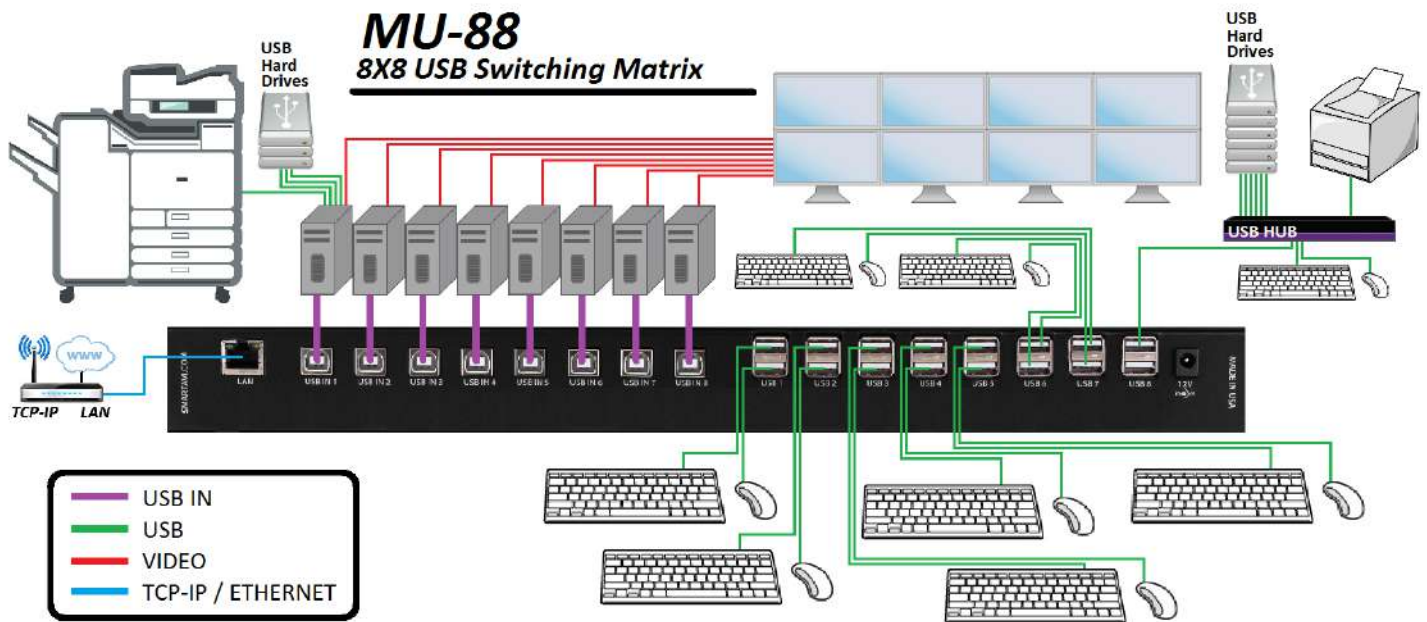


# MU-88

## User Manual

### 8X8 Transparent USB 2.0 Matrix Switch



Access and control up to 8 computers with Transparent USB 2.0 from up to 8 connected stations

**Smart-AVI**  
SMART AUDIO VIDEO INNOVATION

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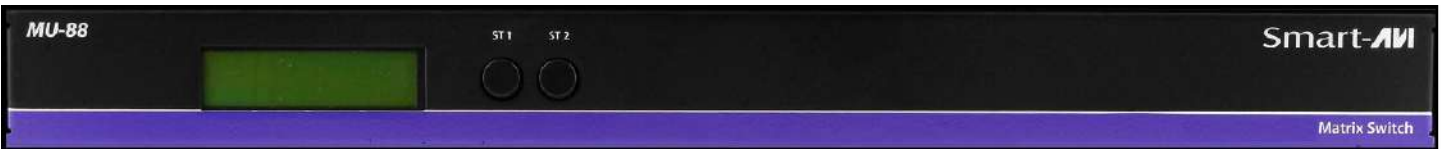
## WHAT'S IN THE BOX?

PART NO.	QTY	DESCRIPTION
MU88-S	1	8X8 Transparent USB 2.0 Matrix Switch
PS12VDC5A	1	Power Adapter
	1	Quick Start Guide

Brackets for mounting this device in a standard 19" rack can be ordered from SmartAVI.



### Front View



### Rear View



## INTRODUCTION

The MU-88 is an 8x8 transparent USB 2.0 matrix switch. It allows up to eight users to control any eight remote computers from USB 2.0 equipped stations. The MU-88 excels at expediting workflow by offering control of remote systems via USB devices, such as keyboards and mice, as well as connectivity for peripherals like external hard-drives, printers, and scanners.

Controlling the MU-88 is easy thanks to SmartAVI's simple-yet-robust design. Our two-button front panel control interface lets users switch between connected systems and devices at the press of a button. Furthermore, the MU-88 features a web-based control interface that offers comprehensive command of USB settings and USB devices over an Ethernet connection. The switch is an essential component in various real-world applications including control room supervision, post-production, group-based digital design work, large-scale server management, and more!

The MU-88 is an ideal solution for medical, industrial, studio and defense applications, where it is not practical or safe to have multiple workstations in close proximity to each other. An operator can switch to any connected computer from any connected station with ease.

## FEATURES

- (8) USB 2.0 Type B inputs—(8) Dual USB 2.0 Type A outputs
- Supports USB keyboard-mouse control (NO EMULATION)
- Supports USB peripheral devices (external hard-drives, scanners, printers, etc...)
- Simple two-button front panel control with LCD display for control and status
- Full web-based control console over Ethernet
- Control Sun, Mac or PC computers from one workstation
- Plug-and-play ready for immediate use

## APPLICATIONS

- Schools & Universities
- Conference Centers
- Server Collocation
- Shopping Centers
- Control Rooms
- Dealer Rooms
- Hospitals
- Security

## TECHNICAL SPECIFICATIONS

<b>USB</b>	
Signal Type	USB 2.0, 1.1 and 1.0
Input	(8) USB Type B Female (No Emulation)
Output	(16) USB Type A Female (2 per Station)
<b>CONTROL</b>	
Front Panel	Buttons
Ethernet (TCP/IP)	(1) RJ-45
<b>OTHER</b>	
Power Adapter	PS12VDC5A
Dimensions	17.06" W x 2" H x 10.4" D
Weight	8.8 lbs.
Working Temp.	32 to 122 °F (0 to 50 °C )
Working Humidity	Up to 85% RH (no condensation)
Storage Temp.	-4 to 149 °F (-20 to 65 °C )
Storage Humidity	Up to 90% RH (no condensation)

## HARDWARE INSTALLATION

1. Position the MU-88 conveniently and keep it unplugged.
2. Connect up to 8 computer's USB outputs to the MU-88 USB type B inputs
3. Connect up to 8 keyboards and mice to the MU-88 type A USB outputs. USB hubs may be used to connect additional USB devices.
4. Optionally connect the MU-88 to your network for additional control.
5. Power on the connected computers and monitors.
6. Power on the the MU-88.

KM extenders can be used to extend placement of Displays and USB devices.

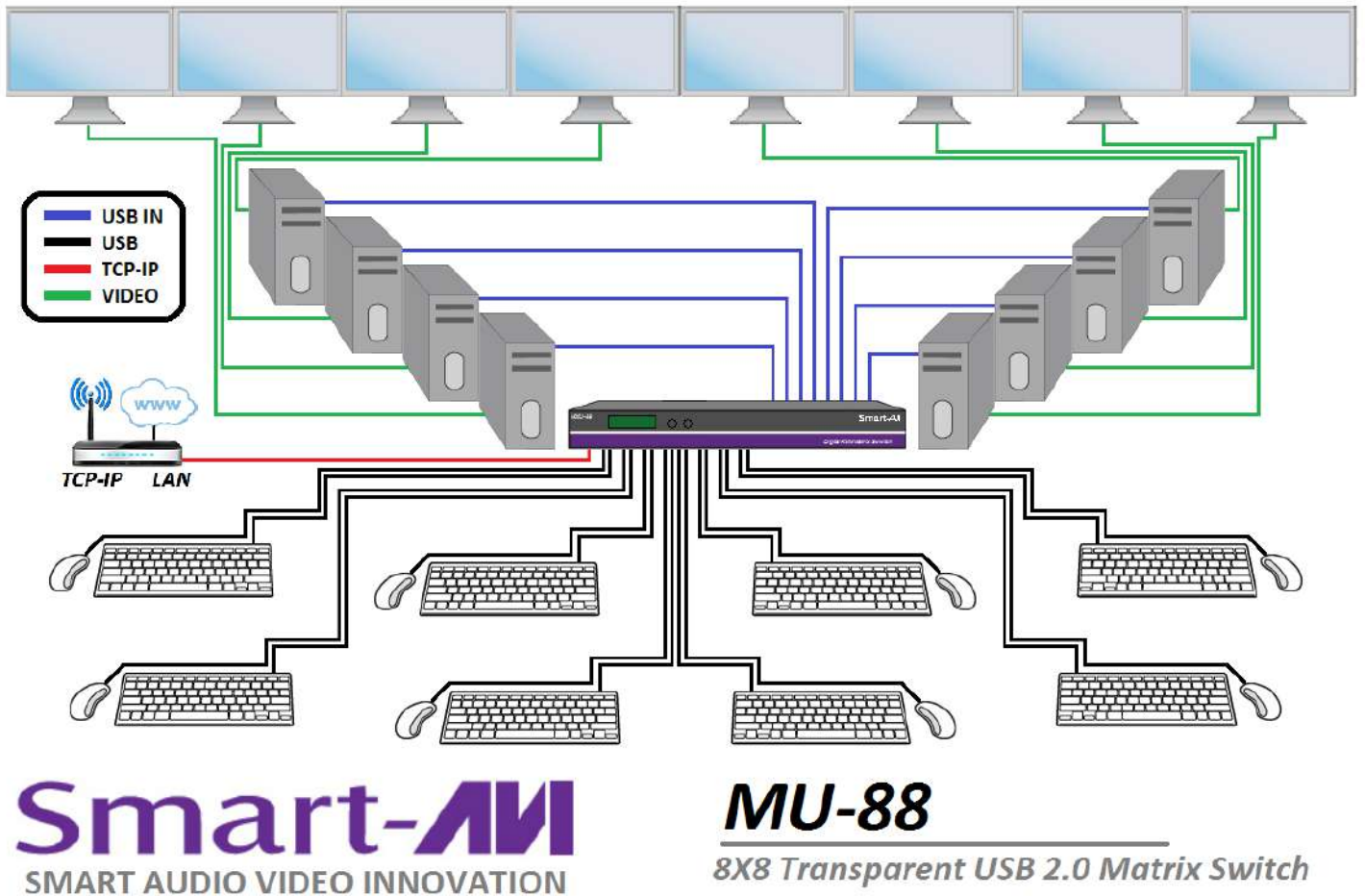


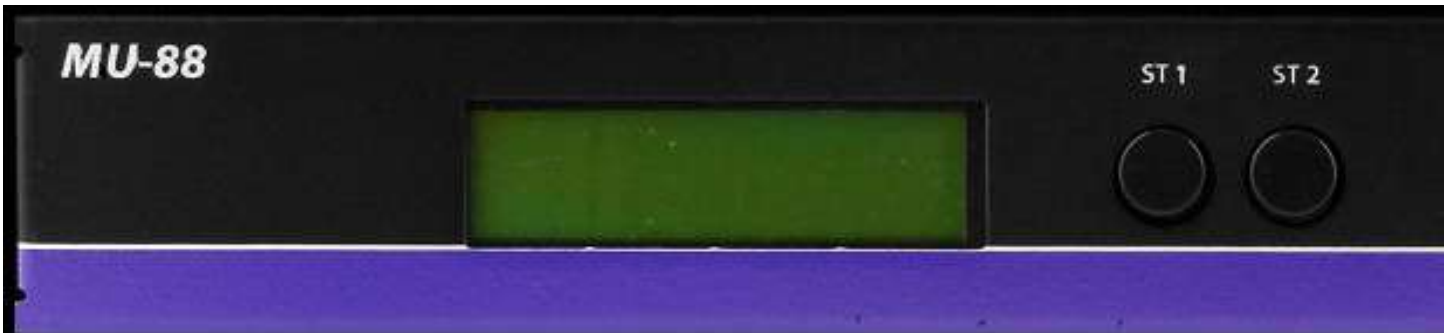
Figure 5-1



Figure 5-2

## FRONT PANEL CONTROL

Use the ST2 button to navigate to the desired menu item. Pressing ST1 and ST2 at the same time will execute the selection.



### USB:

Change which computer is connected to which keyboard / mouse.

Press ST2 to move from IN port to IN port.

Press ST1 when the cursor is on the IN port you want to change the OUT port # connected to it.

Press ST1 & ST2 simultaneously to connect the ports.

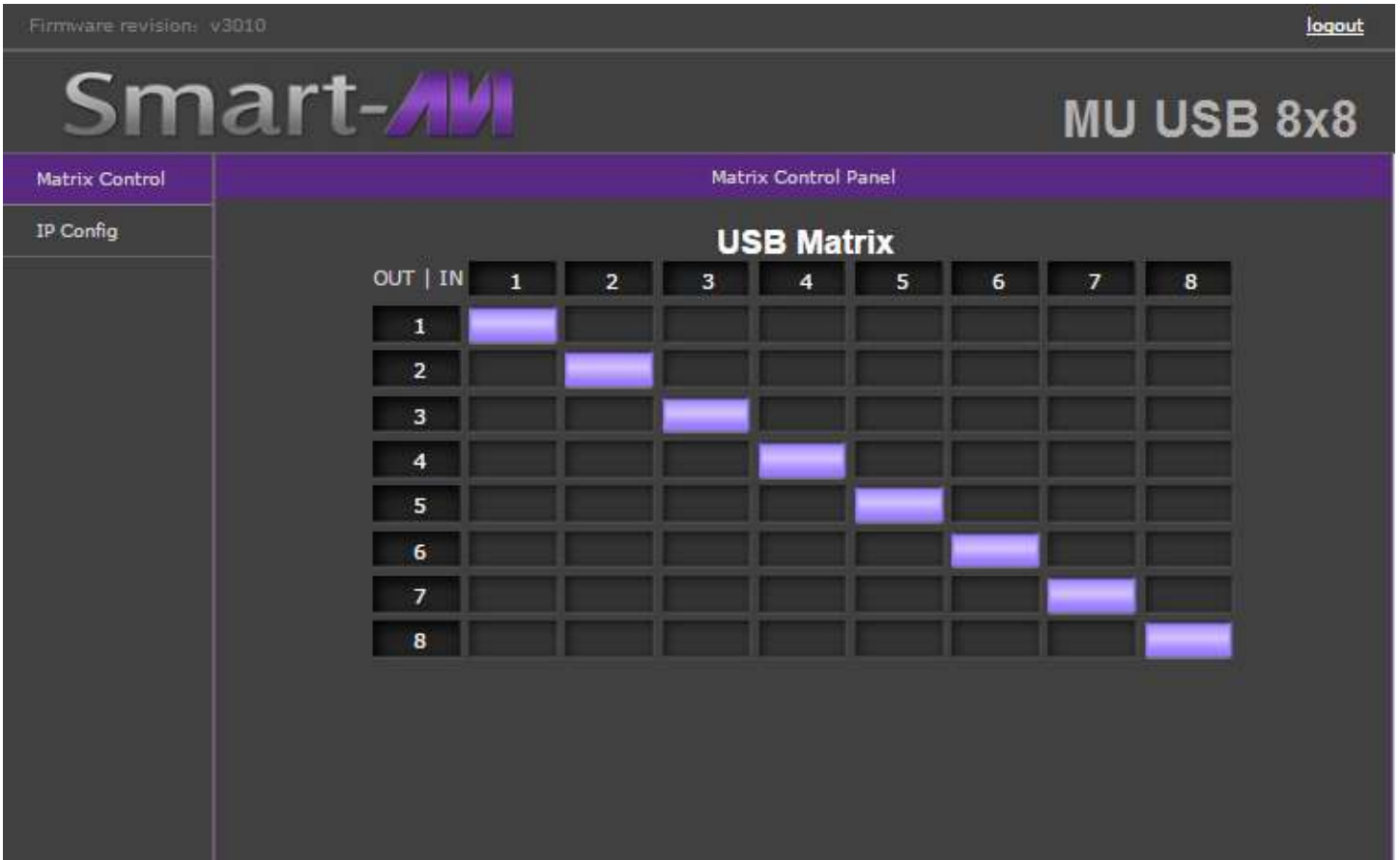
Press ST2 to move to another IN port or press ST1 & ST2 simultaneously to exit back to the main menu.

### IP:

Press ST1 & ST2 simultaneously to display the IP address in use by the MU-88.

## CONTROL VIA ETHERNET

On the front panel of the MU-88 press the ST2 button until the cursor is by the IP selection. Press ST1 & ST2 simultaneously to display the IP address in use by the MU-88. Enter the IP address into a web browser of your choice. You should see the MU-88 login page. **The username is admin and the password is admin.** Then the main webpage will display as shown in Figure 7-1. The left column of numbers represents the output port. The top row of numbers represent the input ports. Using your mouse click on the box at the intersection of the input with the output to execute the desired connection.



The screenshot displays the Smart-AMM MU USB 8x8 Matrix Control Panel. The interface includes a navigation menu on the left with 'Matrix Control' and 'IP Config' options. The main area is titled 'Matrix Control Panel' and 'USB Matrix'. It features an 8x8 grid where the top row represents input ports (1-8) and the left column represents output ports (1-8). The diagonal cells from (1,1) to (8,8) are highlighted in blue, indicating a default or active connection path.

OUT   IN	1	2	3	4	5	6	7	8
1	1							
2		2						
3			3					
4				4				
5					5			
6						6		
7							7	
8								8

Figure 7-1

## CONTROL VIA ETHERNET (Continued)

From the main webpage you can select IP Config and a webpage will display with fields allowing to set the network settings for the MU-88.

The screenshot displays the 'Smart-MU' web interface for 'MU USB 8x8'. The top navigation bar shows 'Firmware revision: v3010' on the left and a 'logout' link on the right. The main header features the 'Smart-MU' logo and the device name 'MU USB 8x8'. A left sidebar contains two menu items: 'Matrix Control' and 'IP Config', with 'IP Config' currently selected. The main content area is titled 'parameter' and contains the following configuration fields:

- IP type: DHCP/AutoIP (dropdown menu)
- Static IP: 192 . 168 . 0 . 7
- Submask: 255 . 255 . 255 . 0
- Gateway: 192 . 168 . 0 . 1

At the bottom of the configuration area, there are two buttons: 'Save' and 'Cancel'.

Figure 8-1



## 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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**Designed and Manufactured in the USA**

**800.AVI.2131**

Tel: (818) 503-6200 | Fax: (818) 503-6208  
11651 Vanowen St. North Hollywood, CA 91605

**SmartAVI.com**