

iCam VB80 Kit

All-in-One Conference Videobar with switcher and BYOD/BYOM

User Manual V1.0



iCam VB80 Kit		
iCam VB80	Videobar	1x
iCam VB80-Mic	Extension mic	2x
iShare MC	Wireless Dongle	1x

This user manual provides a detailed overview of the INFOBIT **iCam VB80** videobar, **iCam VB80-Mic** extension microphone and wireless dongle **iShare MC**. INFOBIT recommends reading through this document in its entirety before designing or installing a system.

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CHAPTER ONE: ICAM VB80



A. INTRODUCTION

The **iCam VB80** is an all-in-one meeting collaboration with ultra-wide angle 4K camera, microphone and speaker features, along with wired and wireless screen casting capability. It is ideal for applications for the huddle/small/medium rooms.

B. FEATURES

- Smart video conference collaboration with all-in-one solution of video speakerphone and camera.
- Wired screen presentation via USB-C (with DP) and HDMI.
- Wireless BYOD via Airplay, Miracast and Dongle (Dongle model: **iShare MC**).
- Wide angle 4K video camera with 120° FOV.
- 4x MEMS digital microphone arrays with a range of 5 ~ 8 meters and an angle of 180°.
- 2x 8W Stereo full range speakers with passive radiator bass enhancement.
- Includes **AEC** (Acoustic Echo Cancellation), **AGC** (Automatic Gain Control), **ANS** (Automatic Noise Suppression) and full duplex mode communication to make all participants feel like they are in the same room.
- Auto Framing / Speaker Tracking / Presenter Tracking based on AI technology makes meetings more intimate and friendly.
- Plug and play with excellent compatibility for OS and UC applications, such as Zoom, Teams, Webex, Skype, BlueJeans, etc.
- Provides flexible control options of Web GUI and Remote Controller.
- Built-in Wi-Fi.

C. PACKAGE CONTENTS



- 1x Video Bar
- 1x DC 24V Power Adapter
- 1x Remote Controller
- 1x Magnetic Lens Cap
- 1x Wall-mounted Bracket
- 1x Wall Hanging Bracket
- 4x Expansion Screws
- 4x Mounting Screws
- 1x mini USB to RJ45 adapter

D. SPECIFICATIONS

Audio and Video	
Interface	1x HDMI in, 1x HDMI out, 1x USB-C, 1x USB-B, 1x USB-A, 1x Mic, 1x GE, 1x DC
Video Resolutions	4K@30Hz (Max)
Output Video Encoding	MJPEG/YUY2/H.264/H.265 UVC 1.1

Camera and Sensor	
Lens	Fixed Focus
Sensor	CMOS, Effective Pixel: 8.0M
White Balance	Auto
Backlight Compensation	Auto
Digital Noise Reduction	2D, 3D Digital noise reduction supported
Viewing Angle	FOV: 120°
ePTZ	Supported 5 x Digital Zoom
HDR	Supported
Tracking Mode	Auto Framing / Speaker Tracking / Presenter Tracking

Speakerphone	
Microphone	4x Linear microphone arrays with echo cancellation Pick-up Range: 5m/16.4ft~8m/26.2ft
Speaker	2x 8 W

Communication and Control	
HDMI	HDMI 2.0, HDCP 2.2
USB	USB-C: USB 3.0 host (60W max charging) USB-A: USB 3.0 device USB-B: USB 3.0 host
USB Protocol	UAC, UVC, USB HID
Ethernet	1 x RJ-45
WLAN	IEEE 802.11 a/b/g/n/ac

Communication and Control

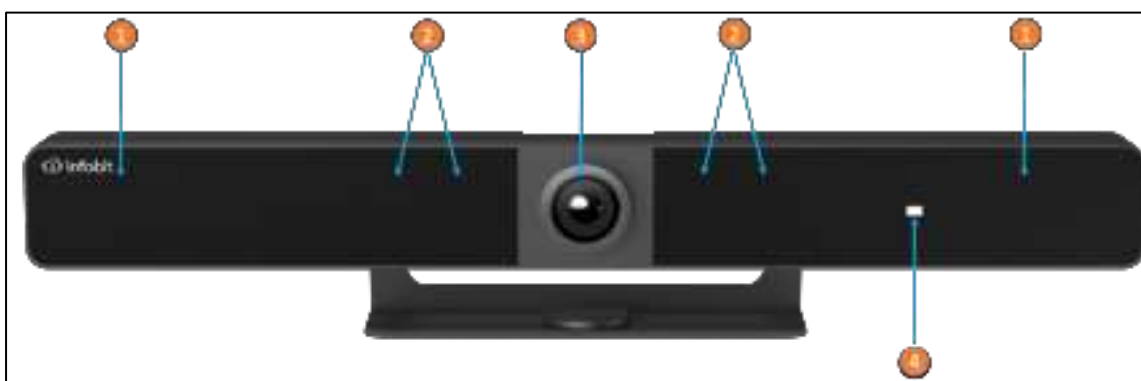
Control Method

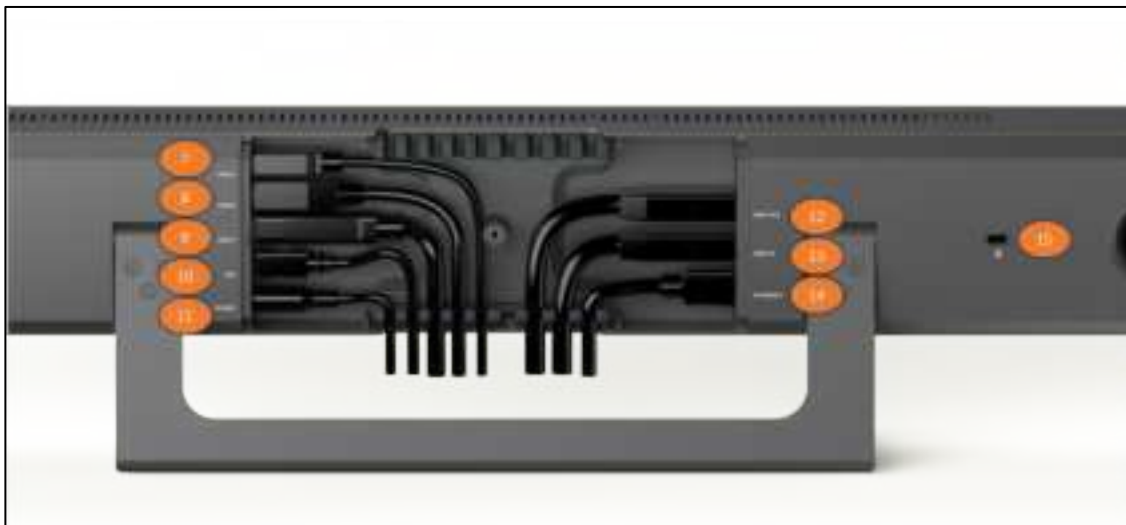
Web UI, Bluetooth Remote Controller

General

Operating Temperature	0°C ~ 40°C (32°F to 104°F), 10% to 90%, non-condensing
Storage Temperature	-20°C ~ 60°C (-4°F to 140°F), 10% to 90%, non-condensing
MTBF	> 30000h
Power Supply	DC 24V 5A
Power Consumption (Max)	100W
Dimension (Width x Height x Depth)	700mm x 126.83 mm x 90mm/27.56" x 4.99" x 3.54" (with Bracket)
Net Weight	2.42kgs/5.324lbs (with Bracket)
Gross Weight	6.22kgs/13.68lbs

E. PANEL DESCRIPTION





ID	Name	Description
1	Speaker	2x Speakers for audio signal output.
2	Microphone	4x Linear microphone arrays for picking up sound.
3	Lens	Camera lens.
4	Status LED	• Blinking orange: The device is booting. • Lighting white: The device is working properly. • Blinking white: The device is in standby state. • Blinking white very quickly: The device is being upgraded. • Breathing and lighting white: The device is in sleep state. • Lighting red: The device's microphone is muted. • Blinking blue: The device is in Bluetooth pairing state.
5	USB-C	Connect to the Dongle for pairing.
6	Pairing Button	Press and hold this button for more than 2 seconds to start pairing with the Bluetooth remote controller.
7	USB-A	USB 3.0 Type-A port. Connect to a USB device such as touch screen.
8	USB-B	USB 3.0 Type-B port. Connect to the room PC for meetings.
9	USB-C	USB 3.0 Type-C port. USB PD: 60W max Connect to the laptop for meetings and presentation.
10	MIC	Connect to external microphone iCam VB80-Mic.
11	Power	Connect to the power adapter provided for DC 24V 5A input.
12	HDMI Out	Connect to a HDMI display device or a capture card of the room PC.
13	HDMI In	Connect to a laptop or PC.
14	Ethernet	Connect to a network device (e.g. network switch, wireless router, computer, etc.) for Airplay Mirroring signal input and LAN control (Web GUI & Telnet API).
15		Kensington security slot



• Blinking orange	The device is booting.
• Lighting white	The device is working properly.
• Blinking white	The device is in standby state.
• Blinking white very quickly	The device is being upgraded.
• Breathing and lighting white	The device is in sleep state.
• Lighting red	The device's microphone is muted.
• Blinking blue	The device is in Bluetooth pairing state.

F. DEVICE CONNECTIVITY

When a user is ready to present, there are a number of connection methods that are available. The iCam VB80 supports both wired and wireless video passthrough. If using wireless screensharing, a user's personal device will not have access to VB80's built-in speakerphone or any USB peripherals. Connecting to iCam VB80 via Airplay (Apple devices) or Miracast (Windows & Android) is for screensharing content only.

Wired connections add the ability for data communication on top of video transmissions. A hardwired USB-C connection to a personal device allows both A/V and USB data to transmit over a single cable. This will allow compatible USB-C devices to share content to a conference display while at the same time having access to VB80's built-in speakerphone and any USB peripherals devices such as a webcam.

A native HDMI connection is also available and can be used for simple video passthrough to a display. If USB data communication is also needed to a device which is using HDMI, a separate USB Type B connection can be used in tandem to connect the VB80's speakerphone and peripheral USB devices.

USB Behavior & Peripherals

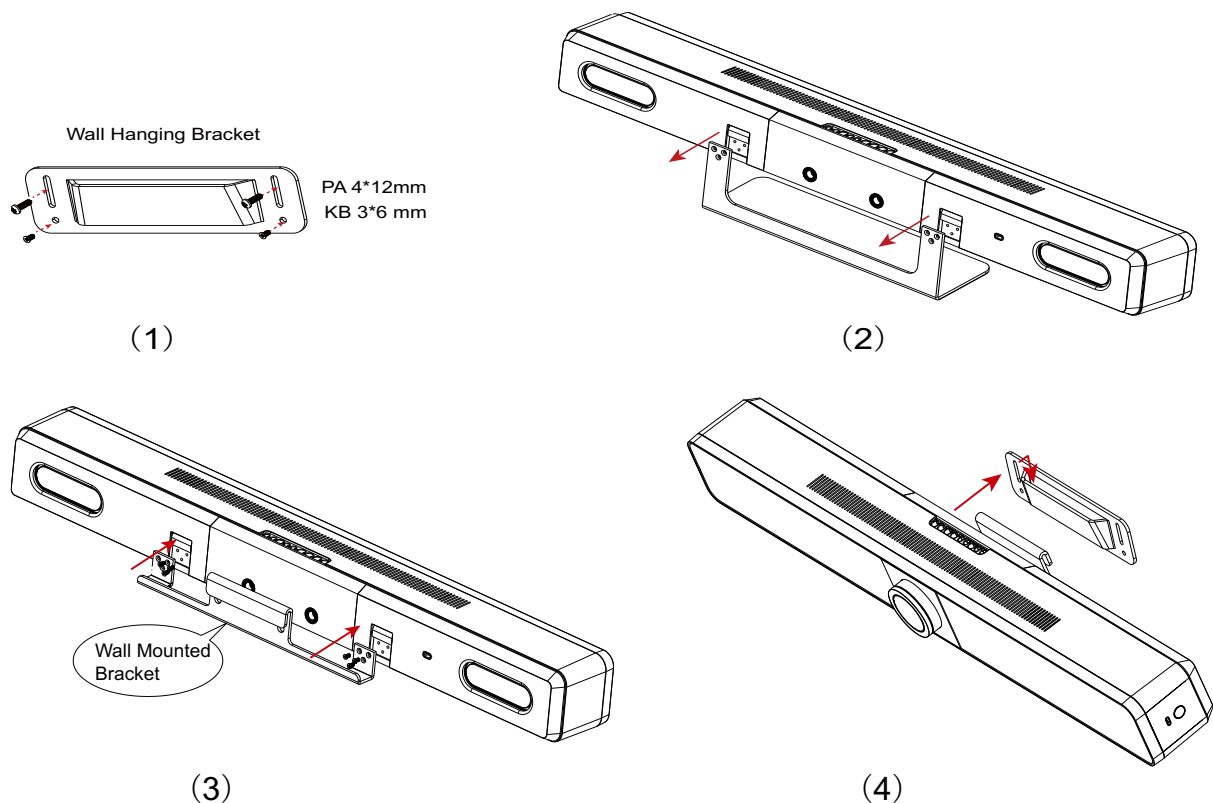
By default, the iCam VB80 is set to auto switch the active USB host between the USB-C or USB Type B connection. USB auto switching uses LIFO (Last In First Out) meaning, if a new device is connected, iCam VB80 recognizes the new device and can automatically send connection of the speakerphone and USB peripherals to this newly connected source. This capability is great for applications that will have many devices that are 'hotplugged' during a meeting.

G. INSTALLATION

Note: Before installation, please ensure the device is disconnected from the power source.

To install the device on the wall:

1. Drill holes on the wall you desire, then insert the expansion screws provided into the wall. Secure the wall hanging bracket on the wall using the mounting screws provided.
2. Remove the stand from the device.
3. Screw the wall-mounted bracket to the device.
4. Attach the device's wall-mounted bracket to the wall hanging bracket on the wall.

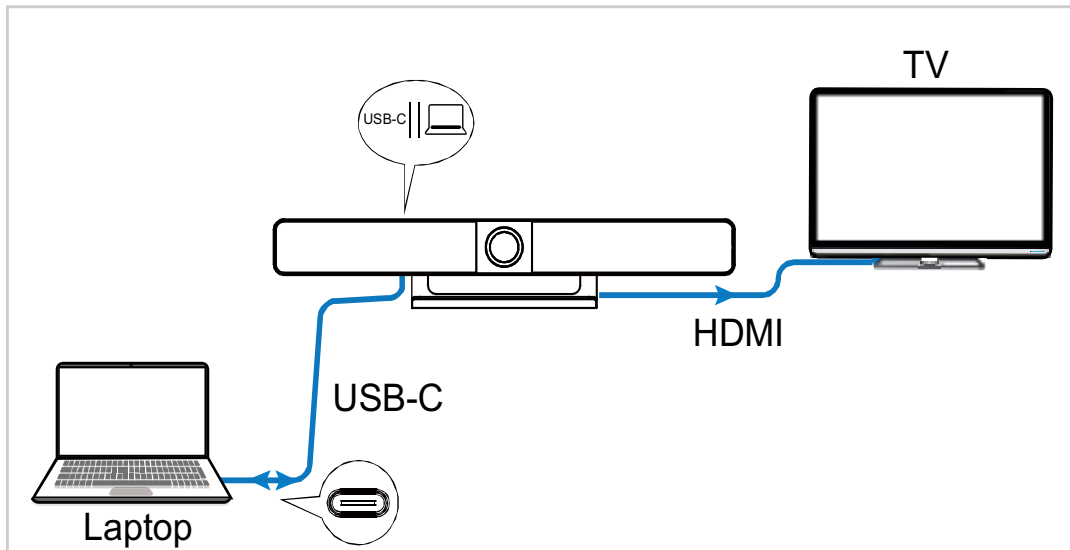


H. APPLICATION

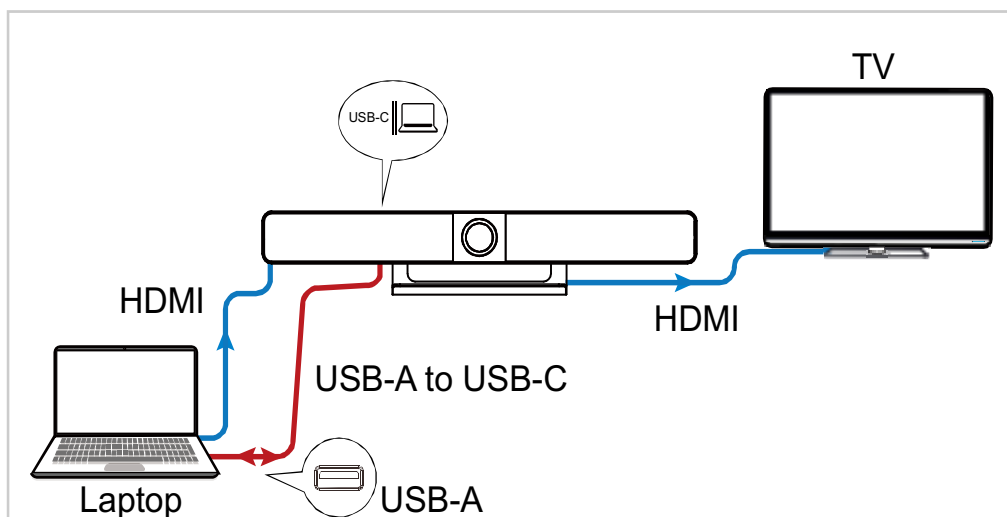
Application 1 – BYOM

A BYOM (Bring Your Own Meeting) conference room allows users to walk into a conference room with their own computer to host a meeting. All meeting software is hosted on the user's personal device and is not specific to a certain vendor (i.e., Zoom or Teams).

In this application the iCam VB80 acts as a unification 'hub' which allows connection of personal devices to have access to VB80's speakerphone, transmit video to a display and by extension have access to any USB cameras that may be connected to VB80's USB peripheral device port.



One Type-C AOC full function cable (**Model: iFiber Y10V**) supports DP1.4, USB3.0, USB2.0 and PD (max 60W). Or select INFOBIT iCable USB4 fully featured cables.



The second connection method is to use the standard HDMI and USB-A cables.

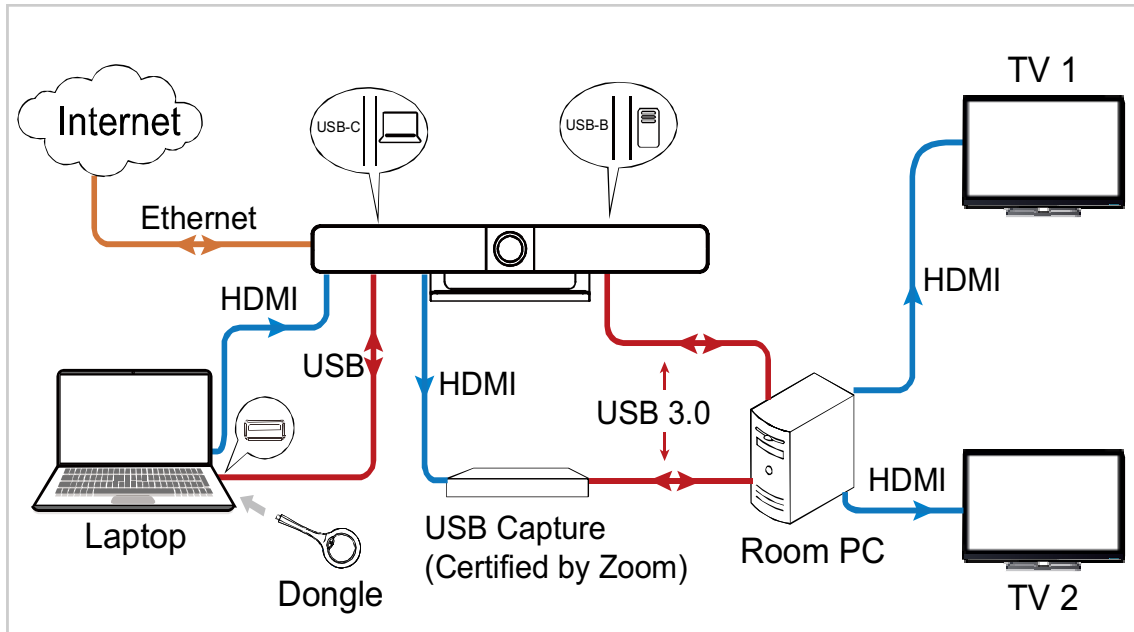
Application 2 – Zoom Room + BYOM

A Zoom Room differs from a BYOD/BYOM room in that it will contain a 'room PC' that is designed to host the conference software. In this application, personal devices will not have access to VB80's speakerphone or peripheral USB cameras as they will be fixed to the 'room PC'.

BYOD devices are still supported in a Zoom Room, however, they are for content sharing only and will require a specific topology in order to work properly. The below diagram allows the room PC to have a USB data connection to the VB80's camera and speakerphone.

The capture card is recognized by the Zoom software and allows for the HDMI output signal of the VB80 to provide content sharing in a call via the laptop.

In this scenario the native USB-C input on the VB80 is not supported for BYOD content sharing. HDMI or the iShare MC casting dongle must be used.



Dongle model: iShare MC

Note: After the device is connected to a computer, it can be detected by the system and specific applications in the name of the following:

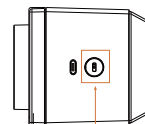
- Model: **iCam VB80**
- Camera/Speaker/Microphone: **iCam VB80**

I. BLUETOOTH PAIRING

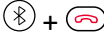
The device can be controlled by the Bluetooth remote controller provided after they have been paired with each other successfully.

To pair with the Bluetooth remote controller:

1. Press and hold the pairing button  on the enclosure's left side, the status LED will blink blue, which indicates that the device enters Bluetooth pairing mode.
2. Press any button on remote controller, the sentence **"Remote Control Connected"** will appear on the display screen, indicating that Bluetooth pairing between the remote controller and the device is successful. Now you can use the remote controller to control the device with ease.



The following briefly introduces the functions of the remote controller buttons.

Buttons	Description
 Bluetooth	Press and hold the button for 2s to make the device to start paring with another third-party Bluetooth device. (This function will be available in future)
 Answer	Press to answer the phone. (Only available when connect to a cellphone via Bluetooth).
 Hang up	Press to hang up the phone. (Only available when connect to a cellphone via Bluetooth).
 Home	- Press to back to the default camera view (only available when Tracking mode is off). - Press and hold the button for 2s to show OSD that includes IP address, model name, etc.
 Navigation	Press to perform ePTZ (Only available when Tracking mode is off).
 Presets	- Press and hold 3s to save current camera view to preset 1 or 2. - Press to switch the camera view to preset 1 or 2. (Only available when Tracking mode is off)
 Mute/ Unmute	Press to toggle between mute and unmute.
 Volume	Press to adjust the volume. Press and hold to adjust the volume continuously.
 Tracking mode	Press to toggle among Auto Framing, Speaker Tracking and Off.
 Zoom	Press to adjust the zoom. Press and hold to adjust the zoom continuously.
	Press and hold the combination buttons for 3s, the remote controller will enter pairing mode.

J. SCREEN MIRRORING

With screen mirroring support, the device allows users to share multimedia content wirelessly from their mobile devices on any HDMI displays over Airplay Mirroring, Miracast and wireless dongle.



- **Airplay:** For Apple iOS and macOS devices.
- **Miracast:** For Android and Microsoft devices.
- **Dongle:** For built-in USB C (support video) devices.

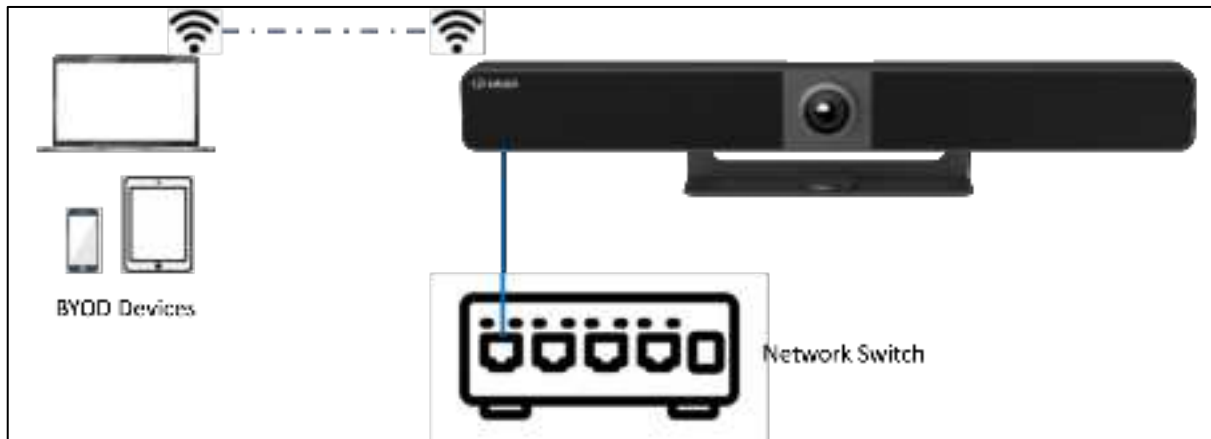
When iCam VB80 is in a standby state it generates a guide screen which provides simple steps for wireless casting. A custom image can be uploaded to replace this default guide screen via the VB80's Web GUI interface.



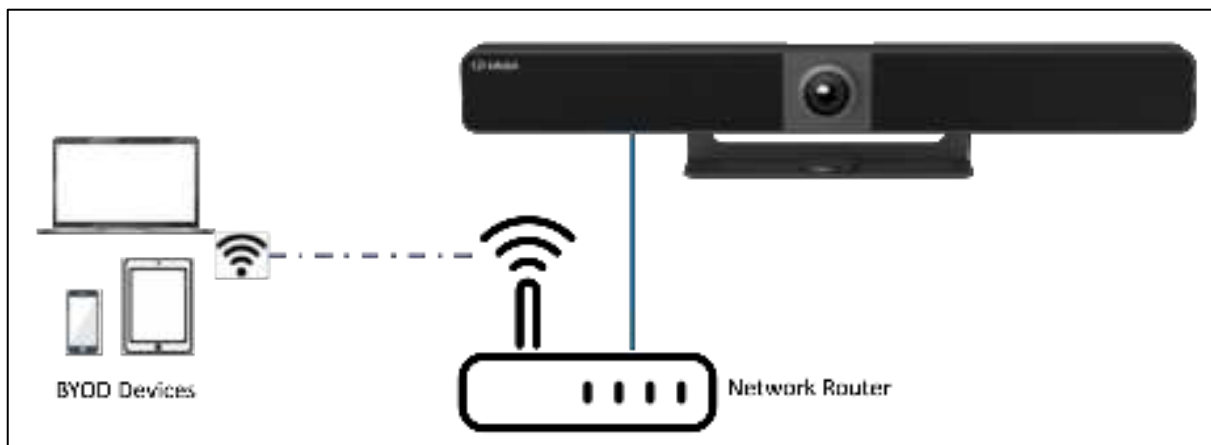
INFOBIT iCam VB80 default guide screen

This iCam VB80 has a built-in wireless access point that can be used to cast content via AirPlay or Miracast. There are two modes for the AP.

- **AP Enabled:** This is the default mode. When connecting to the AP in this mode, the iCam VB80 acts as a bridge to an existing network via its LAN connection. This is useful if there is no existing Wi-Fi network available and you wish to use the iCam VB80 as the primary wireless AP.



- **AP Disabled:** This mode completely disables the built-in AP. This mode should be used when you plan to use an existing network's access point(s). This requires a LAN connection to the iCam VB80 in order for it to be found and discoverable on the existing network.



(J-1) Using Apple Devices

Step 1. Connect your iPhone/iPad/Mac to the network on which the device runs.

Step 2. Open Control Center on your Apple device, tap  to select appropriate mirroring device from the pop-up menu.

Note: For Apple device screen mirroring, please use the remote control to adjust the volume of the iCam VB80.

(J-2) Using Android Phones

Take Samsung Galaxy series for example:

Step 1. Enable the Wi-Fi or WLAN feature of your mobile device.



Step 2. On your mobile device, swipe down from the top and tap **SmartView** or **Wireless Projection** to select appropriate mirroring device from the pop-up CONNECT menu.

(J-3) Using Windows PCs

Step 1. Enable the Wi-Fi or WLAN feature of your PC.

Step 2. On your PC, press the combination keys “ + K” to select appropriate mirroring device from the pop-up menu.

Note: Miracast will not work if the client PC has Wi-Fi disabled. Miracast does not operate over a wired LAN connection. Miracast is a P2P connection, meaning that it will always use a direct wireless connection to the iCam VB80 even if the AP is disabled, unlike Airplay which can be used over a standard Wi-Fi connection.

(J-4) Using the dongle (iShare MC)

Another option to stream wireless video is via the iShare MC USB-C casting dongle. The iShare MC is a simple plug and play method to wirelessly share content. The dongle plugs into an available USB-C port on a PC and operates by a button press.



Pre-Step: Plug the iShare MC dongle in to type-C port on the side of the iCam VB80 for pairing. (Note: it is one-time operation at the first time using.)

Step 1: Plug the iShare MC in to your PC or laptop.

Step 2: Press the button to start casting once the LED stops flashing.

K. WEB GUI

The Web UI designed for this device allows for basic settings. It can be accessed through a modern browser, e.g. Chrome, Safari, Firefox, etc.

To access the Web UI page:



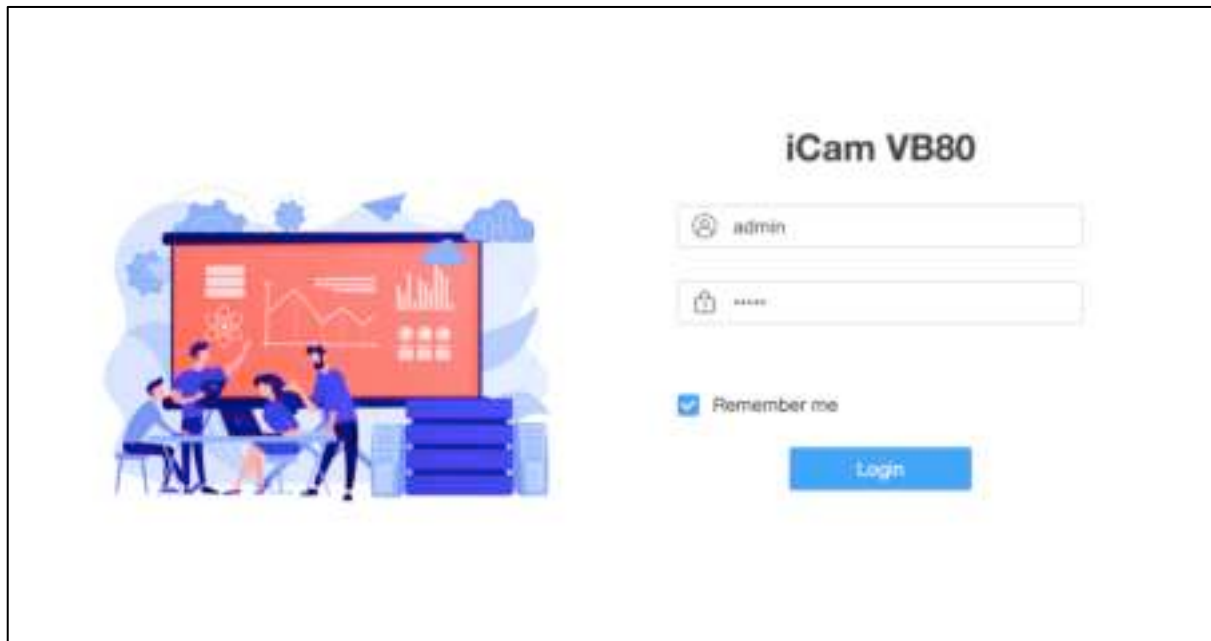
1. Connect the Ethernet port of the device to a local area network. (Ensure there's a DHCP server in the network so that the switcher can obtain a valid IP address.) The IP address will be displayed on the guide screen (see below).



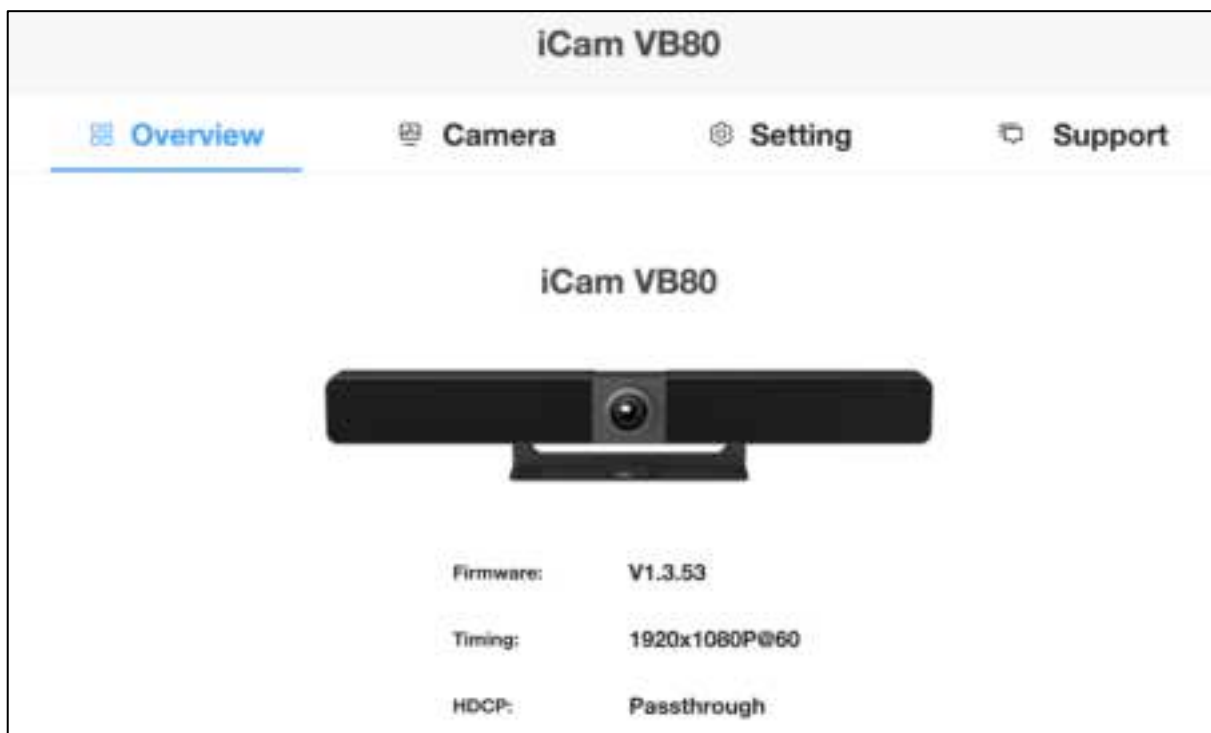
2. Connect a PC to the same network as the device.

3. Input the device's IP address in the browser and press Enter, the following window will pop up. Note: Default IP mode for this device is DHCP.

4. Input the user name and password (default user name & password: **admin**) and click Login to enter the main page.



The main page includes Overview, Camera, Settings and Support tabs.

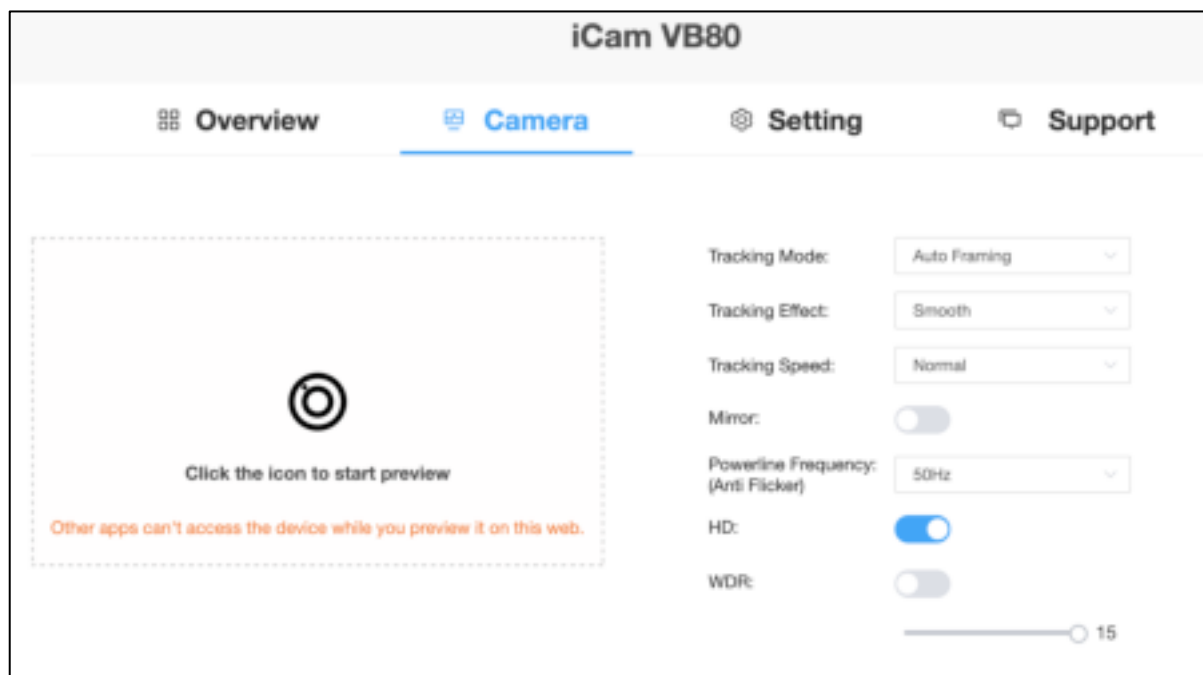


- **Overview:** Offers basic information of the device.
- **Camera:** Offers settings of camera parameters.
- **Settings:** Offers basic settings of Video,Wi-Fi,BYOD,etc.
- **Support:** Offers firmware update function and device information.

(K-1) OVERVIEW

This page offers firmware version and status of output timing and HDCP settings for the device.

(K-2) CAMERA



ITEMS	DESCRIPTION/ FUNCTIONS
Tracking Mode	• Auto Framing is an AI feature to zoom, pan, and tilt intelligently so that everyone in the room is perfectly located in the picture. • Speaker tracking is an AI feature to intelligently focus on the person who is talking. When more than one person is speaking, it will automatically switch between speakers. • Presenter tracking is an AI feature to intelligently track the presenter, so that the presenter can always be in the best position on the screen even when constantly moving. • Off
Tracking Effect	Tracking effect is available when Auto Framing is enabled. • Smooth (default): The tracking image moves smoothly in the frame. • Immediate: The tracking image switches from one to another immediately in the frame.
Tracking Speed	Tracking speed is available when Auto Framing is enabled. • Slow (default) /Normal/Fast
Mirror	• Mirror image function

	• On: Image flipped horizontally. • Off (default setting): Image not flipped horizontally.
Powerline Frequency (Anti Flicker)	Change the frequency to prevent flicker in the video. • 50Hz(default) /60Hz
HD	On (default): Turn on for better image quality. Off: Turn off for better compatibility.
	Click this icon to enable camera preview. Note: Other Apps cannot use the camera until camera preview is disabled.
WDR	When WDR is enabled, you can manually adjust the Backlight compensation value.

The iCam VB80's integrated camera features advanced functionality including ePTZ and AI tracking. ePTZ is the ability for the camera to “electronically” simulate a mechanical pan, tilt, zoom camera. ePTZ uses the camera's 4K resolution to maintain a clear and high-resolution image when zooming, panning, or tilting digitally via supported software. The camera uses the UVC 1.1 protocol and is compatible with many software applications to manipulate the ePTZ functionality.

- **Presenter tracking:** detects motion and then tracks the moving object (person). Presenter tracking is best for scenarios where only one person will be in frame such as the front of a classroom where a “presenter” is speaking. Due to the nature of using motion detection, presenter tracking is not recommended where multiple persons will be in the same frame as it may cause the motion detection to become sporadic if it detects multiple moving objects simultaneously.
- **Speaker tracking:** uses audio detection via the beamforming microphones to intelligently PTZ to a person speaking. This mode is best used when multiple users are positioned around a conference room table and are all in the camera's FOV.
- **Auto framing:** uses motion detection and body recognition to zoom in or out to best frame one or multiple people to the camera. This mode does not track a presenter or use audio detection.

(K-3) SETTINGS

GENERAL SETTINGS

iCam VB80

Overview
Camera
Setting
Support

General Settings

Device Name

Device Name:

iCam VB80

The device name must be 1 to 20 characters long (letters, numbers, "_" or "-" only).

Note: Changing the device name will modify the SSID at the same time, and the Type-C Dongle needs to re-pairing.

Apply

IP Settings

IP Method:

☐ Static
 ☒ DHCP

IP Address:

192.168.1.100

Subnet:

255.255.255.0

Gateway:

192.168.1.1

Note: LAN Module will automatically reboot after changing Network setting.

Apply

IP Conflict Detection

IP Conflict Detection:

ITEMS	DESCRIPTION/ FUNCTIONS
Device Name	Redefine the device name to an easy to remember one. <i>Note: The name must be 1~20 characters in length, including letters, numbers, "_" or "-".</i> - By default, it's set as iCam VB80. - Apply: Click to save and perform above settings. <i>Note: The device name is as same as the soft AP SSID. If you change to a new device name, you need to re-pair Dongle with this device as well.</i>
IP Method	Static/ DHCP(default)
IP Address	Set IP address manually when Static mode is selected.
Subnet	Set subnet mask manually when Static mode is selected.
Gateway	Set gateway address manually for the device to communicate with another network that uses different communication protocols when Static mode is selected.
Apply	Click to save and perform above IP settings. (LAN module will reboot automatically once IP settings are changed.
IP Conflict Detection	When IP Conflict Detection is enabled, an OSD prompt is displayed when an IP address conflict is detected

VIDEO SETTINGS

iCam VB80

Overview
Camera
Setting
Support

Video Settings

Output

Timing:

1920x1080P@60

HDCP:

Passthrough

Screen:

Split Screen

CEC

CEC:

☒

One Touch Play:

80 04

Standby:

80 36

CEC command just supports Hex format with a maximum of 15 byte (example: 40 04).

Apply

Load Default

CEC Test

One Touch Play

Standby

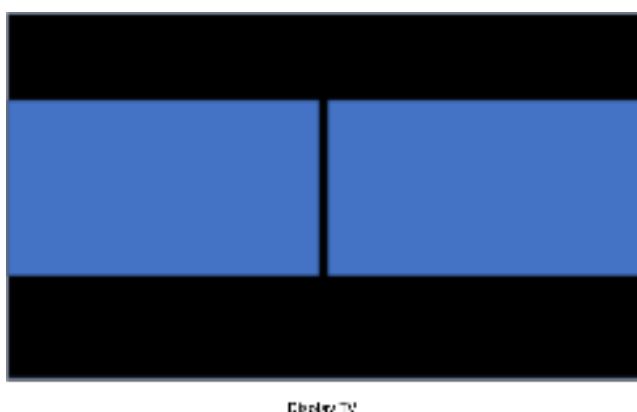
ITEMS	DESCRIPTION/ FUNCTIONS
Timing	Set output resolution for the device. Two options are offered: • Auto (default): Select to output the maximum resolution supported by the display based on the display's EDID. • Resolution list: Select a desired output resolution from the dropdown menu to output this fixed resolution
HDCP	Set HDCP capability for the device's output. Four options are offered: • Pass-through (default)/HDCP 2.2/HDCP 1.4/Off
Screen	• Single Screen (default) • Split Screen: Dual view on one screen.
CEC	On(default)/Off: Select to enable/disable CEC control.
One Touch play	Enter the CEC one touch play command in hex of the controlled display device. For more information about the command, see the user guide of your display device. By default, it's set as "80 04".
Standby	Enter the CEC standby command in hex of the controlled display device. For more information about the command, see the user guide of your display device. By default, it's set as "80 36".

Apply	Click to save and perform above settings.
Load Default	Click to load default settings.
CEC Test	One Touch Play/Standby: Click to test if command setting takes effect.

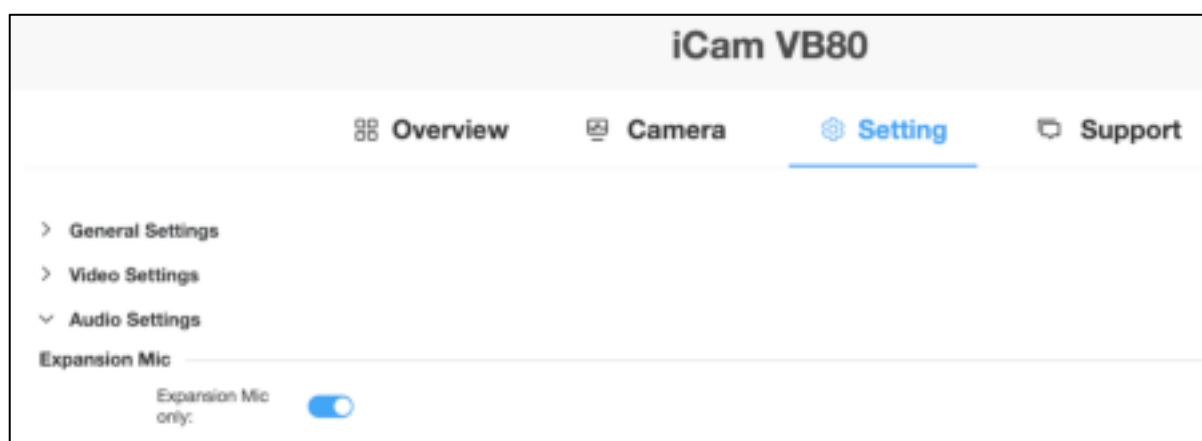
Split Screen

Up to two separate video sources can be transmitted through iCam VB80 in a split screen view. This can be a combination of wireless & wired devices but cannot be two wired devices.

For example, two Airplay devices, or one Miracast & one USB-C, etc... Dual-View uses LIFO (Last In First Out), the iCam VB80 will automatically switch to Dual-View when a second device sync is detected and will return to a single full screen image when a second sync is disconnected.



AUDIO SETTINGS



ITEMS	DESCRIPTION/ FUNCTIONS
Expansion Mic	Expansion Mic only: ON/ OFF When switch ON, the mic of the iCam VB80 will be disabled to pickup sound.

WIFI SETTINGS

iCam VB80

Overview
Camera
Setting
Support

> Audio Settings

▼ Wi-Fi Settings

Built-in WIFI

Band: ☒ 5G

Channel: ☒ Auto ☐ Manual

40

Soft AP

Soft AP: ☒

Soft AP Router: ☒

Password:

The password must be 8 to 20 characters long (letters, numbers, "_" or "-" only)

ITEMS	DESCRIPTION/ FUNCTIONS
Band	5G
Channel	Auto(default): The device selects a wireless channel for itself automatically. Manual: Assign a wireless channel for the device manually.
Soft AP	On (default)/Off: to enable or disable the iCam VB80 hotspot.
Soft AP Router	On (default)/Off
Password	Configure the soft AP password. By default, it is set as 12345678 .
Apply	Click to save and perform above settings.
Operation Frequency	2412MHz~2462MHz for WIFI 2.4G 5180MHz~5240MHz for WIFI 5G 2402-2480MHz for BT-EDR 2402-2480MHz for BT-BLE
Maximum Power	- WIFI 2.4G 16.30dbm(E.I.R.P) - WIFI 5G 14.81dbm (E.I.R.P)

BYOD SETTINGS

iCam VB80

Overview
Camera
Setting
Support

▼ BYOD Settings

BYOD

BYOD: ☒

Access Code: ☐ Auto ☒ Manual

0000-9999 or blank

Apply

Guide Screen

Guide Screen:

Select the .jpg files

Image in .jpg format with 1920x 1080 resolution

Upload

Restore the Default Image

Screen off: ☐

Delay Time:

0

0-30 minutes

ITEMS	DESCRIPTION/ FUNCTIONS
BYOD	On (default)/Off
Access Code	The access code is used to help prevent users from accidentally connecting to an unintended device and protect from an unauthorized access. • Auto: The device will randomly generate a four-digit access code in the following cases 1. The device switches to Guide Screen for output. 2. The device reboots • Manual: Select to input a four-digit code. Access Code OFF by default.
Apply	Click to save and perform above settings.
Guide Screen	Click to select a Guide Screen image in jpg format of 1920x1080 and upload to the device.
Screen off	Enable means that the screen will enter the countdown after the set time and then turn off. Disable means that the screen will never turn off.
Delay time	“0” means the countdown 60s will appear immediately, and the, “x” means the countdown 60s will appear after, “x” minutes.

SYSTEM SETTINGS

iCam VB80

Overview
Camera
Setting
Support

> Wi-Fi Settings
 > BYOD Settings
 ▾ System Settings

Login

Current Password:

New Password:

Verify Password:

Password must be 4 to 16 characters in length (alphanumeric only).

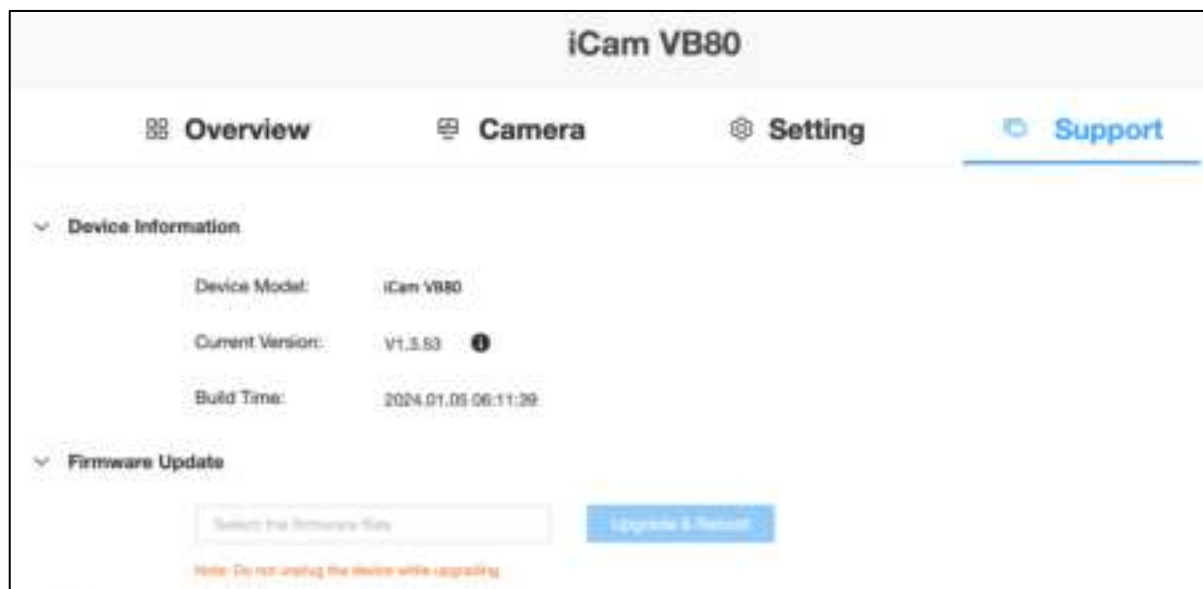
Telnet

Telnet Echo: ☒

System

ITEMS	DESCRIPTION/ FUNCTIONS
Login	Set a new password to login Web UI.
Apply	Click to save and perform above settings.
System	• Factory Reset • Reboot

(K-4) SUPPORT



ITEMS	DESCRIPTION/ FUNCTIONS
Device Information	Displays device model and firmware information.
Firmware Update	Select the firmware file and upload it for upgrade.

CHAPTER TWO: ICAM VB80-MIC



A. INTRODUCTION

The iCam VB80 supports expanding the microphone pickup range by using an add-on USB microphone. This **iCam VB80-Mic** add-on mic connects to the VB80 via the rear USB port labeled “Mic”.

The **iCam VB80-Mic** supports the same features as the VB80 integrated microphones includes AES, ANS & AGC. The mic also includes a 2-way mic mute toggle which is indicated by red LEDs on both the add-on mic and the VB80’s status LED.

The **iCam VB80-Mic** can also be cascaded up to 5 times by connecting an additional mic to the USB port labeled “EXT MIC”.

The iCam VB80-Mic is an add-on microphone for iCam VB80 videobar to extend pickup distance. It is ideal for applications at huddle/small/medium/large conferencing rooms.

The connection distance can be increased by using the Mini USB-to-RJ45 adapter which is a point-to-point USB to ethernet extender. This extender connects in between the VB80 and the first set **iCam VB80-Mic**, and all following VB80-Mic are connected via PREVIOUS/NEXT RJ45 ports to allow up to a 50m extension for installing cables through the floor, walls, or ceilings.

B. FEATURES

- 4x MEMS omnidirectional microphones array with a pickup range of 3 meters.
- Supports AEC (Acoustic Echo Cancellation), AGC (Automatic Gain Control), Background Noise Reduction and full duplex communication, making all participants feel like they are talking face-to-face.
- Supports cascading of up to five microphones for extending pickup range.
- Mic mute button with LED feedback.
- Compatible with iCam VB80 for audio signal extension over Ethernet.

C. PACKAGE CONTENTS

- 1 x Microphone

D. SPECIFICATIONS

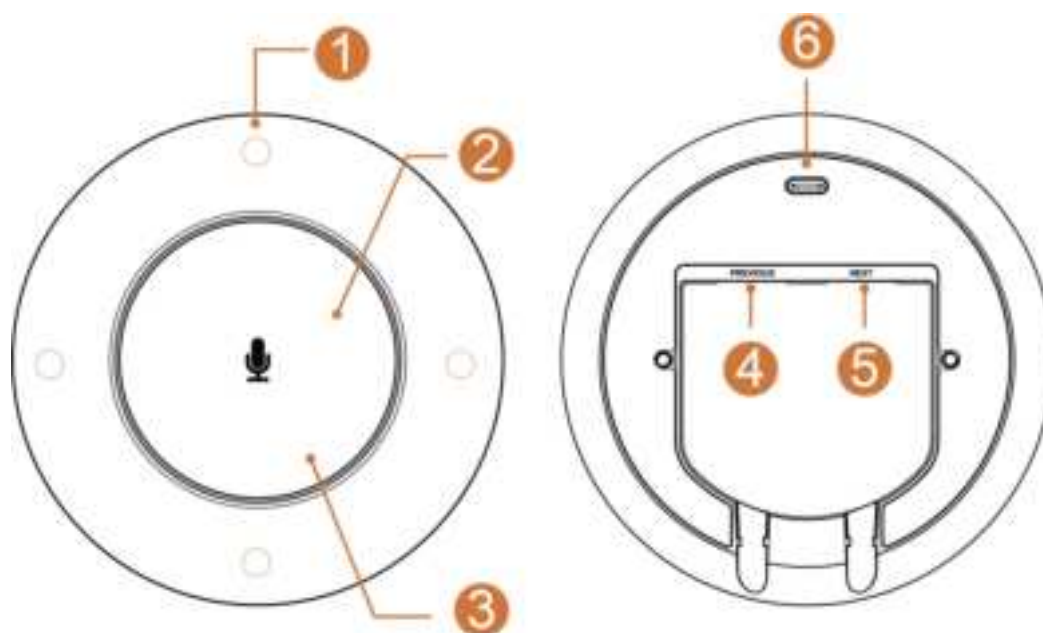
Audio	
Input/Output	RJ-45

Microphone	
Microphone	Omnidirectional microphone array Pickup Range: 3m
Frequency Response	100~10KHz
Sensitivity	-26dBFS
Signal-to-Noise Ratio	62dB
Full Duplex	Supported
AEC (Automatic Echo Cancellation)	Supported
AGC (Automatic Gain Control)	Supported
Background Noise Reduction	Supported

Communication and Control	
Control Method	USB-C for firmware upgrade (Windows App)

General	
Operating Temperature	0°C ~ 40°C (32°F to 104°F)
Storage Temperature	-20°C ~ 60°C (-4°F to 140°F)
Humidity	10% to 90%, non-condensing
Power Supply	Powered by Video Bar
Power Consumption	1.5W (Max)
Installation	On the table
Dimension (φ x h)	108mm x 26.5mm/4.25" x 1.04"
Net Weight	0.14kg/0.31lb

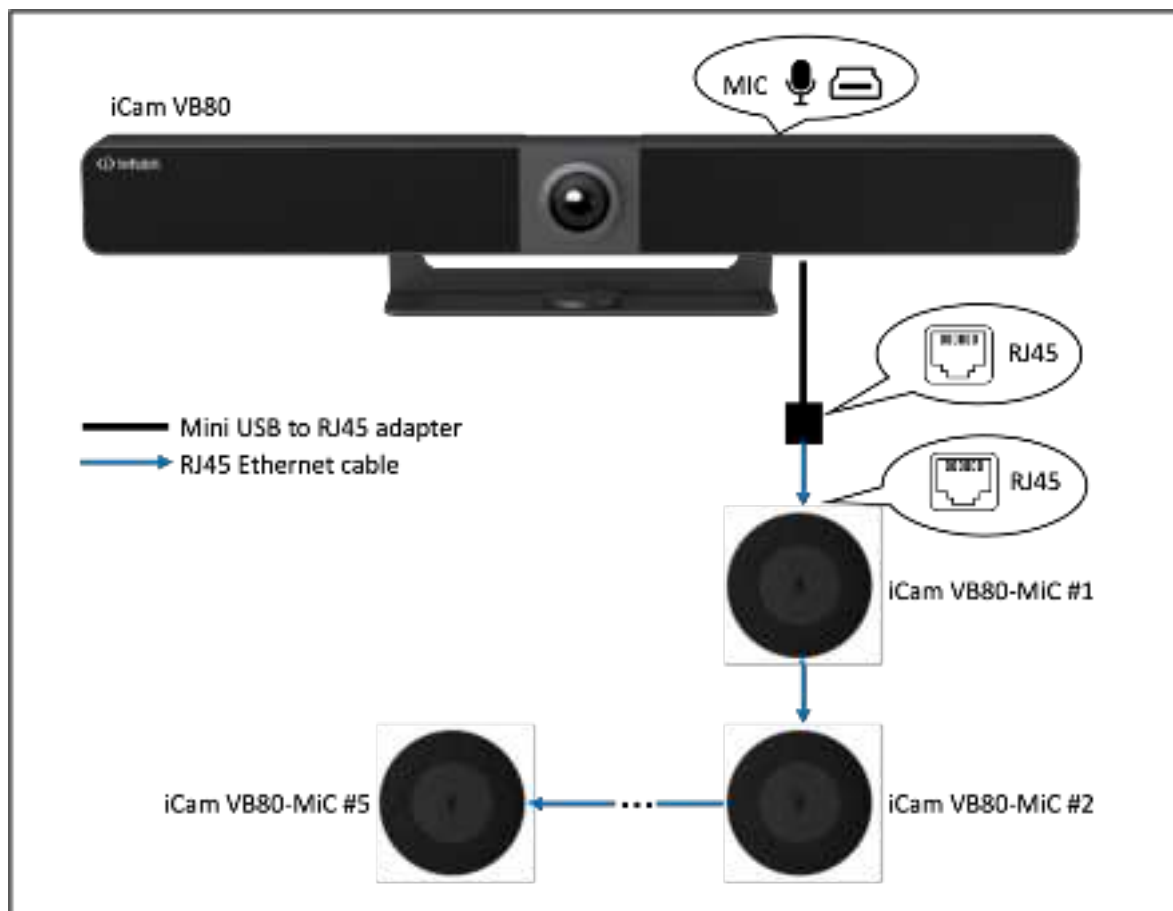
E. PANEL DESCRIPTION



ID	Name	Description
1	Microphone Array	Comprises of 4 x omnidirectional microphones for capturing sound.
2		Press the button to toggle between mute and unmute statuses for the microphones, including the one at the Video Bar and the rest of other iCam VB80-Mic units.
3	Status LED	Status LED indicator beneath the  button, indicating five statuses of the device: - Lighting white: The device is powered on. - Blinking white quickly: The device is being upgraded. - Lighting blue: The device is picking up sound. Note: Once the device completes pickup of the sound, the lighting LED is off. - Lighting red: The device is muted. - Breathing white: The device is in sleep mode.
4	PREVIOUS	RJ-45 port, connect to the iCam VB80 Videobar or the previous iCam VB80-Mic microphone. This port supports power input.
5	NEXT	RJ-45 port, connect to another extensible iCam VB80-Mic microphone. This port supports power output for charging of the next microphone.
6	USB-C Port	For firmware upgrading of the device.

F. APPLICATIONS

Application Diagram



Note:

- For cascading of up to three microphones, the total length of all CAT6 cables in use shall not exceed 50 meters.
- For cascading of up to five microphones, the total length of all CAT6 cables in use shall not exceed 25 meters.
- The mini USB-to-RJ45 adapter is included in the iCam VB80 package.

CHAPTER THREE: ISHARE MC



A. INTRODUCTION

The iShare MC is a Type-C screen transmitter wireless dongle. It supports sharing contents from screen sources (e.g., laptop) to a display device wirelessly through our iCam VB80. It supports transmitting up to 1080P video signal with audio.

It also supports plug and play, and fully compatible with most operation systems, like Windows 7/10, macOS, Android OS.

B. FEATURES

- Support up to 1080P@30Hz video wirelessly transmitting with low latency.
- Plug and play, no installation and no driver are needed.
- Quick and simple, just press the button to transmit video, audio and touch signal.
- Support 2.4G&5G frequency band.
- Low power consumption and transmitting an enough distance to meet requirements in meeting room scenario.
- Compatible with main-stream OS, like Windows 7/10, Android OS, and macOS.

C. PACKAGE CONTENTS

- 1 x USB Dongle

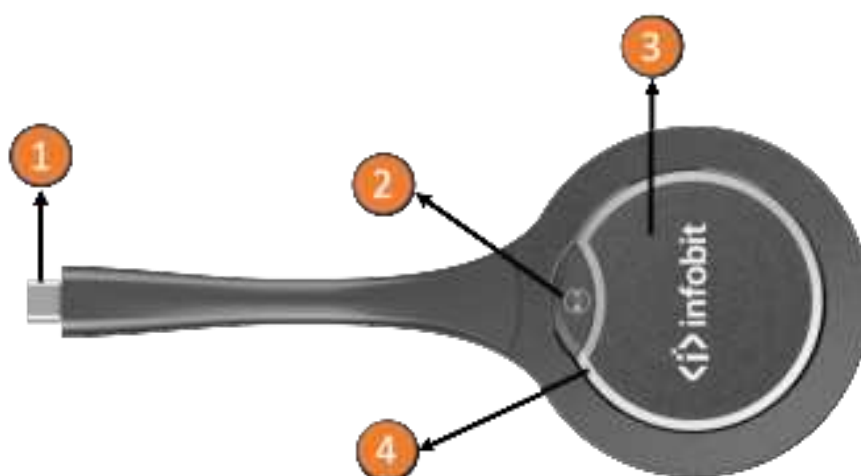
D. SPECIFICATIONS

Technical	
Max Resolution	1080P @ 30fps
Terminal Type	1 x Type-C
Frequency	5GHz (default) and 2.4GHz
Wireless transmission protocol	IEEE 802.11 a/b/g/n, IEEE 802.11ac
Authentication protocol	WPA2-PSK or IEEE 802.1X

USB	
Operate System	Windows 7/10, macOS, Android OS
USB Port	Type-C (DP_Alt mode)

General	
Operating Temperature	0°C to 40°C (32°F to 104°F)
Storage Temperature	-20°C to 60°C (-4°F to 140°F)
Humidity	10% to 90%, non-condensing
ESD Protection	Human-body Model: ±8kV (Air-gap discharge)/ ±4kV (Contact discharge)
Input Voltage	5V (Power over USB)
Power Consumption (Max)	2.14W
Product size (φ x h x l)	68.98mm x 16.4mm x 165.19mm/2.72" x 0.65" x 6.50"
Product Weight	60g/0.13lb (net weight)

E. PANEL DESCRIPTION



No.	Name	Description
1	USB Type-C	Connect to the iCam VB80 for pairing. Connect with laptop for wireless casting.
2	Freezing Button	Press the button to freeze/unfreeze the projected screen (the frame on source device is not affected). Note: When freezing/unfreezing the projected screen, the audio projected through the Dongle is also paused or continuously playing.
3	Projecting Button	Short Press: Short press the button to project screen or disconnect projection. Hold the Button for about 3s: When there are multiple screens (including screen projected through the Dongle) shown on the sink display, hold the button for about 3s, the screen projected through the Dongle will be shown in full screen.
4	LED Indicators	Blinking: • When connected to the receiver: The Dongle is being pairing up with the receiver. • When connected to the computer: The Dongle is preparing and establishing connection with the receiver. Blinking white dimly: The Dongle is projecting screen. Solid on: • When connected to the receiver: USB Dongle is paired up with the receiver successfully. • When connected to the computer: USB Dongle is connected to the receiver successfully. You can press the button to start for screen projection now.

F. APPLICATIONS

1. Pair the USB Dongle with iCam VB80

a. Insert the USB dongle to the pairing port of iCam VB80. “Starting pairing” will appear on the display screen connected to the iCam VB80, and the iCam VB80 will set its soft AP’s SSID and password for the dongle. The Dongle’s LED will be blinking.

b. Once pairing is done, “Pairing succeeded” will appear on the display screen. The Dongle’s LED will be solid on.



2. Connect the Dongle to a laptop.

After pairing up with the iCam VB80 successfully, connect the Dongle to a laptop. Once the Dongle connects to the receiver successfully, the Dongle's LED stops blinking and turns to be solid on. (Note: Please make sure the Type-C port of laptop has a video output, some laptop's Type-C is just for charging.)

3. Start mirroring.

Now short press the Projecting button, you can project your laptop's screen to the display screen immediately. The LED will blink white dimly.

Enter full screen mode: When there are Split screens shown on the sink display, hold press projecting button for about 3 seconds, you can have your laptop's screen displayed in full screen.

Freezing the projected screen: Press the Freezing button, the screen projected by the Dongle on the sink display will be frozen and the audio projected through Dongle is also paused. A transparent pause icon will appear on the center of the projected screen. Press the button again, the screen will be unfrozen, the icon will disappear, and the projected screen will be synchronized with the source device to display.

Note: The freezing function doesn't affect the source device.

G. TROUBLESHOOTING

1. What is a USB-C wireless dongle for wireless casting?

A USB-C dongle is a kind of screen-mirroring device, which can wirelessly transmit the contents of a laptop, smartphone or tablet to the display device connected to the paired wireless presentation system.

2. How can users pair the USB-C dongle with iCam VB80?

Please refer to step 1 in "Application" section to get detail information about pairing.

3. Can users use the USB-C dongle independently?

The USB-C dongle can't be used independently. It needs to work with the iCam VB80.



4. Does any software/application need to be installed to use the USB-C dongle?

No, users don't need to install any software driver or application. Just pair the dongle with the iCam VB80, insert it into your own device, and click the button, then you can start your presentation right away.

5. No video output on the connected TV when insert the dongle to the USB-C port of the laptop.

First, check if you have paired the USB-C dongle with iCam VB80, if not, please pair it firstly. Second, please check if the USB-C port of the laptop supports video transmission. The USB-C port on some old computers may only transmit USB signal. Besides, please wait a few seconds until the LED indicator stops blinking and becomes solid on. Then, you can cast your screen with one click of the button.

6. What's the maximum resolution the USB-C dongle supports?

The USB-C dongle supports transmitting up to 1080P video signal with audio.

7. Can the screen mirroring be paused during the presentation?

Yes, users can press the freezing button to pause the video, and the audio cast through the dongle will also be paused. A transparent pause icon will appear on the center of the cast screen. Press the button again to exit the frozen status. The icon will disappear, and the cast screen will be synchronized with the source device to display.

8. What's the differences among USB-A, USB-B and USB-C?

USB-A, USB-B, and USB-C are different types of connectors used for USB cables. USB-A is the most common connector, used for many devices including flash drives and keyboards. USB-B is used for larger devices like printers and external hard drives. USB-C is the newest and most versatile connector, used for charging and data transfer in devices like smartphones, laptops, and tablets.

H. DIAGRAM



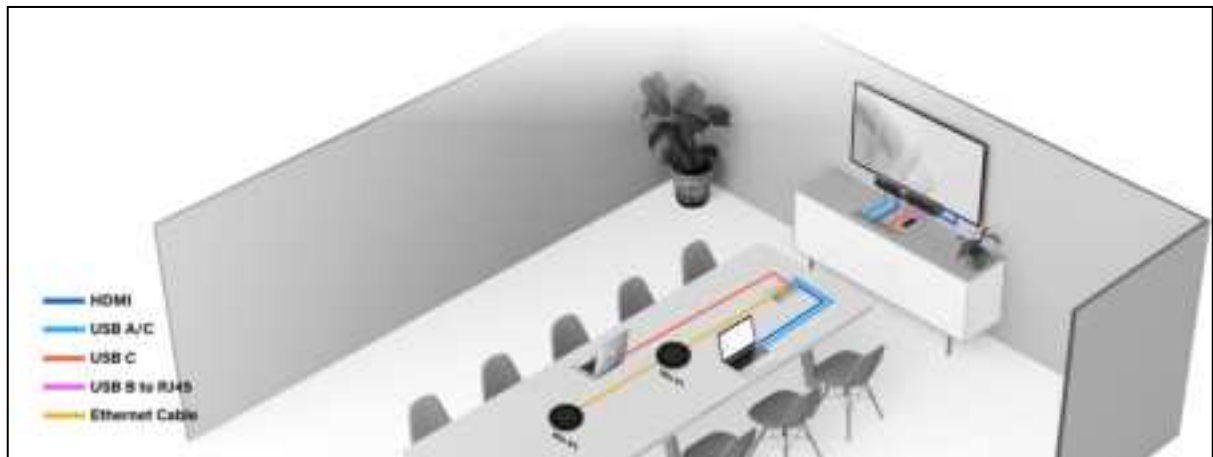
1- Combine with a Room PC

For rooms without own BYOD hardware, the iCam VB80 Kit can be in combination with your Room PC to run your Teams Rooms or Zoom Rooms solutions.



2- Combine with both Room PC and BYOD PC

For rooms without own hardware or with own BYOM laptop, the iCam VB80 Kit can be in combination with both your Room PC and your BYOM PC.



3- BYOM without Room PC

For rooms without Room PC, the iCam VB80 Kit can be in combination with user's BYOM PC.



4- Pure Presentation BYOD

For rooms without Room PC, the iCam VB80 kit can be in combination with BYOD PCs for a tidy pure presentation application through wireless-only connection.



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