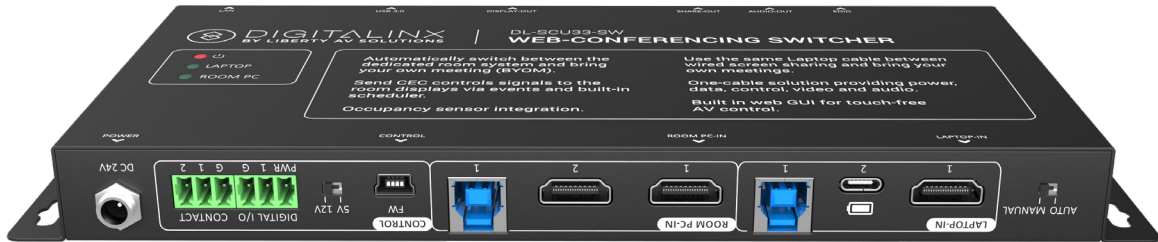


USER MANUAL



Web-Conferencing Room Switcher DL-SCU33-SW

PRODUCT OVERVIEW

Thanks for choosing Liberty AV's DL-SCU33-SW Web-Conferencing Room Switcher! The switcher/hub (DL-SCU33-SW) is a multi-format switcher that provides AV switching and USB routing for BYOM (bring your own meeting) devices to connect to dedicated cloud-based room systems. Users will be able to easily bring-their-own-meeting (i.e. Teams desktop client) in spaces running dedicated cloud-based room clients (i.e. Zoom room client). The device allows USB peripherals to switch between dedicated room systems and BYOM devices such as laptops. In addition, when BYOM is enabled, users can integrate their laptop into a dual screen environment by mirroring the laptop's output. The device's compact size allows for flexible mounting locations such as behind a display or underneath the table; mounting brackets come included. The USB-C port provides up to 60 watts of charging power creating the all-in-one cable experience. Built-in USB hub provides easy connection of devices like cameras, microphones, and speakers. Easily switch between modes from third-party devices ranging from a keypad/button or leave it set to auto switch. Integrated digital I/O ports and the built-in scheduler provide users with touchless display control using the built-in CEC controller. The control software has an event-driven architecture allowing configuration to be a breeze. The existing HDMI presentation cable can be used in either, dedicated or BYOM mode; no need to add another HDMI cable.

The collaboration switcher simplifies meeting room and presentation space system integration by providing two video modes (BYOM mode and Standard mode) with three HDMI inputs, one USB-C input and three HDMI outputs. The USB-C input supports video, data (USB host) and power charging up to 60w. There is a 4-port USB client hub built with 3 USB host ports that can be switched independently.

The switcher supports resolution up to 4K@60Hz@4:4:4, is HDCP 2.2-compliant and has a built-in USB 3.0 switching hub for control and integration of USB devices such as USB cameras and microphones.

The switcher supports auto switching and allows users to control the system functionality via TCP/IP, Digital I/O, contact and front panel.

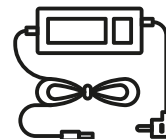
PACKAGE CONTENTS



(x1) User Manual

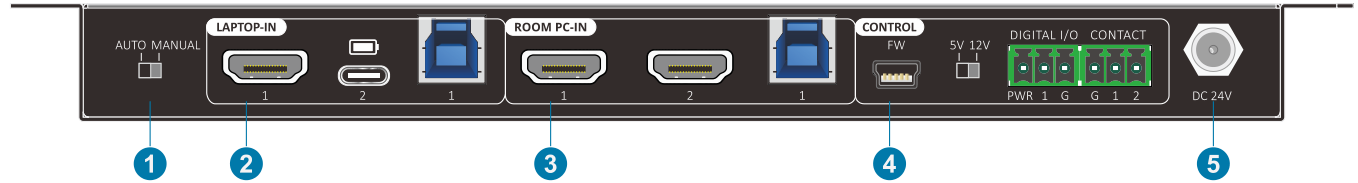


(x1) DL-SCU33-SW HDMI
2.0 Web-Conferencing
Room Switcher



(x4) Power Adaptor
(24V DC 5A)

FRONT PANEL PRODUCT BREAKDOWN



1. Dip Switch:

Auto: Allows for switching between modes using the video sync detected on the USB-C Alt mode setting.

Manual: isables video auto switching based on the connectivity of the USB-C port. In manual mode, the USB-C port can be used for charging purposes.

2. Laptop Mode:

Female HDMI Port: Connect a laptop for BYOM mode.

Female USB-C Port: Connect a laptop for BYOM mode or to charge a device using “convenience” power. Port provides display alt mode, USB data transfer and power.

Female USB B: Connect a laptop for BYOM mode.

3. Room PC Mode:

Female HDMI port: Connect a dedicated room computer for dedicated room systems.

Second HDMI port: For dedicated room computers using dual display.

Female USB B: Connect to the dedicated room computer.

4. CONTROL:

Female micro USB: Intended for FW updates or other configuration.

Dip switch: Select between 5 or 12 volts for the occupancy sensor power.

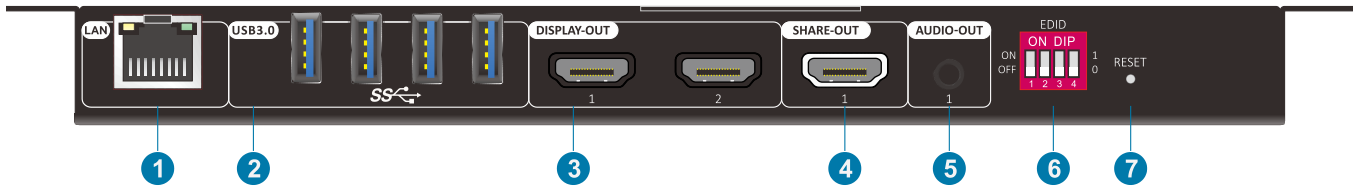
3-pin Phoenix connector: Digital I/O port for an occupancy sensor.

3-pin Phoenix connector: Contact closure.

5. POWER

Barrel Din connector: DC 24V power supply connection.

REAR PANEL PRODUCT BREAKDOWN



1. CONTROL

Female RJ45 connection for connecting into the device via the LAN.

Control the device from a third-party system through the integrated network and/or access the built in web GUI.

2. USB Client Connectivity

Female USB-A 3.0 port. Connect up to four USB peripherals such as cameras and microphones.

3. DISPLAY-OUT

Female HDMI outputs

4. SHARE-OUT

Female HDMI output

5. AUDIO-OUT

Female 3.5 audio jack

6. EDID

Dip switch for setting EDID settings

7. RESET

Push button for resetting the device

MODES

The DL-SCU33-SW collaboration switcher provides two modes to select from which allows users to choose from either a dedicated in-room PC running software or from their own laptop that they brought into the meeting space. The switcher is NOT a matrix switcher, and does not allow for custom routing of AV and USB signals.

BYOM Mode

BYOM (Bring Your Own Meeting) mode allows users to bring their own device to meeting.

1. USB-C or HDMI of LAPTOP IN will switch to 2 HDMI outputs of DISPLAY OUT.
2. USB clients will switch to the USB host connected to the LAPTOP IN (USB-B port if the HDMI source is connected OR, the USB-C port).
3. Audio output will be extracted from USB-C or HDMO of the LAPTOP IN.

*Note: The HDMI signal will be selected if both USB-C and HDMI of LAPTOP IN are connected.

** Note: The USB-C will need to be set to manual or enabled for BYOM. By default, the USB-C port will be set for Standard Mode.

Standard Mode

1. 2 HDMI inputs of ROOM PC IN will switch to DISPLAY separately. USB-C or HDMI of LAPTOP IN will switch to SHARE OUT.
2. USB clients will switch to the USB-B host of ROOM PC IN.
3. Audio output will de-embedded from 1-HDMI of ROOM PC-IN.

SWITCHING BETWEEN MODES

Manual Switching

When the DIP switch next to the LAPTOP-IN is selected to MANUAL, the switcher is now in manual switching mode.

One can select BYOM or STANDARD mode via:

- Web GUI landing page
- Occupancy sensor connected via digital i/o
- Control from a third-party device
- Predefined schedule
- Push button connected via contact closure can select BYOM or STANDARD mode via web GUI
- QR code

Auto Switching

When the DIP switch of rear panel is selected to AUTO, the switcher is in auto-switching mode. BYOM or STANDARD mode will be automatically selected by signal detected according to the following rules:

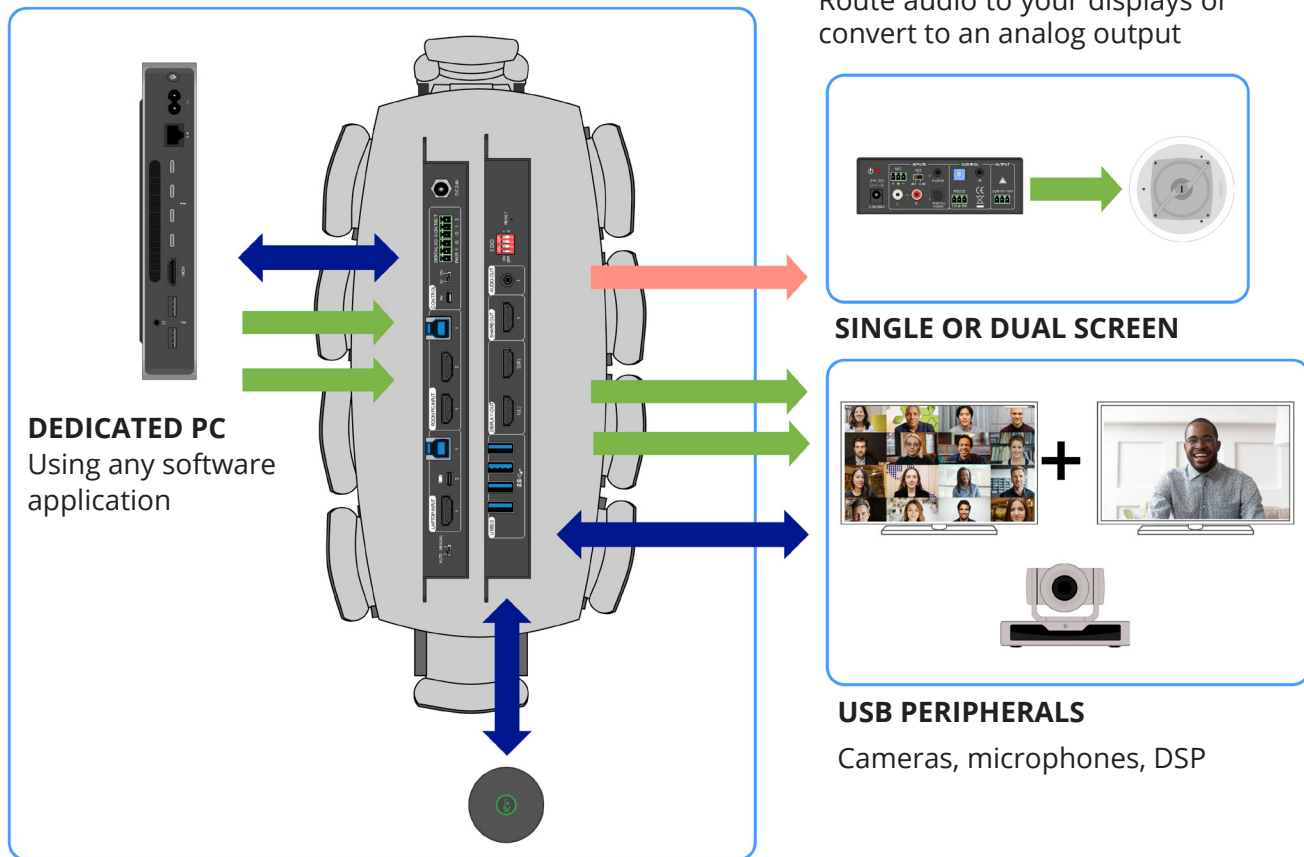
1. If the USB-C or USB-B signal of LAPTOP IN is detected, BYOM mode is selected.
2. If neither the USB-C or USB-B signal of LAPTOP IN is detected, STANDARD mode is selected.

SYSTEM MODE: STANDARD (DEDICATED ROOM PC WITHOUT LAPTOP)

Dedicated Room System (Standard): The collaboration switcher gets installed in series within the dedicated room systems signal chain, ideal for post- or pre-install and is purpose-built for single or dual screen environments. The shared content output allows for a dedicated room system to use the connected HDMI OR USB-C cable for wired HDMI screen sharing, injecting the content into the software running on the dedicated PC. This uses an HDMI to USB capture card to communicate between local device content with the application such as Zoom or a Zoom Room.

Note: The HDMI content sharing output is optional and is not required for system functionality.

Application showing a dedicated room PC with
NO laptop connection



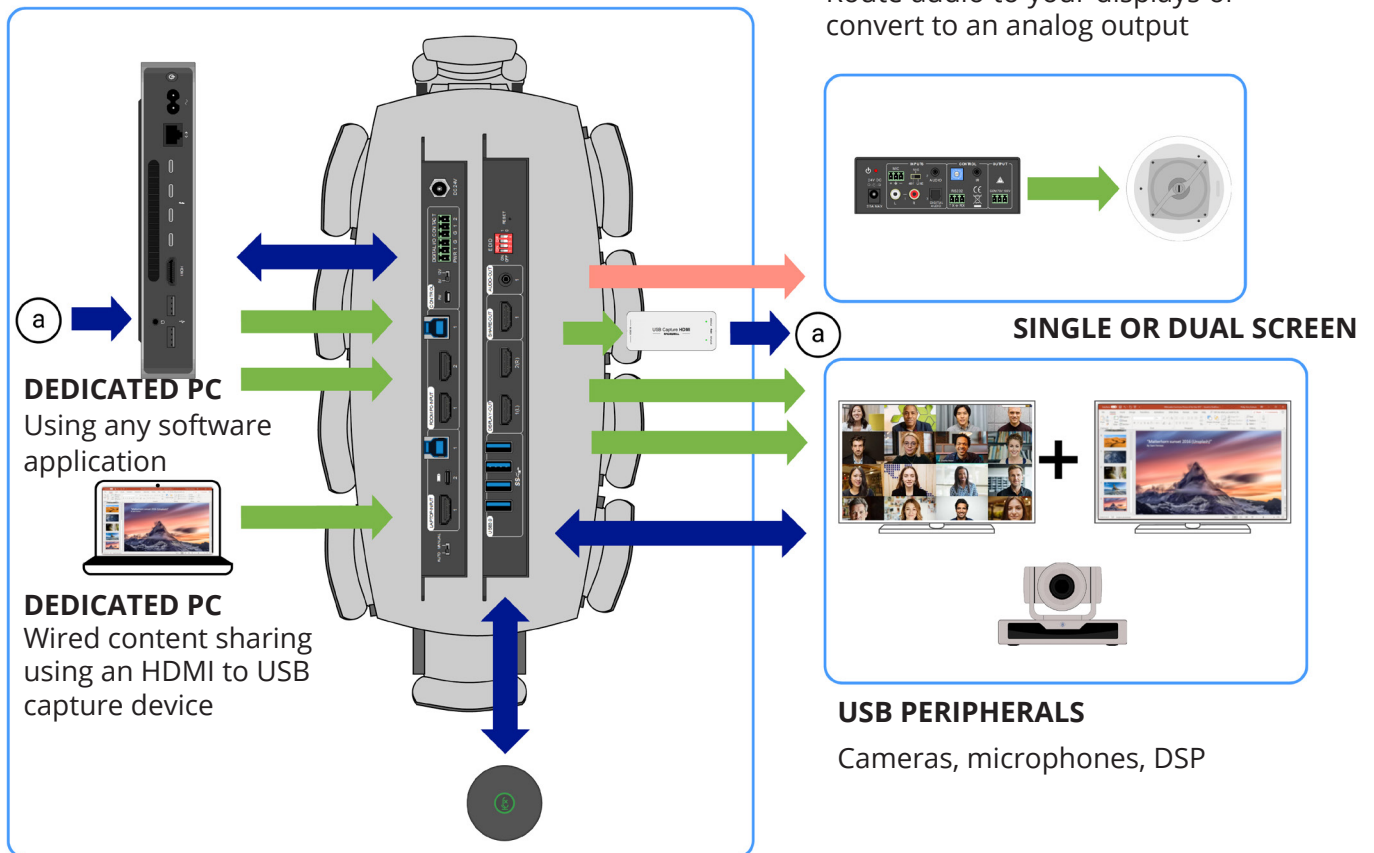
The diagrams within this section are conceptual. The switcher can be installed in various locations such as underneath the table, equipment rack, lectern or behind a display.

SYSTEM MODE: STANDARD (DEDICATED ROOM PC WITH LAPTOP)

In Standard mode, the HDMI signal from the laptop connection will route out of the SHARE OUTPUT. This is intended for wired content sharing when using third-party UC software such as Zoom. Certain UC software companies allow laptop content to be directly shared to the room system for screen share during a video call or locally.

The USB-C connection will send adequate power to charge the device, receive audio and 4K@60Hz video signals for video output and transferring USB data. Note: A full-featured USB-C cable must be used along with a laptop with a full-featured USB-C port.

Application showing a dedicated room PC with a laptop connection for wired content sharing



SYSTEM MODE: BYOM (LAPTOP)

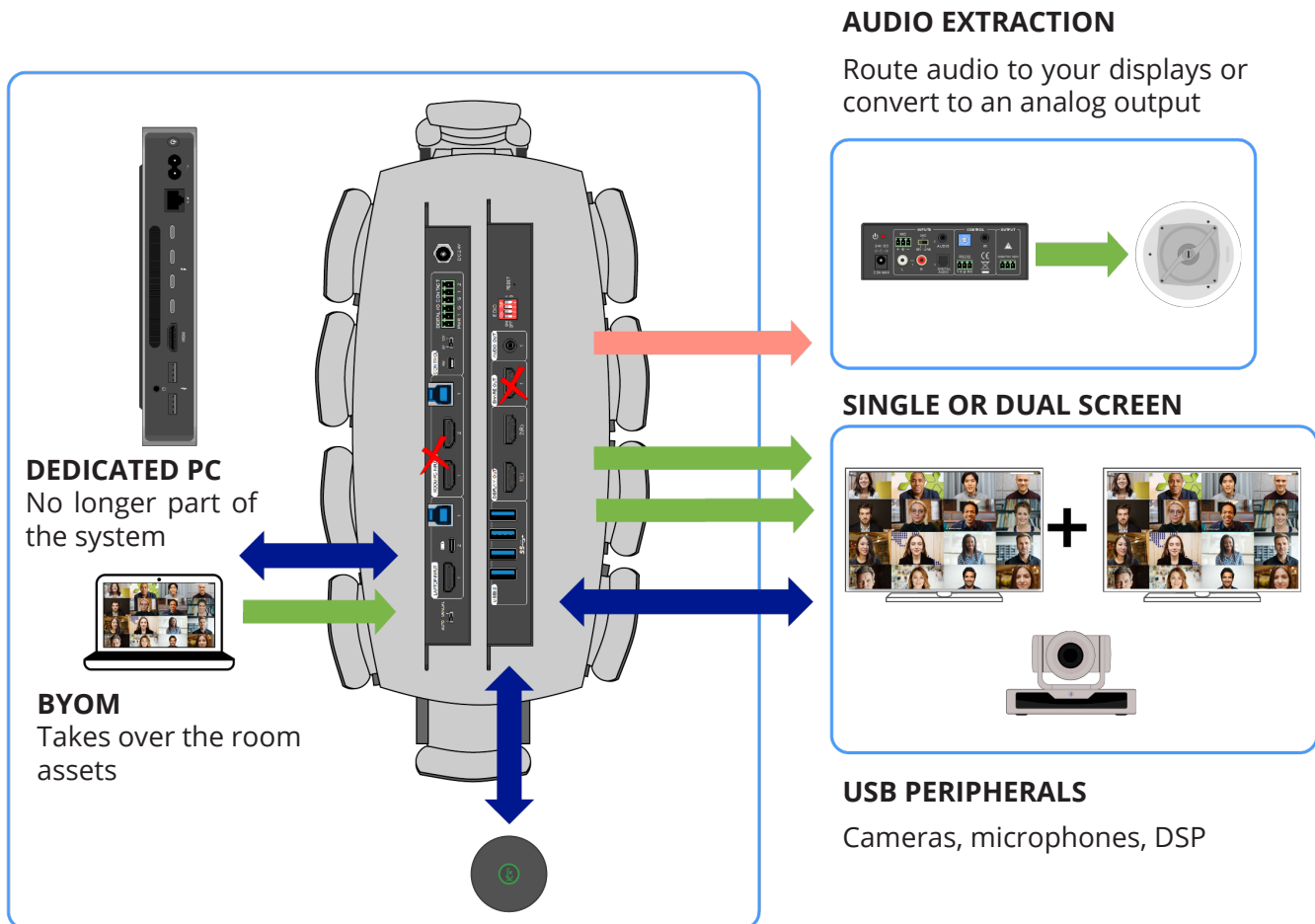
BYOM (Bring Your Own Meeting): Based on how the collaboration switcher is configured, the LAPTOP IN connection provides the ability for users to connect to the meeting space assets from their own device, such as the display, amplifier, camera and microphone OR be used for wired content sharing within a dedicated room system.

1. CONTENT: USB-C or HDMI from the LAPTOP IN connection will switch to the 2 HDMI outputs from DISPLAY OUT. The content will be mirrored to each output. The switcher can be wired for dual or single screen applications.

2. USB: The USB devices connected to the USB 3.0 section client ports will switch to the laptop USB host (USB-B port ties to HDMI or USB-C port if USB-C source is connected).

Note: HDMI signal will be selected if both USB-C and HDMI of LAPTOP IN are connected.

Application showing BYOM MODE



WEB GUI INTERFACE: START UP

The device has a built in web GUI allowing for configuration along with being controlled via TCP/IP.

The default IP settings are:

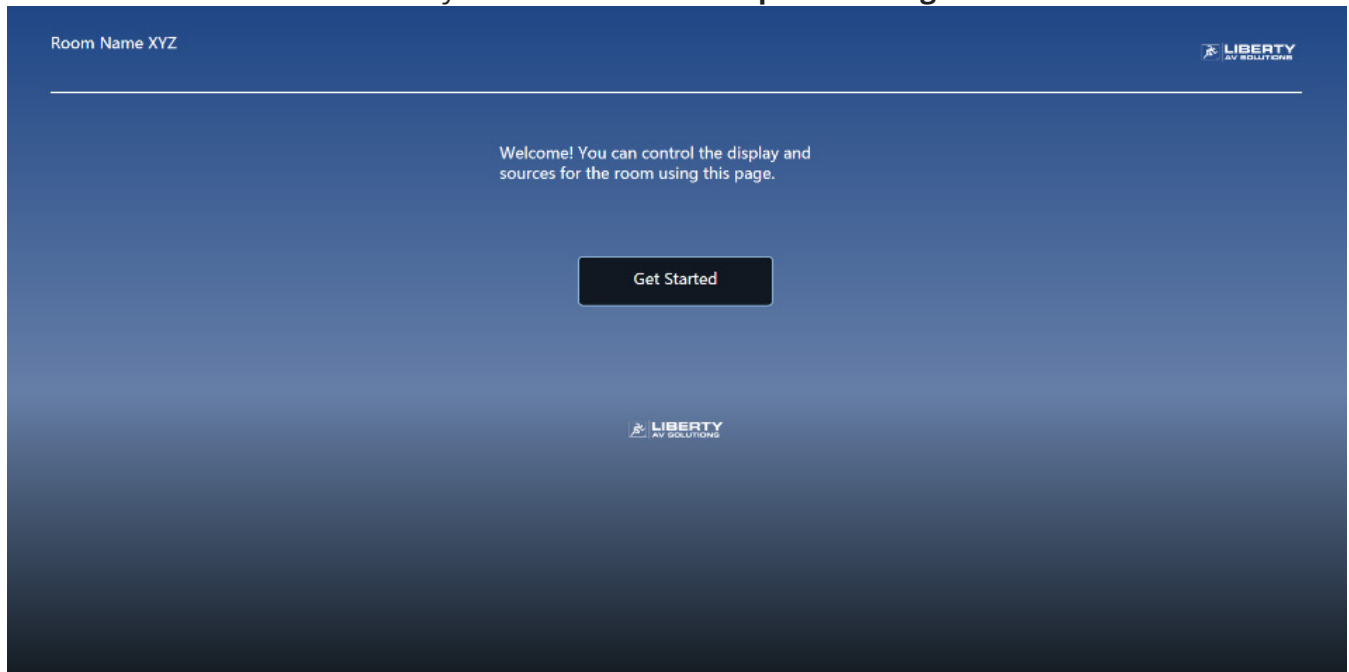
IPAddress:192.168.0.178

Subnet Mask: 255.255.255.0

Port 4001

Type **192.168.0.178** in the web browser, and you will see the Welcome webpage:

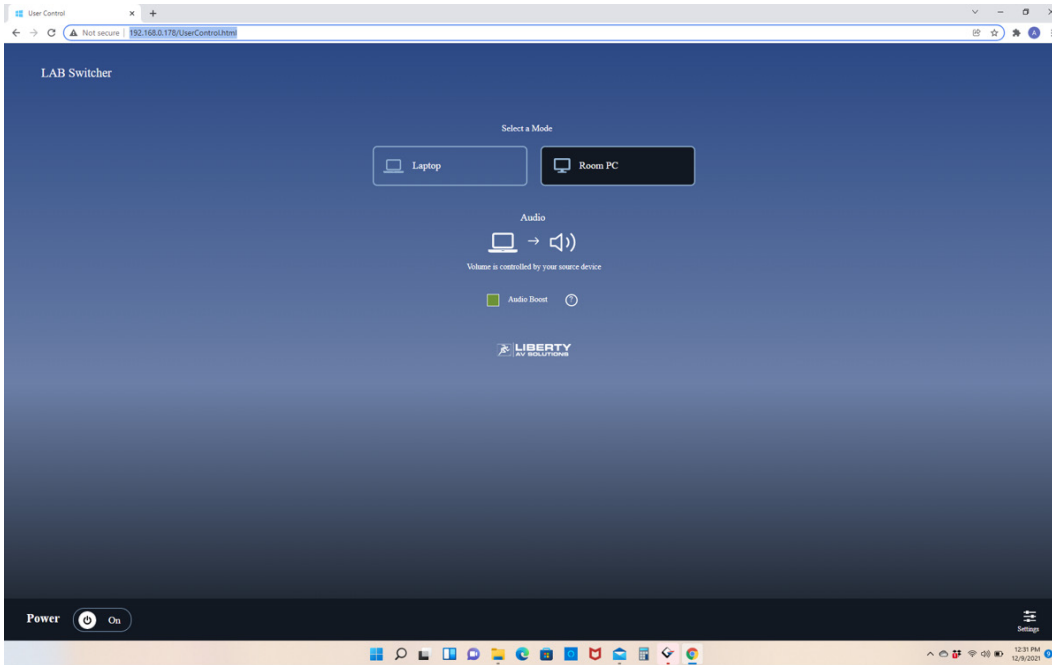
Click on the **“Get Started”** button and you will be sent to the **Operation Page**



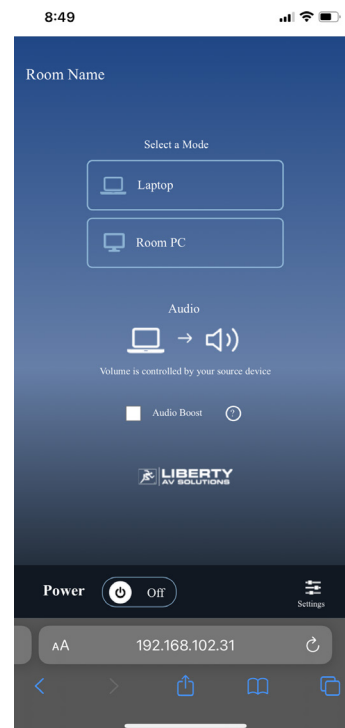
WEB GUI INTERFACE: OPERATORS PAGE

The Operators page provides basic controls, allowing for easy switching between modes, audio adjustments and power cycling. The room name and logo can be updated within the admin settings based on your preferences.

Web View



Mobile View



The predefined GUI provides the following functionality:

- Mode Selection: Select between BYOM or Standard.
- Audio Boost: Boost the HDMI output TV via CEC.
- Power: Turn on/off the unit.

CONTACTLESS MEETING CONTROL

Use the built-in web GUI home page for providing users with remote control over the system.

It's quick and easy to create your digi-QR code:

1. Make sure your device is online and has an IP address.
2. Choose a QR code generator -Free options:
 - qr-code-generator.com
 - QR Code Monkey
3. Paste URL of the switcher into the generator (using dynamic updates, if asked)
4. Print, promote and publish this unique QR code for use.

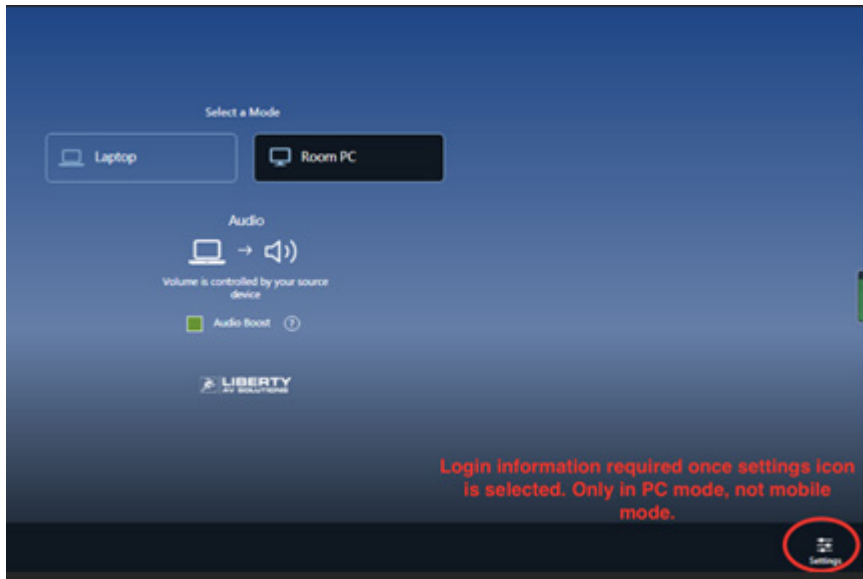
Example



WEB GUI INTERFACE: ADMIN PAGE

Note: The Admin page, is NOT available when using a mobile phone.

Click the “Settings” icon in the bottom right-hand corner to access the admin page to configure the device.

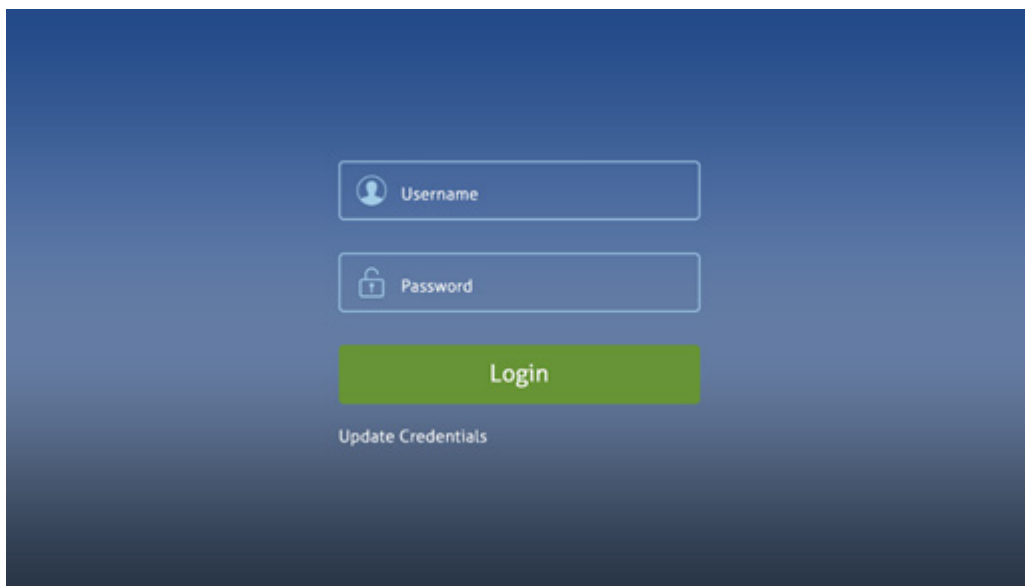


A login pop-up will appear asking for login information.

Default username: admin

Default password: admin

Here one can update the credentials for enhanced security.



WEB GUI INTERFACE: ADMIN PAGE

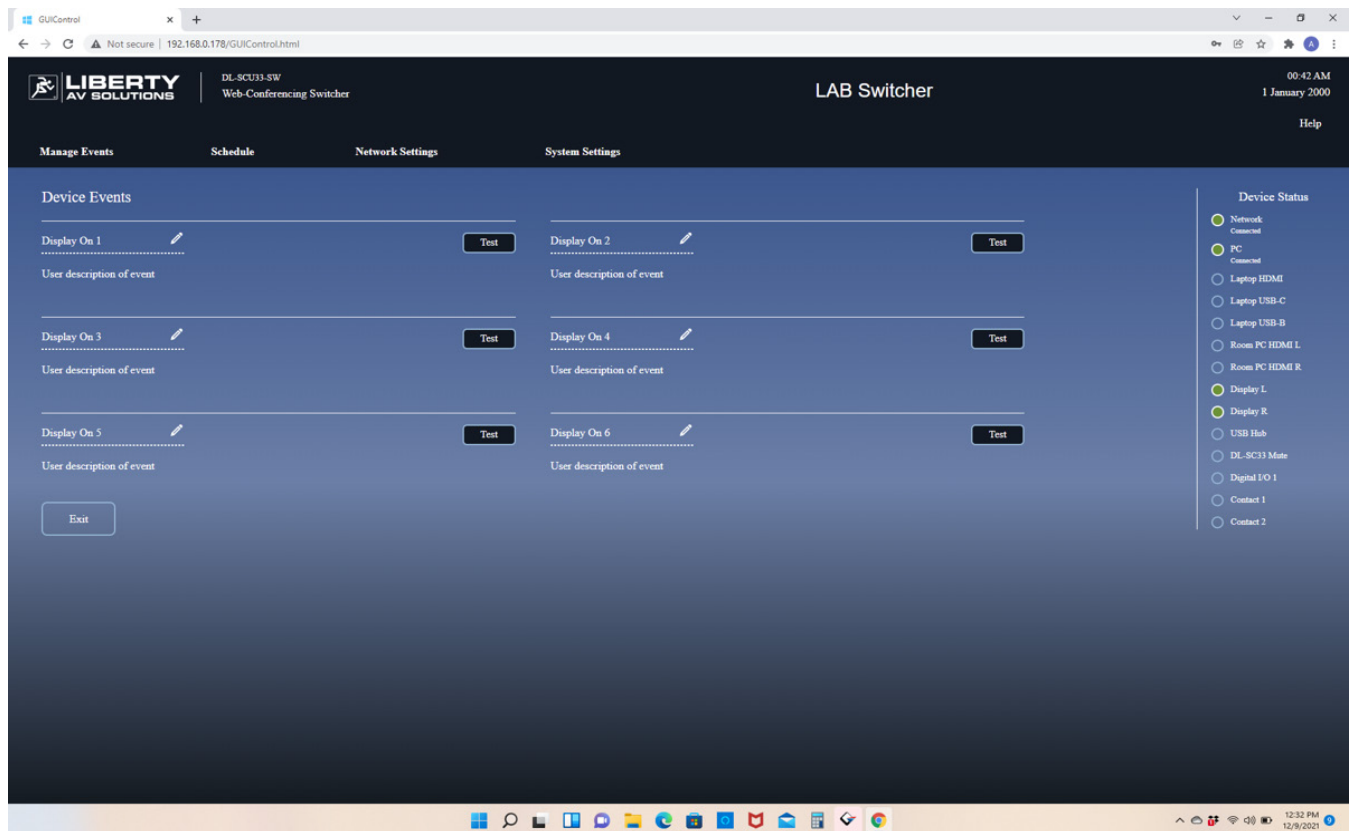
The DL-SCu33 provides automation through an event-driven architecture where actions are executed as events happen.

Event: apply to the cases you want something to happen (for instance turning a display ON).

Label: freely select any name for your event. We have input generic text that can be left alone.

Trigger: is the action that starts an automation. These can be a user tripping a sensor, the completion of a timer or changes in state of the device. In fact, triggering an event can activate any number of actions, enabling an automated experience for the user.

Actions: are events you can force to occur in reaction to a trigger enabling a range of possibilities to automate the user experience.

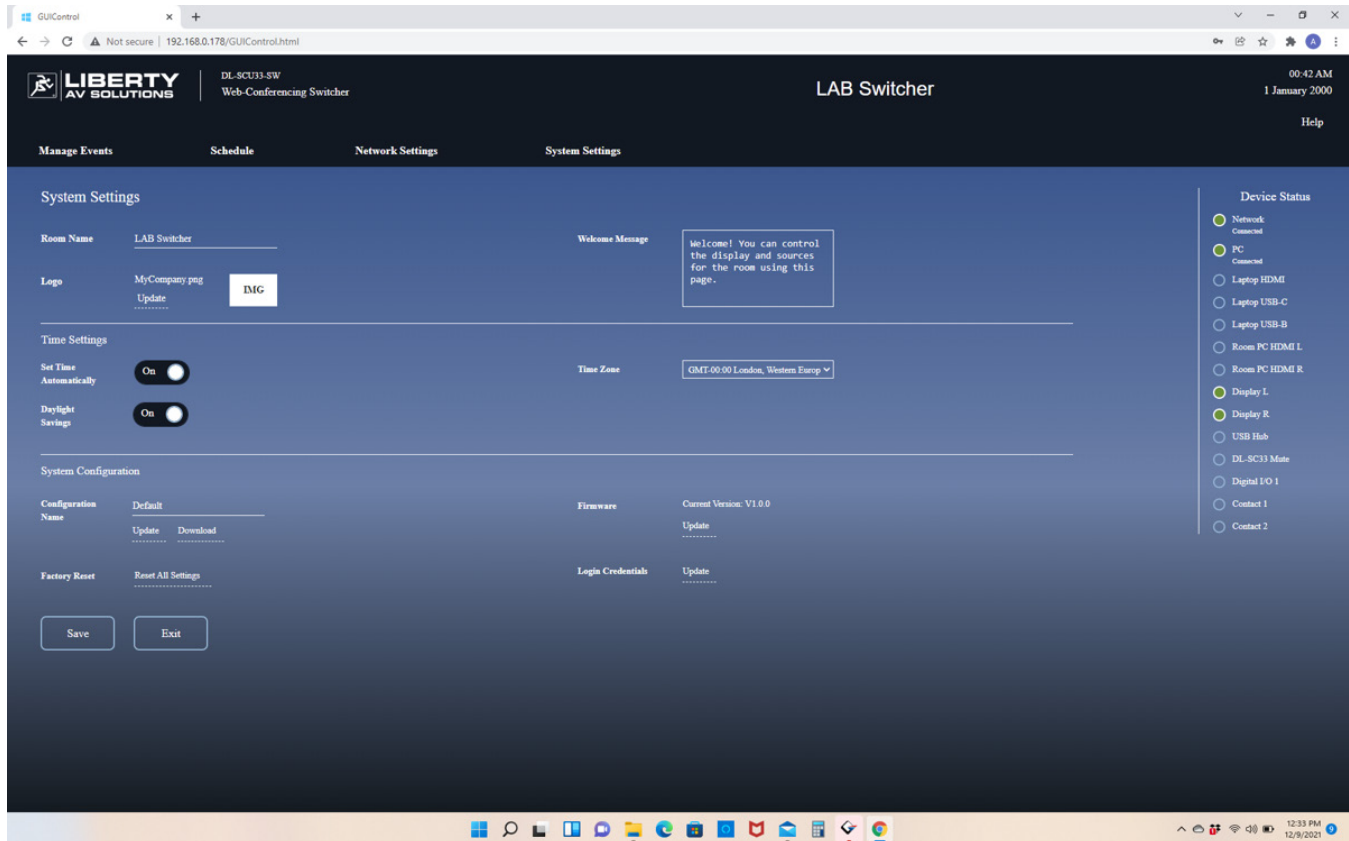


WEB GUI INTERFACE: MANAGE EVENTS

Manage Events

Event list: 6 events list here, click the pencil for event setting.

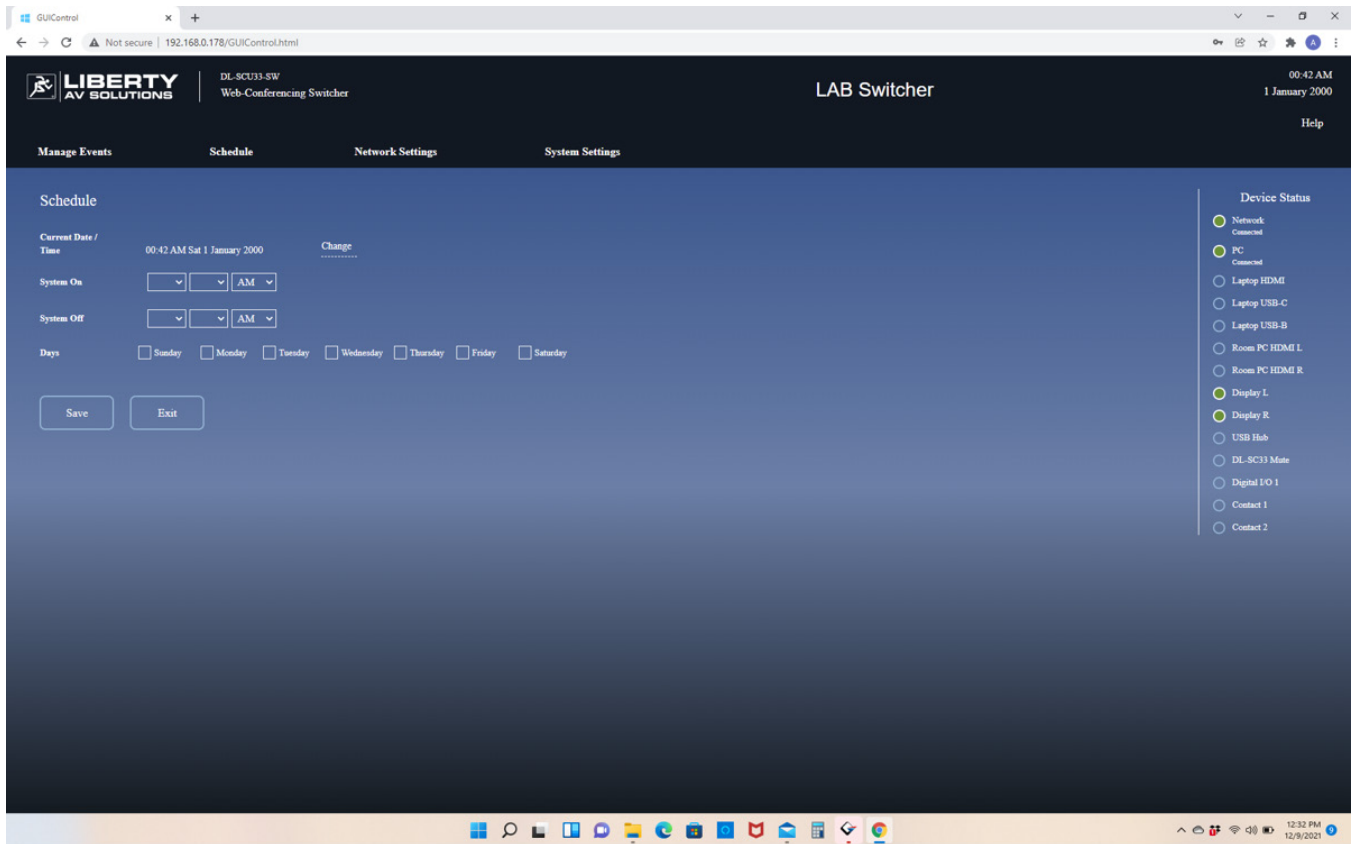
Here you will be able to update the event name, and set CEC commands to be sent when the event is triggered.



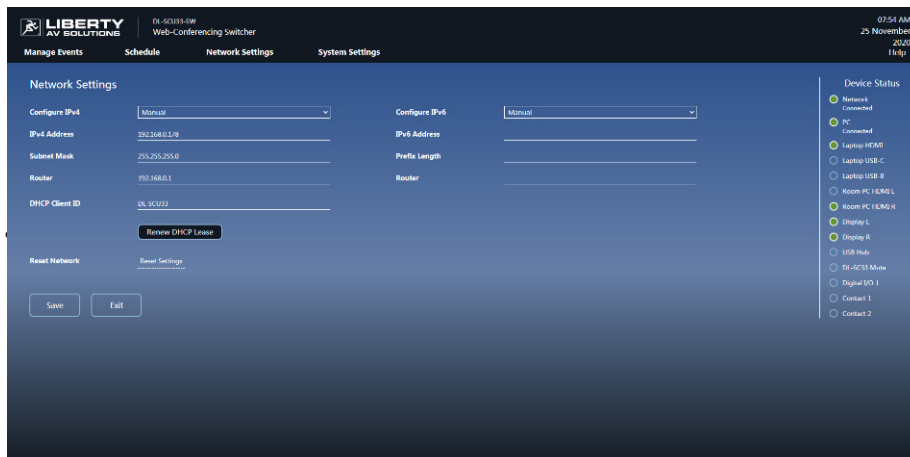
WEB GUI INTERFACE: SCHEDULE

Schedule

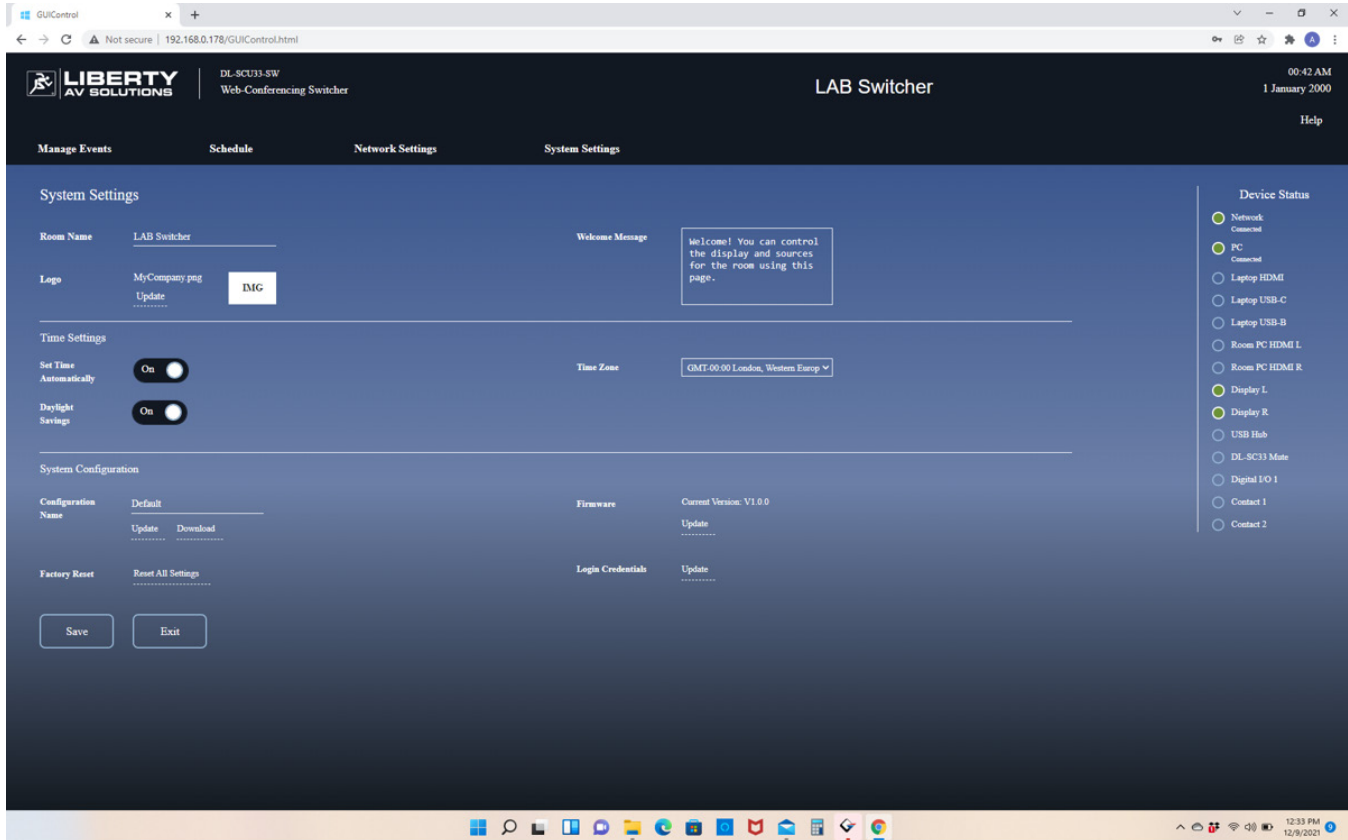
- Current date/ time setting.
- System on/off setting.



Network Setting



WEB GUI INTERFACE: SYSTEM SETTINGS



Within the system settings, you will be able to update the following:

- Room name, welcome message and logo setting.
- Time setting:
 1. Auto/ Manual setting.
 2. Daylight saving time.
- System Configuration:
 1. Upload or download configuration file.
 2. Firmware update.
 3. Factory reset.Login credentials

RS232 CONTROL

RS232 commands can be transmitted to the unit for local control. The baud rate supports 9600(default), 19200, 38400, 57600 or 115200.

Port 4001

RS232 Control Software

• Installation/uninstallation

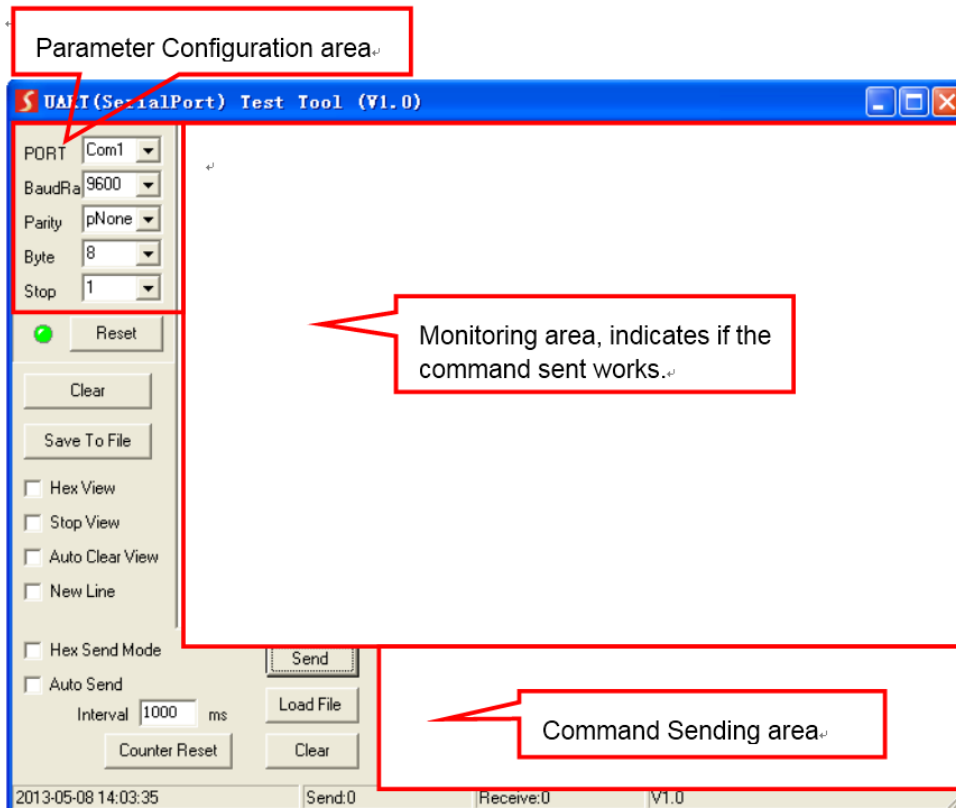
- Installation: Copy the control software file to the computer connected with the transmitter.
- Uninstallation: Delete all the control software files in corresponding file path.

• Basic Settings

First connect the transmitter with all input devices and output devices needed, then connect it with a PC which is installed with RS232 control software. Double-click the software icon to run this software. Here we take the software **CommWatch.exe** as example. The icon is shown as below:



The interface of the control software is shown as below:



Please set the parameters of COM number, bound rate, data bit, stop bit and the parity bit correctly, and then you are able to send command in command sending area.

RS232 CONTROL COMMANDS

RS232 Command

Communication protocol: RS232 Communication Protocol

Baud rate: 115200 Data bit: 8 Stop bit: 1 Parity bit: none

The end mark of command is "<CR><LF>".

Command	Function	Command & Feedback Example
>Help	Get the list of all commands	>Help SetAV <Set the HDMI switch mode >SetAV Param Param = M1,M2 M1 - BYOM Mode M2 - Standard Mode
>GetFirewareVersion	Get the firmware version	>GetFirewareVersion <V1.0.0
>FactoryReset	Factory Default	>FactoryReset <FactoryReset_True
>SetAV Param	Set the HDMI switch mode Param = M1, M2 M1 - BYOM Mode M2 - Standard Mode	>SetAV M1 <AV M1
>GetAV	Get the HDMI switch mode	>GetAV <AV M1
>SetAudioMute Param	Enable/Disable audio mute Param = ON, FF ON - ON FF - OFF	>SetAudioMute ON <AudioMute ON
>SetEDID Param1 To Param2	Set the EDID mode Param1 = 00 ~ 04 00~04 - Input Param2 = 00 ~ 12 00 - 1920x1080@60 8bit Stereo (default) 01 - WUXGA 1920x1200 02 - 1920x1080@60 8bit High Definition Audio 03 - 3840x2160@60Hz 4:2:0 Deep Color Stereo Audio 04 - 3840x2160@60Hz Deep Color Stereo Audio 05 - 3840x2160@30Hz 8bit Stereo Audio 06 - 3840x2160@60Hz Deep Color High Definition Audio 07 - 3840x2160@60Hz Deep Color HDR LPCM 6CH 08 - copy EDID from Share output 09 - copy EDID from HDMI L output 10 - copy EDID from HDMI R output 11 - EDID passthrough(follow HDMI share)	>SetEDID 01 To 01 <EDID IN 01 STA 01

RS232 CONTROL COMMANDS

Command	Function	Command & Feedback Example
>GetEDID	Get the EDID mode	>GetEDID <EDID IN 01 02 03 04 STA 01 01 01 01
>SetPower Param	Enter/exit standby mode Param = On, Off Off - Power off On - Power on	>SetPower On <Power On
>GetPower	Get the standby status	>GetPower <Power On
>SetIOMode Param	Set Contact I/O mode Param = 1 ~ 2 1 - IO Mode 1 2 - IO Mode 2	>SetIOMode 1 <IOMode 1
>GetIOMode	Get Contact IO mode	>GetIOMode <IOMode 1
>SetCtlCecOn Param	Enable/Disable CEC control Param = ON,FF ON - ON FF - OFF	>SetCtlCecOn <SetCtlCecOn ON
>GetCtlCecOn	Get CEC control status	>GetCtlCecOn <GetCtlCecOn ON
>SetSchedule <Param1,Param2, Param3,Param4, Param5,Param6, Param7,Param8, Param9,Param10, Param10>	Set Schedule time Param1 = 0 ~ 24(hour) Param2 = 0 ~ 60(min) Param3 = 0 ~ 24(hour) Param4 = 0 ~ 60(min) Param5 = 0 ~ 1(Sun) Param6 = 0 ~ 1(Mon) Param7 = 0 ~ 1(Tues) Param8 = 0 ~ 1(Wed) Param9 = 0 ~ 1(Turs) Param10 = 0 ~ 1(Fri) Param11 = 0 ~ 1(Sat)	>SetSchedule <1,0,1,0,0,1,1,1,1,1,1> <SetSchedule <1,0,1,0,0,1,1,1,1,1,1>
>GetSchedule	Get Schedule time	>GetSchedule <Time: 1,0,1,0,0,1,1,1,1,1,1>
>SetDaylight Param	Set Daylight on/off Param = On, Off Off - Power off On - Power on	>SetDaylight On <Daylight On
>GetDaylight	Get Daylight on/off	>GetDaylight <Daylight On
>SetTime <Param,Param1,Para m2,Param3,Param4,P aram5>	Initialize the time setting Param = 1970 ~ 2099(year) Param1 = 1 ~ 12(month) Param2 = 1 ~ 31(date) Param3 = 0 ~ 24(hour) Param4 = 0 ~ 60(min) Param5 = 0 ~ 60(sec)	>SetTime <2020,1,1,1,1,1> <SetTime <2020,1,1,1,1,1>

RS232 CONTROL COMMANDS

Command	Function	Command & Feedback Example
>GetTime	Get current time	>GetTime <Time: 2020,1,1,1,1,1>
>GetIpAddress	Get the IP to access GUI	>GetIpAddress <IP: 192.168.0.178>
>SetIP <XXX.XXX.XXX.XXX> <YYY.YYY.YYY.YYY> <ZZZ.ZZZ.ZZZ.ZZZ>	Set the GUI IP address XXX = 0 ~ 255(IP ADDRESS) YYY = 0 ~ 255(MASK) ZZZ = 0 ~ 255(GATE)	>SetIP <192.168.0.178> <255.255.255.0> <192.168.0.1> <SetIP <192.168.0.178> <255.255.255.0> <192.168.0.1>
>SetCecSrcMenu Param	Send CEC MENU command to source Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcMenu 1 <CecSrcMenu 1
>SetCecSrcUp Param	Send CEC UP command to source Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcUp 1 <CecSrcUp 1
>SetCecSrcDown Param	Send CEC DOWN command to source Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcDown 1 <CecSrcDown 1
>SetCecSrcLeft Param	Send CEC LEFT command to source Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcLeft 1 <CecSrcLeft 1
>SetCecSrcRight Param	Send CEC RIGHT command to source Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcRight 1 <CecSrcRight 1
>SetCecSrcBack Param	Send CEC BACK command to source Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcBack 1 <CecSrcBack 1
>SetCecSrcEnter Param	Send CEC ENTER command to source Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcEnter 1 <CecSrcEnter 1
>SetCecSrcOn Param	Send CEC ON command to source Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcOn 1 <CecSrcOn 1

RS232 CONTROL COMMANDS

Command	Function	Command & Feedback Example
>SetCecSrcOff Param	Send CEC OFF command to source Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcOff 1 <CecSrcOff 1
>SetCecSrcStop Param	Send CEC STOP command to source Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcStop 1 <CecSrcStop 1
>SetCecSrcPlay Param	Send CEC PLAY command to source Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcPlay 1 <CecSrcPlay 1
>SetCecSrcPause Param	Send CEC PAUSE command to source Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcPause 1 <CecSrcPause 1
>SetCecSrcPrev Param	Send CEC PREV command to source Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcPrev 1 <CecSrcPrev 1
>SetCecSrcNext Param	Send CEC NEXT command to source Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcNext 1 <CecSrcNext 1
>SetCecSrcRewind Param	Send CEC rewind command to source Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcRewind 1 <CecSrcRewind 1
>SetCecSrcFast Forward Param	Send CEC fast-forward command to source Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcFastForward 1 <CecSrcFastForward 1
>SetCecDisplayOn Param	Send CEC ON command to displayer Param = 1~3 1 - Display HDMI OUT L 2 - Display HDMI OUT R 3 - HDMI SHARE OUT	>SetCecDisplayOn 1 <CecDisplayOn 1

RS232 CONTROL COMMANDS

Command	Function	Command & Feedback Example
>SetCecDisplayOff Param	Send CEC OFF command to displayer Param = 1~3 1 - Display HDMI OUT L 2 - Display HDMI OUT R 3 - HDMI SHARE OUT	>SetCecDisplayOff 1 <CecDisplayOff 1
>SetCecDisplaySource Param	Send CEC SOURCE command to displayer Param = 1~3 1 - Display HDMI OUT L 2 - Display HDMI OUT R 3 - HDMI SHARE OUT	>SetCecDisplaySource 1 <CecDisplaySource 1
>SetCecDisplayMute Param	Send CEC MUTE command to displayer Param = 1~3 1 - Display HDMI OUT L 2 - Display HDMI OUT R 3 - HDMI SHARE OUT	>SetCecDisplayMute 1 <CecDisplayMute 1
>SetCecDisplay VOLPlus Param	Send CEC volume plus command to displayer Param = 1~3 1 - Display HDMI OUT L 2 - Display HDMI OUT R 3 - HDMI SHARE OUT	>SetCecDisplayVOLPlus 1 <CecDisplayVOLPlus 1
>SetCecDisplayVOL Minus Param	Send CEC volume minus command to displayer Param = 1~3 1 - Display HDMI OUT L 2 - Display HDMI OUT R 3 - HDMI SHARE OUT	>SetCecDisplayVOLMinus 1 <CecDisplayVOLMinus 1

EDID SETTINGS

EDID Switch

The DIP switch on rear panel is an EDID selector, please see details below.

SETTING	EDID FUNCTIONALITY
0000	1920x1080@60 8bit Stereo (default)
0001	WUXGA 1920x1200
0010	1920x1080@60 8bit High Definition Audio
0011	3840x2160@60Hz 4:2:0 Deep Color Stereo Audio
0100	3840x2160@60Hz Deep Color Stereo Audio
0101	3840x2160@30Hz 8bit Stereo Audio
0110	3840x2160@60Hz Deep Color High Definition Audio
0111	3840x2160@60Hz Deep Color HDR LPCM 6CH
1000	Copy EDID from SHARE-OUT
1001	Copy EDID from DISPLAY-OUT-1
1010	Copy EDID from DISPLAY-OUT-2
1011	EDID pass-through (follow SHARE-OUT)

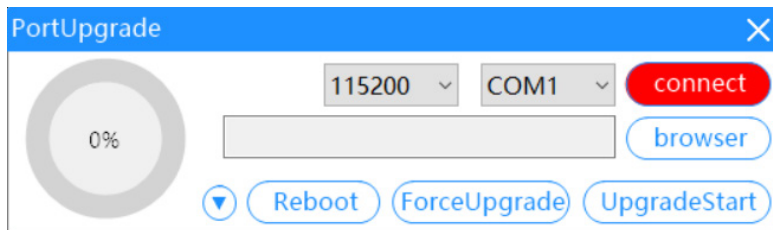
Note: If the unit fails to copy the EDID of HDMI output, default EDID will be used.

FIRMWARE UPGRADE

User can upgrade the firmware via web GUI or FW port.

Please follow the steps as below to upgrade firmware by the **FW** port on the rear panel:

1. Prepare the latest upgrade file on PC.
2. Power off the switcher, and connect the **FW** port of switcher to the PC with a suitable cable, make sure the RS232 port works normally (Baud Rate: 115200).



3. Use the firmware upgrade software, click **browser** to choose the latest upgrade file.
4. Click the **UpgradeStart** button to upgrade.
5. After firmware is upgraded successfully, the switcher should be restarted by unplugging and plugging the power adapter.

TECHNICAL SPECIFICATIONS

Video Input	
Video input	(3) HDMI, (1) USB-C
Video input connector	(3) Type-A female HDMI, (1) USB-C
Video input video resolution	Up to 4K@60Hz 4:4:4, HDR
Video Output	
Video output	(3) HDMI
Video output connector	(3) Type-A female HDMI
Video output video resolution	HDMI: Up to 4K@60Hz 4:4:4, HDR
Audio Output	
Audio output	(1) AUDIO OUT
Audio output connector	(1) 3.5mm jack
Frequency response	20Hz to 20kHz, ± 3 dB
Max output level	2.2 ± 0.1 Vrms
THD+N	< 0.1%, 20Hz to 20kHz bandwidth, 1 kHz sine at 0dBFS level (or max level)
SNR	> 80dB, 20Hz to 20kHz bandwidth
Crosstalk isolation	< -70 dB, 10kHz sine at 0dBFS level
L-R level deviation	< 0.3 dB, 1kHz sine at 0dBFS level (or max level before clipping)
Output load capability	1k Ω and higher (supports 10x paralleled 10K Ω loads)
Noise level	- 75dB
Control Part	
Control port	(1) TCP/IP (1) FIRMWARE, (1) Digital I/O (1) Contact, (2) USB Host, (4) USB Device Port 4001
Control connector	(1) RJ45, (1) Mini-USB, (2) 3-pin terminal blocks, (2) Type-B USB, (4) Type-B USB
General	
HDMI version	Up to 2.0
HDCP version	Up to 2.2
Bandwidth	18Gbps
Operation temperature	-5 to +55°C (+23° to +131°F)
Storage temperature	-25 to +70°C (-13° to +158°F)
Relative humidity	10% to 90%, Non-condensing
External power supply	Input: AC 100~240V, 50/60Hz; Output: 24V DC 5A
Power consumption	70W (Max)
Dimension (W*H*D)	220mm x 21.5mm x 110mm
Net weight	0.55KG

Thank you for your purchase.

For technical support please call our
toll-free number at 800-530-8998
or email us at supportlibav@libav.com

Liberty

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