4x1 18G BYOD Presentation Switcher

User's Guide

P/N: SwitchBYOD41

G4-0083A

Thank you for purchasing from gofanco. Our products aim to meet all your connectivity needs wherever you go. For optimum performance and safety, please read the instructions carefully and keep this User's Guide for future reference. If you need more information about our products, please visit www.gofanco.com. For technical support, please email us at support@gofanco.com. For drivers/manuals download, please go to https://www.gofanco.com/download.

Important Safety Notices

Please read safety instructions carefully before installation and operation.

- Please pay close attention to all warnings and hints for this device
- Do not expose this unit to rain, heavy moisture, or liquid
- Do not put any items into the device or attempt to modify its operation
- Do not repair the device or open the enclosure without professional guidance to avoid electric shocks. Doing so may void your warranty
- Keep the product in a well-ventilated location to avoid damage from overheating
- Shut off power and make sure environment is safe before installation
- Use the included power adapter only. Make sure the specification matches if using 3rd-party DC power adapters

Introduction

The 4x1 18G BYOD Presentation Switcher allows switching between 4 sources (1 Wireless Miracast / Airplay, 2 HDMI, 1 USB-C) to display on 1 HDMI display. It's a great tool for homes and offices.

> **Note**: Wireless transmission distance will vary due to the environmental conditions. Thick walls, brick, glass or electronic interference will shorten the wireless transmission distance or cause signal loss.

Features

- 4x1 18G presentation switcher with soft codec & wireless BYOD
- Supports HDMI 2.0b, HDCP 2.2, 4K @60Hz YUV 4:4:4, HDR 10, and Dolby Vision
- Wireless BYOD (Bring Your Own Device) capability via AirPlay and Miracast
- 2x Type-B USB ports for host connection, and 2x Type-A USB ports for devices
- HDMI output audio extraction to balance analog audio
- Easy and clean installation

Package Contents

- 4x1 18G BYOD Presentation Switcher
- Mounting Ears with 4 Mounting Screws (2pcs)
- Plastic Cushions (4pcs)
- 5-pin Terminal Block (1pc)
- Antenna (1pc)
- Power Adapter (1pc)
- User's Guide

Installation Requirements

- HDMI, USB Type-C, Miracast/Airplay capable devices
- HDMI display device (SDTV/Monitor, HDTV/ Monitor, projector, etc.)
- HDMI cables (not included)
- Windows 8.1/10, Mac OS 10.13/10.14, iOS 7 or above (Airplay), Smart View enabled Android 4.0 or above (Miracast)

Product Layout

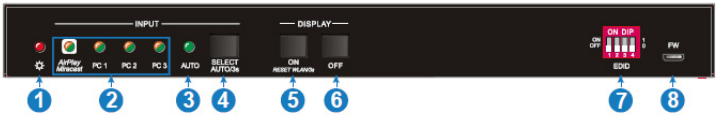


Figure 1: Front Panel

1. Power LED	Lights up when the switcher is powered on
2. Input LED (x4)	**Off** - No video signal detected **Orange LED**: Video signal is detected **Green LED**: The input is the active video source
3. Auto Switching LED	**On**: Auto switching mode is enabled **Off**: Auto switching mode is disabled
4. Input Select/Auto Switching	**Input Select**: Press the button to select an input source **Auto Switching**: Hold the button down for 3 seconds to enable/disable auto switching mode
5. Display On	Press to turn on the display. RS232 command set by the user
6. Display Off	Press to turn off the display. RS232 command set by the user
7. EDID DIP Switches	4-pin DIP switch for EDID settings
8. Micro USB Port	Firmware update

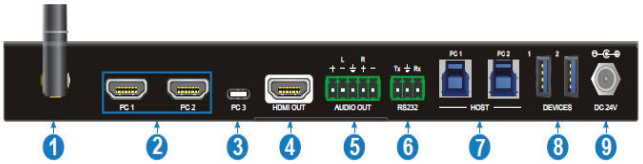


Figure 2: Rear Panel

1. Miracast/Airplay Input	Connects to the included antenna for Miracast/Airplay wireless connection
2. PC1 & PC2 (HDMI Input)	Connects to PC1's & PC2's HDMI output
3. PC3	USB Type-C with PD charging connects to laptops, notebooks, and other devices
4. HDMI Out	Connects to an HDMI display
5. Audio Out	5-pin Terminal block, connects to speakers
6. RS232	3-pin Terminal block, connects to RS232 control device
7. PC1 & PC2 USB 3.0 Type-B	Connects to PC1's and PC2's USB 3.0 port
8. USB Type-A (x2)	Connects to a Keyboard and mouse
9. Power Jack	Connect to the included power adapter

Hardware Installation

1. Install the included antenna.
2. Connect your source device(s) to the switcher's inputs.
3. Connect your HDMI display to the switcher's HDMI Out connector with an HDMI cable (HDMI cable not included).
4. Plug the included power adapter into the switcher's power jack, then plug the power adapter into a reliable power outlet.
5. Power on your source device(s) and HDMI display. The switcher is ready for use.

Application

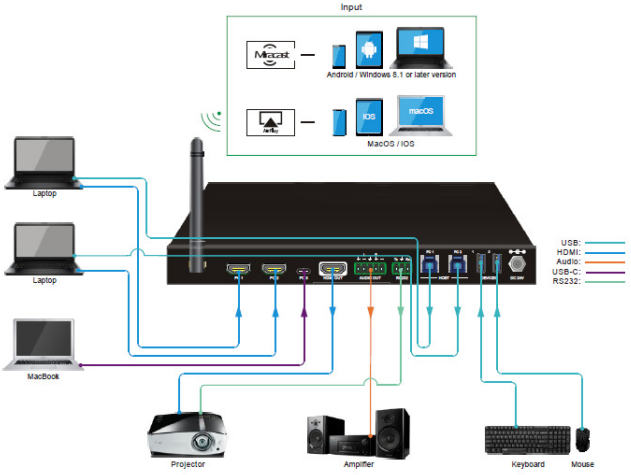


Figure 3: Application

Front Panel Controls

Manual Device Selection

Press the **Input Select** button to switch between the 4 source inputs, in order Miracast/Airplay, PC1, PC2, and PC3. The Input LED corresponding to the active source input will illuminate Green.

Auto Switching Mode

Hold down the **Input Select** button for minimum of 3 seconds to enable auto switching mode.

- The switcher will switch to the next active input in order Miracast/AirPlay, PC1, PC2, PC3
- New input: The switcher will automatically select the new input once detecting a new input
- Shutdown: When power is restored to the switcher, it will automatically connect to the input that was active before shutdown
- Source removed: When an active source is removed, the switcher will switch to the next active input in order AirPlay/Miracast, PC1, PC2, PC3
- In auto switching mode, the input source also can be switched by the manual switching steps
- Press and hold down the Input Select button at least three seconds again to exit auto switching mode, the input source will not change.

Display Controls

CEC and RS232 display control functions are set by the user.

- **Manual Control:** Press the **DISPLAY ON/OFF** buttons on the front panel to simultaneously send CEC and RS232 commands to turn on/off the display device
- **Auto Control:** When detecting a video input signal (5V or TMDS), CEC and RS232 commands are automatically sent to turn on the display device. When no video signal is detected within the set time (default 10mins), CEC and RS232 commands are automatically sent to turn off the display device.

> **Note**: Please refer to CEC / RS232 Function Setting on page 17 and Function Setting on page 18 for more details.

EDID

The Extended Display Identification Data (EDID) is used by the source device to match its video resolution with the connected display. The DIP switches on the front panel can be used to set the EDID to ensure the compatible video resolution. In the DIP switch table, "**0**" represents down (**OFF**) position, and "**1**" represents up (**ON**) position.

Switch Position	Resolution	Audio Format
0000	EDID Pass-through	
0001	1280x720@60Hz	Stereo
0010	1920x1080@60Hz DVI	-
0011	1920x1080@60Hz 8bit	Stereo
0100	1920x1080@60Hz 8bit	High Definition
0101	1920x1200@60Hz 8bit	Stereo
0110	3840x2160@30Hz 8bit	Stereo
0111	3840x2160@30Hz 8bit	High Definition
1000	3840x2160@30Hz 8bit HDR	Stereo
1001	3840x2160@60Hz Deep Color	Stereo
1010	3840x2160@60Hz Deep Color HDR	High Definition
Switch Position	**EDID**	**Note**
1011	User-defined EDID 1	The five user-defined EDID can be uploaded by sending RS232 command "#UPLOAD_USER_EDID [PARAM]", please refer to section **RS232 Control** for more details.
1100	User-defined EDID 2	
1101	User-defined EDID 3	
1110	User-defined EDID 4	
1111	User-defined EDID 5	

Notes:

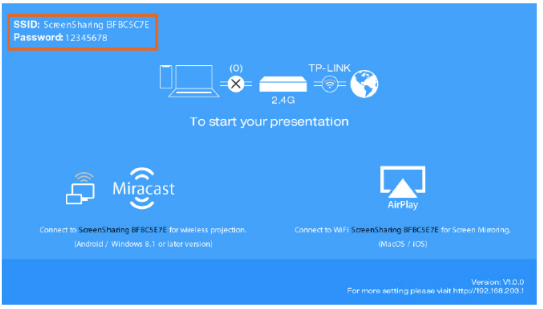
- **Stereo**: LPCM 2Ch
- **High Definition Audio**: LPCM 8Ch, AC-3 6Ch, DTS 5.1, Dolby Digital 5.1, DTS-HD7.1, Dolby TrueHD 7.1
- **Deep Color**: 8bit, 10bit, 12bit

Miracast/Airplay Connection

Windows 10, MacOS/iOS, and Android devices are compatible. Mirroring the device's screen is only display mode supported.

Press Input Select button to select the Miracast/Airplay input and the Presentation screen, showing the Wi-Fi SSID (ScreenSharing xxxx...) and Password, will pop up similar to what is shown below.

> **Note**: The SSID and Password may be different than that shown in the screen below.

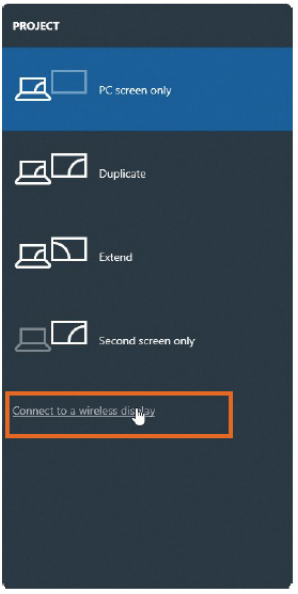


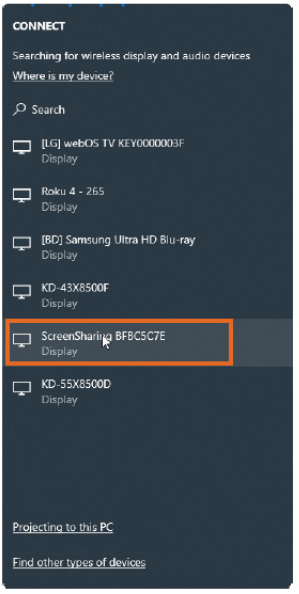
> **Note**: For optimal wireless signal range, install in a clear environment with few obstacles. Wireless signals from other devices, such as microwaves, wireless mice and keyboard, etc. may interfere with transmission.

Windows

1. Press Windows key + P key, then click Connect to a wireless display.
2. Click the SSID (ScreenSharing xxxx...) for screen mirroring.

> **Note**: The SSID may be different than that shown in the screen below.

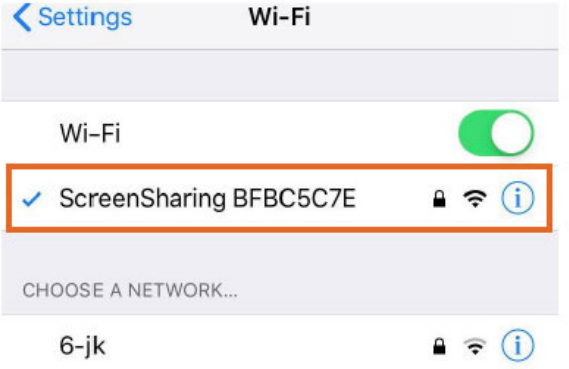




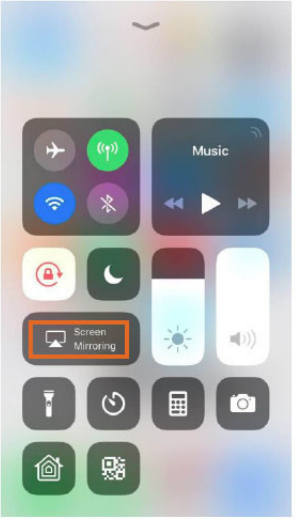
iPhone

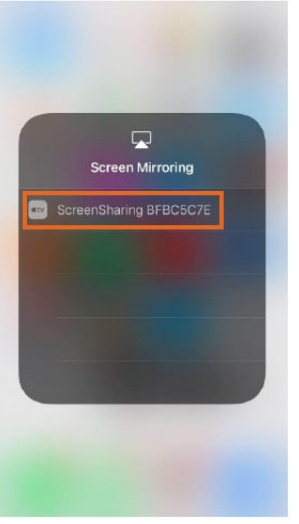
1. Connect the iPhone to Wi-Fi.

> **Note**: The SSID (ScreenSharing xxxx...) may be different than that shown in the screens below.



2. Slide the iPhone screen to enter Control Center, and click Screen Mirroring, and click the SSID (ScreenSharing xxxx...) for screen mirroring.

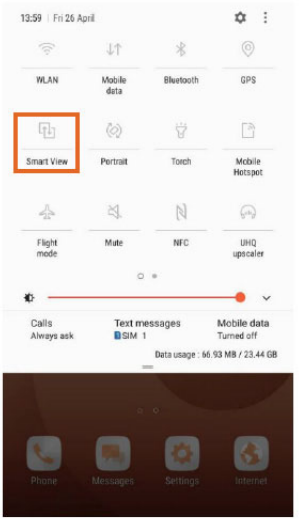


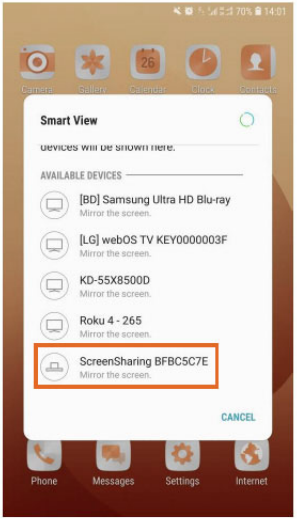


Android

1. Scroll the Android screen and click Smart View.
2. Click the SSID (ScreenSharing xxxx...) for screen mirroring.

> **Note**: The SSID may be different than that shown in the screen below.





RS232 Control

Connect the control PC's RS232 serial port to the Switcher's RS232 port using an RS232 cable (cable not included).

RS232 Control Software

Work with most serial command and monitoring software such as CommWatch.

- Download CommWatch or the serial command software of your choice.
- Installation: Copy the control software files and paste them to the hard drive of your PC
- Uninstallation: Delete all control software files from the PC

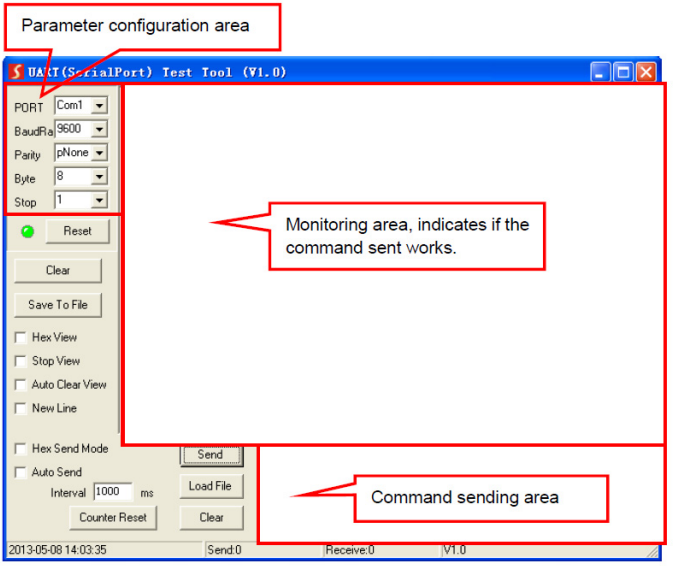
Basic Settings

1. Connect all input and output devices as needed, then connect the PC to the switcher.
2. Double click the software icon to run the control

The examples show on this page and the following page are from CommWatch serial command software.

Control Software Interface

Set the COM port, Baud rate, data bit, stop bit, and parity. Enter command into the Command Sending Area.



RS232 Commands

Default settings: Baud rate: 9600, Data bit: 8, Stop bit: 1, Parity bit: none.

System Control

The command's ending mark is <CR> <LF>.

Command	Description	Command & Feedback Example
#GET_FIRMWARE_VERSION	Get the firmware version	@V1.0.0
#FACTORY_RESET	Restore to factory defaults	@FACTORY_RESET
#REBOOT	System reboot	@REBOOT

#HELP [PARAM]	Get the command details.
	
	[PARAM]=Null; Get all command list
	
	PARAM]=Any command; Get the English description and usage of the command
		#HELP SET_AV
		
		Input Port
		#SET_AV PARAM1
		PARAM=A, PC1, PC2, PC3
		A - Airplay/Miracast
		PC1 - HDMI1
		PC2 - HDMI2
		PC3 - TYPE-C

#SET_RST_WIRELESS	Reset Airplay/Miracast power	@RESET WIRELESS DEVICE
#SET_KEYPAD_LOCK 1	Lock front panel buttons	#SET_KEYPAD_LOCK 1
#SET_KEYPAD_LOCK 0	Unlock front panel buttons (Default)	#SET_KEYPAD_LOCK 0
#GET_KEYPAD_LOCK	Get the locking status of the front panel buttons	@KEYPAD_LOCK 1

Source Switching

Command	Description	Command & Feedback Example
#SET_AV A	Select the input source: Airplay/Miracast (Default)	@AV Airplay/Miracast
#SET_AV PC1	Select the input source: PC1	@AV PC1
#SET_AV PC2	Select the input source: PC2	@AV PC2
#SET_AV PC3	Select the input source: PC3	@AV PC3
#GET_AV	Get the current input source	@AV PC1
#SET_AUTO_SWITCH 0	Disable auto-switching mode	@AUTO_SWITCH 0
#SET_AUTO_SWITCH 1	Enable auto-switching mode	@AUTO_SWITCH 1
#GET_AUTO_SWITCH	Get the auto-switching status	@AUTO_SWITCH 1

CEC / RS232 Function Setting

The command's ending mark is <CR> <LF>.

Command	Description	Command & Feedback Example
#SET_SYNCACT_CEC	Enable the function of automatically sending CEC commands When detecting video input signal or not detecting any video signal, the switcher will automatically send the corresponding CEC command to control the display device	@SYNCACT_CEC 1
#SET_SYNCACT_CEC 0	Disable the function of automatically sending CEC commands	@SYNCACT_CEC 0
#GET_SYNCACT_CEC	Get the function setting status of automatically sending CEC commands	@SYNCACT_CEC 1
#SET_SYNCACT_RS232 1	Enable the function of automatically sending RS232 commands When detecting video input signal or not detecting any video signal, the switcher will automatically send the corresponding RS232 command to control the display device	@SYNCACT_RS232 1
#SET_SYNCACT_RS232 0	Disable the function of automatically sending RS232 commands	@SYNCACT_RS232 0
#GET_SYNCACT_RS232	Get the function setting status of automatically sending RS232 commands	@SYNCACT_RS232 1
#SET_DISPLAY 1	Power on display device (Simultaneously sending CEC and RS232 commands to display device)	@DISPLAY 1
#SET_DISPLAY 0	Power off display device (Simultaneously sending CEC and RS232 commands to display device)	@DISPLAY 0

Function Setting

The command's ending mark is <CR> <LF>.

Command	Description	Command & Feedback Example
#SET_OFF_CNT 1	Set the number of sending DISPLAY OFF command to 1 time	@OFF_CNT 1
#SET_OFF_CNT 2	Set the number of sending DISPLAY OFF command to 2 times	@OFF_CNT 2
#GET_OFF_CNT	Get the number of sending DISPLAY OFF command	@OFF_CNT 1
#SET_OFF_DELAY [PARAM]	Set the delay time of sending DISPLAY OFF command to [PARAM] [PARAM]=5~100 (1=100ms)	#SET_OFF_DELAY 5 @OFF_DELAY 5
#GET_OFF_DELAY	Get the delay time of sending DISPLAY OFF command	@OFF_DELAY 5
#SET_OUTPUT_HDCP [PARAM]	Set the HDCP mode of output port to [PARAM]. [PARAM]=1~3: 1- Active 2- On 3- Off	#SET_OUTPUT_HDCP 1 @OUTPUT_HDCP 1
#GET_OUTPUT_HDCP	Get the HDCP mode of output port.	@OUTPUT_HDCP 1
#SET_SW_HDCP_MODE [PARAM]	Switch the input ports to support HDCP2.2 status. [PARAM]= 0/1 0 - UNSUPPORT HDCP2.2 1 - SUPPORT HDCP2.2	#SET_SW_HDCP_MODE 1 @SW_HDCP_MODE 1
#GET_SW_HDCP_MODE	Get the HDCP2.2 status of input ports	@SW_HDCP_MODE 1
#UPLOAD_USER_EDID [PARAM]	Upload the user-defined EDID [PARAM] PARAM = 1 ~ 5 1 - User-defined EDID 1 2 - User-defined EDID 2 3 - User-defined EDID 3 4 - User-defined EDID 4 5 - User-defined EDID 5 When the command applied, system prompts to upload the EDID file (.bin). Operation will be cancelled in 10 seconds	#UPLOAD_USER_EDID 1 @USER_EDID 1 READY PLEASE SEND EDID DATA IN 10S OK/ERROR
#SET_DTIME [PARAM1]:[PARAM2]	When not detecting video input signal, set the auto power-off time of display device to: [PARAM1] or [PARAM2]. The default time is 10 minutes [PARAM1] = 0~30 minutes [PARAM2] = 0~1800 seconds	#SET_DTIME 1:30 @DTIME 1:30
#GET_DTIME	Get the auto power-off time of display device	@DTIME 30:0

Special Commands

Special commands do not need ending mark.

Command	Description	Command & Feedback Example
#SET_ON_[PARAM1]_ [PARAM2]:XXXX	Set the ASCII RS232 command XXXX to be sent to control the third-party device when the DISPLAY ON button is pressed [PARAM1]= 00~06 (Baud Rate) 00 - 115200 01 - 57600 02 - 38400 03 - 19200 04 - 9600 05 - 4800 06 - 2400 [PARAM2]= 00~99 The delay time of sending command XXXX: Any ASCII code (up to 48 bytes)	#SET_ON_05_30:1234567 @BAUDRATE: 4800 @DELAY TIME: 30 s @DISPLAY ON TO SEND:1234567
#SET_H_ON_[PARAM1]_ [PARAM2]:XX XX	Set the HEX RS232 command XX XX to be sent to control the third-party device when the DISPLAY ON button is pressed [PARAM1]= 00~06 (Baud Rate) 00 - 115200 01 - 57600 02 - 38400 03 - 19200 04 - 9600 05 - 4800 06 - 2400 [PARAM2]= 00~99 The delay time of sending command XX XX: Any HEX code (0-9, A-F; up to 20 bytes. It must have a space between the 2 different XX)	#SET_H_ON_05_30:31 32 33 34 35 @BAUDRATE: 4800 @DELAY TIME: 30 s @DISPLAY ON HEX TO SEND:31 32 33 34 35

Special Commands Cont'd

Command	Description	Command & Feedback Example
#SET_OF_[PARAM1]_ [PARAM2]:XXXX	Set the ASCII RS232 command XXXX to be sent to control the third-party device when the DISPLAY OFF button is pressed [PARAM1]= 00~06 (Baud Rate) 00 - 115200 01 - 57600 02 - 38400 03 - 19200 04 - 9600 05 - 4800 06 - 2400 [PARAM2]= 00~99 The delay time of sending command XXXX: Any ASCII code (up to 48 bytes)	#SET_OF_05_30:ABCDEFG @BAUDRATE: 4800 @DELAY TIME: 30 s @DISPLAY OFF TO SEND:ABCDEFG
#SET_H_OF_[PARAM1]_ [PARAM2]:XX XX	Set the HEX RS232 command XX XX to be sent to control the third-party device when the DISPLAY OFF button is pressed [PARAM1]= 00~06 (Baud Rate) 00 - 115200 01 - 57600 02 - 38400 03 - 19200 04 - 9600 05 - 4800 06 - 2400 [PARAM2]= 00~99 The delay time of sending command XX XX: Any HEX code (0-9, A-F; up to 20 bytes. It must have a space between the 2 different XX)	#SET_H_OF_05_30:41 42 43 44 45 @BAUDRATE: 4800 @DELAY TIME: 30 s @DISPLAY OFF HEX TO SEND:41 42 43 44 45

Firmware Upgrade

For firmware information and updates, go to https://www.gofanco.com/downloads.

FAQ & Solutions

Q: The display is not clear or stable.

A: 1) Check the cables for proper connection.

2) Try higher quality cables.

Q: No image when switching.

A: 1) Please check if there is video signal input from the source device.

2) Check the cables for proper connection.

3) If it's still not working, connect the source device to the TV directly to see if there's a signal.

Q: RS232 PC control is not working.

A: 1) Please check that you have typed in the correct command.

2) Check COM port, Baud rate, Data bit, Stop bit, Parity bit are set properly.

3) Check the RS232 cable is connected properly.

4) Use a different RS232 cable.

Specifications

HDMI Standard	HDMI 2.0b
HDCP Compliance	HDCP 2.2
HDMI Input Resolution	4K@60Hz YUV 4:4:4 HDR10, Dolby Vision
USB-C Input Resolution	4K@30Hz YUV 4:4:4
Miracast/Airplay Resolution	4K@30Hz YUV 4:4:4
Wireless Connectivity	IEEE 802.11ac
Wireless Distance	≤5 meters
Wireless Band	5GHz
USB-C Power Charging	60W (max)
Power Adapter	Input: 100 - 240V, 50/60Hz Output: 24VDC/5A
Operating Temperature	23 to 131 F
Storage Temperature	-13 to 158 F
Power Consumption	85W (max)
Dimensions	9.37" (L) x 0.96" (H) x 5.31" (W)

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