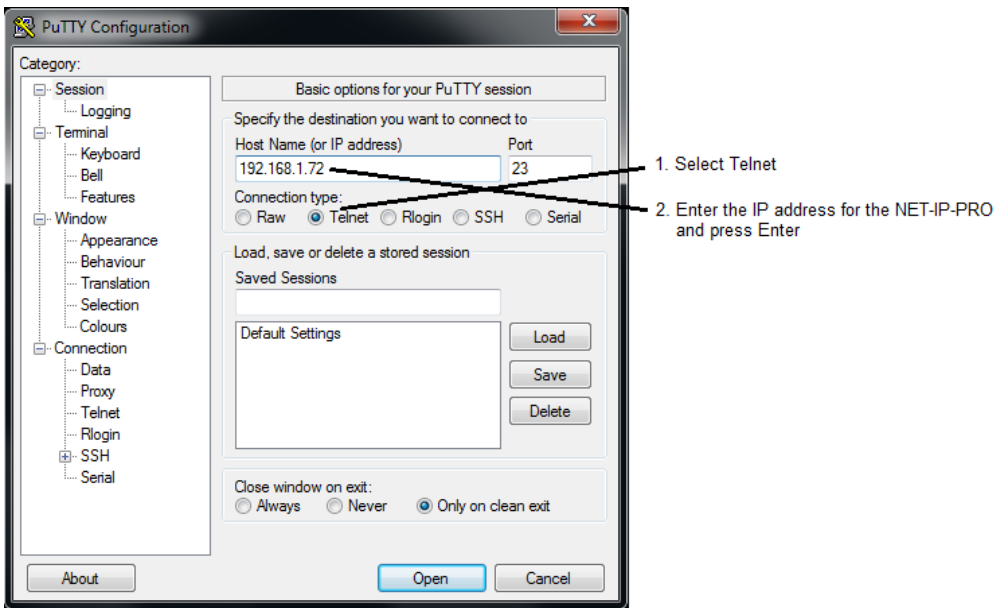


Figure 10-1



Figure 10-2

## UPGRADING THE NET-IP-PRO

To upgrade the NET-IP-PRO with the latest firmware, contact your sales representative at 800-AVI-2131, 818-503-6200 or contact us at [www.smartavi.com](http://www.smartavi.com).

## CONTROLLING THE NET-IP-PRO VIA LOCAL KEYBOARD / MOUSE

You can connect an HDMI monitor, keyboard and mouse directly to the NET-IP-PRO and control your Smart-AVI device remotely. After plugging in the NET-IP-PRO when it finishes booting up you will see the log in screen as shown below in Figure 11-1. The IP address should already be displayed. If not use one of the software tools listed in the “Connecting to the NET-IP-PRO” section of this manual to obtain the IP address in use and enter it into the top field labeled Host. Then enter the User name and password. The default username is admin and the default password is admin. The username and password are case sensitive. At any point you can click the keyboard icon (shown in figure 11-2) in the upper right corner of the screen and a keyboard will be displayed as shown in figure 11-3. This allows you to remotely control your Smart-AVI device with only a mouse connected to the NET-IP-PRO.

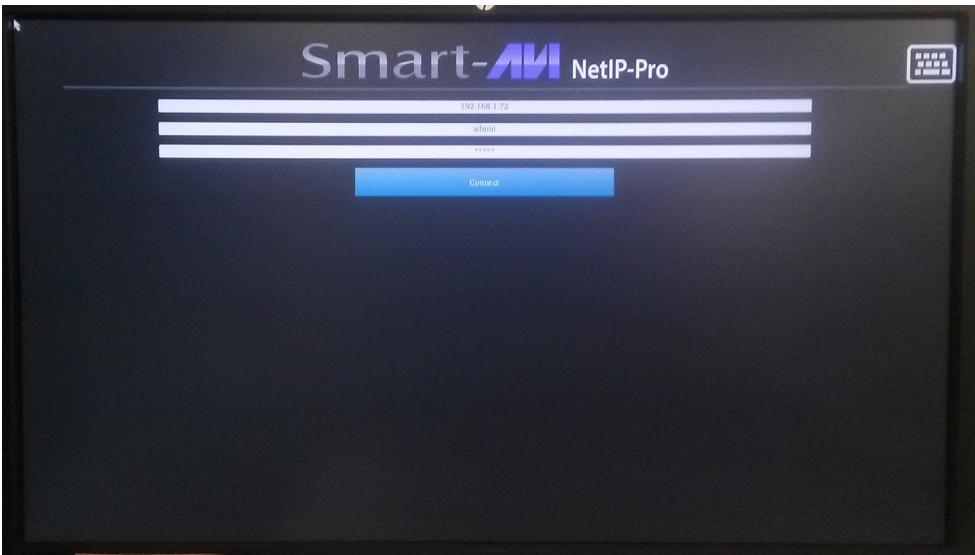


Figure 11-1



Figure 11-2

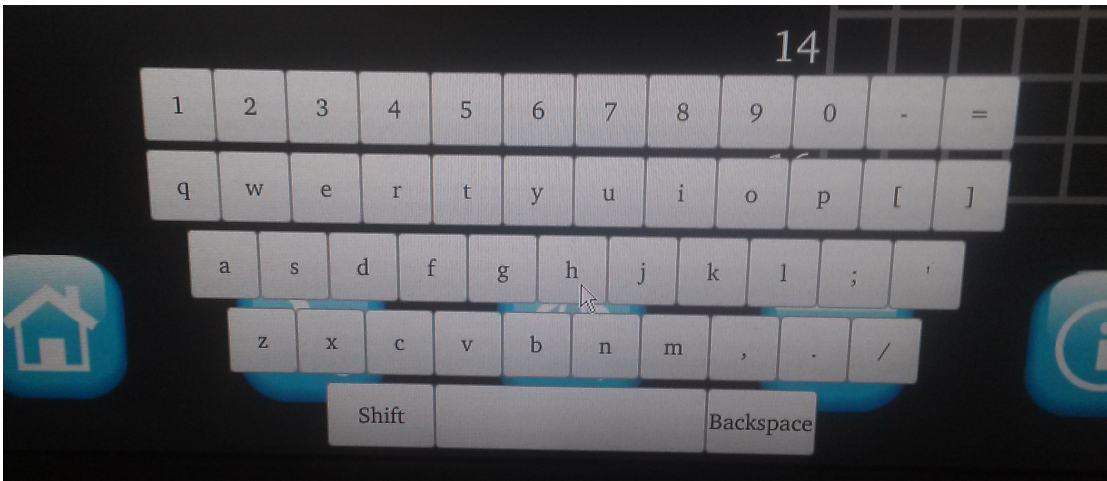


Figure 11-3

## LIMITED WARRANTY STATEMENT

### A. Extent of limited warranty

Smart-AVI Technologies, Inc. warrants to the end-user customers that the Smart-AVI 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.

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

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

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

Smart-AVI limited warranty is valid in any country where the covered product is distributed by Smart-AVI.

### B. Limitations of warranty

To the extent allowed by local law, neither Smart-AVI nor its third party suppliers make any other warranty or condition of any kind whether expressed or implied with respect to the Smart-AVI 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 Smart-AVI 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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20161230



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