ScreenBeam 1100 Plus Wireless Display Receiver

Firmware 11.1.17.0

User Manual

V1.5

For Catalog # SBWD1100P

Table of Contents

Part I Getting Started

Thank you for your purchase of ScreenBeam 1100 Plus Wireless Display Receiver (hereinafter refer to as “ScreenBeam 1100 Plus”).
ScreenBeam 1100 Plus wireless display receiver enables native screen mirroring from your Windows, Android, Apple, and Chromebook devices - without apps or wires. ScreenBeam 1100 Plus lets you wirelessly stream what’s on your wireless display capable device to your HDTV, including movies, videos, photos, music, and more. The receiver frees your eyes from a tiny screen.
The receiver boasts some great features, including fast connect, quick switch, multi-network support, VLAN support, multi-view support, digital signage, enhanced security, IT manageability, smooth video playback, 4K HDMI® output, ultra-low delay, Windows 10/11 optimization, versatile compatibility, low power consumption, and more.

For optimal wireless display experience, we strongly recommend you update your receiver to the latest firmware. Check firmware update now on https://support.screenbeam.com.

1.1 Contents in the Box

Contents in the receiver’s package are listed below:

- ScreenBeam 1100 Plus wireless display receiver (1)
- HDMI® Cable (1)
- AC Power Adapter (1)
- Magnetic Mounting Kit (1)
- Product documentation

1.2 Meeting ScreenBeam 1100 Plus

This manual is applicable to the following catalog #s:

- SBWD1100P

1.2.1 ScreenBeam 1100 Plus

- Power Input **(12V/3A)**, for power supply
- USB ports, (two USB 2.0 ports and one USB 3.0 port), for provisioning CMS connection data, firmware update, connecting to touch display, and USB over network control (UIBC)
- Ethernet Port **(ETHERNET)**, for receiver management with ScreenBeam Central Management System (CMS) / Local Management Interface (LMI) or for multi-media streaming over infrastructure network
- HDMI® Output **(HDMI OUT)**, for connecting to HDTV/projector with an HDMI® port for video and audio output
- HDMI® Input **(HDMI IN)**, for connecting to an HDMI® source for video input
- Audio Output **(AUDIO)**, for outputting audio to speaker
- Power Indicator, indicating power supply status
- Reset button, for resetting the receiver to default settings

1.3 Minimum Requirements

System requirements for ScreenBeam 1100 Plus are shown below:

1.3.1 System Requirements

Client device from 2020 or newer with one of the following operating systems:

- Windows 10/11 21H2 (and later)
- macOS 12 (and later)
- iOS 13 (and later)
- Android 8 (and later) with Miracast
- Chrome OS 100.x (and later) with Cast

1.3.2 Wi-Fi Miracast Facts & Requirements

Most Windows and Android devices have screen mirroring feature built-in to the operating system. This is called Wi-Fi Miracast, an industry standard created by the Wi-Fi Alliance association.

Below are some facts about Miracast and what you need to know for optimum performance:

- Windows and Android Miracast devices discover ScreenBeam receiver via the Wi-Fi Direct (WFD) signal.
- Wi-Fi radio must be turned on for Windows and Android Miracast devices to function.
- ScreenBeam receiver and the Miracast devices must be within 100' range for the Miracast devices to discover.
- Line-of-sight is not required, but ScreenBeam receiver shall not be placed in a spot where 802.11 Wi-Fi could be affected.
- Miracast devices can connect to ScreenBeam receiver over either:
    - Peer-to-peer (P2P) using the WFD signal to send data on one of the 802.11 5GHz channel.
    - Or over the network if ScreenBeam is connected to the same network as the Miracast device. This is called Miracast over Infrastructure Connection, developed by Microsoft® (MS-MICE).
- Only Windows 10/11 Miracast devices can support Miracast over Infrastructure (Infracast). The connection method is transparent to users and Infracast is prioritized over P2P.
    - If Windows can reach ScreenBeam receiver over the network, Infracast will be established.
    - If Windows cannot reach ScreenBeam receiver over the network, Miracast P2P will be established.
- Performance expectations.
    - Infracast performance relies on the quality of the infrastructure network. The clarity and quality of the mirrored content depend on the Windows device's Wi-Fi network speed and connection strength.
    - Miracast P2P performance relies on the quality of the 802.11 wireless channel configured on ScreenBeam receiver. The clarity and quality of the mirrored content depend on the cleanliness of the Miracast P2P channel, and the Windows device's Wi-Fi adapter. Below is the recommended list of Wi-Fi adapters that work well.
        - Intel® Dual Band Wireless-AC 7000-series
        - Intel® Dual Band Wireless-AC 8000-series
        - Intel® Dual Band Wireless-AC 9000-series
        - Intel® Wi-Fi 6 AX series
        - Qualcomm® Wi-Fi 6 series
- Android devices, depending on the manufacturer, may not support Miracast P2P.

1.3.3 Network Requirements

For wireless display over the existing wireless network or LAN:

- Ethernet: 1000BASE-T 10/100/1000 connection (1 Gbps is recommended)
- Wireless: 802.11ac (5 GHz is strongly recommended)
- Multicast DNS (mDNS) support is required for auto-discovery of ScreenBeam
- Required ports, see the table below:

Feature	Sub-Function	Network ports required by ScreenBeam receiver	
		Port Number	Direction
Miracast screen mirroring over Wi-Fi Direct link - Win10/11 and Android	HDCP	Local Port: 25030 | TCP Foreign Port: not specified | TCP	Both
	RTSP	Local Port: not specified | TCP Foreign Port: 7236 | TCP	Both
	RTP	Local Port: 24030 | UDP Foreign Port: not specified | UDP	In (receive only)
	I2C	Local Port: 23030 | TCP Foreign Port: not specified | TCP	Both
	HW Cursor	Local Port: 19134 | UDP Foreign Port: not specified | UDP	Both
	UIBC	Local Port: not specified | TCP Foreign Port: 50000 | TCP	Both
Miracast over Infrastructure network - For Win10 RS2 (and later)	Protocol	Local Port: 7250 | TCP Foreign Port: not specified | TCP	Both
	HDCP	Local Port: 25030 | TCP Foreign Port: not specified | TCP	Both
	RTSP	Local Port: not specified | TCP Foreign Port: 7236 | TCP	Both
	RTP	Local Port: 24030 | UDP Foreign Port: not specified | UDP	In (receive only)
	I2C	Local Port: 23030 | TCP Foreign Port: not specified | TCP	Both
	HW Cursor	Local Port: 19134 | UDP Foreign Port: not specified | UDP	Both
	UIBC	Local Port: not specified | TCP Foreign Port: 50000 | TCP	Both
	mDNS Discovery	Local Port: 5353 | UDP Foreign Port: 5353 | UDP	Both
Native Screen Mirroring for macOS & iOS - AirPlay Mirroring	BLE Discovery disabled	Local Port: 47000 | TCP Foreign Port: not specified | TCP	Both
	BLE Discovery enabled	Local Port: 7000 | TCP Foreign Port: not specified | TCP	Both

Feature	Sub-Function	Network ports required by ScreenBeam receiver	
		Port Number	Direction
	mDNS Discovery	Local Port: 5353 | UDP Foreign Port: 5353 | UDP	Both
	Data	Local Port: 7100 | TCP Foreign Port: not specified | TCP	Both
	RTP/RTSP	Local Port: 18000-18009 | TCP+UDP Foreign Port: not specified | TCP+UDP	Both
ChromeOS / Chrome Browser Screen Mirroring		Local Port: 8008 | TCP Foreign Port: not specified | TCP	Both
		Local Port: 8009 | TCP Foreign Port: not specified | TCP	Both
Firmware Upgrade for receiver by ScreenBeam CMS	Server	Specified by the FW Upgrade Server such as 80 or 8080	Both
	Client in SB Receiver	Local Port: not specified | TCP Foreign Port: specified by the upgrade server (such as 80, 8080, ...) | TCP	Both
ScreenBeam Central Management System (CMS)	Server	7237 | TCP	Both
	Client in SB Receiver	Local Port: not specified | TCP Foreign Port: 7237 | TCP	Both

Note: Additional network configuration is not required for Wi-Fi Miracast enabled device to connect. Verify Group Policy and firewall settings allow Wi-Fi Direct groups or hosted networks.

1.3.4 Setup Requirements

- ScreenBeam 1100 Plus receiver
- Display with an available HDMI® input
- (Optional) Touchscreen with USB touch cable
- An Ethernet network connection with DHCP IP or a Wi-Fi router
  Note: This is used for wireless display over LAN and management.

1.3.5 QoS Recommendations

To get premium screen mirroring quality, it is recommended to follow the QoS recommendations below:

- Miracast over Infrastructure (MS-MICE) uses RTSP to setup streaming and RTP via UPD for underlying transport protocol while mirroring. Miracast sets DSCP markings by default of CS5. Bandwidth - Up to 15Mbps.

- AirPlay uses HTTP server to setup streaming and RTP over TCP for the underlying transport protocol while mirroring. AirPlay sets DSCP markings by default of CS4. Bandwidth - Up to 12Mbps.

- Google Cast uses both TCP and UDP for setup, control and streaming. Google Cast does not specify default DSCP markings by default. Bandwidth - 5 Mbps (SD), 10 Mbps (HD) and 20 Mbps (4K).

Part II Installing the Receiver

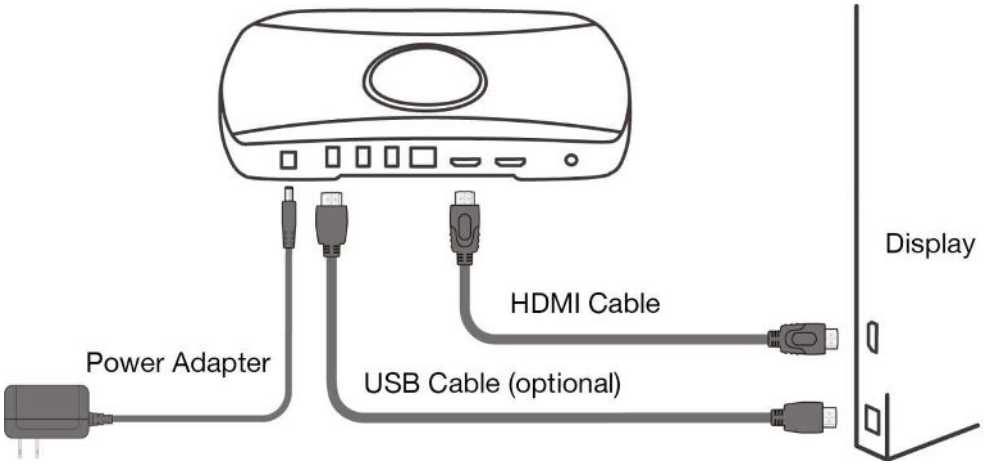
This chapter explains how to connect ScreenBeam 1100 Plus to a display such as an HDTV or projector. Make sure you have all the contents from the receiver's package available before starting.

2.1 Setting up ScreenBeam 1100 Plus Receiver

It is quite easy and fast to set up the receiver. You can easily complete the setup by your own.

To connect ScreenBeam 1100 Plus to an HDTV:

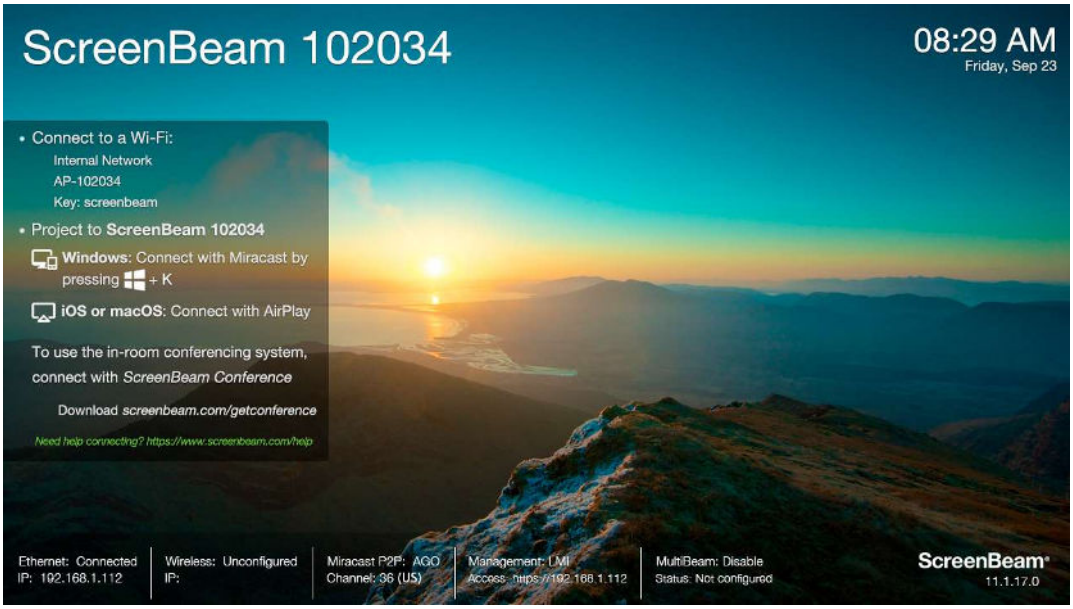
1. Get the receiver, AC power adapter, and HDMI® cable from the receiver's package, and place the receiver next to the display.
2. Plug one end of the HDMI® cable into the HDMI® port ("**HDMI OUT**") on the receiver, and the other end into an available HDMI® port on the display.
3. (Optional) If the display has USB HID touch capability, insert the HID USB connector into a USB port on the ScreenBeam receiver. (USB cable is not included).
4. (Optional) Connect one end of the Ethernet cable to the receiver's Ethernet port and connect the other end to the network switch with DHCP IP. (Ethernet cable is not included).
   Note: Refer to **Section 2.2** for more information on setting up a network connection.
5. Plug the connector of the power cord to the receiver's power input port labeled "**12V/3A**", and plug the power adapter to a power outlet.
   When the above steps are complete, the hardware should be connected as shown in the figure below:



Note: Power adapter may vary in different region.

6. Turn on the display and set it to display the input from the correct HDMI® port (the one you have plugged into in Step 2).

7. Verify that the receiver's idle screen appears on the display.



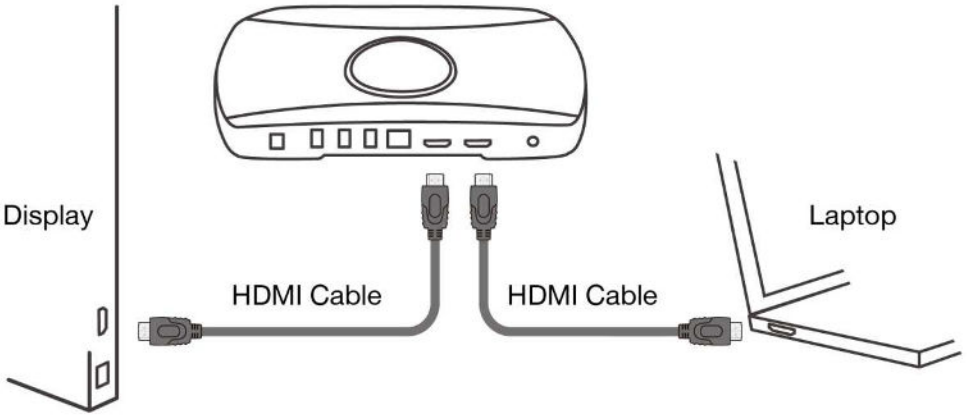
The receiver is connected to the display, and it is ready for use.

8. (Optional) Connect your ScreenBeam receiver to a speaker in your room using a 3.5mm audio cable, as shown below:

Note: 3.5mm audio is active in conjunction with the HDMI® output.

ScreenBeam 1100 Plus receiver includes an HDMI® Input to accommodate either wireless or wired connection. If there is an existing HDMI® cable connected to the display for wired projection, it can be used in conjunction with ScreenBeam in case the client device cannot connect wirelessly.

1. Remove the existing HDMI® cable from the display's HDMI® port.
2. Connect the existing HDMI® cable to the **HDMI IN** port on the receiver.
3. Connect the provided HDMI® cable from the **HDMI OUT** of the receiver to the display.
4. Refer to **Section 4.3 HDMI® Output Behaviors** to manage the HDMI® output behavior.



2.2 Connecting the Receiver to a Network

ScreenBeam 1100 Plus receiver supports both wired and wireless connections. You can deploy ScreenBeam 1100 Plus receivers based on your network requirements.

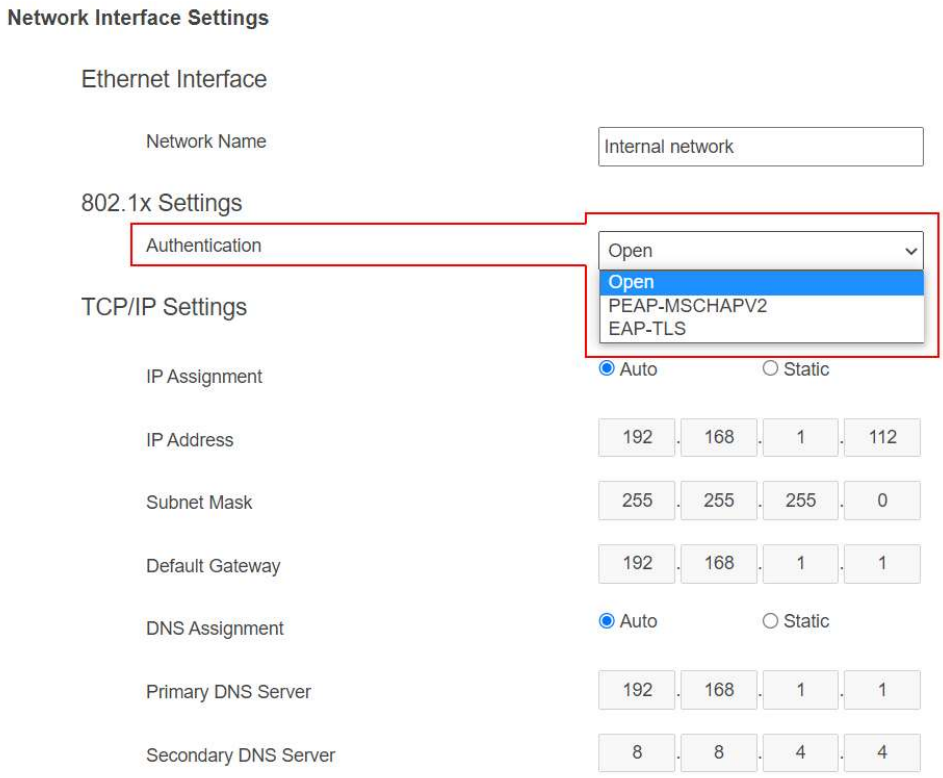
Note: The setups in this section are optional. Wired Ethernet connection is highly recommended for screen mirroring protocol that requires infrastructure network (e.g., Miracast over LAN, AirPlay mirroring, and Google Cast mirroring).

2.2.1 Wired Connection

ScreenBeam 1100 Plus receiver provides a built-in Ethernet port, allowing direct connection to an Ethernet network.

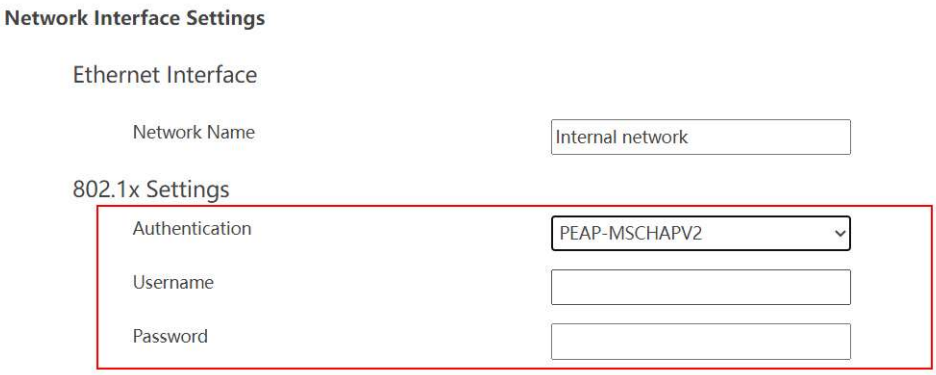
To connect the receiver to an Ethernet network, follow this procedure:

1. (Optional) If you are going to connect your receiver to your network with RADIUS authentication, you need to configure authentication parameters through LMI > **Network Settings** > **Network Interface Settings** > **Ethernet Interface** > **802.1x Settings.**



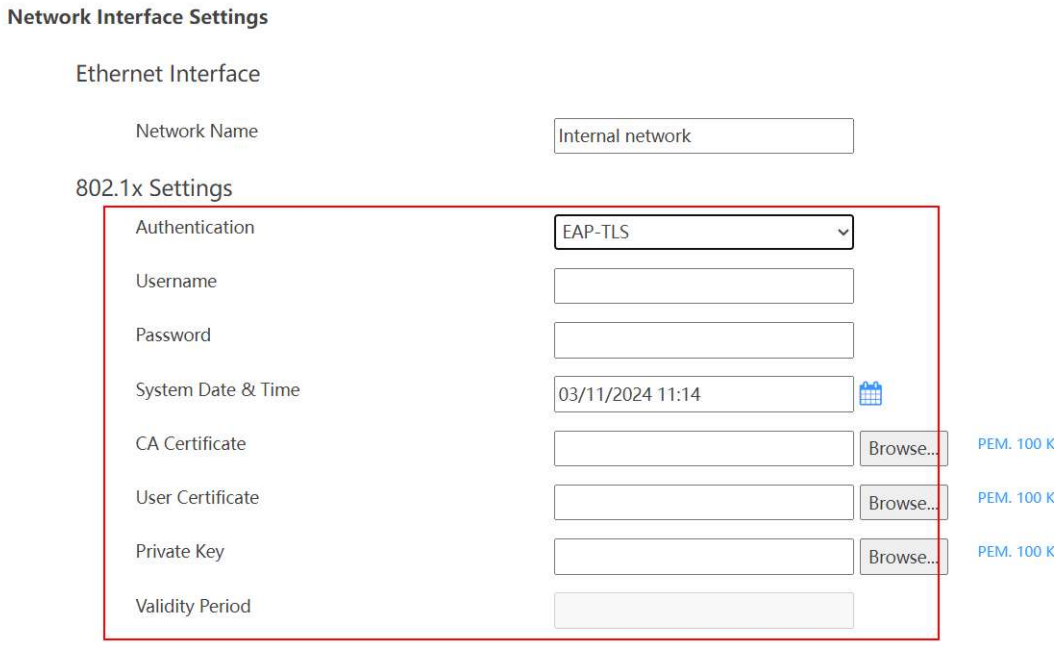
When **Authentication** is set to **PEAP/MSCHAPV2**,

- **User Name**: This is for authentication through a RADIUS server. It is RADIUS account User Name.
  Note: The User Name supports these characters: a-z, A-Z, 0-9, and @#$-._, and the length should be 1-128 characters.
- **Password**: It is RADIUS account password.
  Note: The Password supports these characters: a-z, A-Z, 0-9, ~!@#$%^*()_+-=[]{}|:;.,?/ and space. And the length of the password should be 1-63 characters.



When **Authentication** is set to **EAP-TLS**, the following items are available:

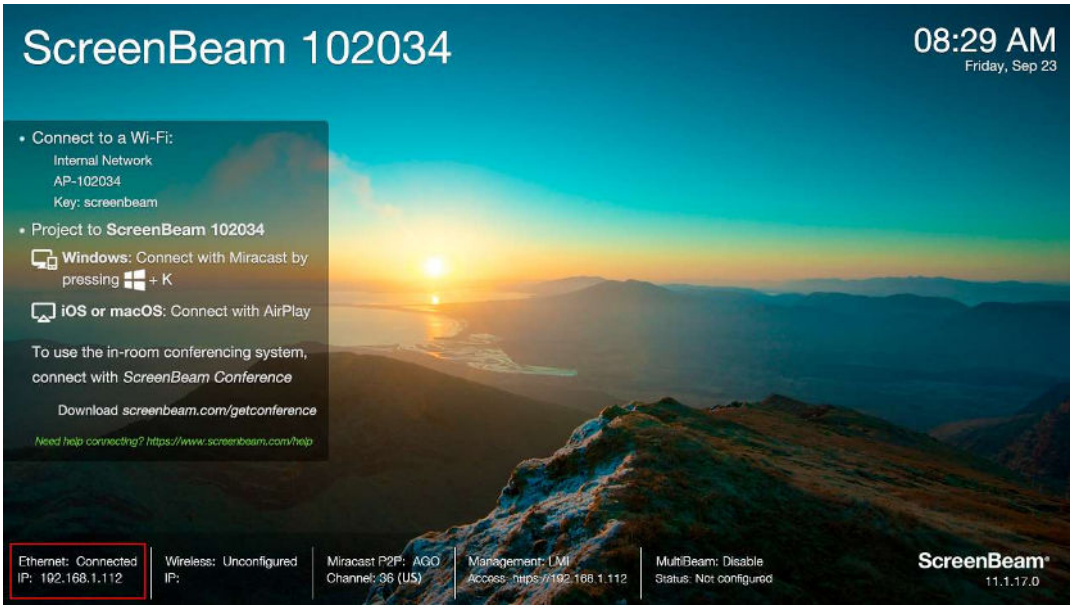
- **User Name**: It is the User Principal Name or RADIUS Identity (if necessary).
  Note: The User Name supports these characters: a-z, A-Z, 0-9, and @#$-._, and the length should be 1-128 characters.
- **Password**: It is the password of the Private Key.
  Note: The Password supports these characters: a-z, A-Z, 0-9, and ~!@#$%^*()_+-=[]{}|:;.,?/ and space. And the length of the password should be 1-63 characters.
- **System Date & Time**: It is used to set date and time for the receiver. Users should set the date and time according to the validity period of the certificates.
- **CA Certificate**: It is the root certificate. Click the **Browse** button to browse and add the certificate.
- **User Certificate**: It is the user certificate. Click the **Browse** button to browse and add the certificate.
- **Private Key**: It is the user's private key. Click the **Browse** button to browse and add the certificate.
- **Validity Period**: It displays the effective period of the certificates.



Note:

- Currently, only certificates in ".pem" format are supported, and the certificates must be generated using the "DER encoded binary X.509" method.
- The length of the certificate file name must not exceed 64 bytes, and the file size must be less than 100 KB.
- All the three certificates are required for authentication.
- Users should select the right certificate file for each type of certificate.

2. Connect your ScreenBeam receiver to your network with a quality Ethernet cable.
3. The receiver will be assigned an IP address after a few seconds, if a DHCP server is available on your network.



Note: ScreenBeam receiver is set to obtain an IP address automatically by default. If you want to set the receiver's IP address or DNS server to static, consult your network administrator.

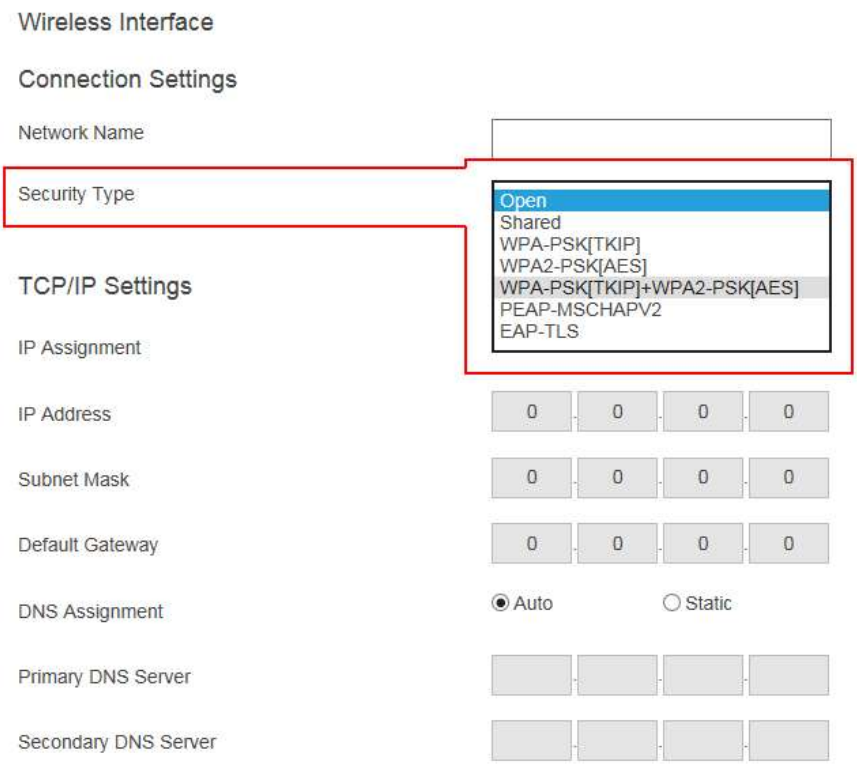
- Refer to Section **5.2 Using Local Management on ScreenBeam** for details on how to log into the receiver's LMI.
- Refer to Section **5.3.7.5 Setting up the Receiver's IP Address** for details on how to set up the receiver's IP address.
- Refer to Section **5.3.7.6 Specifying a DNS Server for the Receiver** for details on how to set up the receiver's DNS server.

2.2.2 Wireless Connection

ScreenBeam 1100 Plus receiver provides a built-in WLAN adapter, which allows the receiver to wirelessly connect to your network. It is required to set up the wireless connection parameters before starting the connection.

To connect the receiver to a wireless network, follow this procedure:

1. Log into the receiver's LMI. Refer to Section **5.2 Using Local Management on ScreenBeam** for details on how to log into the receiver's LMI.
2. Go to LMI > **Network Settings** > **Network Interface Settings** > **Wireless Interface** > **TCP/IP Settings**, and set **IP Assignment** and **DNS Assignment** to **Auto**.
   Note: If you want to set the receiver's IP address or DNS server to static, consult your network administrator.
   - Refer to Section **5.3.7.5 Setting up the Receiver's IP Address** for details on how to set up the receiver's IP address.
   - Refer to Section **5.3.7.6 Specifying a DNS Server for the Receiver** for details on how to set up the receiver's DNS server.
3. Go to LMI > **Network Settings** > **Network Interface Settings** > **Wireless Interface** > **Connection Settings**, and configure the parameters according to specific requirements.



- **Network Name**: The SSID of the wireless router (AP).
  Note: The length of the Network Name should be 1-64 characters.
- **Security Type**: Select a security type, the one you have selected on your wireless router. Available security types are **Open**, **Shared**, **WPA-PSK[TKIP]**,

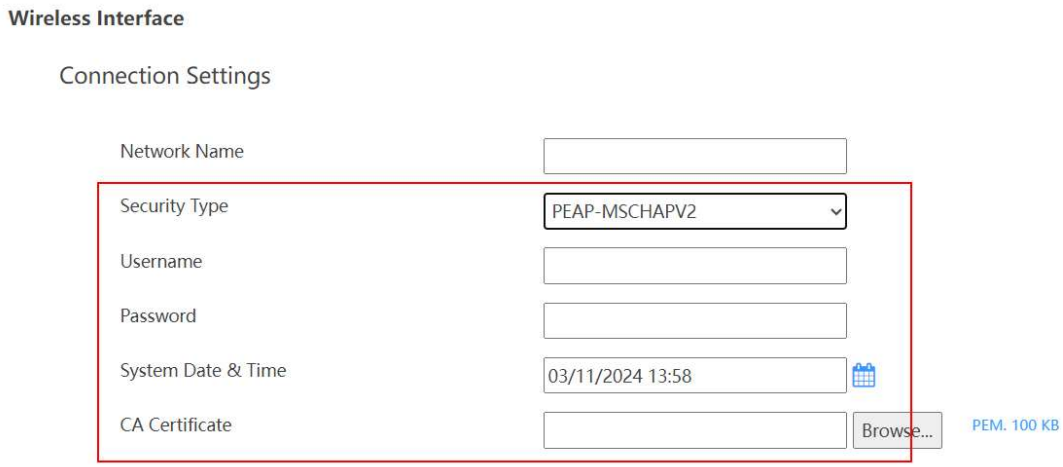
WPA2-PSK[AES], **WPA-PSK[TKIP]+WPA2-PSK[AES]**, **PEAP/MSCHAPV2**, and **EAP-TLS**.

When **Security Type** is set to **Shared**, **WPA-PSK[TKIP]**, **WPA2-PSK[AES]**, or **WPA-PSK[TKIP]+WPA2-PSK[AES]**,

- **Password**: The pre-shared password for the wireless SSID.
  Note: The length of the Password should be 1-63 characters.

When **Security Type** is set to **PEAP/MSCHAPV2**,

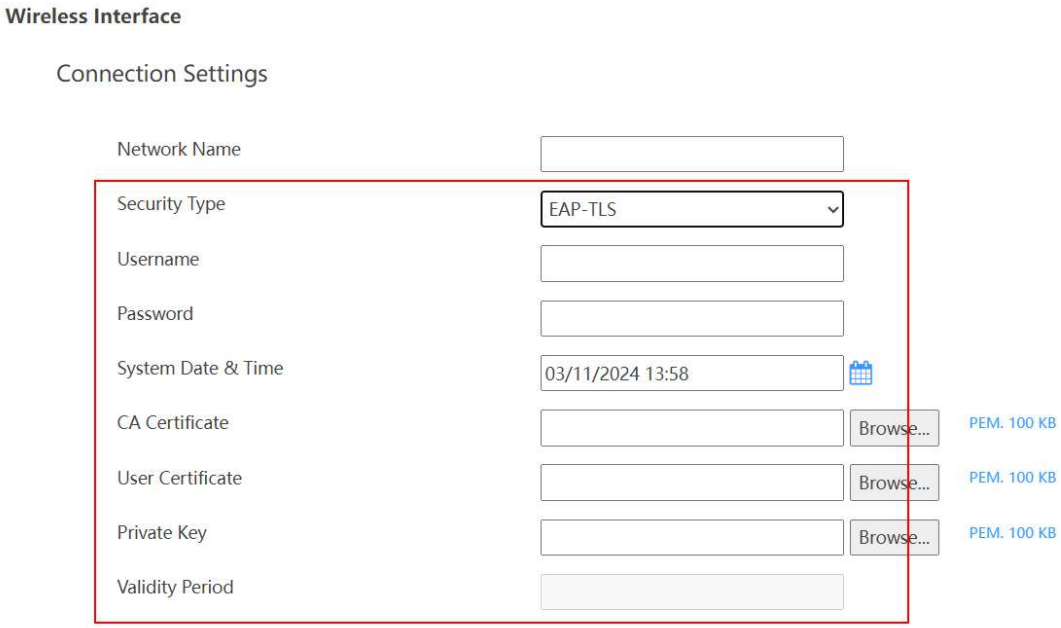
- **User Name**: This is for authentication through a RADIUS server. It is RADIUS account User Name.
  Note: The User Name supports these characters: a-z, A-Z, 0-9, and @#$-._, and the length should be 1-128 characters.
- **Password**: It is RADIUS account password.
  Note: The length of the Password should be 1-63 characters.
- **System Date & Time**: It is used to set date and time for the receiver. It is useful for the receiver that can't synchronize its time with an NTP time server. Users should set the date and time according to the validity period of the certificates.
- **CA Certificate**: It is the root certificate. Click the **Browse** button to browse and add the certificate. This setting is optional.



When **Security Type** is set to **EAP-TLS**, the following items are available:

- **User Name**: It is the User Principal Name or RADIUS Identity (if necessary).
  Note: The User Name supports these characters: a-z, A-Z, 0-9, and @#$-._, and the length should be 1-128 characters.
- **Password**: It is the password of the Private Key.
  Note: The length of the Password should be 1-63 characters.
- **System Date & Time**: It is used to set date and time for the receiver. It is useful for the receiver that can't synchronize its time with an NTP time server. Users should set the date and time according to the validity period of the certificates.
- **CA Certificate**: It is the root certificate. Click the **Browse** button to browse and add the certificate.

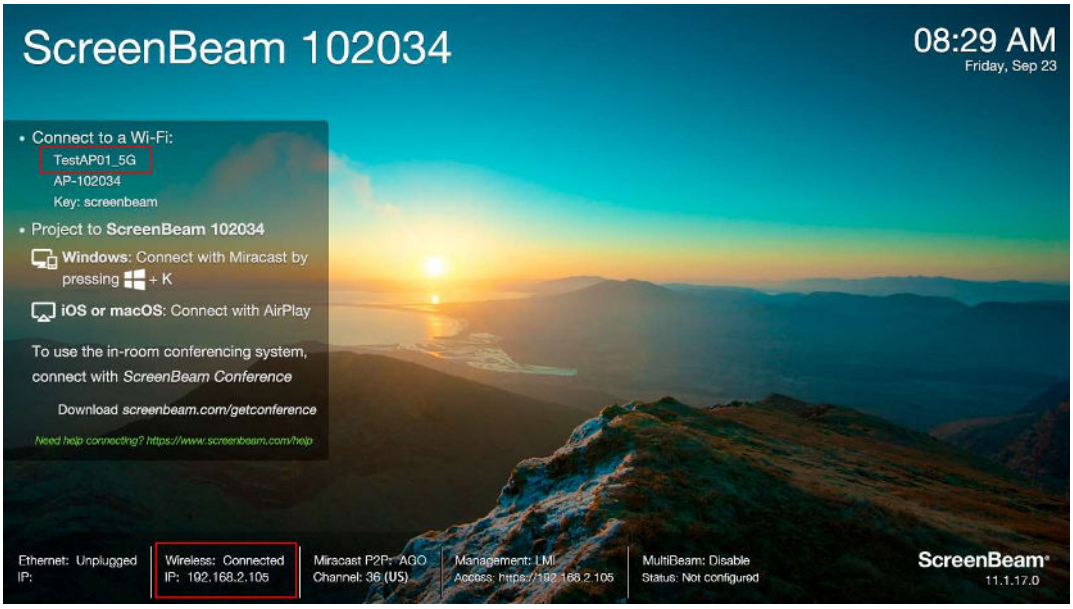
- **User Certificate**: It is the user certificate. Click the **Browse** button to browse and add the certificate.
- **Private Key**: It is the user's private key. Click the **Browse** button to browse and add the certificate.
- **Validity Period**: It displays the effective period of the certificates.



Note:

- Currently, only certificates in ".pem" format are supported, and the certificates must be generated using the "DER encoded binary X.509" method.
- The length of the certificate file name must not exceed 64 bytes, and the file size must be less than 100 KB.
- All the three certificates are required for authentication.
- Users should select the right certificate file for each type of certificate.

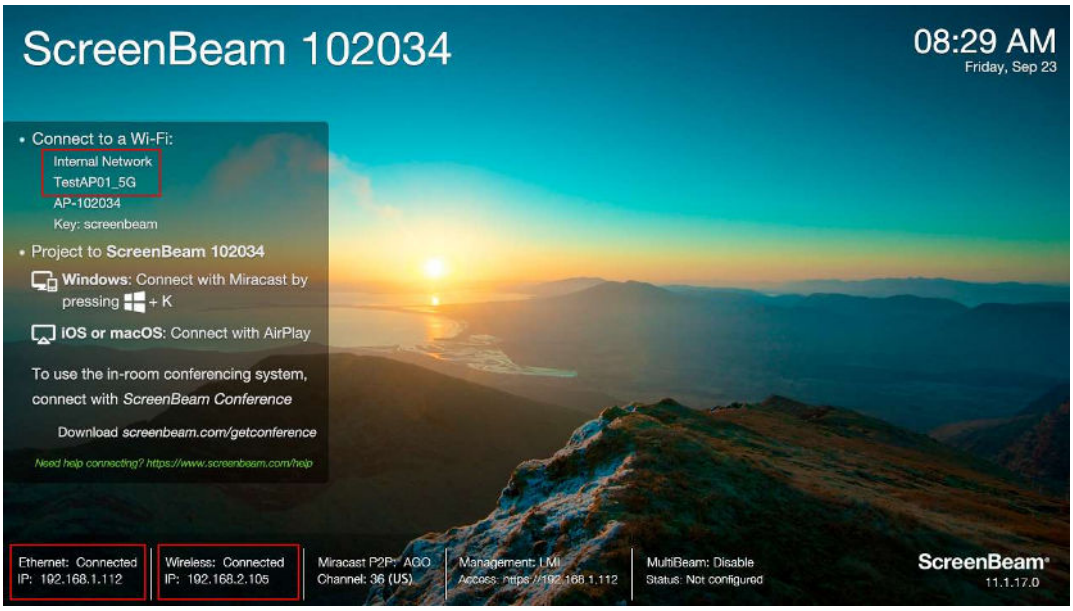
4. Click the **Apply** button at the bottom of the page to save new settings to the receiver. The WLAN adapter will connect to the wireless router (AP) in a few seconds.
   Note: The WLAN adapter may take some time to connect to your network, depending on your network environment.



2.2.3 Dual-network Connection

ScreenBeam 1100 Plus can be connected to two different networks concurrently. This dual-network feature allows the flexibility of supporting wireless display for either staff (on internal network) or visitors (on guest network).

1. Plan your network in advance. For example, one for internal use, and one for guest use.
2. Connect ScreenBeam 1100 Plus to the internal network via Ethernet, and verify that an IP address is assigned.
3. Connect ScreenBeam 1100 Plus to the guest network via wireless connection, and verify that an IP address is assigned.

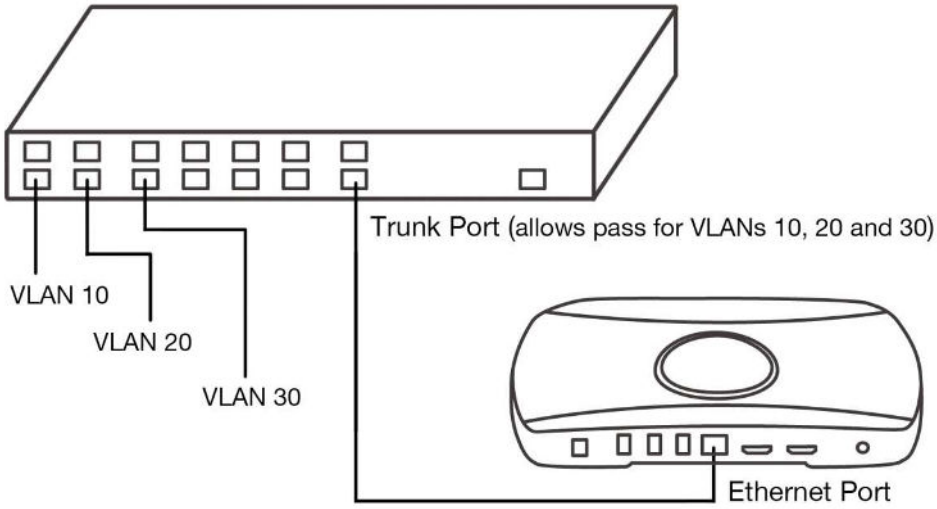


Now both the user that connects to the internal network and the user that connects to the guest network can connect to ScreenBeam for wireless display.

2.2.4 VLAN Connection

ScreenBeam 1100 Plus allows VLAN integration with up to three VLANs.

1. Plan your network in advance. For example, VLAN 10 for Department One, VLAN 20 for Department Two, and VLAN 30 for Department Three.
2. Configure the VLANs and a trunk port that allows pass for the VLANs.
3. Connect ScreenBeam 1100 Plus to the trunk port via Ethernet.



Now the devices that connect to VLAN 10, 20, and 30 can connect to ScreenBeam for wireless display.

Part III Connecting Client Device

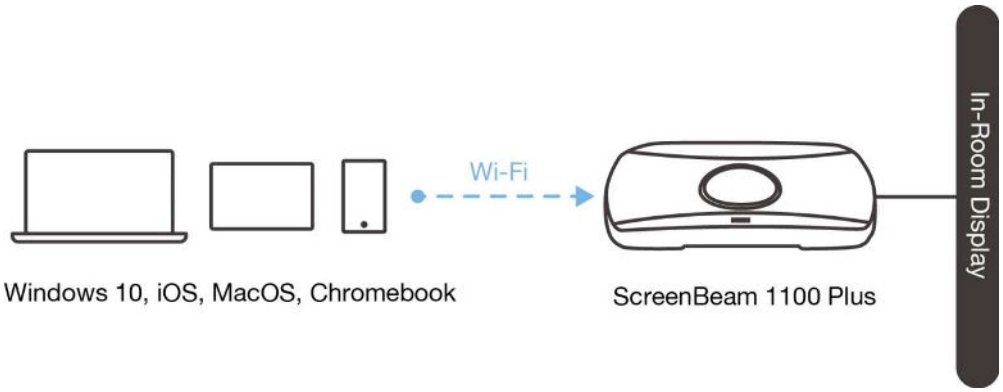
This section provides the instructions on how to connect to ScreenBeam using the native screen mirroring from the most common operating systems.
Refer to www.screenbeam.com/setup for details and instructions for common operating systems.
Note: The web page will display instructions based on the client-device OS. Use the links at the bottom of the web page to select OS-specific instructions.

3.1 Overview of Wireless Display Network Modes

The ScreenBeam 1100 Plus allows presenters with Windows 10/11, macOS, iOS, Android, or Chromebook device to wirelessly display without requiring any apps. ScreenBeam 1100 Plus offers a variety of secured network modes to support connection from internal users on different subnets and external guest users. ScreenBeam 1100 Plus supports local Wi-Fi, Wi-Fi Miracast, and wireless display over existing infrastructure network. Two or more modes can operate concurrently to support various scenarios where both internal and guest users could simply connect and project.

3.1.1 Local Wi-Fi

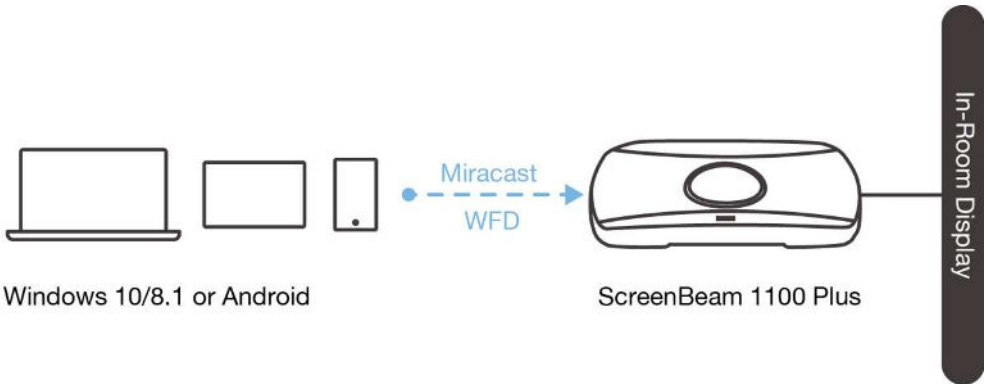
The ScreenBeam Wi-Fi mode provides the simplest form of network for client devices to connect and project. In this mode, user needs to connect the client device Wi-Fi to the ScreenBeam Wi-Fi and then select the receiver to mirror. This mode is ideal for guest client devices that need wireless display and/or Internet access. Internet is available if the ScreenBeam receiver is connected to the existing network, wired or wireless, and the receiver's local Wi-Fi is set to NAT or Bridge. Mobile device with cellular service can access the Internet and wireless display if bridge mode is disabled.



Note: ScreenBeam Wi-Fi is fully secured and manageable via ScreenBeam CMS with options to tune the wireless transmission power, channel and encryption type.

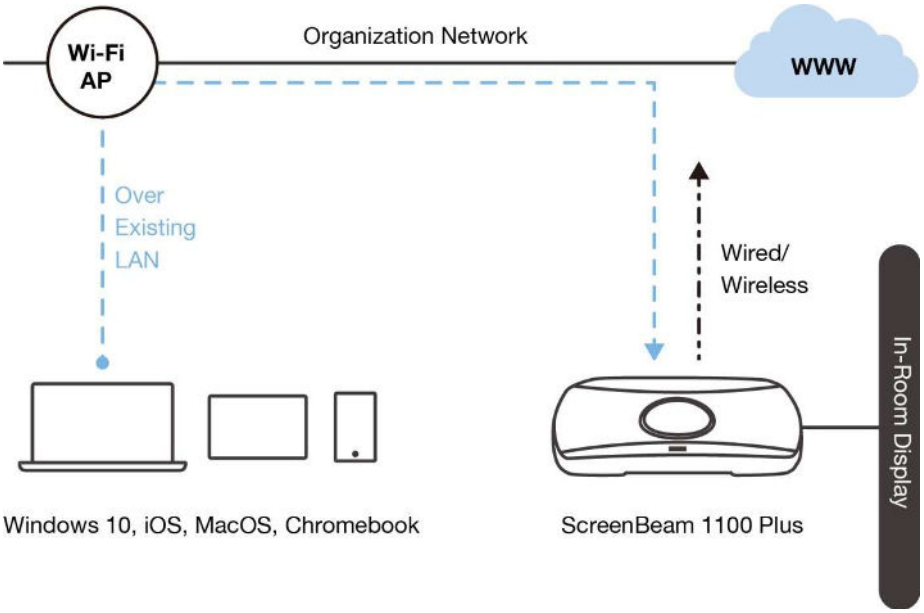
3.1.2 Wi-Fi Miracast

The Wi-Fi Miracast mode allows compatible Wi-Fi Miracast devices to connect directly to ScreenBeam, even when connected to an infrastructure wireless network. Miracast is commonly available on Windows 10/11 and Android 8 (and later) devices since 2020. Users can enjoy wireless display and Internet access if the client device is already connected to Wi-Fi.



3.1.3 Wireless Display over existing LAN

ScreenBeam 1100 Plus can be connected to the existing wireless and wired network and supports wireless display for client devices on either network. This is a common setup to support client devices that need access to network resources. Additional port and network configurations may be required for this mode to work seamlessly.

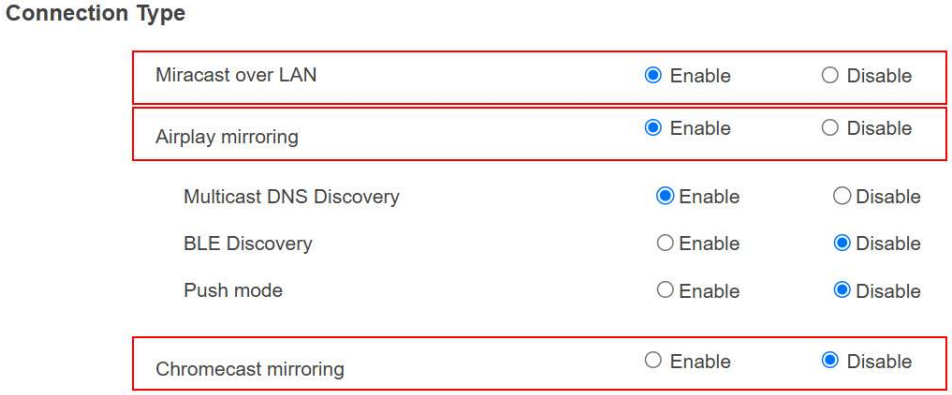


ScreenBeam 1100 Plus can be connected to two different networks concurrently. This dual-network feature allows the flexibility of supporting wireless display for either staff (on internal network) or visitors (on guest network). Refer to the deployment guide for more details.

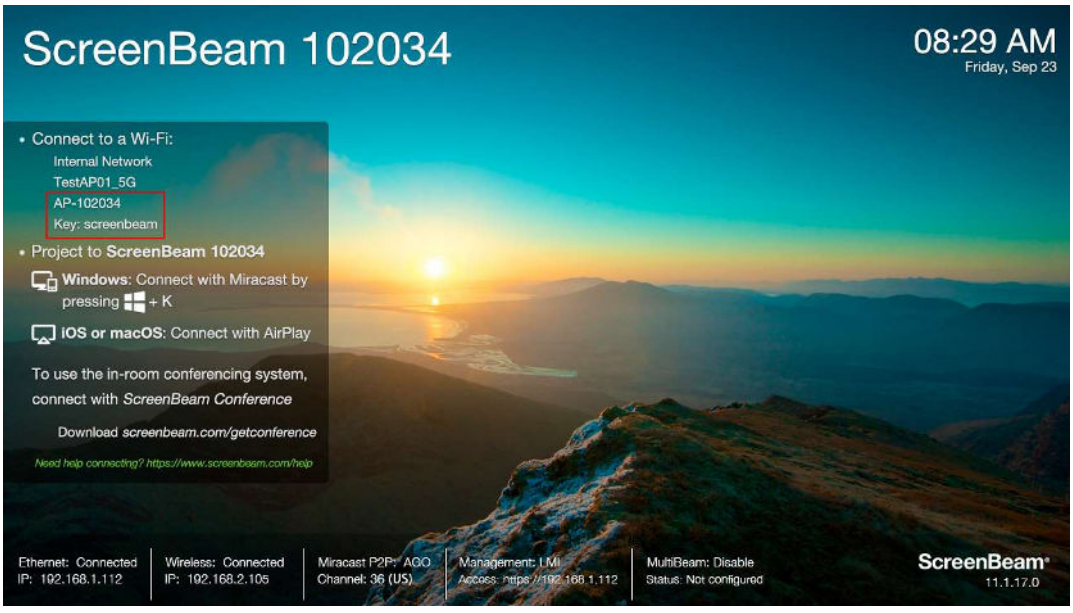
3.2 Connect using Local Wi-Fi

This section explains how to connect a client device to ScreenBeam 1100 Plus using the local AP on ScreenBeam 1100 Plus.

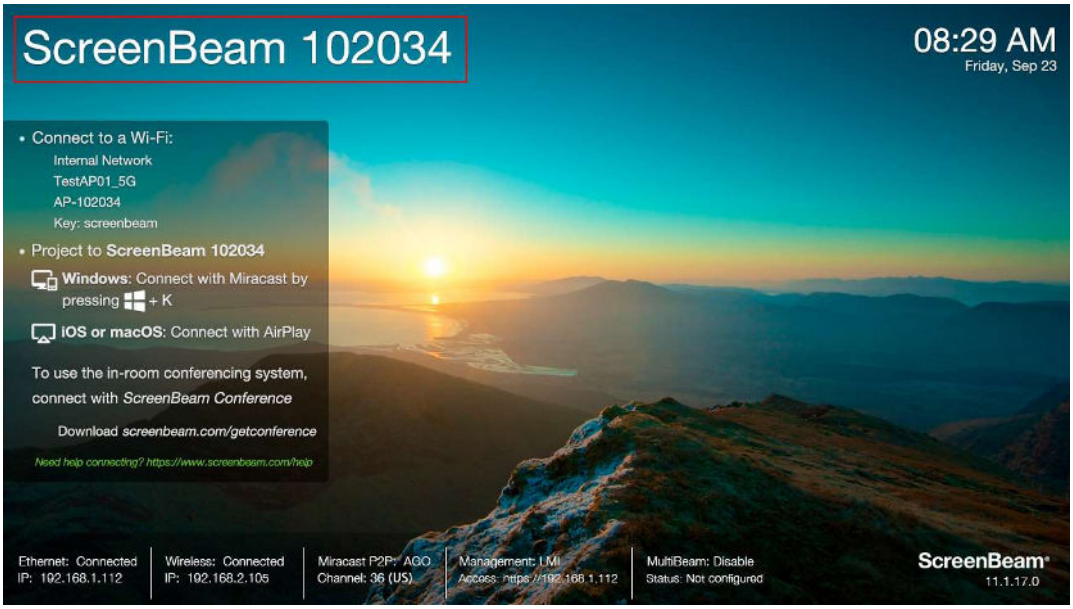
1. Make sure that the wireless display over LAN features are enabled for Windows 10/11, macOS/iOS AirPlay and/or Google Cast screen mirroring. Refer to section **5.3.2 Wireless Display over LAN** for details.
   Note: You can also configure your receiver with ScreenBeam CMS.



2. Connect the client device's Wi-Fi to the wireless network (AP SSID) as shown on the TV display. And enter the password for the wireless network. By default, the password is **screenbeam** (case-sensitive).
   Note: For Windows 10/11 or Android devices with Miracast, you can skip to Section **3.3 Connect using Wi-Fi Miracast**.



3. Select the ScreenBeam receiver name as shown on the TV display.



- For Windows 10/11
  Select **Connect** or **Cast** from the Action Center by swiping from right or simultaneously pressing the Windows key and K.

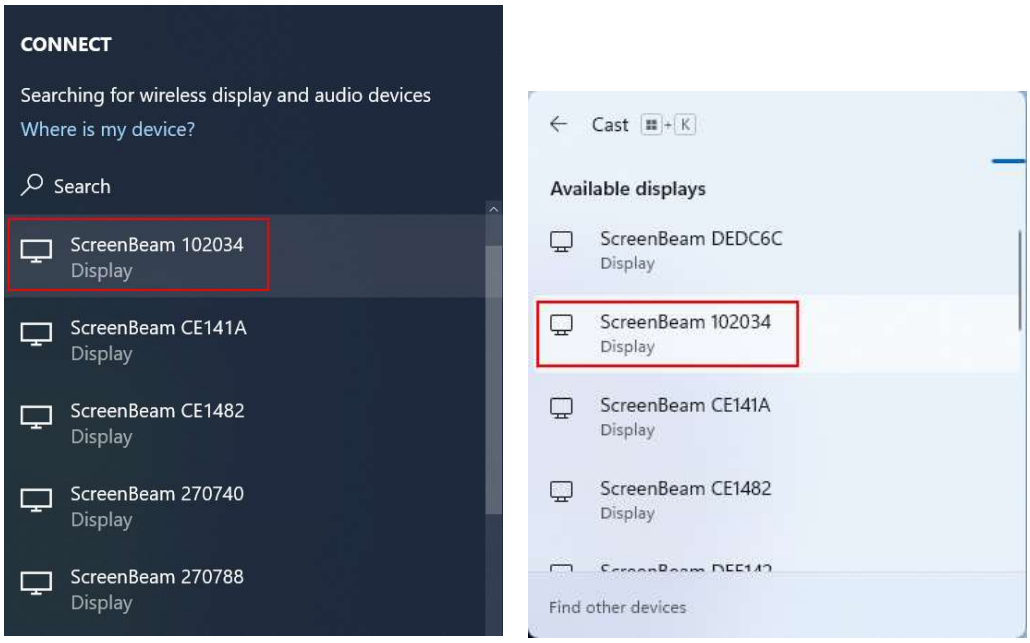


Figure: Selecting ScreenBeam on a Windows 10/11 device

- For iOS or macOS
  Connect with Screen Mirroring from the menu bar or control center.

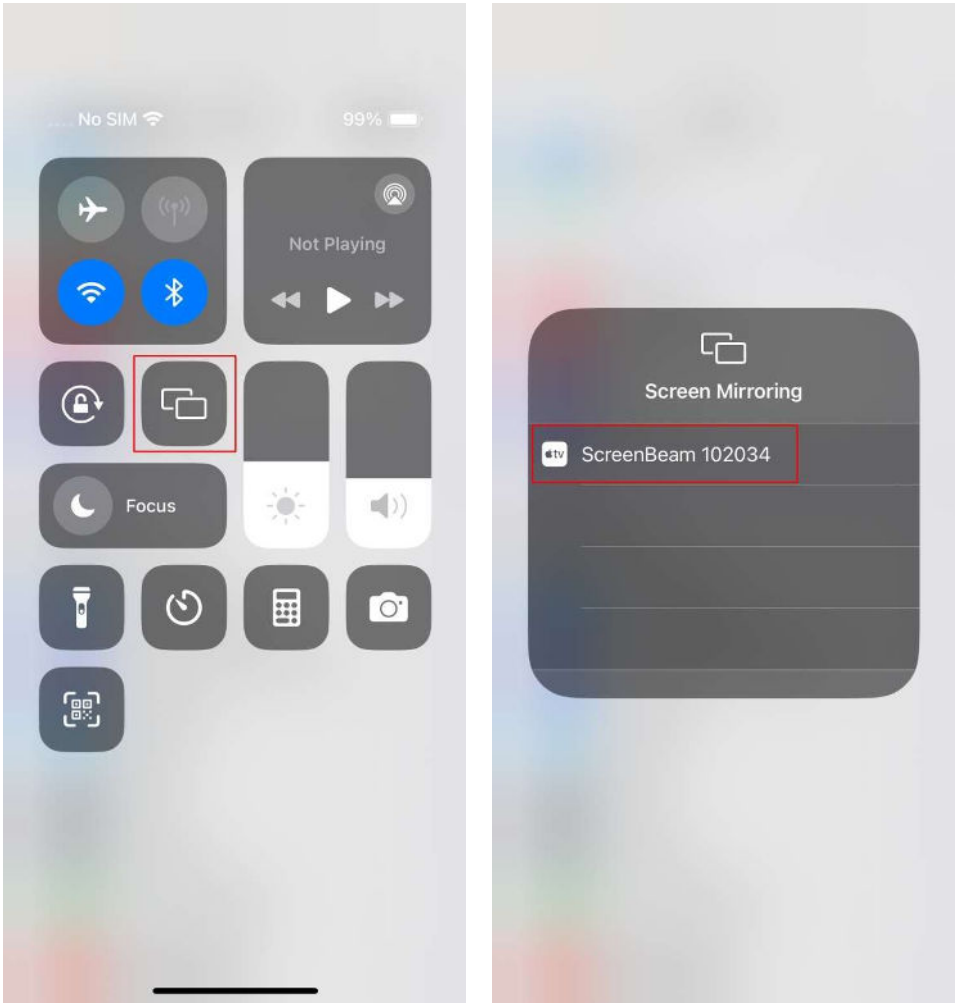


Figure: Selecting ScreenBeam on an iOS device

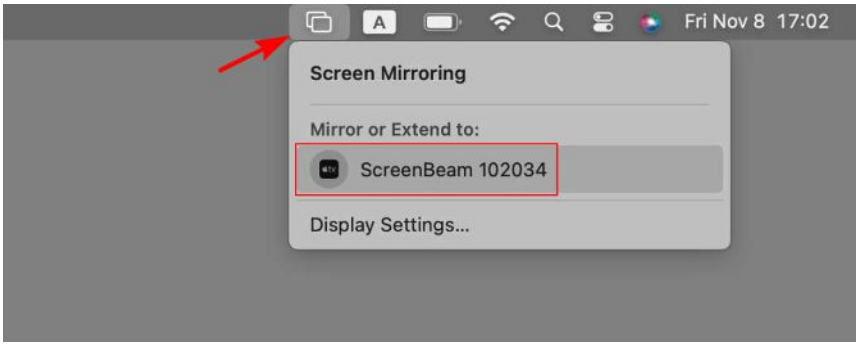


Figure: Selecting ScreenBeam on a macOS device

- For Chrome OS or Chrome browser
  Connect with **Cast** from the status area on Chrome OS or Chrome browser menu.

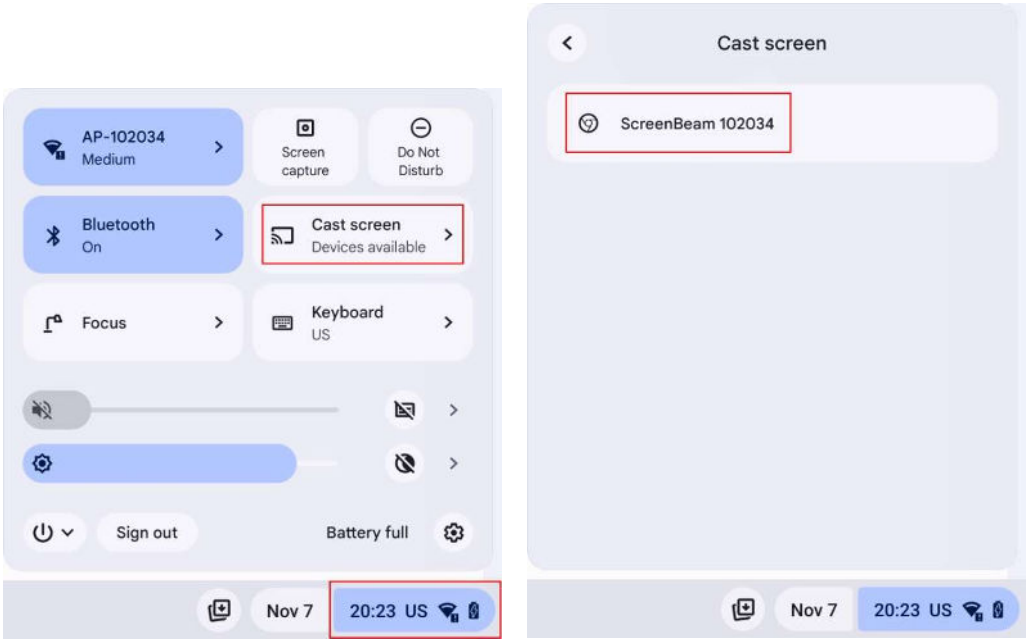


Figure: Selecting ScreenBeam on Chrome OS

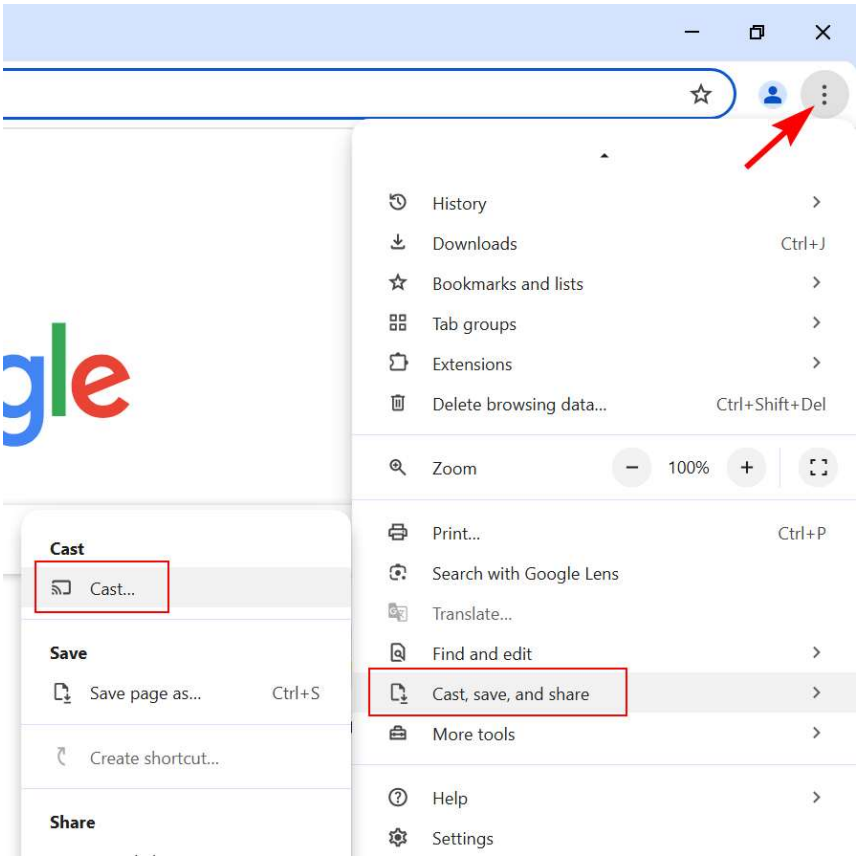


Figure: Selecting ScreenBeam on Chrome Browser

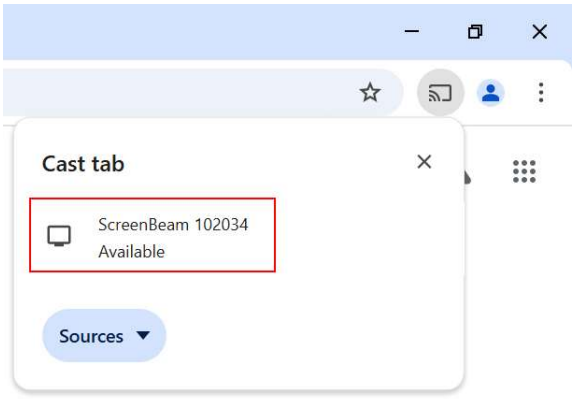
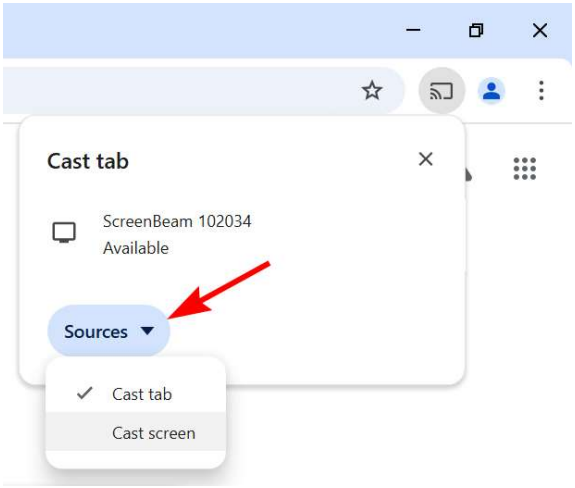
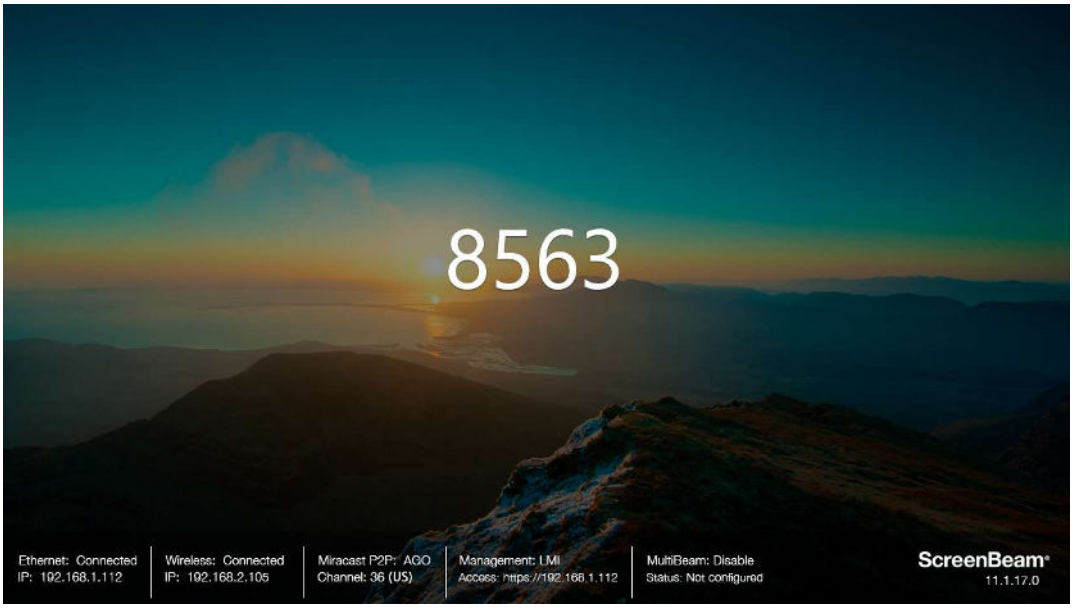


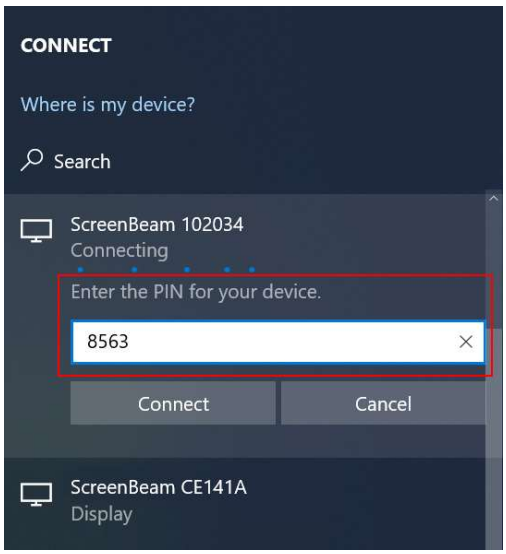
Figure: Selecting ScreenBeam on Chrome Browser

Note: On Chrome browser, you can define a source to cast before connecting to ScreenBeam.

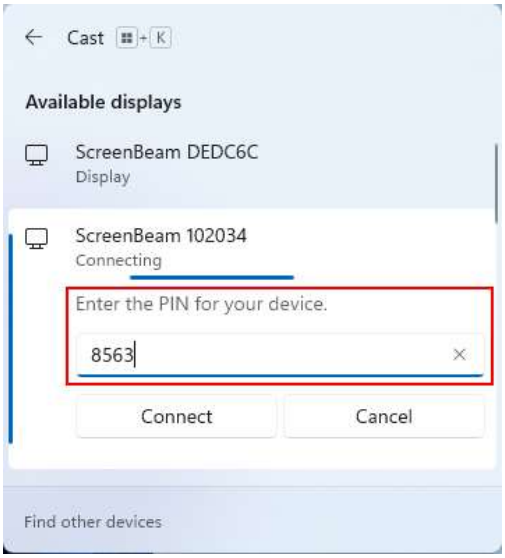


4. Enter in the PIN if required. If the PIN code is not displayed, try the hidden PIN 1234 (default).
   Note: You should consult your network administrator if no PIN is displayed on the connected display device.

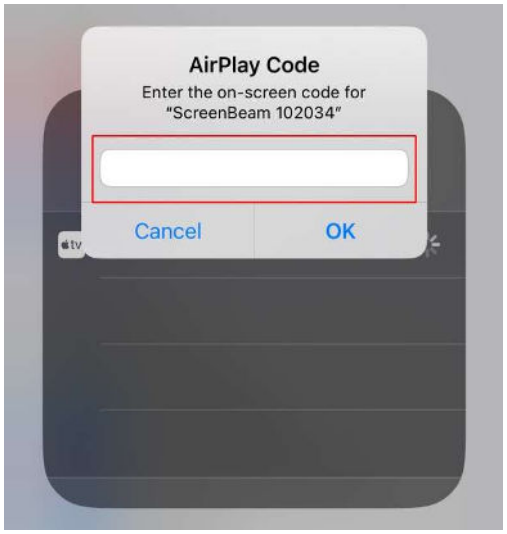




Windows 10



Windows 11

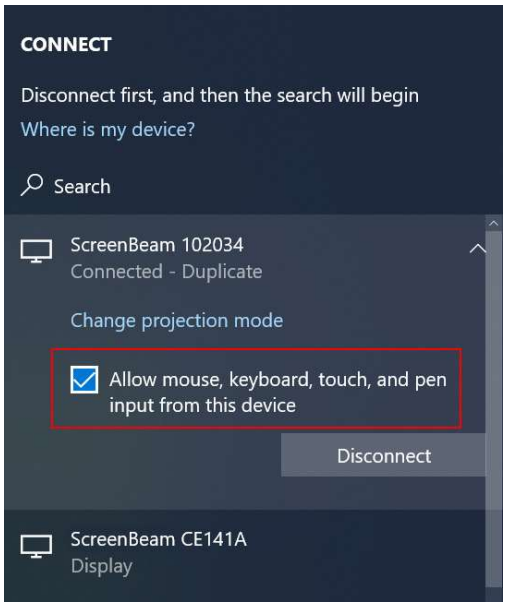


iOS

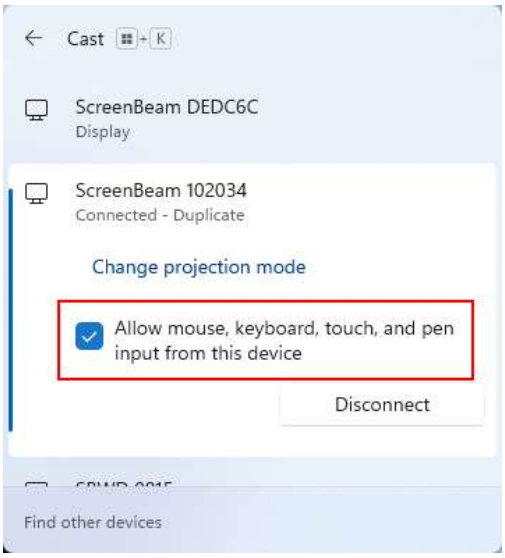
macOS

5. Select duplicate or extended screen mode if prompted.

6. If the display has touch functionality, Windows 10/11 devices can take advantage of the touch and inking feature by selecting **Allow mouse, keyboard, touch, and pen input from this device**. Refer to section **4.4 USB over Network Control** for more details.



Windows 10



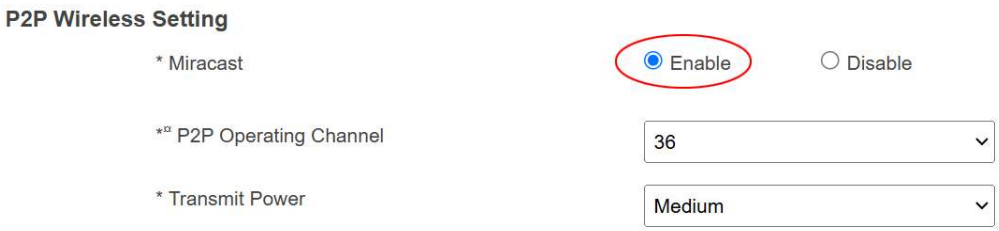
Windows 11

Note: To disconnect, follow instructions in step 3 to return to the screen mirroring menu and select mirroring off.

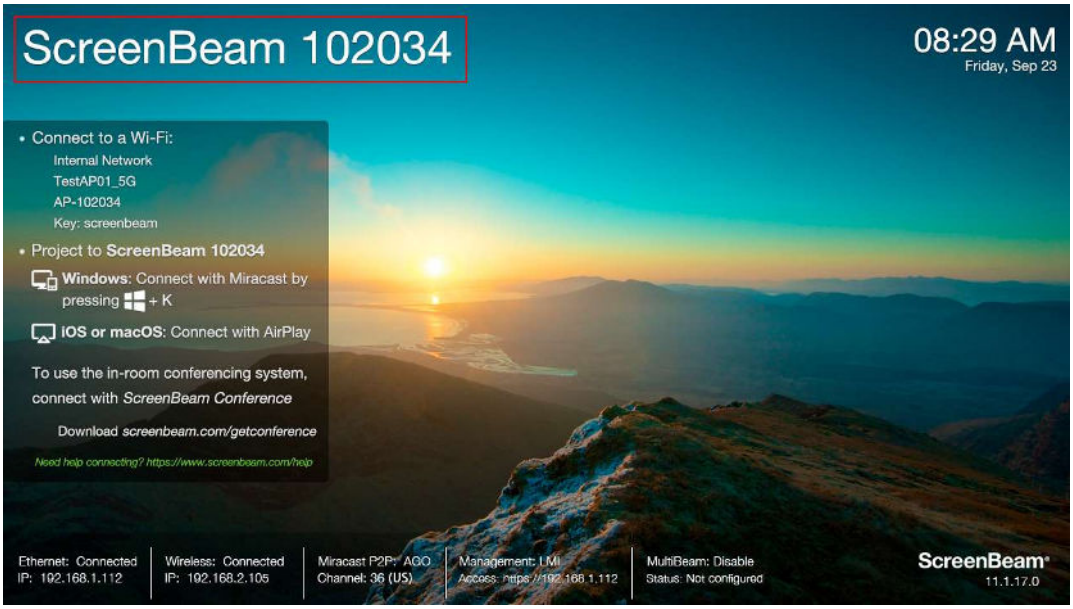
3.3 Connect using Wi-Fi Miracast

This section explains how to connect a client device to ScreenBeam 1100 Plus using Wi-Fi Miracast.

1. Log into receiver's LMI and make sure that the **Miracast** feature is enabled. Refer to section **5.3.3.1 Setting up Miracast Connection** for details.
   Note: You can also configure your receiver with ScreenBeam CMS.



2. Select the ScreenBeam receiver name as shown on the TV display.



- For Windows 10/11
  Select **Connect** or **Cast** from the Action Center by swiping from right or simultaneously pressing the Windows key and K.

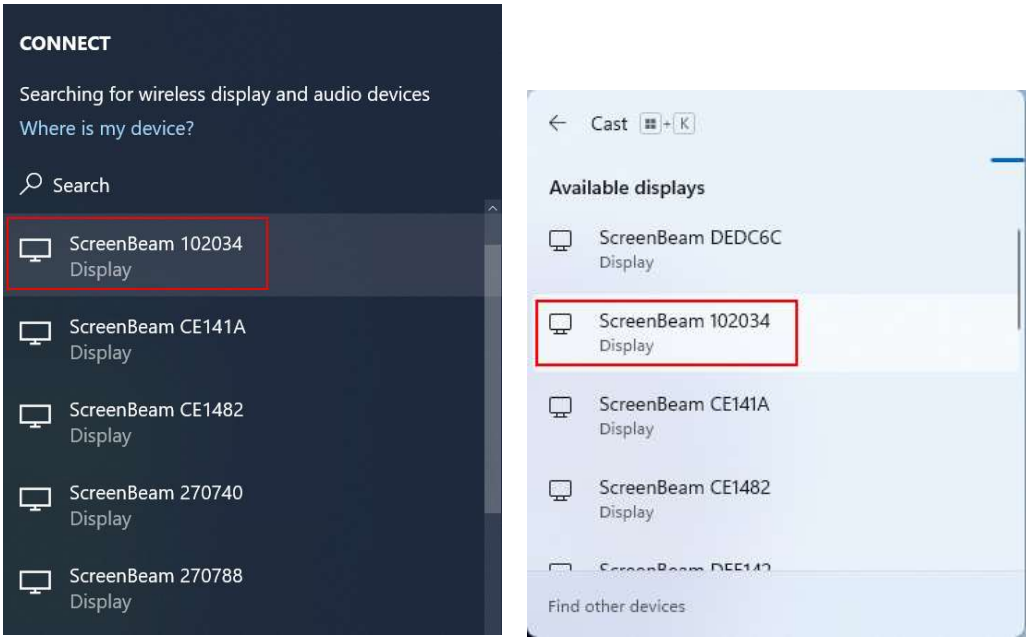
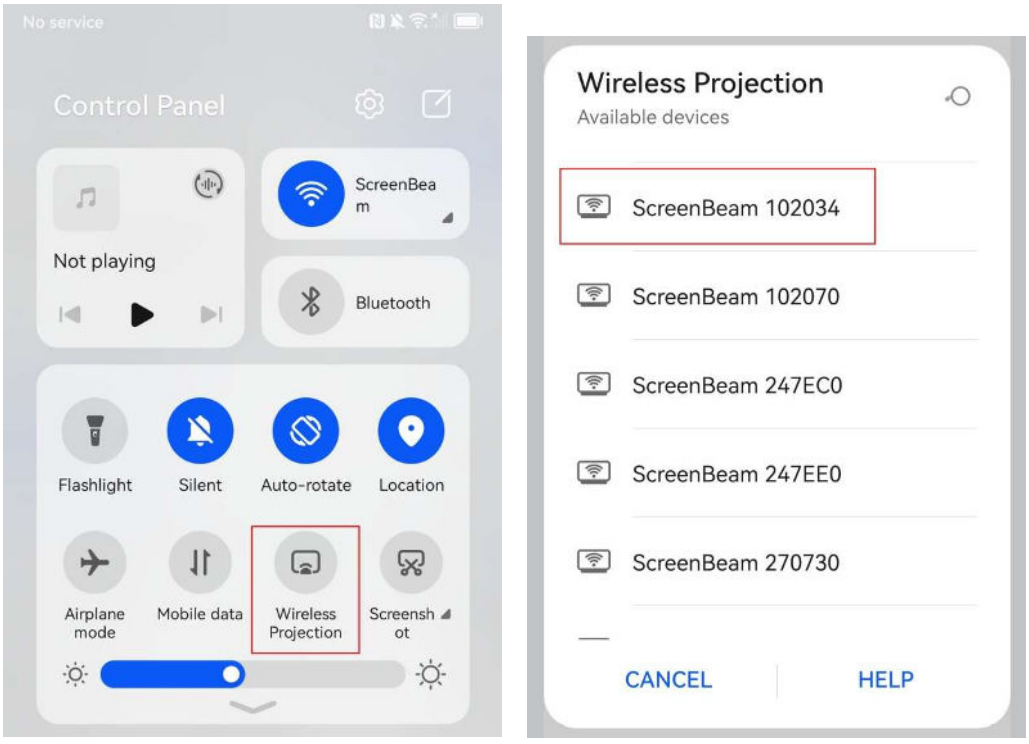


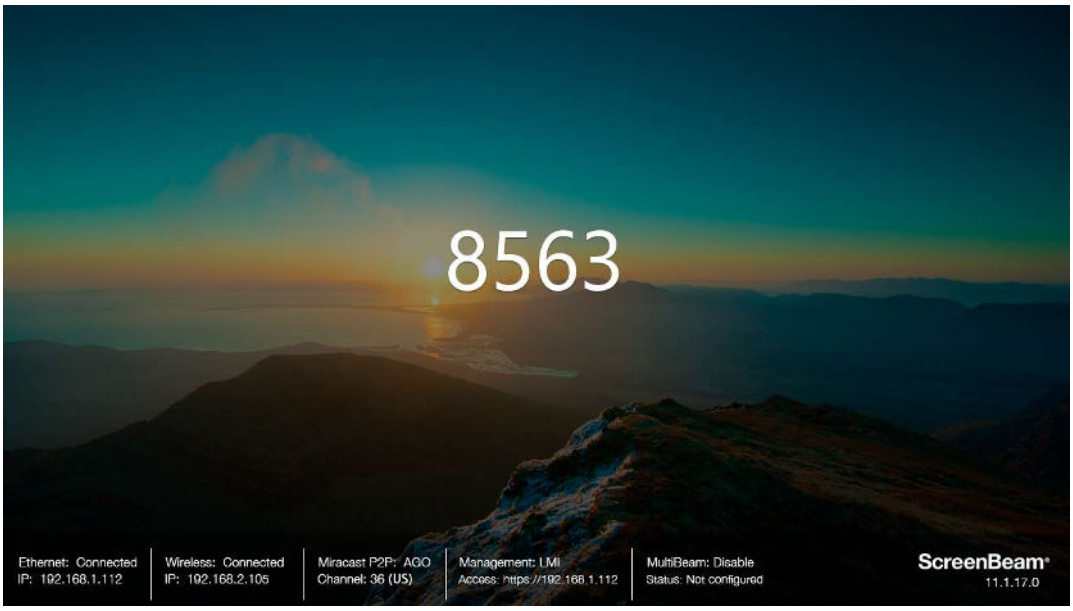
Figure: Selecting ScreenBeam on a Windows 10/11 device

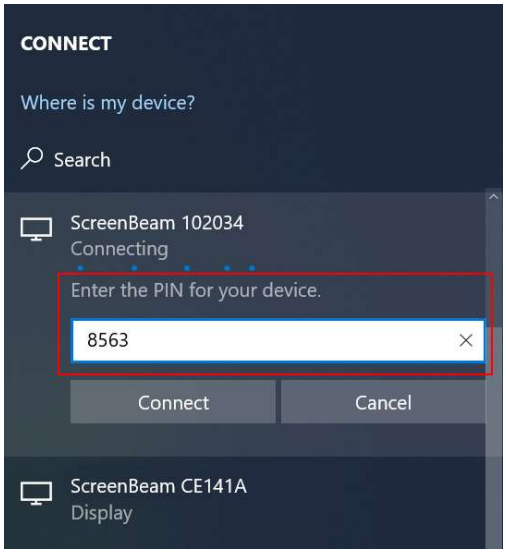
- For Android
  Select the Screen Mirroring option from the quick access menu and follow the connection instructions.



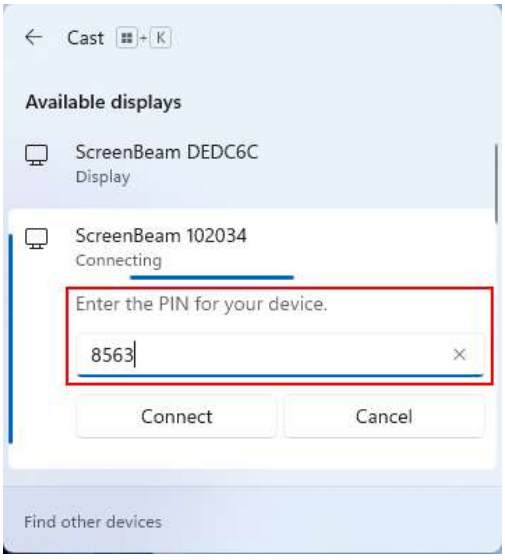
Note: Different Android device manufacturers may have different names for their wireless display apps.

3. Enter in the PIN if required. If the PIN code is not displayed, try the hidden PIN 1234 (default).
   Note: You should consult your network administrator if no PIN is displayed on the connected display device.

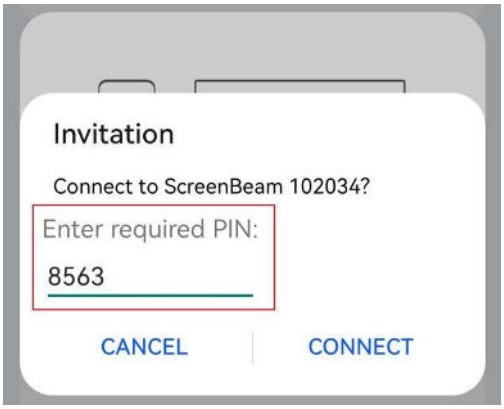




Windows 10



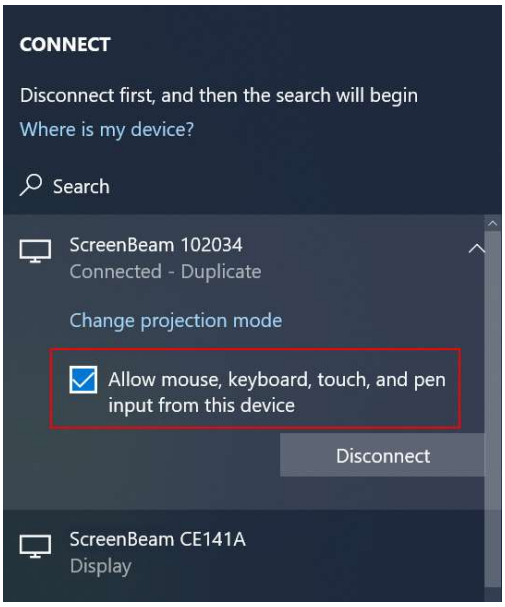
Windows 11



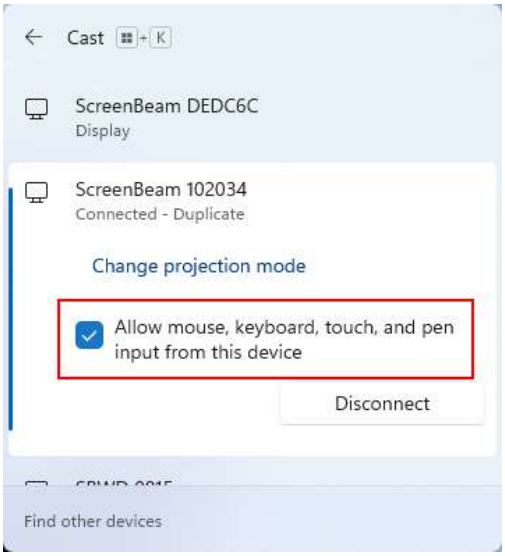
Android

4. Select duplicate or extended screen mode if prompted.

5. If the display has touch functionality, Windows 10/11 devices can take advantage of the touch and inking feature by selecting **Allow mouse….** (Refer to section **4.4 USB over Network Control** for more details.)



Windows 10



Windows 11

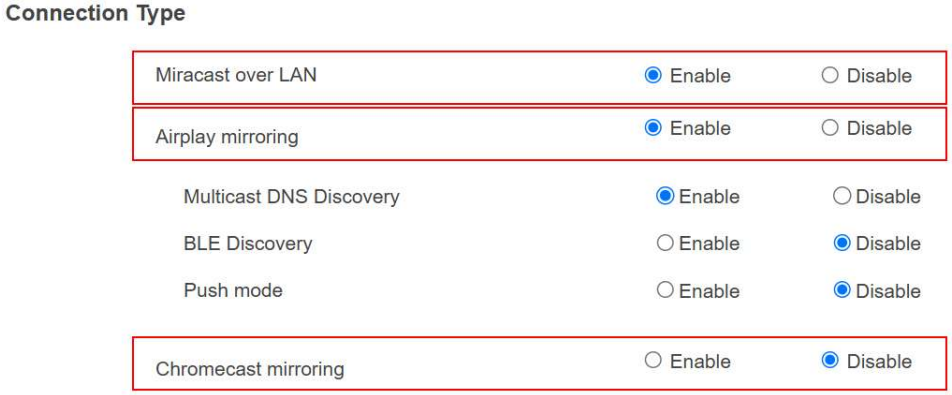
Note:

- To disconnect, follow instructions in step 2 to return to the screen mirroring menu and select mirroring off.
- Some Android devices do not support PIN and will fail to connect. Refer to section **5.3.4.1 Setting up PIN Pairing Method** below for instructions on how to configure ScreenBeam and disable PIN enforcement.

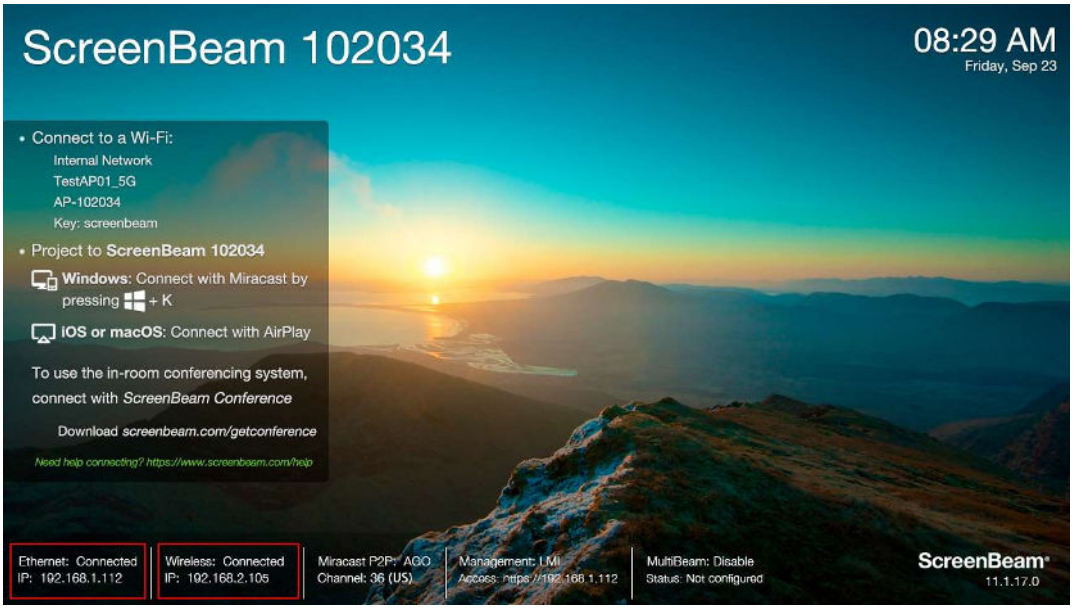
3.4 Connect using Existing Wireless Network or LAN

This section explains how to connect a client device to ScreenBeam 1100 Plus using existing wireless network or LAN.

1. Make sure that the wireless display over LAN features are enabled for Windows 10/11, macOS/iOS AirPlay and/or Google Cast screen mirroring. Refer to section **5.3.2 Wireless Display over LAN** for details.
   Note: You can also configure your receiver with CMS.

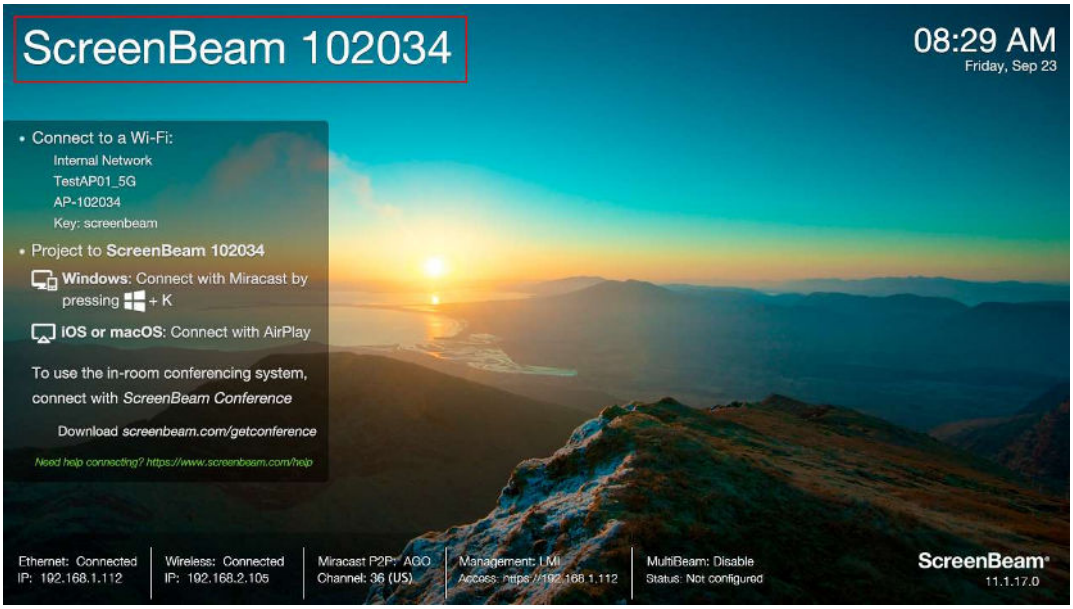


2. Connect the ScreenBeam receiver to a known network where your client device can communicate over Wi-Fi. Refer to Section **2.2 Connecting the Receiver to a Network** for details.
3. Verify the receiver obtains an IP address (shown on the receiver's idle screen).



4. Connect the client device to the same network as the ScreenBeam receiver.

5. Select the ScreenBeam receiver name as shown on the TV display.



- For Windows 10/11
  Select **Connect** or **Cast** from the Action Center by swiping from right or simultaneously pressing the Windows key and K.

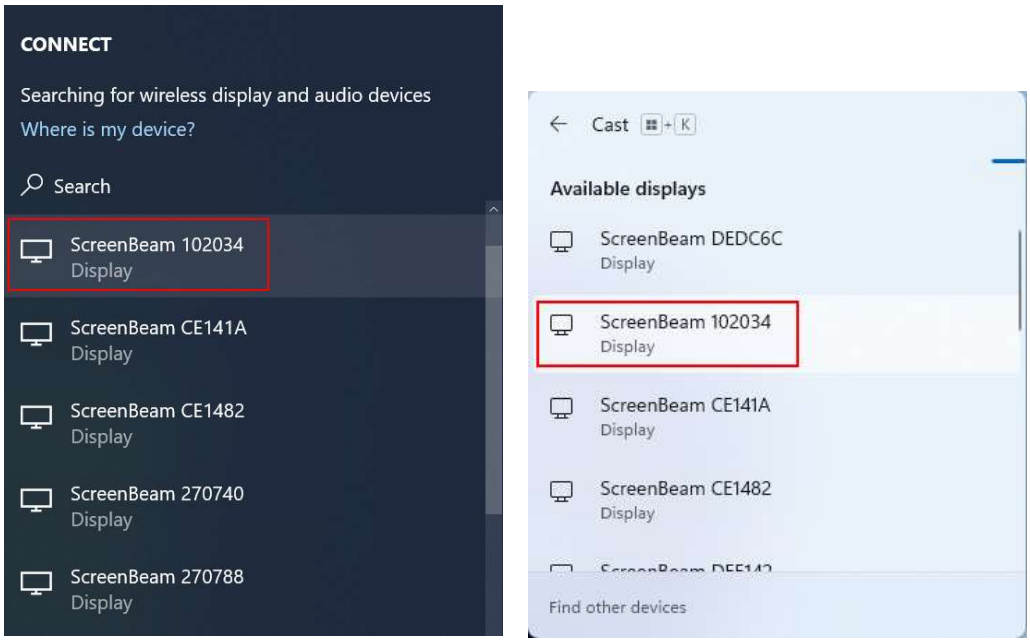


Figure: Selecting ScreenBeam on a Windows 10/11 device

- For iOS or macOS
  Connect with Screen Mirroring from the menu bar or control center.

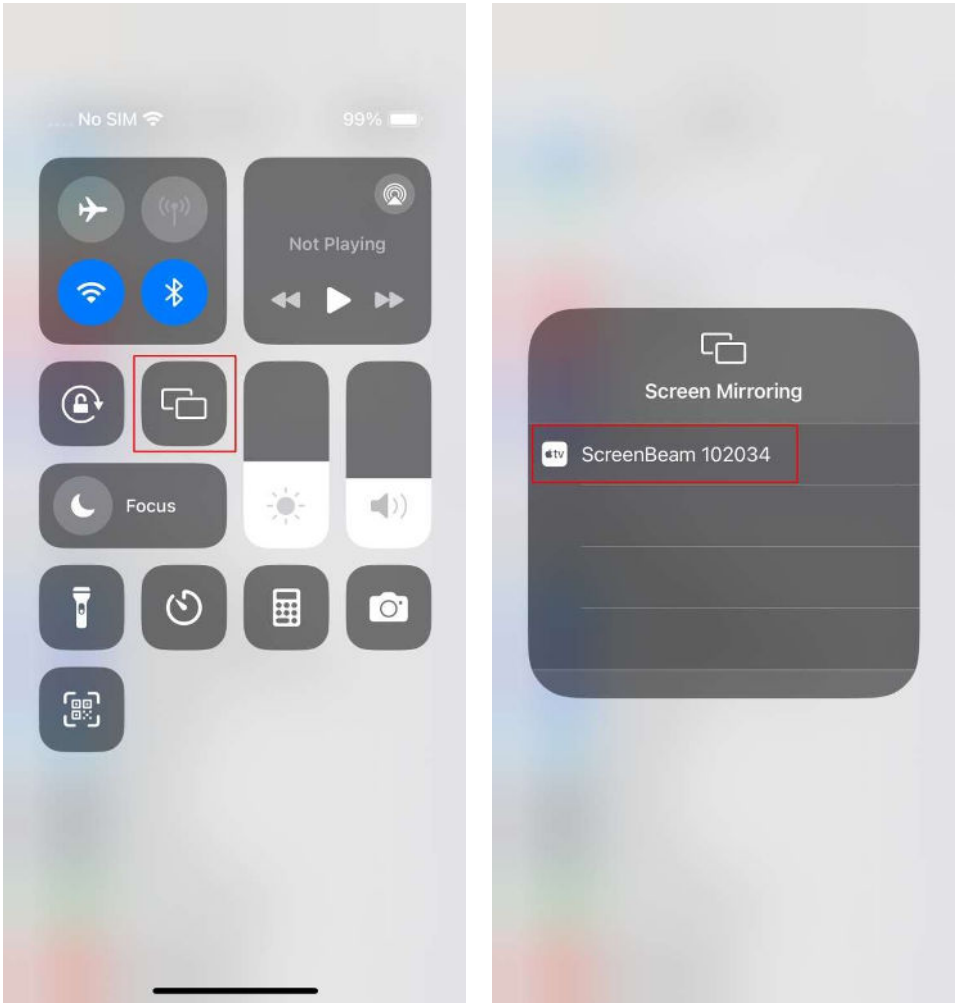


Figure: Selecting ScreenBeam on an iOS device

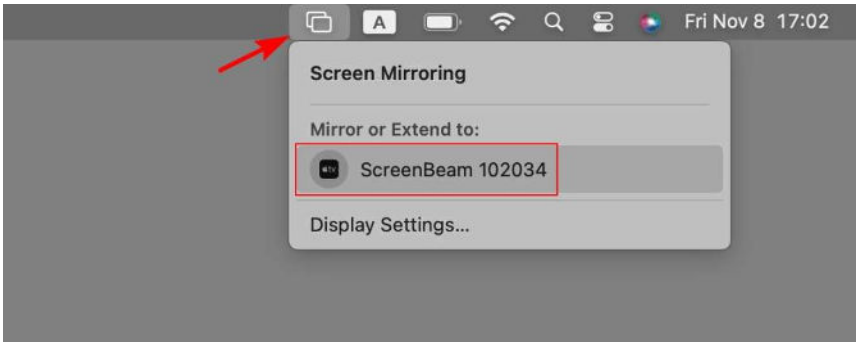


Figure: Selecting ScreenBeam on a macOS device

- For Chrome OS or Chrome browser
  Connect with **Cast screen** from the status area on the Chrome OS or **Cast** from the Chrome browser menu.

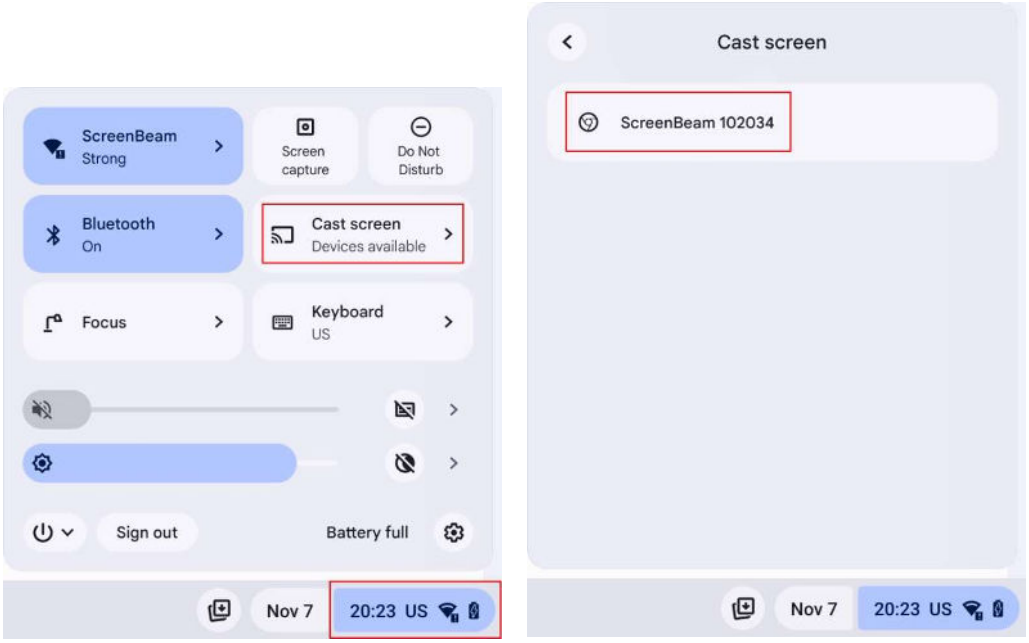


Figure: Selecting ScreenBeam on Chrome OS

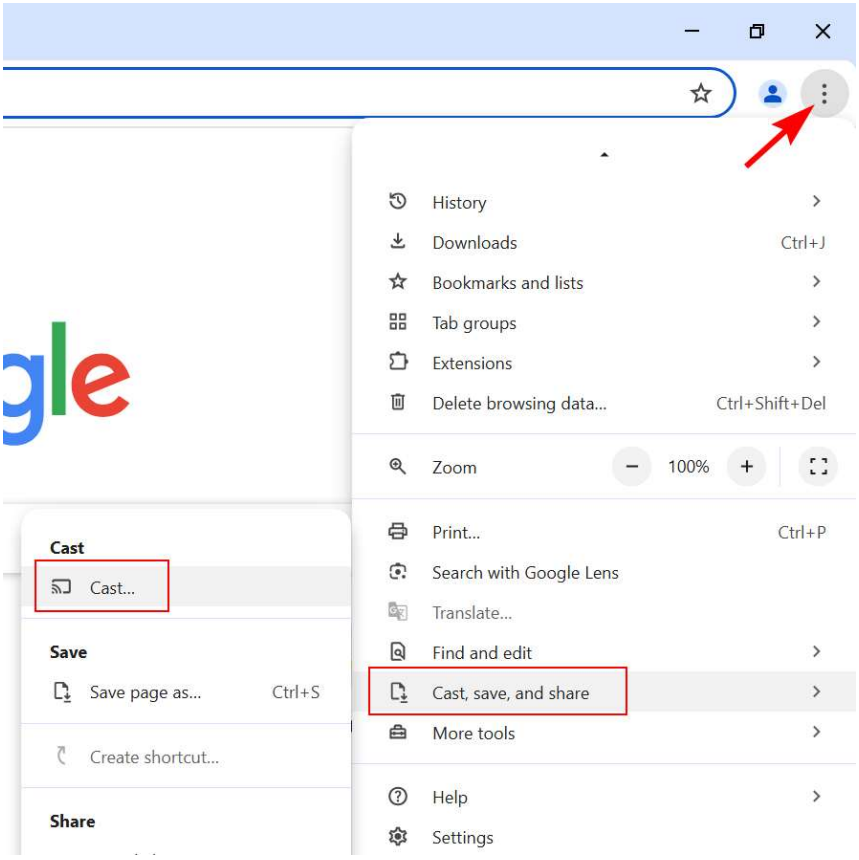


Figure: Selecting ScreenBeam on Chrome Browser

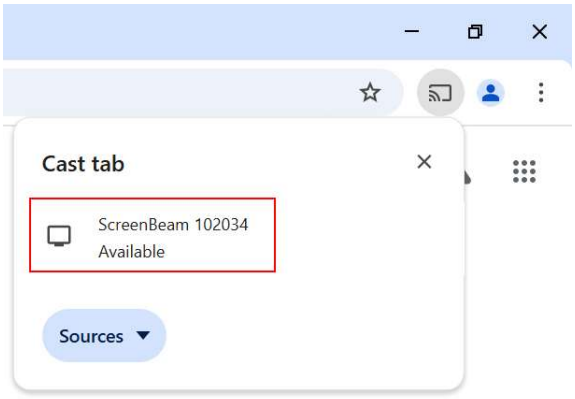
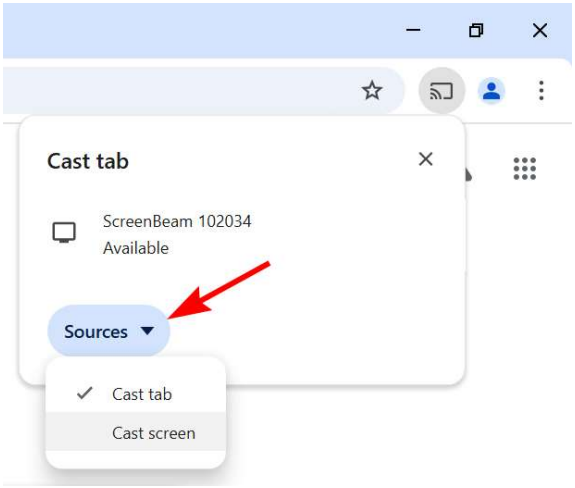
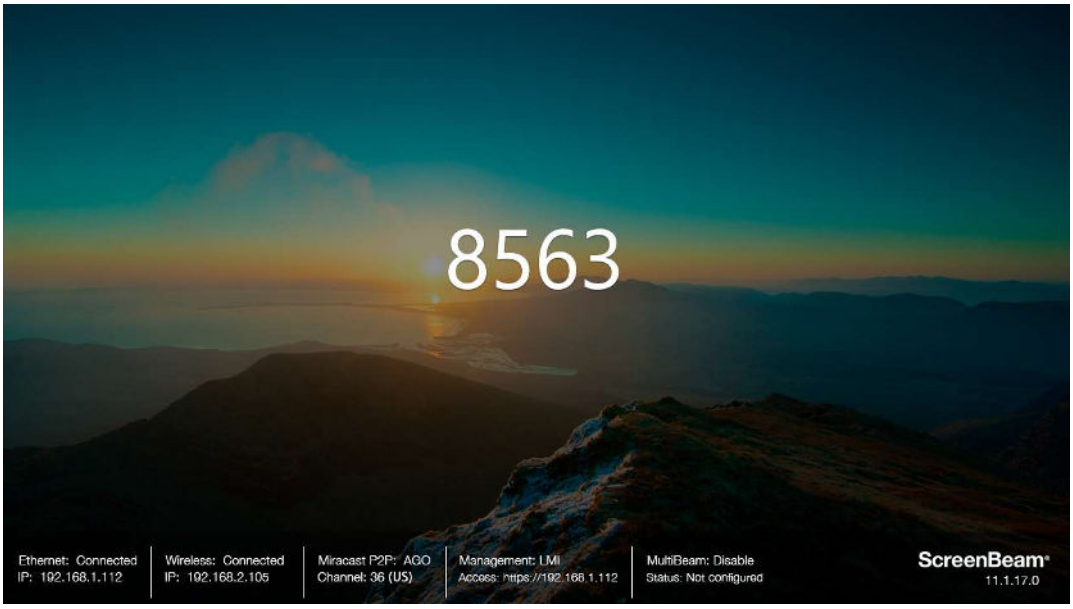


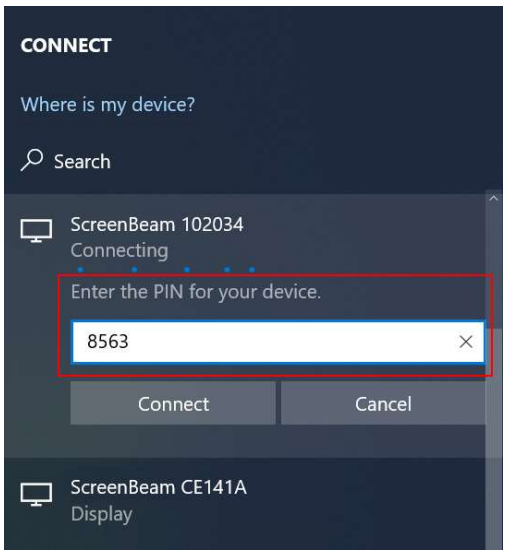
Figure: Selecting ScreenBeam on Chrome Browser

Note: On Chrome browser, you can define a source to cast before connecting to ScreenBeam.

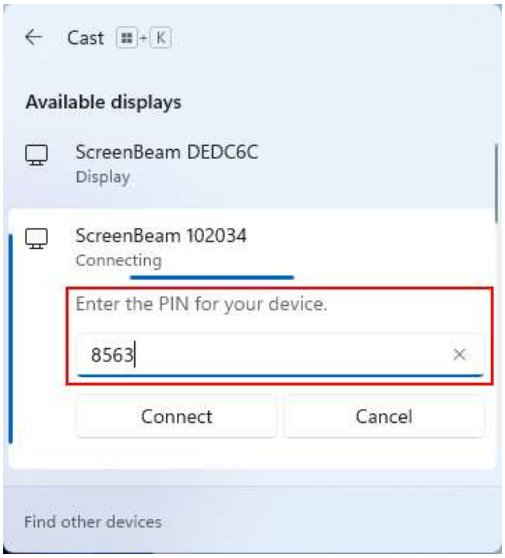


6. Enter in the PIN if required. If the PIN code is not displayed, try the hidden PIN 1234 (default).
   Note: You should consult your network administrator if no PIN is displayed on the connected display device.

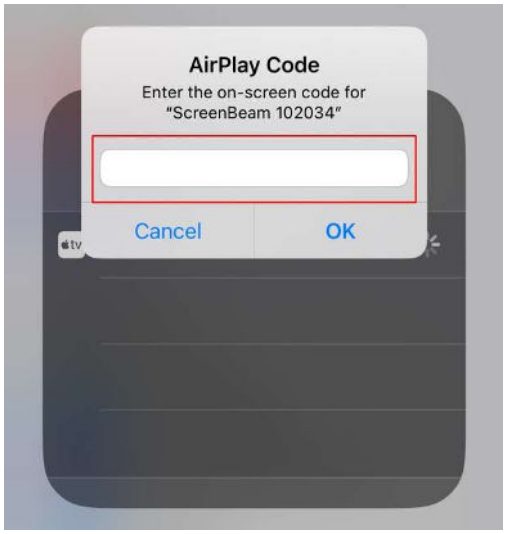




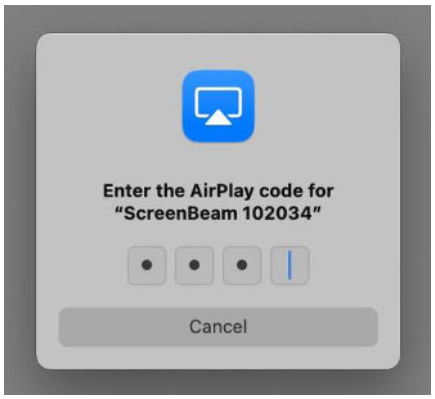
Windows 10



Windows 11



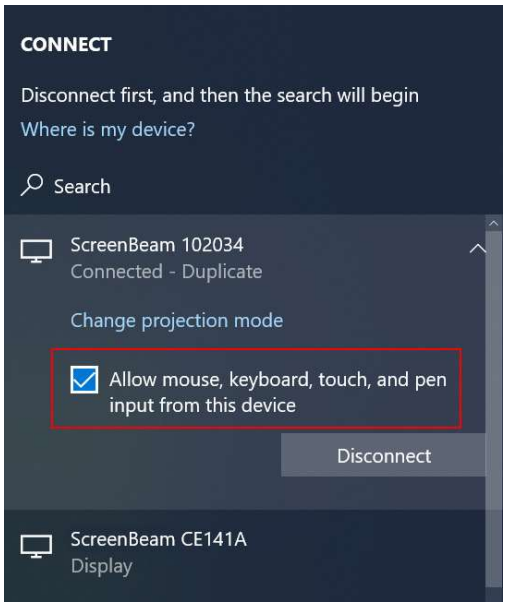
iOS

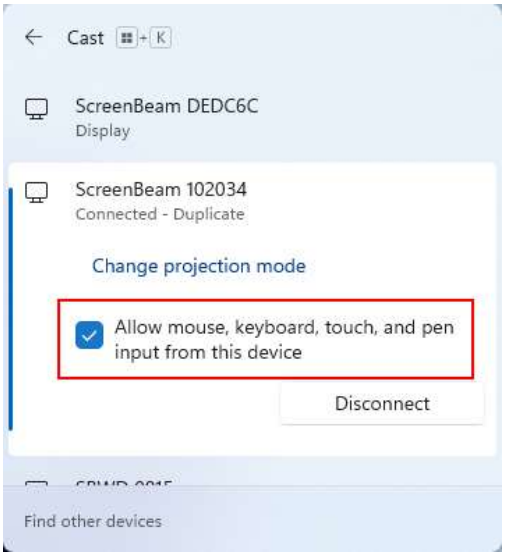


macOS

7. Select duplicate or extended screen mode if prompted.

8. If the display has touch functionality, Windows 10/11 devices can take advantage of the touch and inking feature by selecting **Allow mouse, keyboard, touch, and pen input from this device**. Refer to section **4.4 USB over Network Control** for more details.



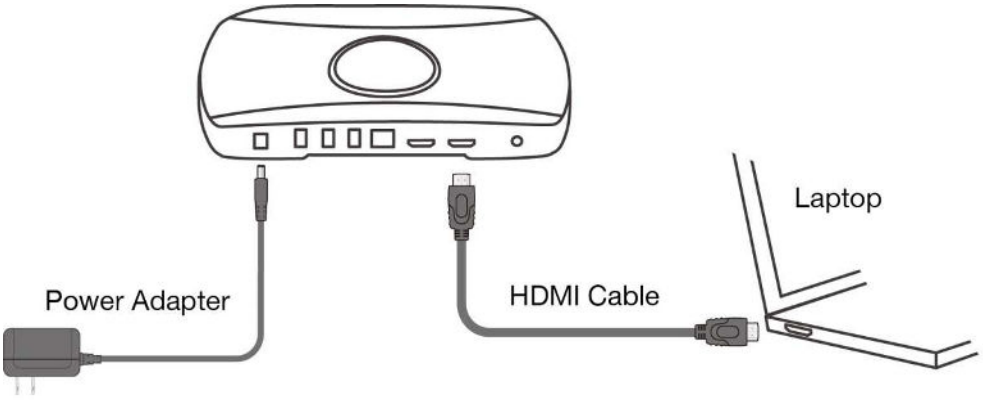


Note: To disconnect, follow instructions in step 5 to return to the screen mirroring menu and select mirroring off.

3.5 Displaying with a connected HDMI® cable

While most users will be able to connect to ScreenBeam wirelessly using their native application, there may be the occasional user that will prefer to use a wired HDMI® connection and ScreenBeam can even support those users.

To connect with an HDMI® cable, connect the HDMI® cable to the receiver's HDMI IN port, and then plug the HDMI® cable into the user's HDMI® output port. ScreenBeam will automatically display the users screen. Refer to Section **4.3 HDMI® Output Behaviors** for more information on how the hardwired connection works when a wireless session is already active.



Part IV Display and Control Options

This chapter describes Orientation modes, projection modes and control options that are supported by the receiver.

4.1 Display Orientation

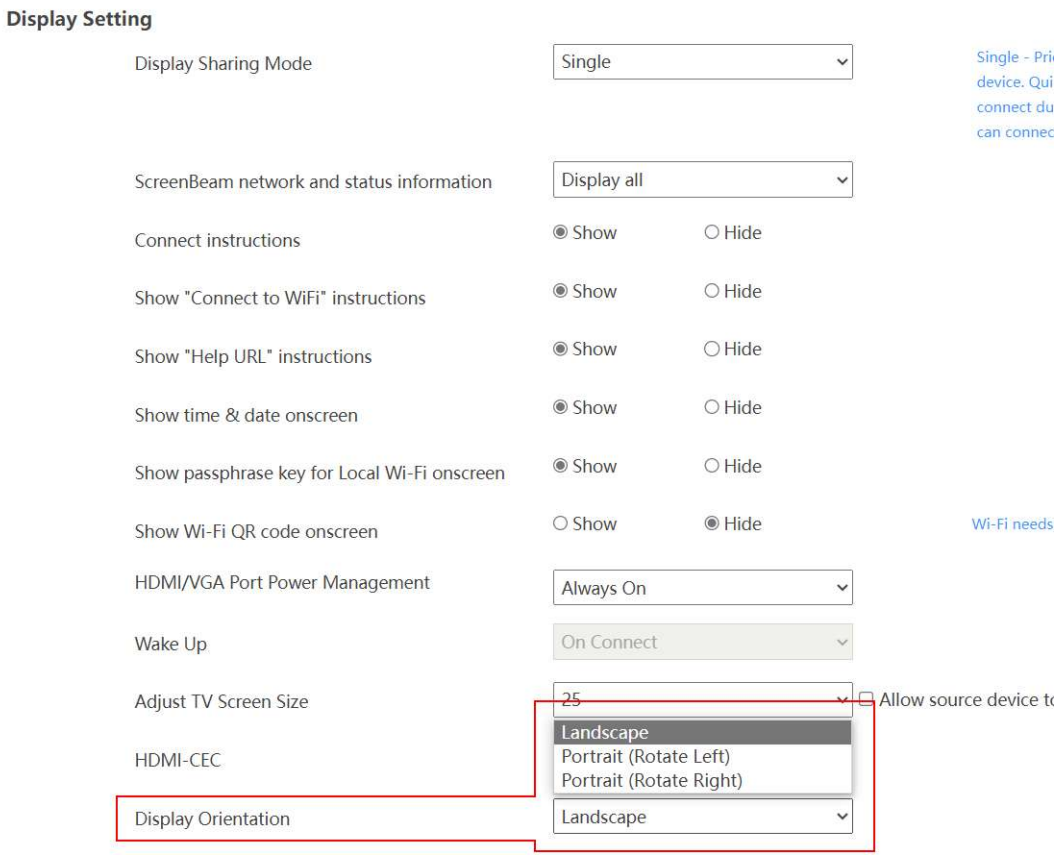
The receiver supports two types of display orientation: Landscape and Portrait. And in Portrait mode, it is allowed to rotate left or right.

By default, the receiver displays in Landscape mode. In Landscape mode, the receiver supports full features.

In Portrait mode, the following features of the receiver are not supported or present poor user experience: Multi-view mode, Video Conferencing (SBUC), and Digital Signage (framed).

To switch your receiver's display orientation, follow this procedure:

1. Log into the receiver's LMI, and go to **Features** > **Display Setting** > **Display Orientation**, and select **Landscape**, **Portrait (Rotate Left)** or **Portrait (Rotate Right)**. Refer to Section **5.2 Using Local Management on ScreenBeam** for details.



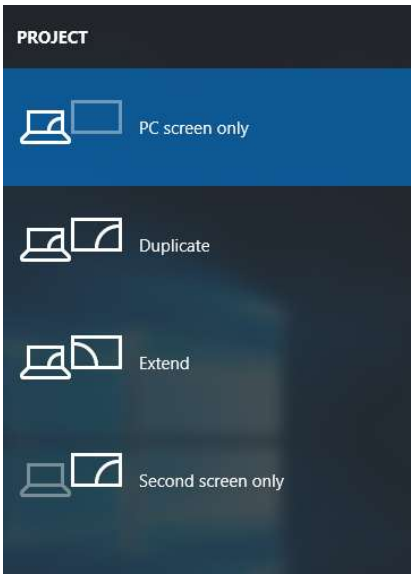
2. Click **Apply** to save your settings. You receiver will display in the selected display orientation mode soon.

4.2 Projection Mode

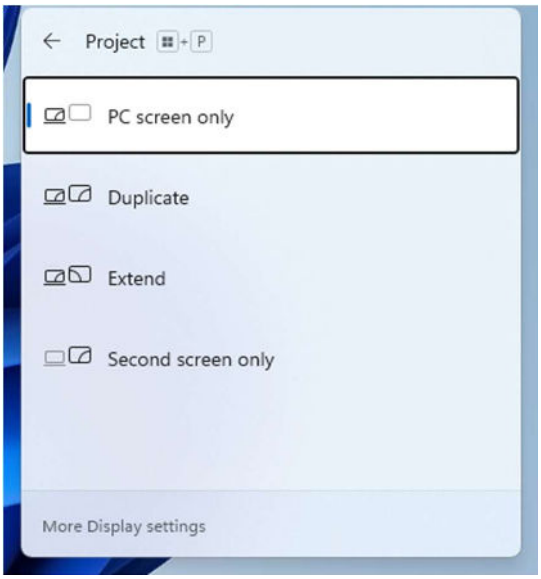
The receiver supports three projection modes when connected with a compatible wireless display application.

On Windows, press the **Windows** logo + **P** keys simultaneously (+ **P**) to launch the display options and select a desired display mode from the options.

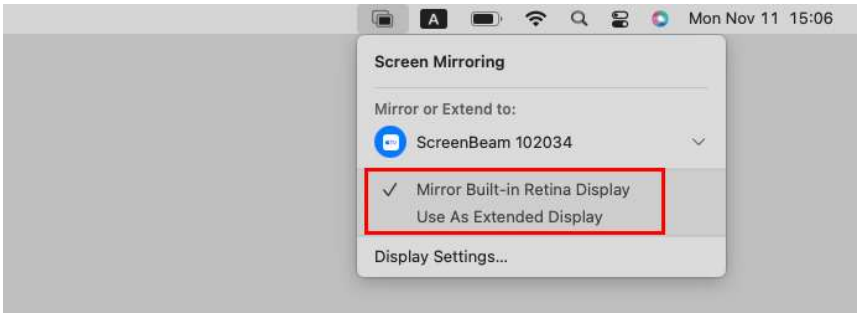
Windows 10



Windows 11



On macOS, click the Screen Mirroring icon and select a desired projection mode from the options (**Mirror Built-in Rentina Display** and **Use As Extended Display**) under the connected ScreenBeam receiver.



- **Duplicate (Mirror Built-in Rentina Display** on macOS)

The **Duplicate** mode is used to display the same content on both the device's screen and the HDTV simultaneously.

Note: There may be minor delay between the content displayed on the HDTV screen compared to the device's screen. This is due to the current state of wireless display technology.

- **Extend (Use As Extended Display** on macOS)

The **Extend** mode creates a single, extended "screen" between the source device and the

HDTV. When in the **Extend** mode, dragging windows to the right side of the device's screen displays those windows on the HDTV, while dragging windows to the left of the HDTV screen displays them back on the device's screen. This mode allows users to display selected content on the HDTV, while all other windows remain on the device's screen. When this mode is first selected, the HDTV displays only the Windows desktop.

- **Second Screen Only**

The **Second Screen Only** mode causes the HDTV to be the only display for the device. You'll see everything on the connected screen, and your device's screen will be blank.

4.3 HDMI® Output Behaviors

ScreenBeam 1100 Plus accepts two kinds of input methods: HDMI® input and wireless display connection, and it provides one outputs: HDMI® output. Its input and output follow the rules as discussed below:

4.3.1 Single Mode

When ScreenBeam 1100 Plus is in Single mode, its HDMI® input and output follow these rules:

- When an HDMI® source is the first connection,
  - ScreenBeam 1100 Plus will display this HDMI® source only.
  - ScreenBeam 1100 Plus can be detected on a wireless display capable source.
  - A wireless display source can connect to the receiver successfully, but it is not displayed.
  - The successfully connected wireless display source is displayed after the HDMI® source is disconnected.

- When a wireless display source is the first connection,
  - ScreenBeam 1100 Plus will display the wireless display source first.
  - ScreenBeam 1100 Plus can't be detected by another wireless display capable source.
  - ScreenBeam 1100 Plus will switch to display the HDMI® source if an HDMI® source connects to the receiver's HDMI® input. And the wireless display source (except Google Cast) stays connected in the background. Google Cast will be disconnected when an HDMI® source connects to the receiver.
  - ScreenBeam 1100 Plus will switch to display the wireless display source again if the HDMI® source disconnects from the receiver.

4.3.2 Quick Switch Mode

When ScreenBeam 1100 Plus is in Quick Switch mode, its HDMI® input and output follow these rules:

- When the first connection is an HDMI® source,
  - ScreenBeam 1100 Plus will display this HDMI® source first.
  - ScreenBeam 1100 Plus will switch to display the wireless display source (except Google Cast) if a wireless display source connects to the receiver successfully.
  - Google Cast devices can't connect to the receiver.

- When the first connection is a Miracast/Infracast/AirPlay source,
  - ScreenBeam 1100 Plus will display this Miracast/Infracast/AirPlay source first.
  - ScreenBeam 1100 Plus will switch to display another wireless display source

(except Google Cast) if another wireless display source connects to the receiver successfully. And the current Miracast/Infracast/AirPlay connection will be disconnected.

- ScreenBeam 1100 Plus will switch to display the HDMI® source if an HDMI® source connects to the receiver. And the current Miracast/Infracast/AirPlay connection stays connected in the background.

- When the first connection is a Google Cast source,
  - ScreenBeam 1100 Plus will display this Google Cast source first.
  - No other wireless display sources are allowed to connect.
  - ScreenBeam 1100 Plus will switch to display the HDMI® source if an HDMI® source connects to the receiver. The Google Cast will be disconnected when an HDMI® source connects to the receiver.

4.3.3 Multiview Mode

When ScreenBeam 1100 Plus is in Multiview mode, its HDMI® input and output follow these rules:

- When the first connection is an HDMI® source,
  - ScreenBeam 1100 Plus will display the HDMI® source in full screen with audio.
  - Three more wireless display connections (Miracast/Infracast/AirPlay) are allowed.
  - Google Cast source is not allowed.

- When the first connection is a Miracast/Infracast/AirPlay source,
  - ScreenBeam 1100 Plus will display this wireless display source in full screen with audio.
  - ScreenBeam 1100 Plus will display the wireless display sources in quadrants without audio if 2-4 wireless display sources are connected.
  - HDMI® input is still allowed if 4 wireless display sources are connected already. The HDMI® input source will take over the quadrant of the last connected wireless display source on the display, and this wireless display source is still connected in the background. However, no wireless display sources are allowed if 3 wireless display sources and an HDMI® input source are already connected.
  - Google Cast source is not allowed.

- When the first connection is a Google Cast source,
  - ScreenBeam 1100 Plus will display the Google Cast in full screen with audio.
  - No other wireless display sources or HDMI® input source is allowed to connect.

4.4 USB over Network Control

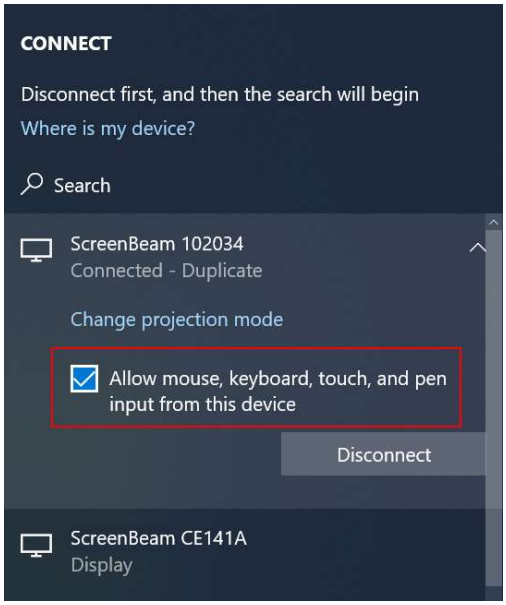
The ScreenBeam 1100 Plus receiver supports User Input Back Channel (UIBC) also known as USB over network control. This feature allows the use of USB HID peripheral devices from the source device to control the client device via ScreenBeam connection.

The USB over network control is available on **Windows 10/11** devices only. The minimum CPU requirement for a Windows 10/11 device to support UIBC is either:

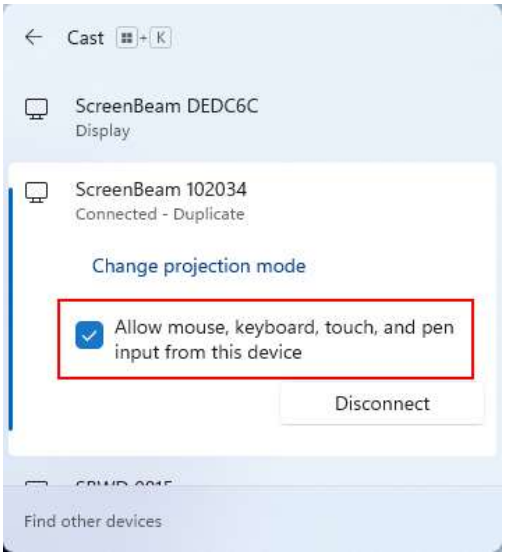
- 6th Generation Intel Core i3 (or better) processor
- AMD A4-5000 (Kabini or better) processor

To connect a USB keyboard, mouse, or trackpad:

1. Plug the USB HID peripheral into the receiver's USB port and wait for the device to be detected. This may take 10-15 seconds.
2. Connect your Windows 10/11 device to the receiver, and remember to check the "*Allow mouse, keyboard, touch, and pen input from this device*" box.



Windows 10



Windows 11

Note: Although the checkbox "*Allow mouse, keyboard, touch, and pen input from this device*" may be available upon the Miracast connection, the UIBC feature will not be supported if the Windows 10/11 device does not meet the minimum CPU requirement.

3. Use the USB keyboard, mouse, or trackpad to control the source device.

4.5 Using Interactive Touch Display

ScreenBeam 1100 Plus supports wireless inking and touch with Windows 10/11 Miracast for collaboration using a touchscreen display. Users can project their preferred Windows 10/11 application and take notes on the touchscreen; the notes appear directly on the client device.

4.5.1 System Requirements

- OS: Windows 10/11 21H2 (or later)
- CPU: 5th Gen Intel Core i-Series 5xxx or AMD equivalent (or better)
- RAM: 4 GB or more

4.5.2 Setup Requirements

- Interactive touch display or projector
- USB Type-A to Type-B/A cable (depending on the touchscreen type)

4.5.3 Supported Features

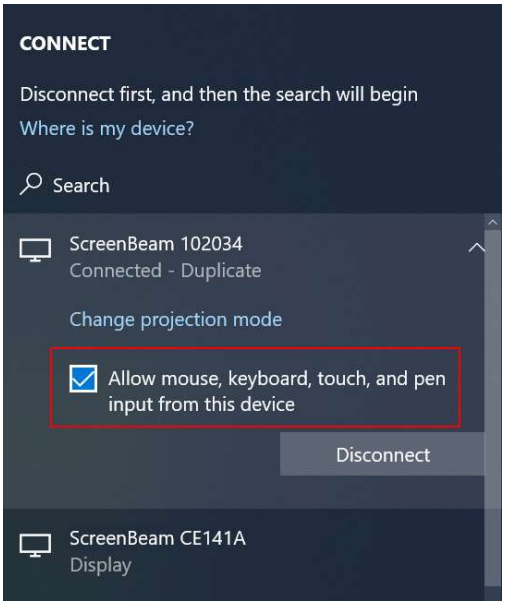
- Support USB HID display, projector, or whiteboard
- Up to 20-point touch
- Up to four simultaneous passive pens
- Up to two simultaneous active pens

Supported features may require compatible touchscreen and/or application. Works best with InGlass™ Technology enabled display. Refer to the online compatibility list at: https://support.screenbeam.com/touch/compatibility

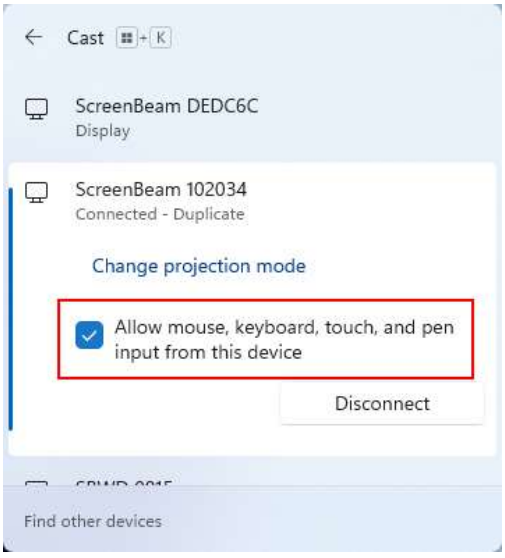
4.5.4 Setup and Instructions

Follow the steps below to set up and use the interactive touch feature:

1. Prepare the touch display and the USB touch cable supplied with the touch display.
2. Connect the USB Type-A end to the ScreenBeam 1100 Plus receiver's USB port.
3. Connect the USB Type-B/A end to the USB Touch input on the display or projector.
   Note: If the display provides more than one touch output, make sure the USB Type-B/A end is connected to the same touch output as the HDMI® input.
4. Connect Windows 10/11 device to ScreenBeam 1100 Plus (see instructions in **Part III Connecting Client Device**).
5. Ensure the "**Allow mouse, keyboard, touch, and pen input from this device"** option is checked.



Windows 10



Windows 11

6. Start using the display by touching the screen. Launch an app and draw using finger or pen.

4.5.5 Ghost Inking™

Ghost Inking is specific to the ScreenBeam product portfolio and solves the latency (delay) typically experienced when a touch-enabled display or projector is connected to a computer or mobile device over a network. Ghost Inking is currently included in ScreenBeam products for all customer segments in commercial, government, and education.

Due to limitations of current wireless environments, users may see an obvious delay when they write or draw quickly on a touch-enabled display using a wireless display connection. ScreenBeam's patented Ghost Inking technology backfills the user's finger or pen ahead of the actual digital ink marking. The Ghost Ink stays with the finger or pen regardless of how quickly or slow the user draws. The user experience is greatly improved with a more intuitive and natural pen-to-paper like experience that fosters better collaboration overall.

The Ghost Inking feature is enabled by default on the ScreenBeam products that support this feature. Users are allowed to configure or disable this feature on the Advanced settings page with ScreenBeam CMS Enterprise.

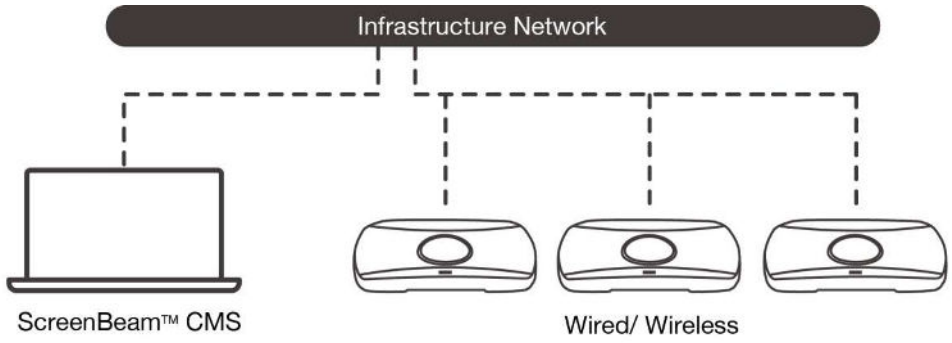
Part V Device Management for IT Administrator

ScreenBeam 1100 Plus can be configured by using the ScreenBeam CMS software or accessing the ScreenBeam's Local Management Interface (LMI).

5.1 Using ScreenBeam CMS Software

ScreenBeam Central Management System (CMS) is a highly recommended complimentary tool for multi-unit deployment, configuration and administration.

1. To obtain CMS software and the CMS User Guide, go to: https://support.screenbeam.com/cms.
2. Refer to the CMS User Guide for setup instructions.



5.2 Using Local Management on ScreenBeam

The Local Management Interface can configure and update a single ScreenBeam at a time. There are three methods to access the LMI:

- Method 1: ScreenBeam Local Wi-Fi Network
- Method 2: Network Connection via DHCP
- Method 3: Wireless P2P Direct Connection

Note:

The Local Management Interface is allowed for access in one of the following situations:

- The receiver's **Local Management Interface Access** feature is set to **Auto** and the receiver is not connected to CMS;
- The receiver's **Local Management Interface Access** feature is set to **Enable**.

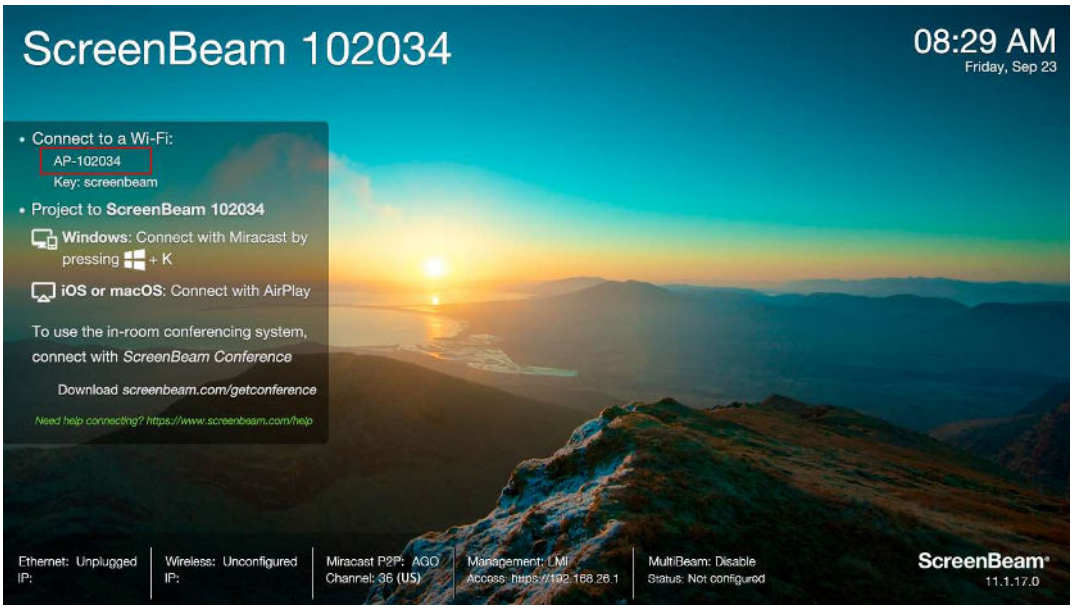
Refer to Section **5.3.9.3 Setting up Local Management Interface Access** for details about Local Management Interface Access.

5.2.1 Method 1: ScreenBeam Local Wi-Fi Network

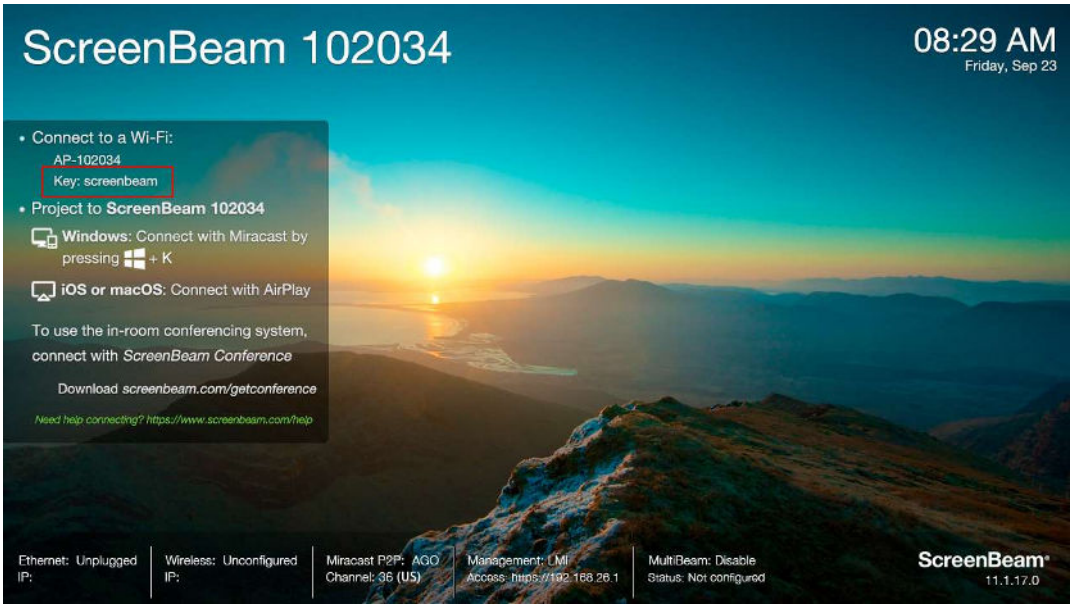
ScreenBeam receiver's LMI can be accessed via https://192.168.26.1 after a user's device has connected to the ScreenBeam receiver's Local Wi-Fi.

Follow the procedure below to access the ScreenBeam receiver's LMI,

1. Connect the client device's Wi-Fi to the ScreenBeam Local Wi-Fi network (AP SSID) as shown on the TV display.



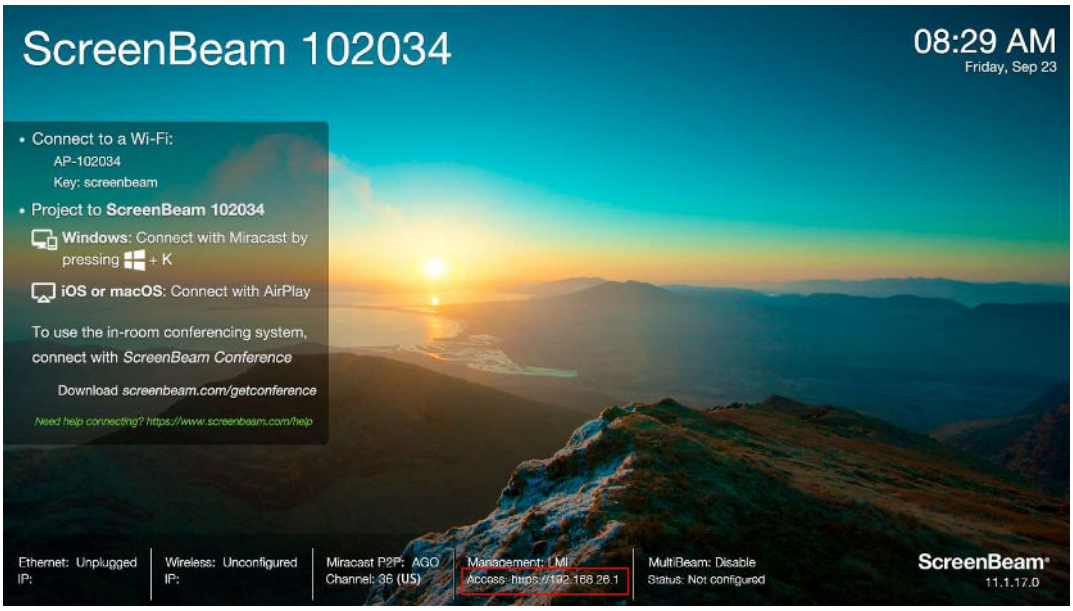
2. Enter the password for the wireless network. By default, the password is **screenbeam** (case-sensitive).



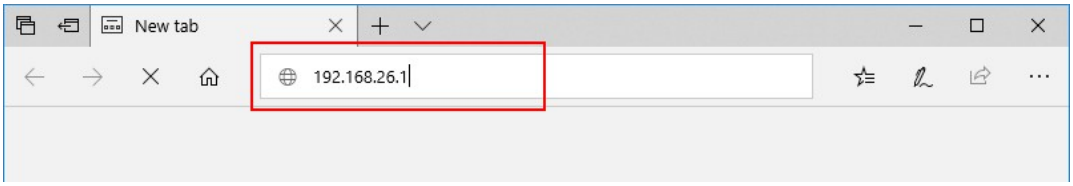
3. The receiver's idle screen on the display will show the IP address assigned to the ScreenBeam.

   Note:

   - If the receiver is not connected to any existing wireless network or LAN, its IP address is **192.168.26.1**.
   - If the receiver is connected a network, the IP address can be identified on the receiver's idle screen.



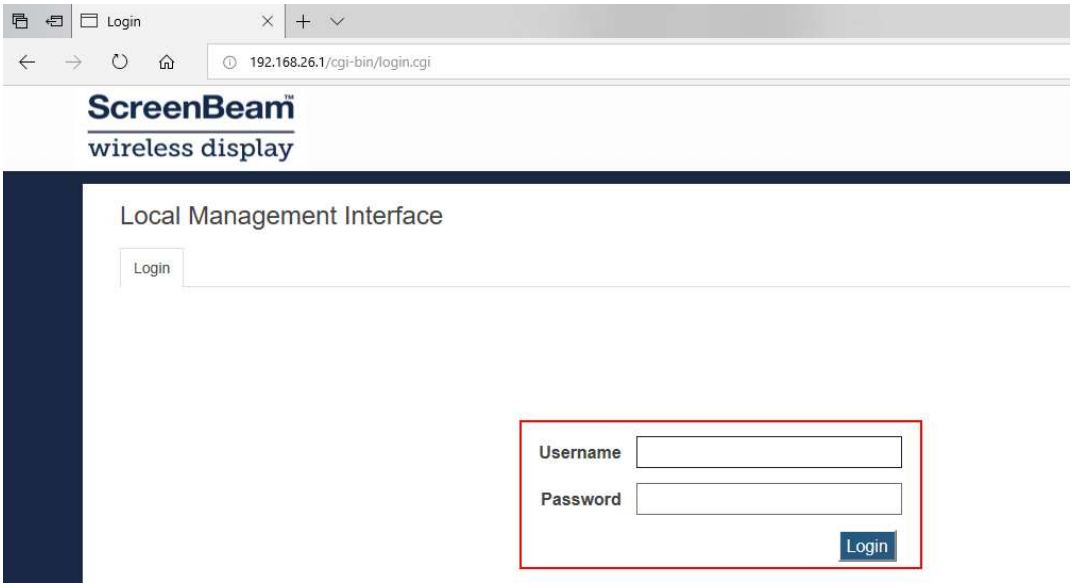
4. Enter the assigned IP address into the web browser on a device.



5. The browser may give an error stating "The connection or site is not secure or private." Manually accept the connection as follows:

   - **Chrome** browser: click **Advanced**, and then click **Proceed to …**.
   - **Edge** browser: click **Advanced**, and then click **Continue to …**.
   - **IE** browser: click **Details**, and then **Go on to the webpage (not recommended)**.
   - **Firefox** browser: click **Advanced**, then click **Accept the Risk and Continue**.

6. When the ScreenBeam management page appears, enter the Username **Administrator** and Password **screenbeam** (both case-sensitive).
   By default, the Username is **Administrator**, and password is **screenbeam**.



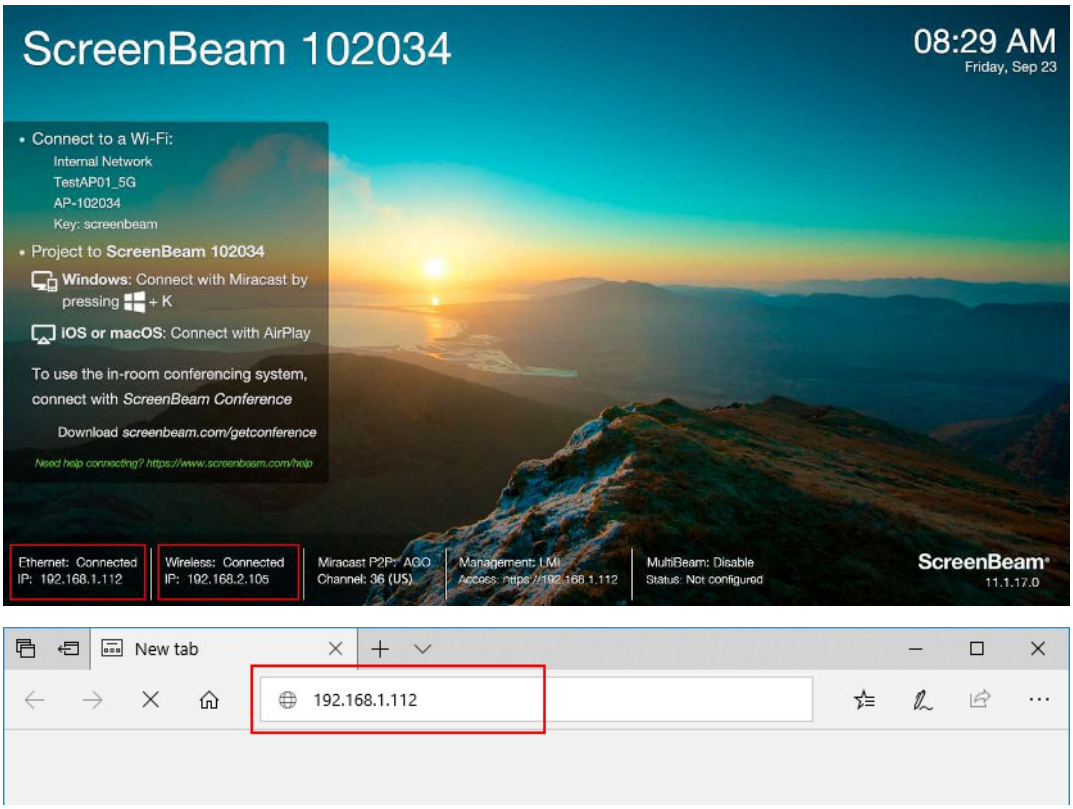
5.2.2 Method 2: Network Connection via DHCP

ScreenBeam receiver's LMI can be accessed via the IP address (https:// + receiver's IP

address) that the receiver obtained from a DHCP network.

Follow the procedure below to access the ScreenBeam receiver's LMI,

1. Using a shielded RJ-45-terminated Cat5e or better Ethernet cable, connect the ScreenBeam Ethernet port to a DHCP enabled network.
2. The Receiver's idle screen on the display will show the IP address assigned to the ScreenBeam. Enter this address into the web browser on a device on the same network as the ScreenBeam.



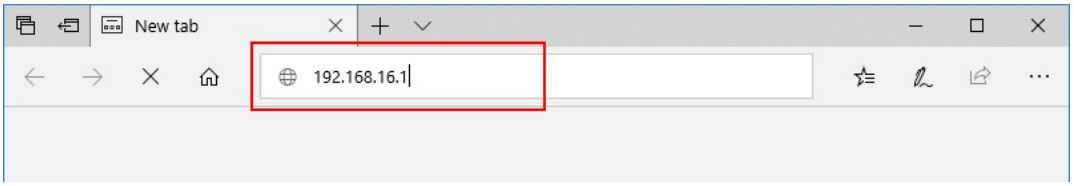
3. Follow the directions from Method 1 from Step 5 on.

5.2.3 Method 3: Wireless P2P Direct Connection

ScreenBeam receiver's LMI can be accessed via https://192.168.16.1 (default) after a user's device has connected to the ScreenBeam receiver via Wi-Fi Miracast.

Follow the procedure below to access the ScreenBeam receiver's LMI,

1. Using a Windows 10/11 device, connect the device to the ScreenBeam per section **3.3 Connect using Wi-Fi Miracast**.
2. Once connected, enter **https://192.168.16.1** into a web browser to access the LMI.



3. Follow the directions from Method 1 from Step 5 on.

5.3 Configuring ScreenBeam

After you have logged into the LMI, you are ready to configure ScreenBeam 1100 Plus.

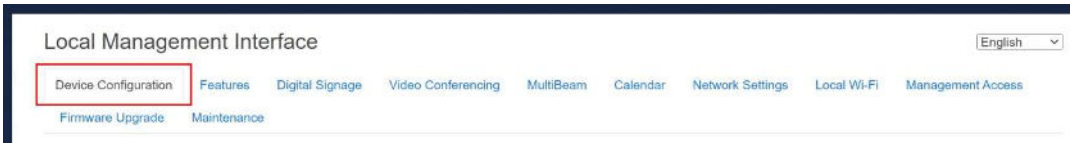
5.3.1 General Settings

This section introduces some general settings for the receiver.

5.3.1.1 Renaming the Receiver

To rename your receiver, follow this procedure:

1. Go to the **Device Configuration** tab page by clicking the **Device Configuration** tab.



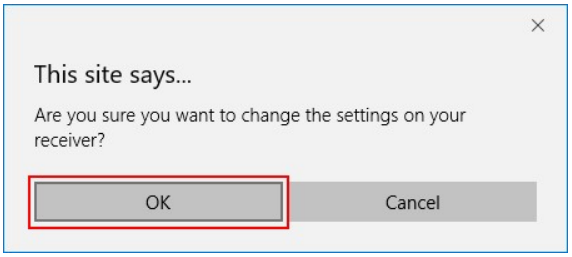
2. Type a new name in the **Device Name** box.

The receiver's **Device Name** supports the characters listed below:

- A-Z, a-z, 0-9
- `~!@#$%^&*()_+=-{}|\][:"';<>?/.,
- Japanese characters with Unicode in the following range: **\u3040-\u30FF**, **\u31F0-\u31FF**, and **\u4E00-\u9FBF**.
- Simplified and Traditional Chinese characters

And, length of the device name should be 1 - 32 characters.

3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.

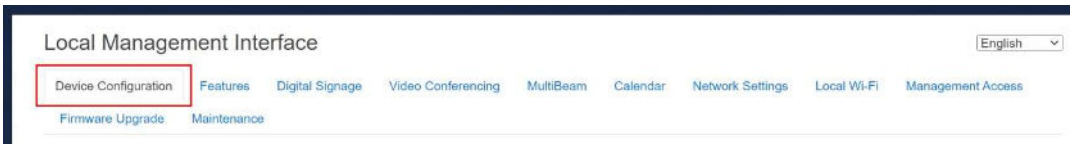


Note: New settings take effect immediately.

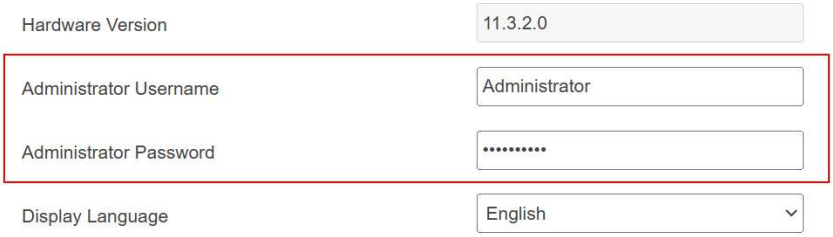
5.3.1.2 Setting up the Login Username and Password

To modify the username and password for user login, follow this procedure:

1. Go to the **Device Configuration** tab page by clicking the **Device Configuration** tab.

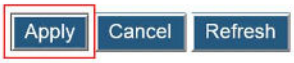


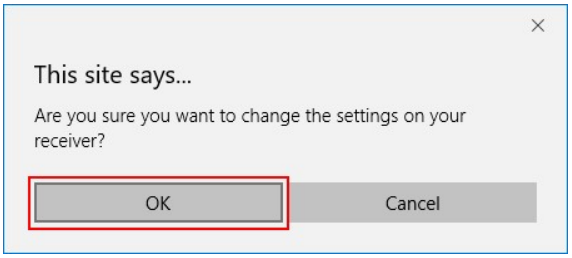
2. Go to the **Administrator Username** and **Administrator Password** lines, and type new username and password in the **Administrator Username** and **Administrator Password** boxes, respectively.



The supported characters for **Administrator Username** include: A-Z, a-z, 0-9, and @#$_-
The length of Administrator Username should be 1-16 characters.
The supported characters for **Administrator Password** include: A-Z, a-z, 0-9, and @#$_-
The length of Administrator Password should be 1-16 characters.

3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.

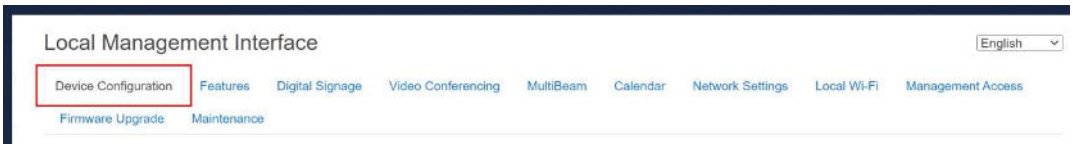




5.3.1.3 Setting up the Receiver's Display Language

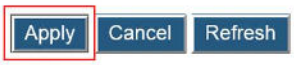
To set up the receiver's display language, follow this procedure:

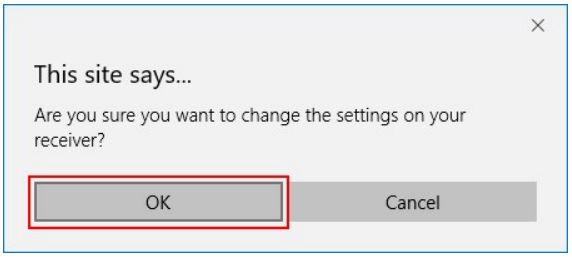
1. Go to the **Device Configuration** tab page by clicking the **Device Configuration** tab.



2. Go to the **Display Language** line, and choose a desired language from the **Display Language** drop-down box.
   Note: This will change the language displayed on the TV screen, not the one on the configuration webpage.

3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.



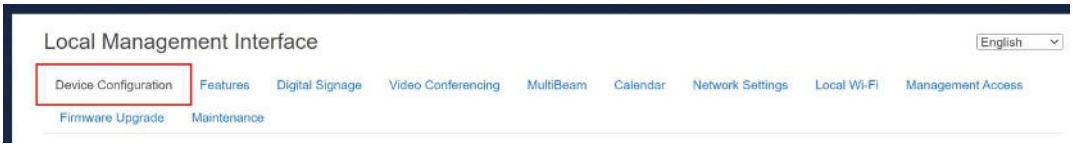


5.3.1.4 Modifying the Receiver's Host Name

The host name is used to identify the receiver in a network.

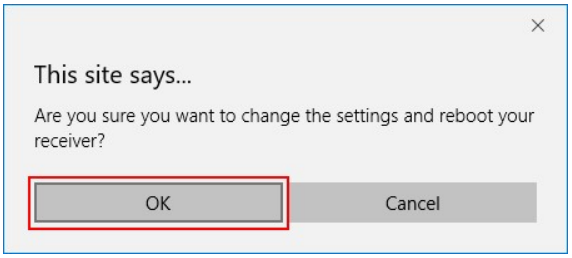
To modify your receiver's host name, follow this procedure:

1. Go to the **Device Configuration** tab page by clicking the **Device Configuration** tab.



2. Go to the **Host name** line, and type a new host name in the **Host name** box.
   The supported characters for **Host Name** include: A-Z, a-z, 0-9, and hyphen (-).
   The length of Host Name should be 1-63 characters.

3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.



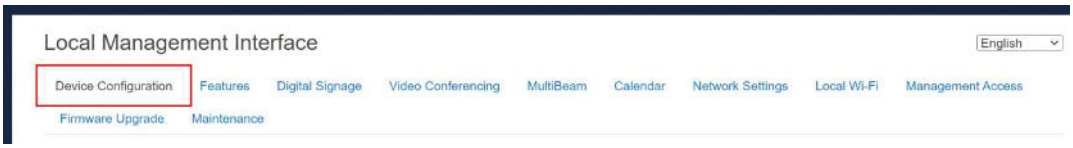
Note: The receiver's new host name takes effect after the reboot.

5.3.1.5 Setting up Time Zone and NTP Time Server

ScreenBeam 1100 Plus will synchronize its time with an NTP server.

To set up a time zone and an NTP time server for the receiver, follow this procedure:

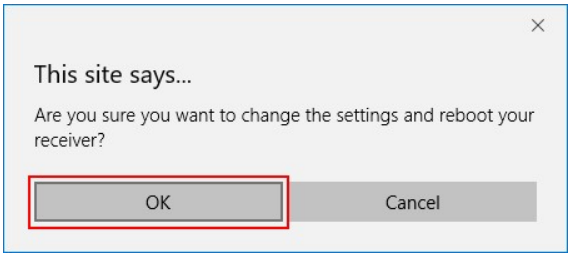
1. Go to the **Device Configuration** tab page by clicking the **Device Configuration** tab.



2. Select a desired time zone in the **Time zone** drop-down box, and type a new time server address in the **NTP Time Server** box if you want to change the default NTP time server. The length of NTP Time Server should be 1-128 characters.

Note: Internet access is required for time synchronization.

3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.



5.3.2 Wireless Display over LAN

Wireless Display over LAN allows non-Miracast ready devices to project over the local network connection. ScreenBeam receiver must be connected to the same network with the source device via Ethernet (recommended) or wireless.

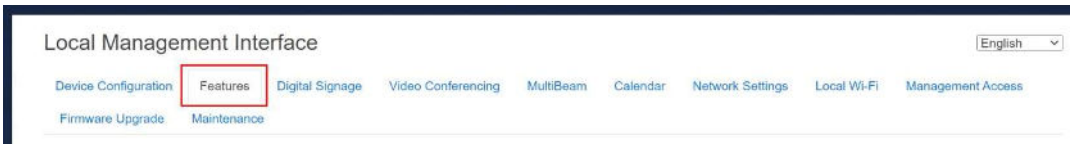
5.3.2.1 Setting up Miracast over LAN for Windows 10/11 Devices

If your Windows 10/11 device is not Miracast capable, you can still project your screen over LAN, as long as the following requirements are met:

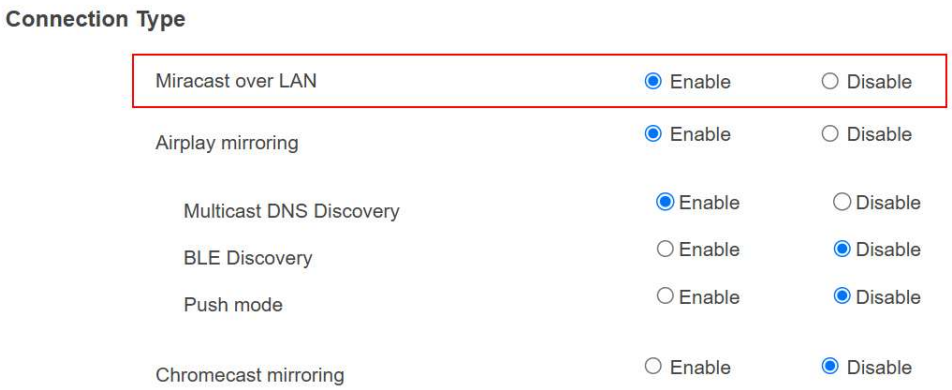
- Operating system: Windows 10/11, 21H2 or newer
- 100M/1000M Ethernet adapter (optional, but recommended) and Wi-Fi adapter are available
- Stable local area network
- Windows 10/11 device and ScreenBeam 1100 Plus receiver are connected to the same LAN
- Required ports: UDP 5353, TCP 7250, TCP 7236
  - UDP 5353, for Multicast DNS (mDNS) discovery
  - TCP 7250, for Miracast over LAN data stream
  - TCP 7236, for RTSP

To set up Miracast over LAN for Windows 10/11 devices, follow this procedure:

1. Go to the **Features** tab page by clicking the **Features** tab.

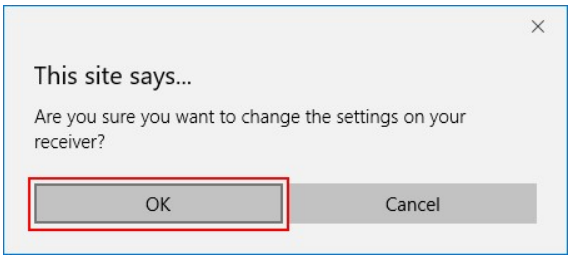


2. Go to the **Connection Type** section, and set **Miracast over LAN** to **Enable** or **Disable**.



- **Enable**: Windows 10/11 devices are allowed to project over the local network.
- **Disable**: Windows 10/11 devices are not allowed to project over the local network.

3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.



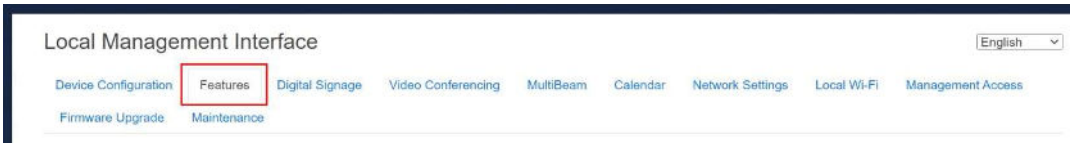
5.3.2.2 Setting up AirPlay Mirroring for macOS/iOS Devices

The AirPlay Mirroring feature allows macOS/iOS devices to project over the local network with the OS native screen mirroring. Two methods are provided for an AirPlay source device to discover ScreenBeam receiver: Multicast DNS Discovery and BLE Discovery.
Make sure the following requirements are met:

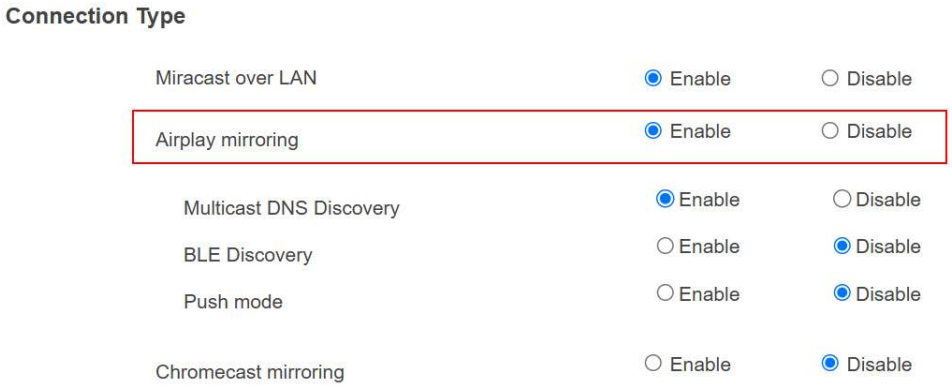
- Operating system: macOS 12 (or later) or iOS 13 (or later)
- 100M/1000M Ethernet adapter (optional, but recommended) and Wi-Fi adapter are available
- Stable local area network
- MacOS/iOS device and ScreenBeam 1100 Plus receiver are connected to the same LAN
- Required ports: UDP 5353, TCP 47000, TCP 7000, TCP 7100, TCP&UDP 18000-18009
  - UDP 5353, for Multicast DNS (mDNS) discovery
  - TCP 47000, for Airtune in AirPlay
  - TCP 7000, for AirPlay by passing URL
  - TCP 7100, for AirPlay mirroring
  - TCP&UDP 18000-18009, for macOS and iOS AV data

To set up AirPlay mirroring for macOS/iOS devices, follow this procedure:

1. Go to the **Features** tab page by clicking the **Features** tab.

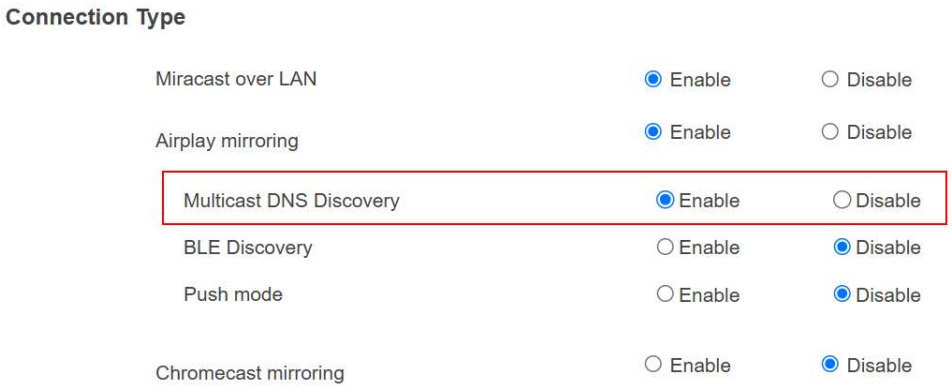


2. Go to the **Connection Type** section, and set **AirPlay mirroring** to **Enable** or **Disable**.

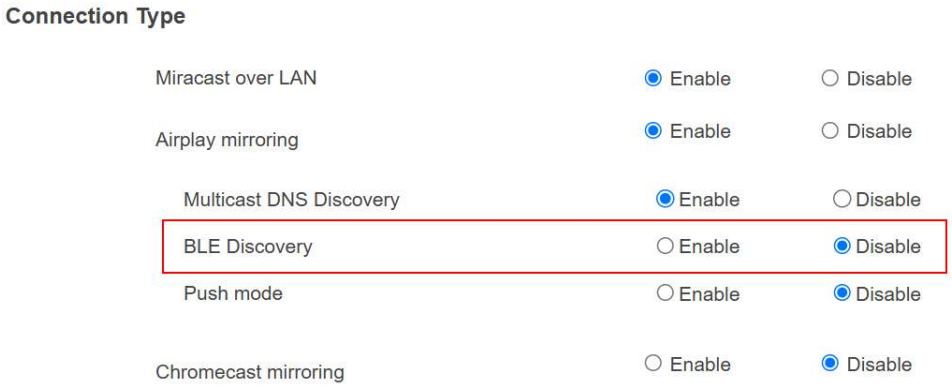


- **Enable**: macOS/iOS devices are allowed to project over the local network with AirPlay mirroring. By default, this feature is enabled.
- **Disable**: macOS/iOS devices are not allowed to project over the local network with AirPlay mirroring.

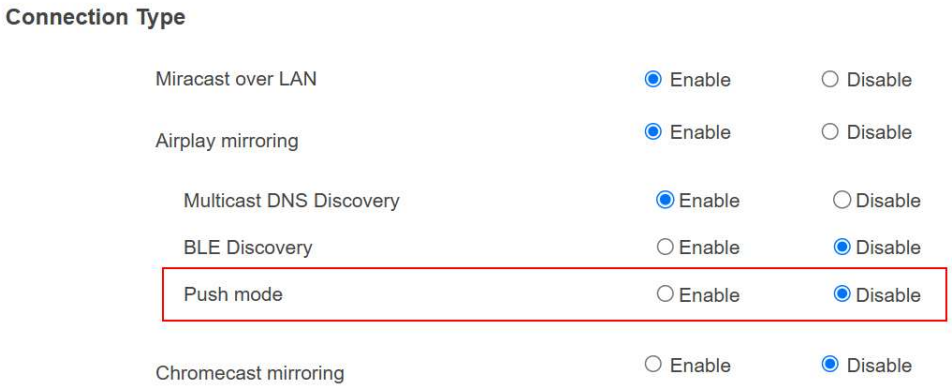
3. Enable or disable the Multicast DNS Discovery feature according to deployment requirements. By default, the Multicast DNS Discovery feature is enabled, which enables the receiver to broadcast AirPlay discovery over the network using UDP port 5353.



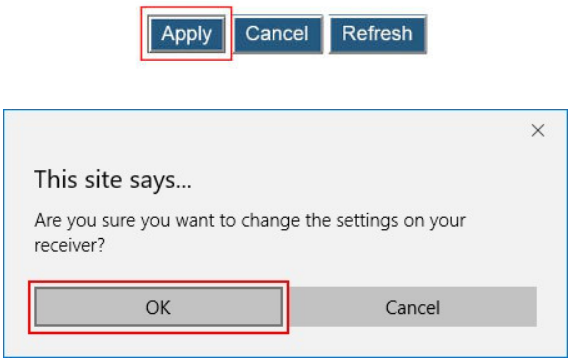
4. Enable or disable the BLE Discovery feature according to deployment requirements. By default, the BLE Discovery feature is disabled. This feature enables the receiver to broadcast AirPlay discovery over Bluetooth.
   To discover ScreenBeam receiver via BLE Discovery, the AirPlay source device must have its Bluetooth turned on.



5. If your streaming app can support push mode, enable the **Push mode**. Otherwise, disable it.
   Note: The **Push mode** is available when **ScreenBeam Conference** is disabled and the receiver's **Display Sharing Mode** is set to **Single** or **Quick Switch**.



6. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.



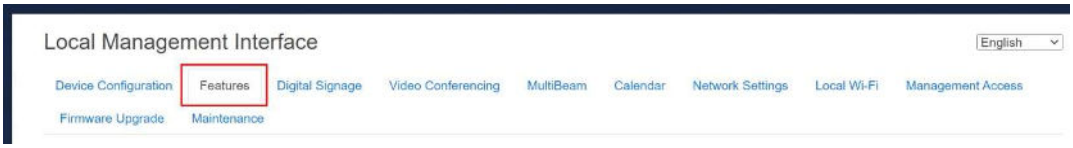
5.3.2.3 Setting up Chromecast Mirroring for Chrome OS Device and Device with Chrome Browser

Your device can connect to ScreenBeam for wireless display, as long as the following requirements are met:

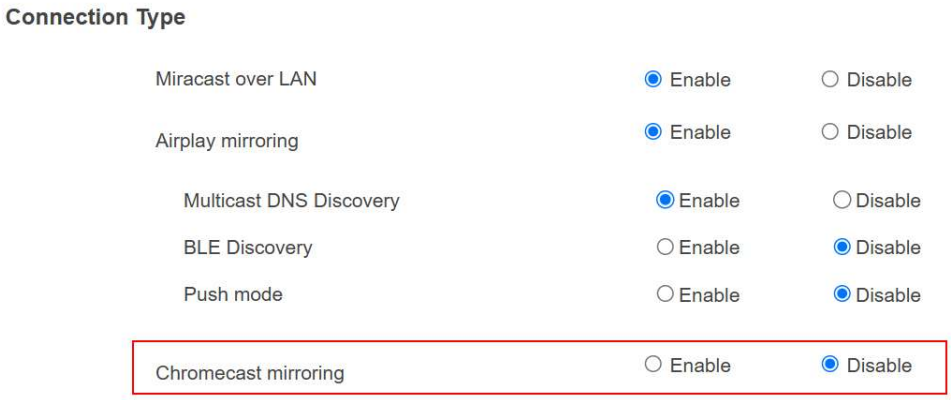
- Operating system: Chrome OS 100.x (and later) with Cast, or Chrome Browser with Cast
- 100M/1000M Ethernet adapter (optional, but recommended) and Wi-Fi adapter are available
- Stable local area network
- Source device and ScreenBeam 1100 Plus receiver are connected to the same LAN

To set up Chromecast Mirroring for Chrome OS devices or devices with Chrome browser, follow this procedure:

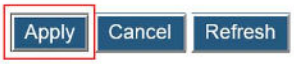
1. Go to the **Features** tab page by clicking the **Features** tab.

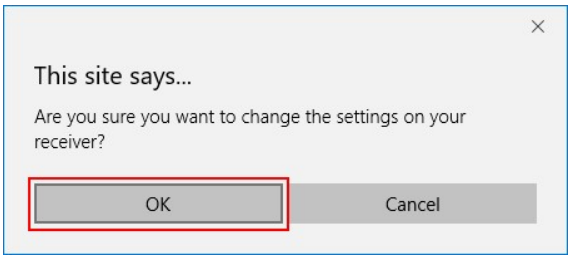


2. Go to the **Connection Type** section, and set **Chromecast mirroring** to **Enable** or **Disable**.
   - **Enable**: Chrome OS devices or devices with Chrome browser are allowed to project over the local network.
   - **Disable**: Chrome OS devices or devices with Chrome browser are not allowed to project over the local network.



3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.





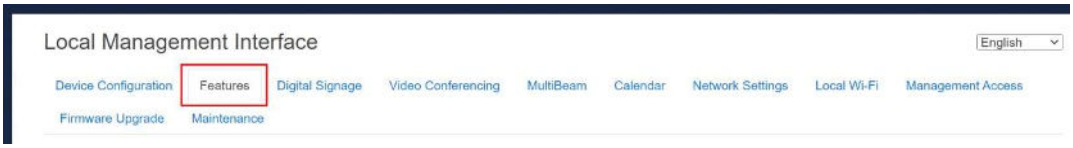
5.3.3 P2P Wireless Settings

This section introduces settings for Miracast connection, P2P operating channel and transmission power.

5.3.3.1 Setting up Miracast Connection

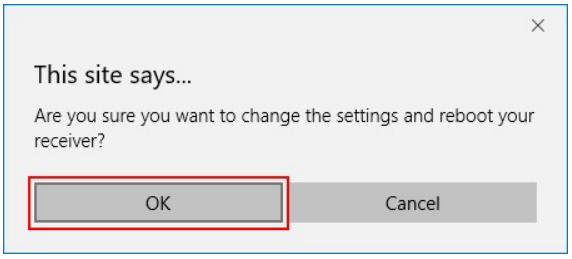
ScreenBeam 1100 Plus allows users to disable or enable Miracast connection.
To set up the receiver's Miracast connection, follow this procedure:

1. Go to the **Features** tab page by clicking the **Features** tab.



2. Go to the **P2P Wireless Setting** section, and set **Miracast** to **Enable** or **Disable**. It is enabled by default.
   Note: Windows and Android Miracast devices are not allowed to connect using Wi-Fi Direct to the receiver after **Miracast** is set to **Disable**.

3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.

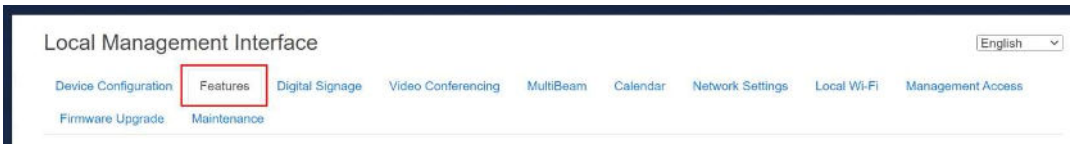


5.3.3.2 Setting up P2P Operating Channel

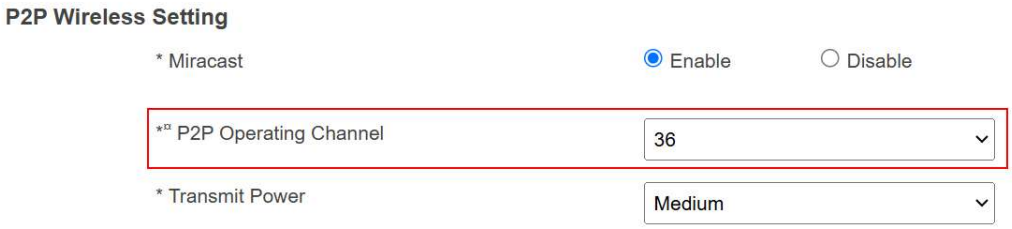
ScreenBeam 1100 Plus allows you to define an operating channel for communication between the wireless display receiver and the source device.

To set up the receiver's operating channel, follow this procedure:

1. Go to the **Features** tab page by clicking the **Features** tab.



2. Go to the **P2P Wireless Setting** section, and select a desired channel from the **P2P Operating Channel** drop-down box.



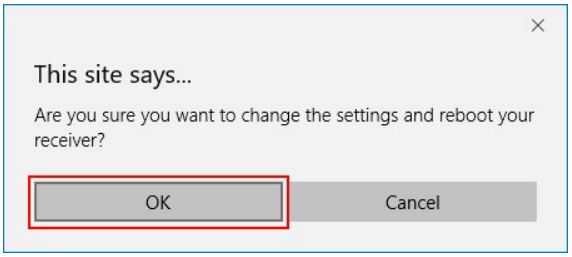
Channels from 1 to 13 belong to the 2.4 GHz band; and channels from 36 to 165 belong to the 5 GHz band. By default, channel 36 is used.

Availability of channels depends on the sales region (country code).

You should select a channel based on your network environment. Generally, cleaner channels (where less devices work) will provide better performance. You can use Wi-Fi Analyzer to help you identify a clean channel.

Note: ScreenBeam receivers do not support Dynamic Frequency Selection (DFS) channels, 50 through 144, because it's prohibited in a direct Wi-Fi usage model. You should disconnect your source device from the DFS-capable router (AP) or connect to a non-DFS AP if the Wi-Fi adapter of your source device cannot work in dual bands.

3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.



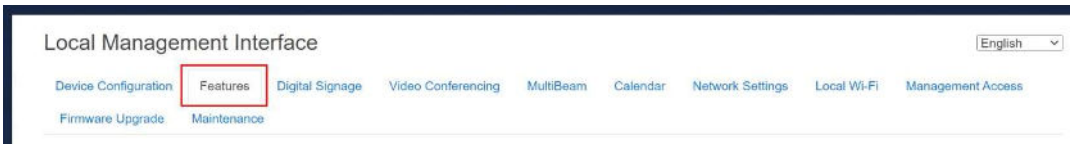
Note: New setting takes effect on the next connection.

5.3.3.3 Setting up Transmit Power

ScreenBeam 1100 Plus allows users to tune down or up the transmission power of the Wi-Fi adapter for Miracast connection.

To set up the receiver's transmission power, follow this procedure:

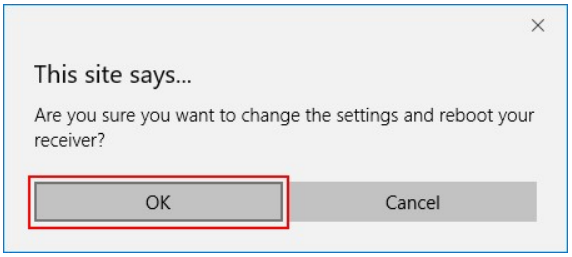
1. Go to the **Features** tab page by clicking the **Features** tab.



2. Go to the **P2P Wireless Setting** section, and select an option from the **Transmit Power** drop-down box.

   Lower transmit power can reduce interference to the nearby devices. Higher transmit power can ensure longer working distance.

3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.



4. The receiver reboots, and new setting takes effect after the reboot.

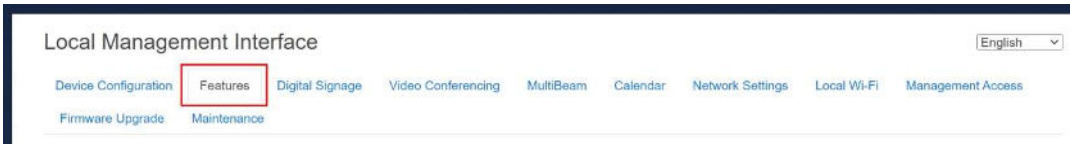
5.3.4 Security Settings

This section introduces the receiver's PIN pairing methods.

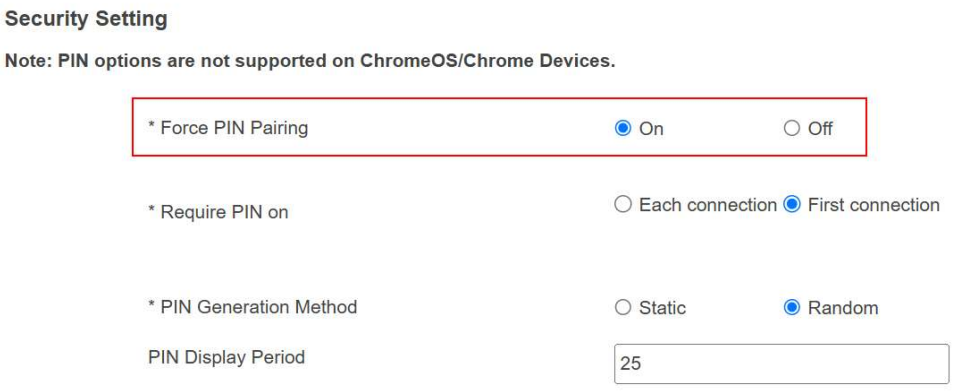
5.3.4.1 Setting up PIN Pairing Method

To set up PIN pairing method, follow this procedure:

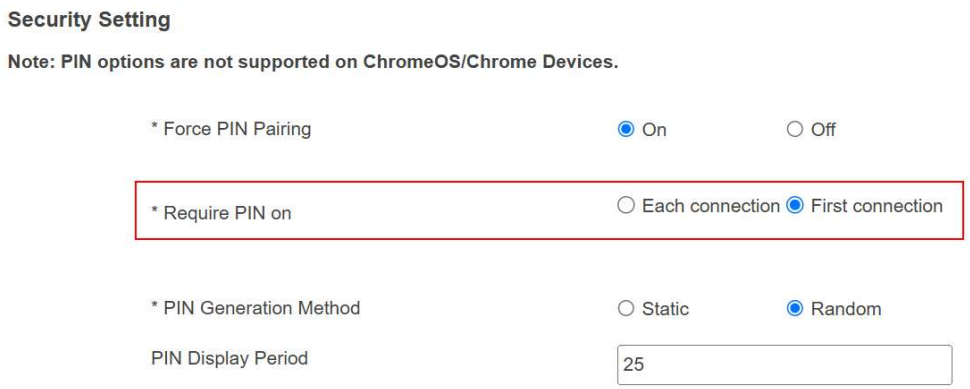
1. Go to the **Features** tab page by clicking the **Features** tab.



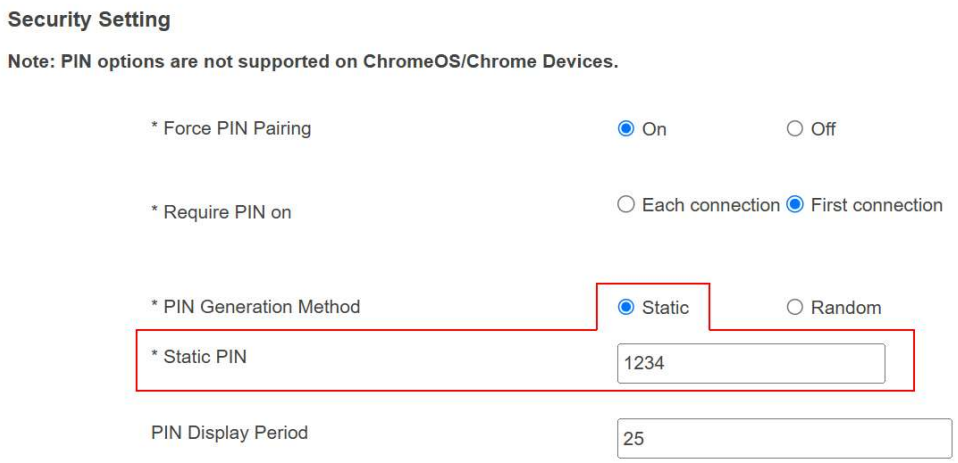
2. Go to the **Security Setting** section, and set the **Force PIN Pairing** feature to **On** or **Off**.
   - Select "**Off**" to disable the PIN enforcement function. PIN or PBC pairing is used when connecting a source device to the receiver for the first time.
   - Select "**On**" to enable the PIN enforcement function. In this case, you must enter a PIN code on the device connecting to the receiver every time or the first time.
     Note: Some wireless display source devices may not support PIN entry and may not be able to connect with the ScreenBeam receiver if this mode is enabled. Refer to the device's user manual for details about enabling the PIN connection.



3. Select a PIN pairing method.
   - **Each connection**: It is required to provide PIN every time when a device connects to the receiver.
   - **First connection**: It is required to provide PIN the first time when a device connects to the receiver.

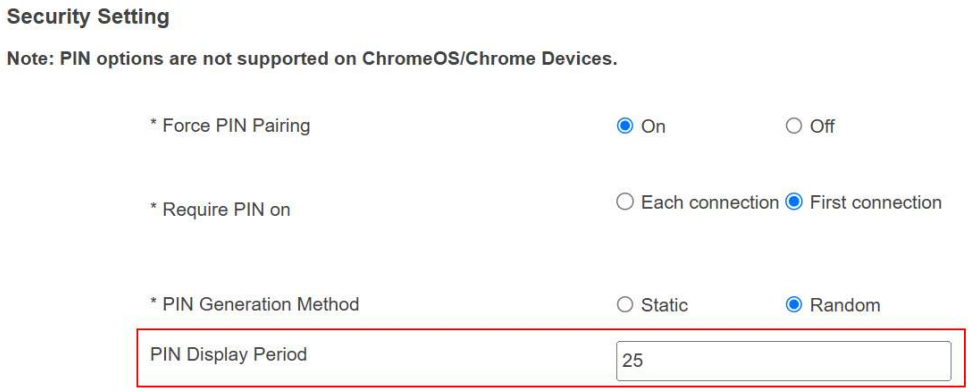


4. Select a PIN generation method.
   When the **Force PIN Pairing** feature is enabled, the system provides two PIN generation methods: **Static** and **Random**.
   - **Static**: When **Static** is selected, users can define a PIN flexibly. The static PIN will not be displayed on the connected display.

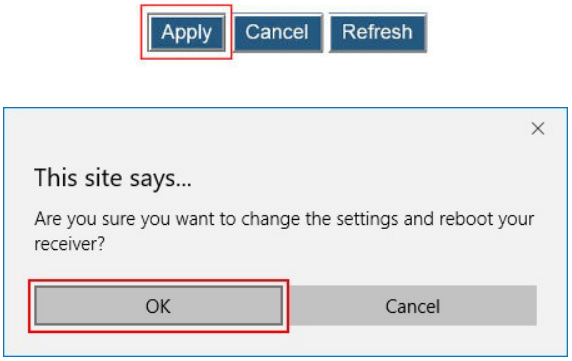


   - **Random**: A PIN code is generated randomly by ScreenBeam and displayed on the connected HDTV/projector.

5. Define the period for showing the PIN on the connected display. The PIN Display Period ranges from 25 to 120 seconds.



6. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.



5.3.5 Display Settings

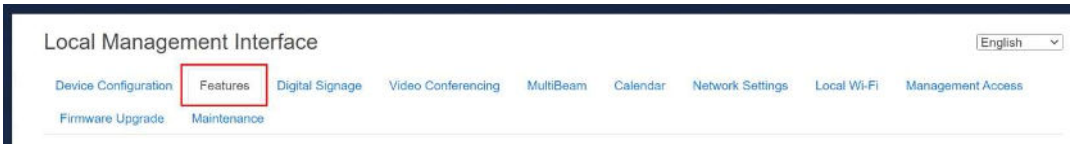
This section introduces display related features.

5.3.5.1 Setting up Display Sharing Mode

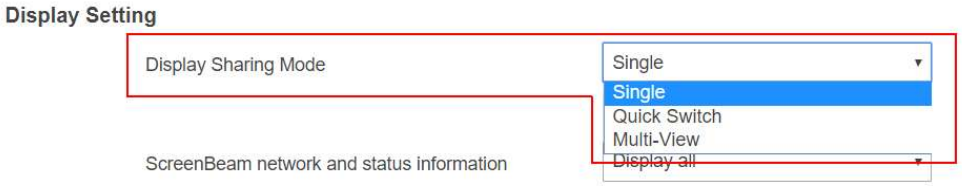
ScreenBeam 1100 Plus supports three display sharing modes: Single mode, Quick Switch mode, and Multi-view mode.

To select a display sharing mode, follow this procedure:

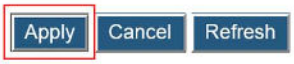
1. Go to the **Features** tab page by clicking the **Features** tab.

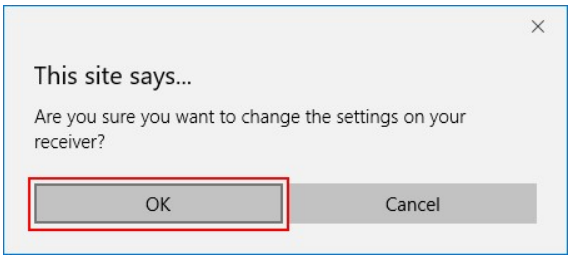


2. Go to the **Display Setting** section, and select a desired option from the **Display Sharing Mode** menu. Available options are: **Single**, **Quick Switch**, and **Multi-View**.
   - **Single**: Other device is not allowed to connect if the receiver is already in use.
   - **Quick Switch**: The Quick Switch mode allows a supported device to take over the wireless connection from the currently connected device. After the take-over, the formerly connected device will be disconnected.
     Supported sources include Miracast sources, Infracast sources, AirPlay sources, and HDMI® input sources.
   - **Multi-View**: The Multi-View mode allows up to four sources connected to the receiver and displayed on the TV at the same time.
     Supported sources include Miracast sources, Infracast sources, AirPlay sources, and HDMI® input sources.
     Note: An HDMI® input is still allowed when there are 4 wireless display sources are connected. The last connected wireless display source will be taken over by the HDMI® input source on the display quadrant but it is still connected in the background. Refer to Section **4.3 HDMI® Output Behaviors** for details.



3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.



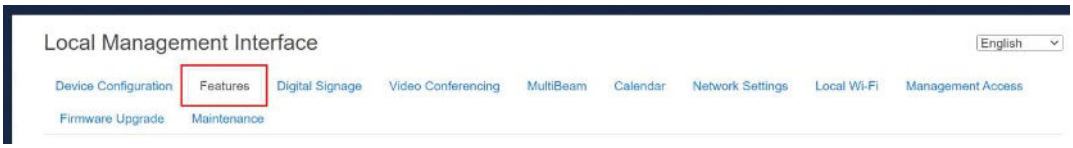


5.3.5.2 Setting up Receiver Name Display for Quick Switch/Multi-View

ScreenBeam 1100 Plus allows customizing the display of receiver name in the Quick Switch or Multi-View mode.

To set up the display of the receiver's name, follow this procedure:

1. Go to the **Features** tab page by clicking the **Features** tab.



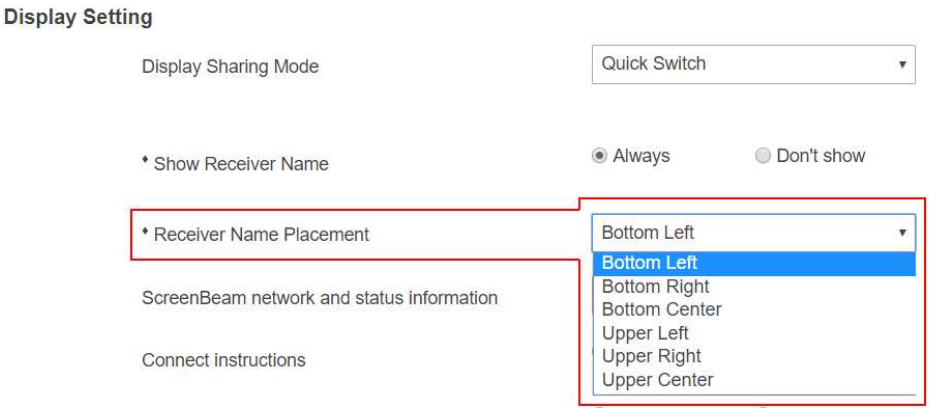
2. Go to the **Display Setting** section, and ensure that **Display Sharing Mode** is set to **Quick Switch** or **Multi-View**.
3. Set **Show Receiver Name** to **Always**.

   The **Show Receiver Name** feature provides two options, as shown below:

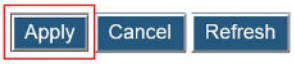
   - **Always**: The receiver's name will be displayed on the connected TV when an active connection session is present.
   - **Don't show**: The receiver's name will not be displayed on the connected TV when an active connection session is present.

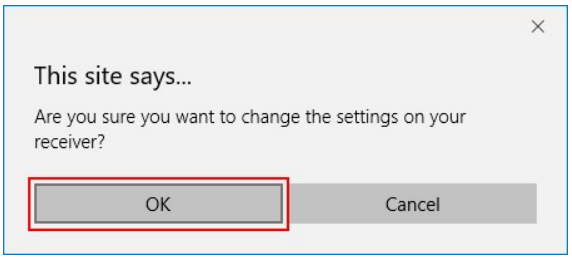
     Note: If this option is selected, the receiver name placement is not available.

4. Select an option from the **Receiver Name Placement** drop-down box.



5. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.

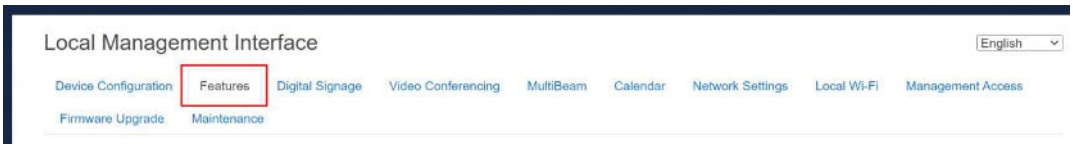




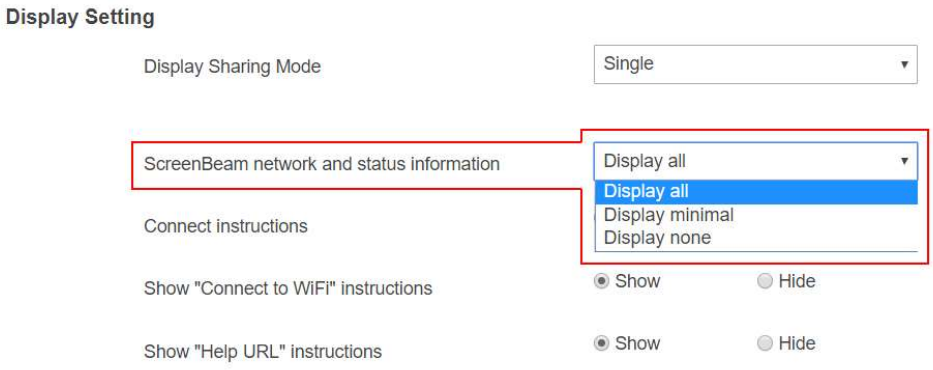
5.3.5.3 Setting up Information Display on Receiver's Idle Screen

To set up the receiver's information display on its idle screen, follow this procedure:

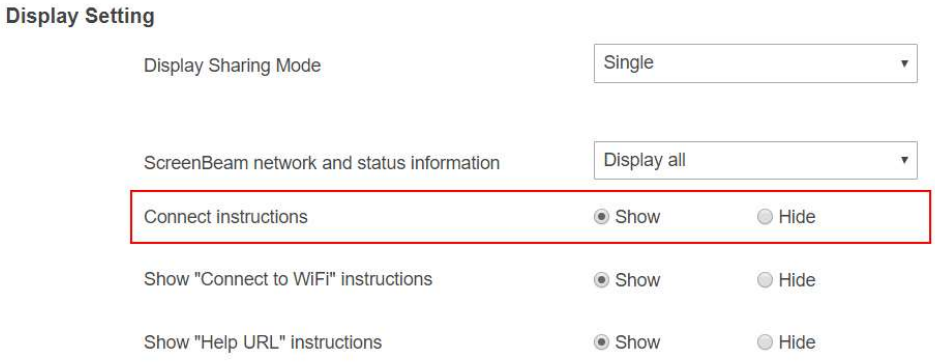
1. Go to the **Features** tab page by clicking the **Features** tab.



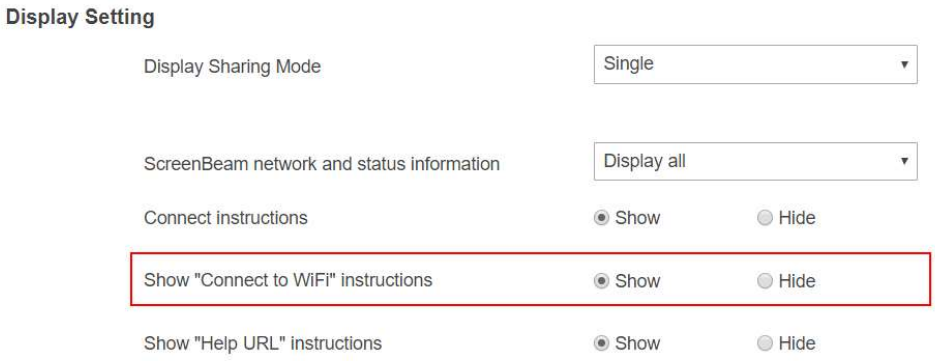
2. Go to the **Display Setting** section, and select a desired option from the **ScreenBeam network and status information** menu. Available options are: **Display all**, **Display minimal**, and **Display none**.
   - **Display all**: The receiver displays all network and status information on the connected display.
   - **Display minimal**: The receiver displays local Wi-Fi information on the connected display.
   - **Display none**: The receiver displays none of the network and status information on the connected display.



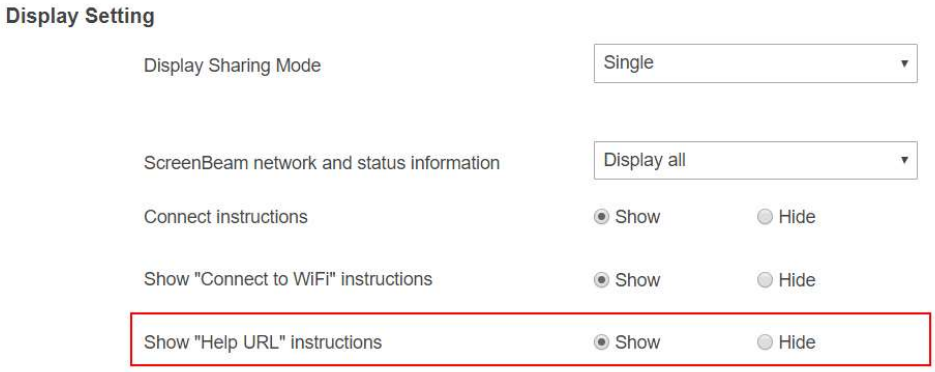
3. Set **Connection instructions** to **Show** or **Hide**.
   - **Show**: The Wi-Fi connection and receiver connection instructions will be displayed on the receiver's idle screen.
   - **Hide**: The Wi-Fi connection and receiver connection instructions will not be displayed on the receiver's idle screen.



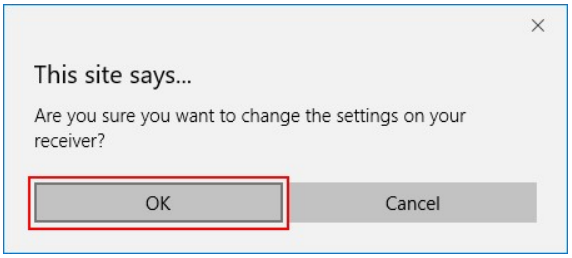
4. Set **Show "Connect to WiFi" instructions** to **Show** or **Hide**.
   - **Show**: The Wi-Fi connection instruction will be displayed on the receiver's idle screen.
   - **Hide**: The Wi-Fi connection instruction will not be displayed on the receiver's idle screen.



5. Set **Show "Help URL" instructions** to **Show** or **Hide**.
   - **Show**: The help URL info will be displayed on the receiver's idle screen.
   - **Hide**: The help URL info will not be displayed on the receiver's idle screen.



6. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.

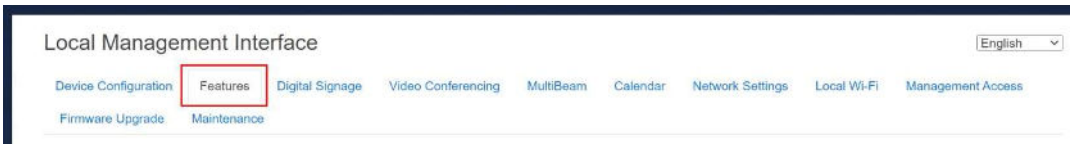


Here is an example after all these info are set to be hidden.

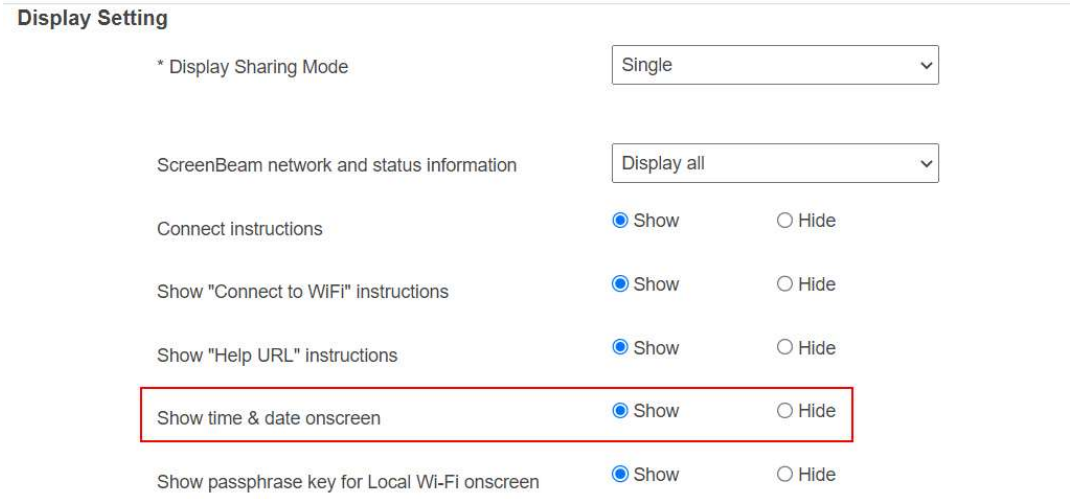
5.3.5.4 Setting up Date and Time Display on Receiver's Idle Screen

To set up date and time display on the receiver's idle screen, follow this procedure:

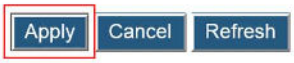
1. Go to the **Features** tab page by clicking the **Features** tab.

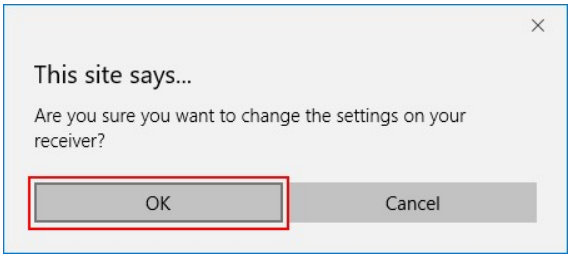


2. Go to the **Display Setting** section, and set **Show time & date onscreen** to **Show** or **Hide**.
   - **Show**: Date and time will be displayed on the receiver's idle screen.
   - **Hide**: Date and time will not be displayed on the receiver's idle screen.

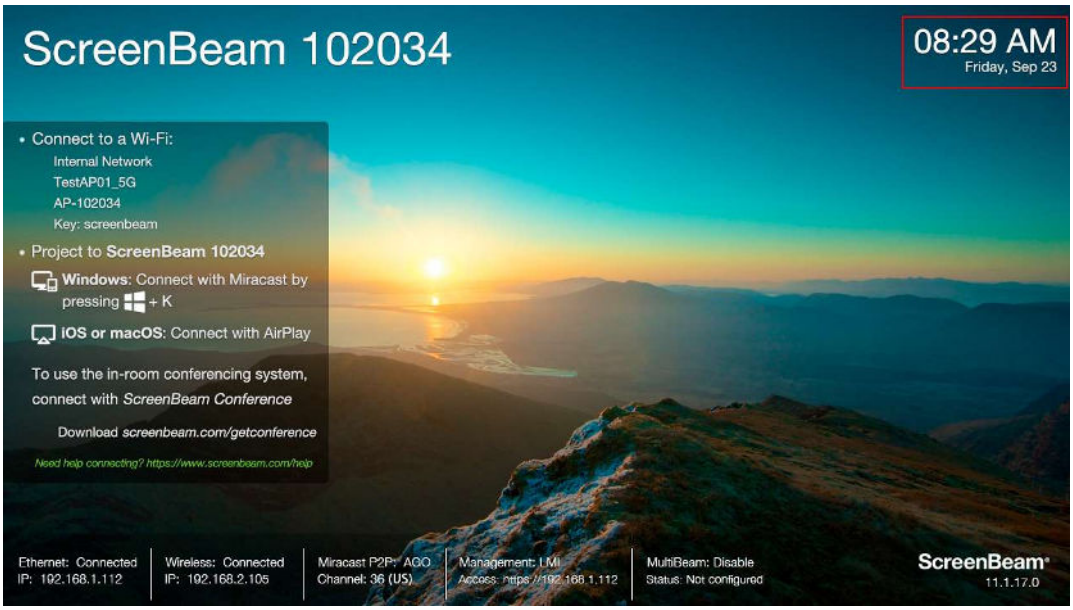


3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.





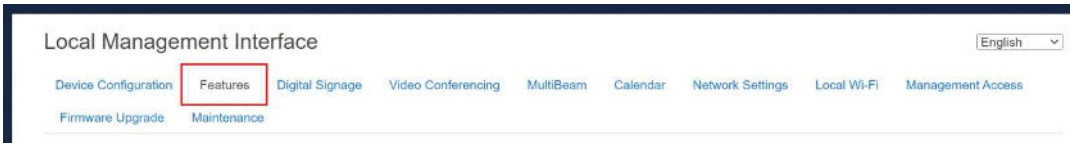
Time and date will be displayed on the receiver's idle screen if **Show time & date onscreen** is set to **Show**.



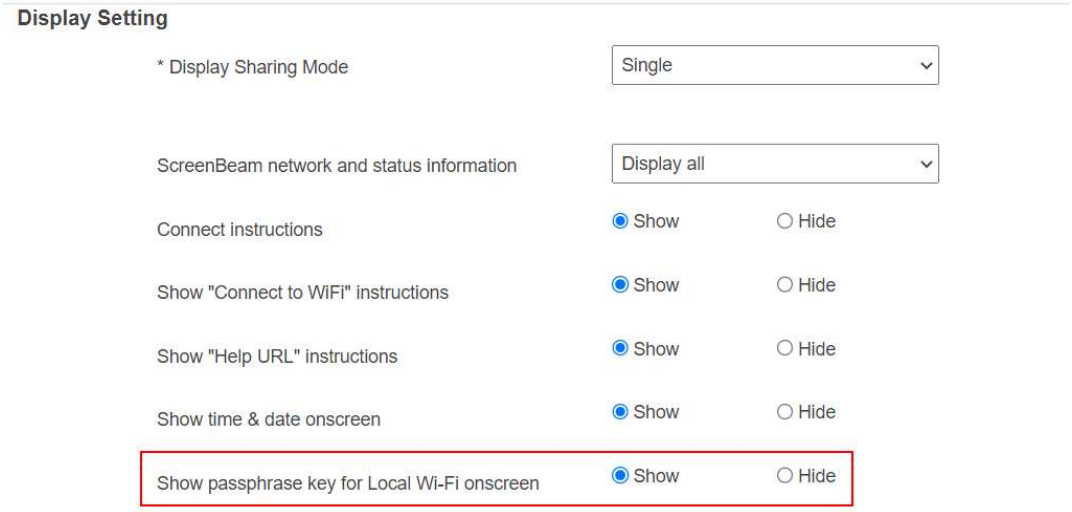
5.3.5.5 Setting up Local Wi-Fi Password Display on Receiver's Idle Screen

To show or hide password for Local Wi-Fi on the receiver's idle screen, follow this procedure:

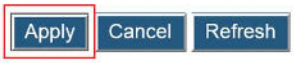
1. Go to the **Features** tab page by clicking the **Features** tab.

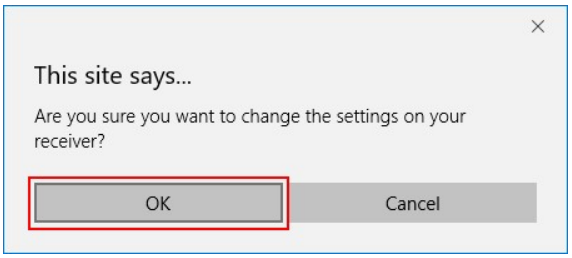


2. Go to the **Display Setting** section, and set **Show passphrase key for Local Wi-Fi onscreen** to **Show** or **Hide**.
   - **Show**: The password for the receiver's Local Wi-Fi will be displayed on the receiver's idle screen.
   - **Hide**: The password for the receiver's Local Wi-Fi will not be displayed on the receiver's idle screen.

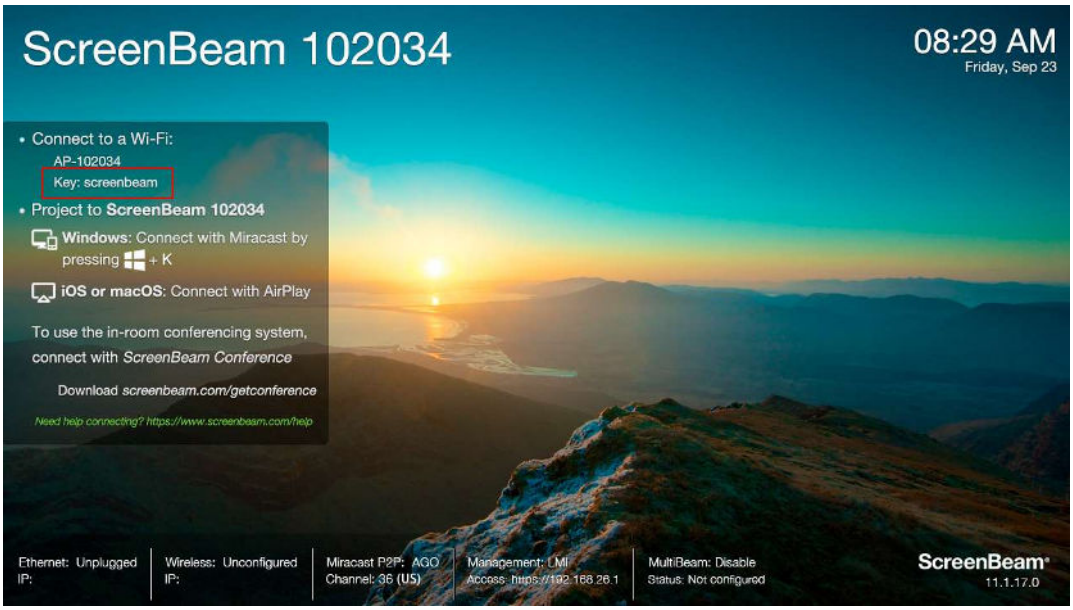


3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.





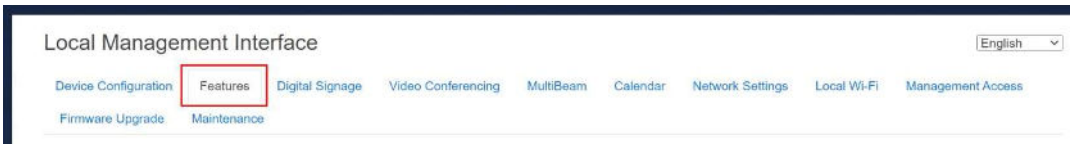
The password for the receiver's Local Wi-Fi will be displayed on the receiver's idle screen if **Show passphrase key for Local Wi-Fi onscreen** is set to **Show**.



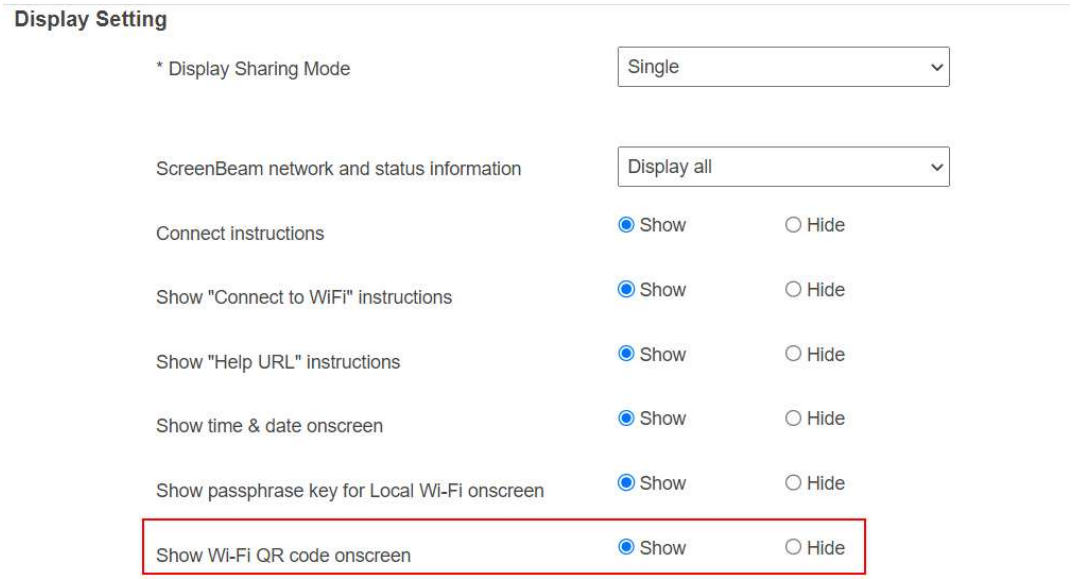
5.3.5.6 Setting up Wi-Fi QR Code Display on Receiver's Idle Screen

To show or hide Wi-Fi RQ code on the receiver's idle screen, follow this procedure:

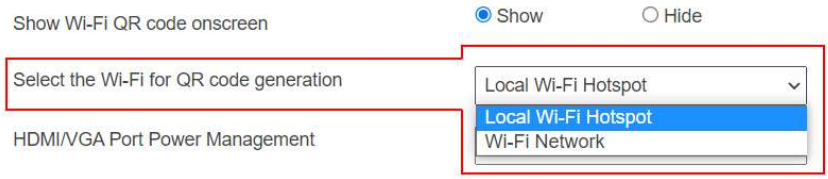
1. Go to the **Features** tab page by clicking the **Features** tab.



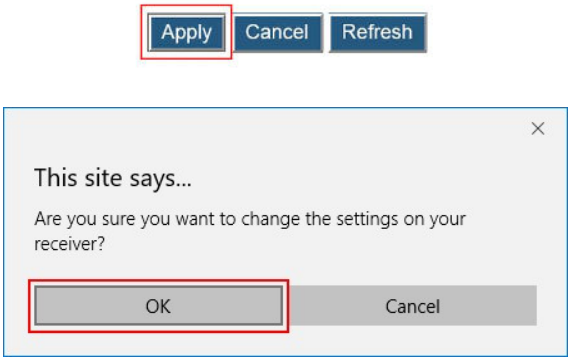
2. Go to the **Display Setting** section, and set **Show Wi-Fi QR code onscreen** to **Show** or **Hide**.
   - **Show**: The Wi-Fi QR code will be displayed on the receiver's idle screen.
   - **Hide**: The Wi-Fi QR code will not be displayed on the receiver's idle screen.



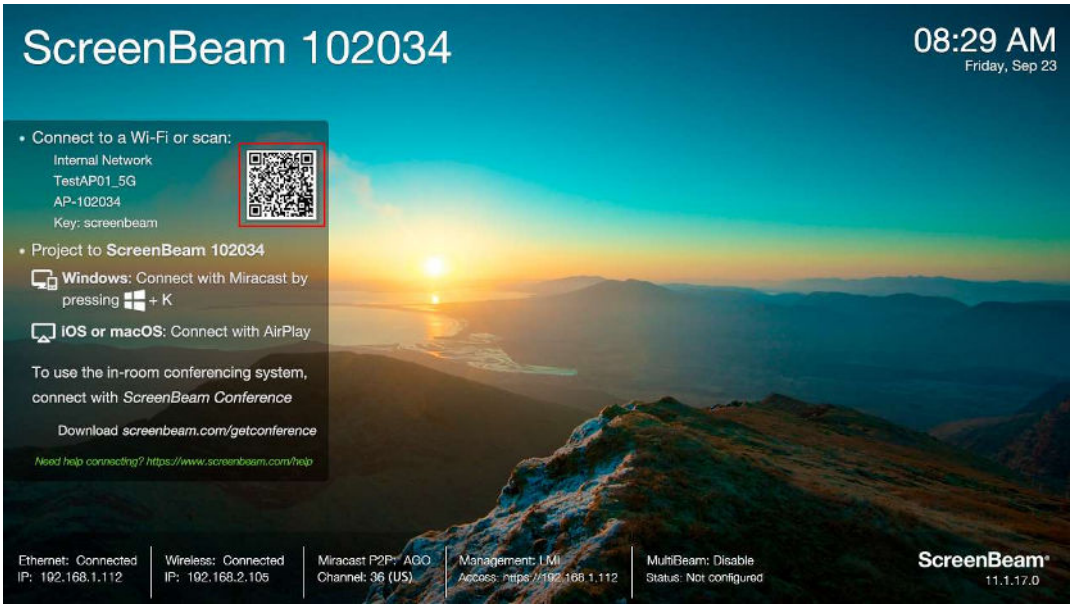
3. Select an option from the **Select the Wi-Fi for QR code generation** box: **Local Wi-Fi Hotspot** or **Wi-Fi Network**.
   - **Local Wi-Fi Hotspot**: The QR code for the receiver's Local Wi-Fi will be displayed.
   - **Wi-Fi Network**: The QR code for the Wi-Fi that the receiver has connected to will be displayed.



4. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.



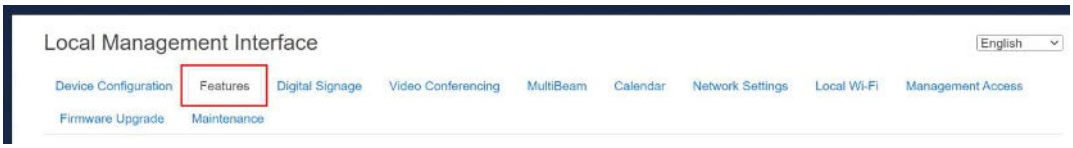
The QR code for the selected Wi-Fi will be displayed on the receiver's idle screen if **Show Wi-Fi QR code onscreen** is set to **Show**.



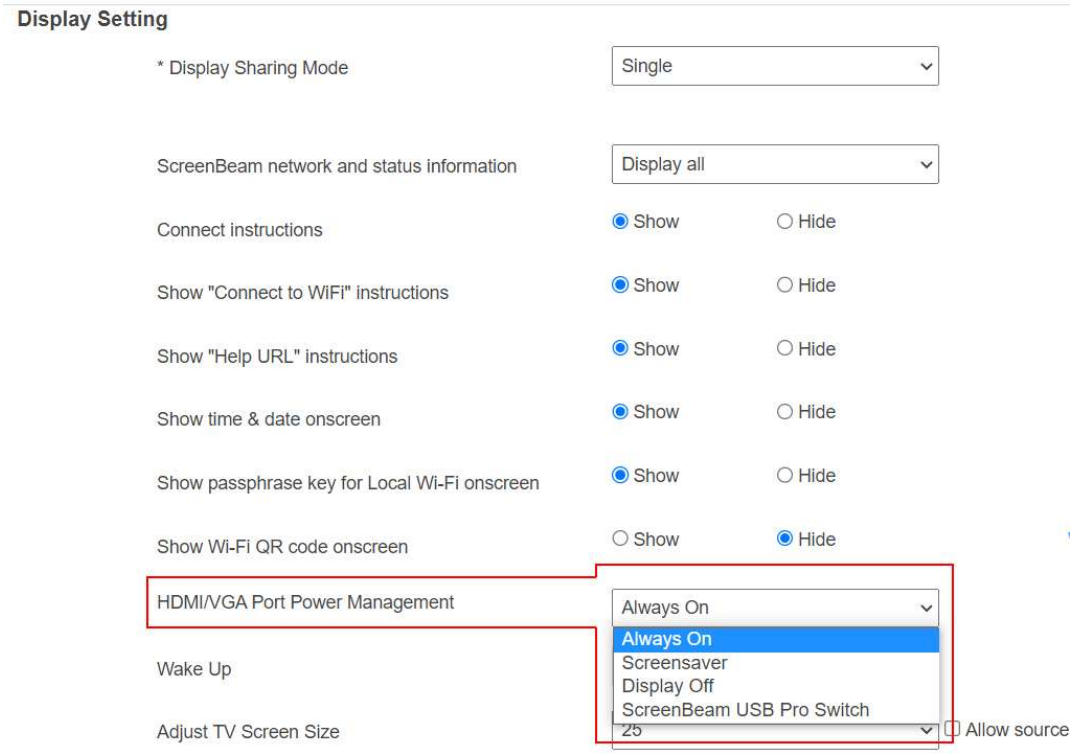
5.3.5.7 Managing HDMI® Port Output

To set up HDMI® port output, follow this procedure:

1. Go to the **Features** tab page by clicking the **Features** tab.



2. Go to the **Display Setting** section, and select a desired option in the **HDMI/VGA Port Power management** drop-down box. Available options are: **Always On**, **Screensaver**, and **Display Off**.

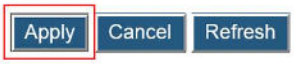


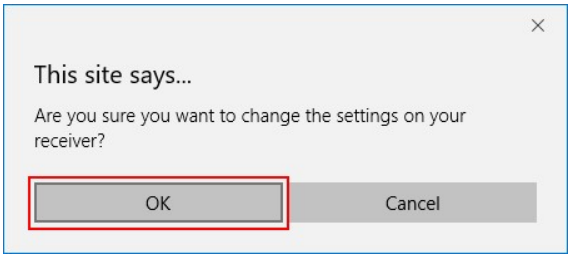
- **Always On**: Selecting this option, the HDMI® output is always on.
- **Screensaver**: Selecting this option, the system will run the screen saver after the defined idle time expires. Users can define the idle time (1-9999 seconds) in the **Wait** time box.

- **Display Off**: Selecting this option, the HDMI® output will be turned off after the defined idle time expires. Users can define the idle time (1-9999 seconds) in the wait time box.

- **ScreenBeam USB Pro Switch**: It is used to work with the ScreenBeam USB Pro Switch for integration with in-room conference equipment (such as in-room camera, in-room microphone and in-room speaker).

3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.



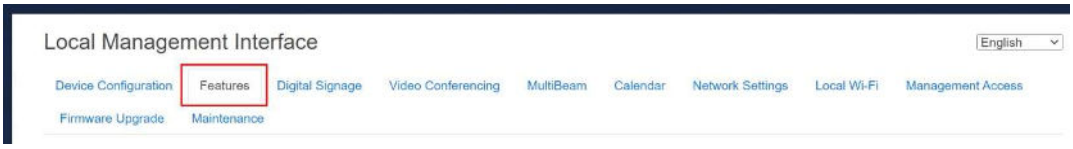


5.3.5.8 Waking up the Receiver

When the receiver runs screen saver or when its HDMI® port output is turned off, it can be waked up by any one of two events: scanning and connecting.
Note: The **Wake Up** feature is available when **HDMI/VGA Port Power management** is set to **Screensaver** or **Display Off**.

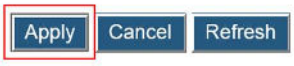
To set up the receiver's wakeup feature, follow this procedure:

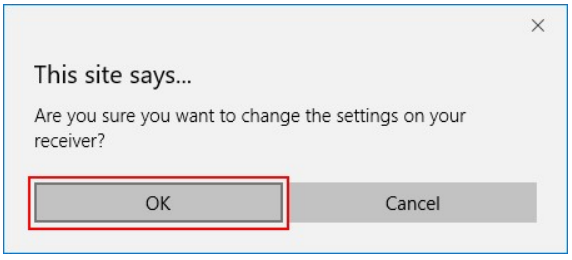
1. Go to the **Features** tab page by clicking the **Features** tab.



2. Go to the **Display Setting** section, and set the **Wake Up** feature to **On Scan** or **On Connect**.
   - **On Connect**: The receiver will wake up from sleep or screen saver only when a source device is connecting.
   - **On Scan**: The receiver will wake up from sleep or screen saver when it detects that a source device is scanning.

3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.

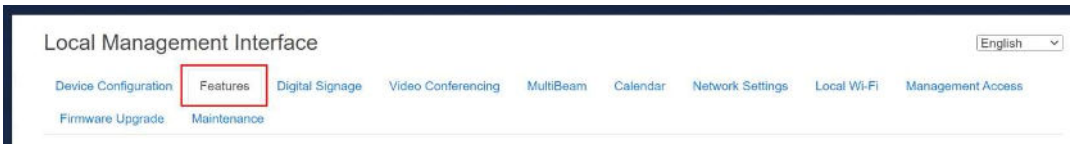




5.3.5.9 Adjusting TV Screen Size

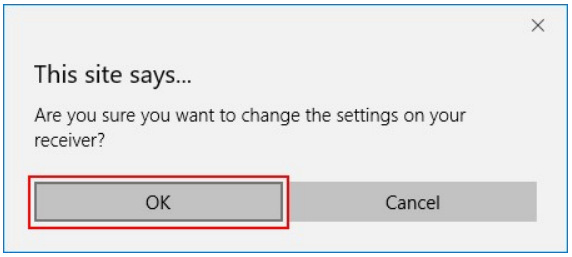
To adjust the size of your TV screen, follow this procedure:

1. Go to the **Features** tab page by clicking the **Features** tab.



2. Go to the **Display Setting** section, and select a desired option in the **Adjust TV Screen Size** drop-down box.
   - The value for TV screen size ranges from 0 to 25. The larger the value is, the bigger the screen will be.
   - **Allow source device to override overscan value**: When this option is enabled (checked), the overscan value is in consistence with the setting on the source device. Otherwise, the overscan value is in consistence with the setting on the receiver.

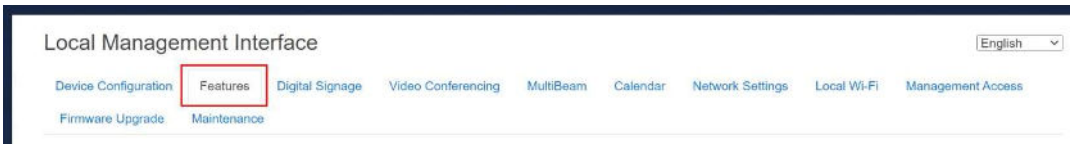
3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.



5.3.5.10 Setting up HDMI-CEC

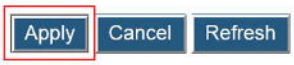
To set up the HDMI-CEC feature, follow this procedure:

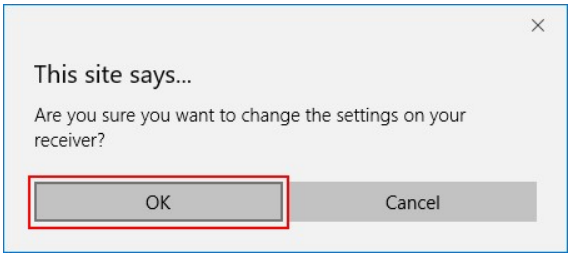
1. Go to the **Features** tab page by clicking the **Features** tab.



2. Go to the **Display Setting** section, and set the **HDMI-CEC** feature to **On** or **Off**.
   After this function is enabled, the receiver can wake up the connected display device and the display device will switch to the source that the receiver connects to.
   Note: The display device must support HDMI-CEC and this feature is turned on.
   The display device will be waked up in one of the following conditions:
   - when the receiver is powered on;
   - when a connection to the receiver is established; and
   - when a power-on receiver is connected to the display device.

3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.

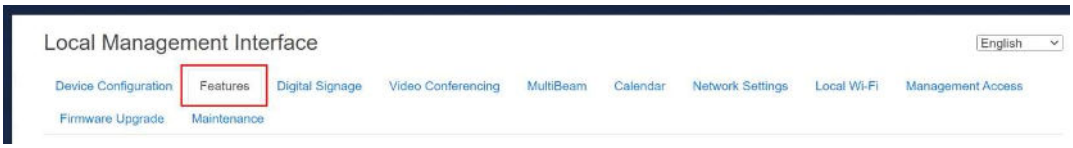




5.3.5.11 Updating the Receiver's Background Image

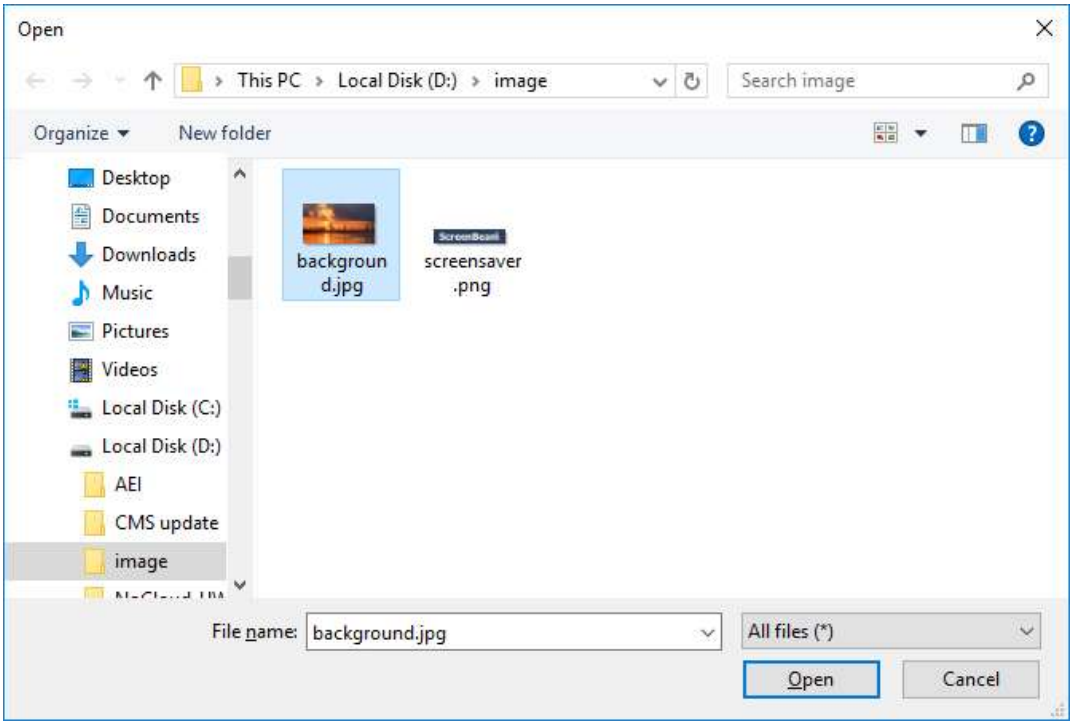
To update the receiver's background, follow this procedure:

1. Go to the **Features** tab page by clicking the **Features** tab.

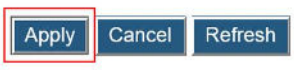


2. Go to the **Display Setting** section, and click the **Browse** button next to the **Background Image** box.

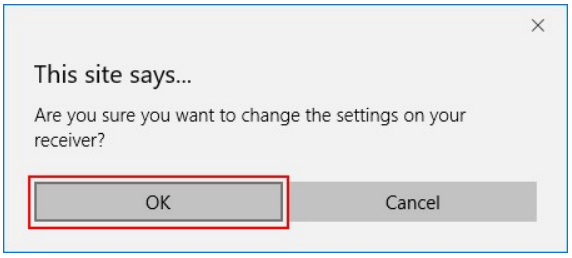
3. The **Open** window appears. Select an image for the background and click the **Open** button to confirm.
   - The images must be in .png and .jpeg/.jpg formats.
   - The file size must not exceed 2.5 MB.
   - The best image size is 1280*720 pixels (width x height).



4. Click the **Apply** button to upload the background image to the receiver.



5. A confirmation message appears. Click **OK** to continue.

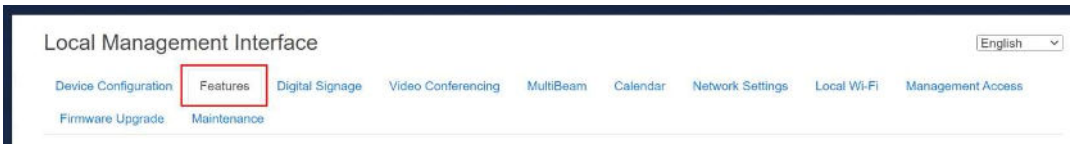


6. After a while, the background image will be updated. You can check it on the connected display.

5.3.5.12 Updating the Receiver's Screen Saver Image

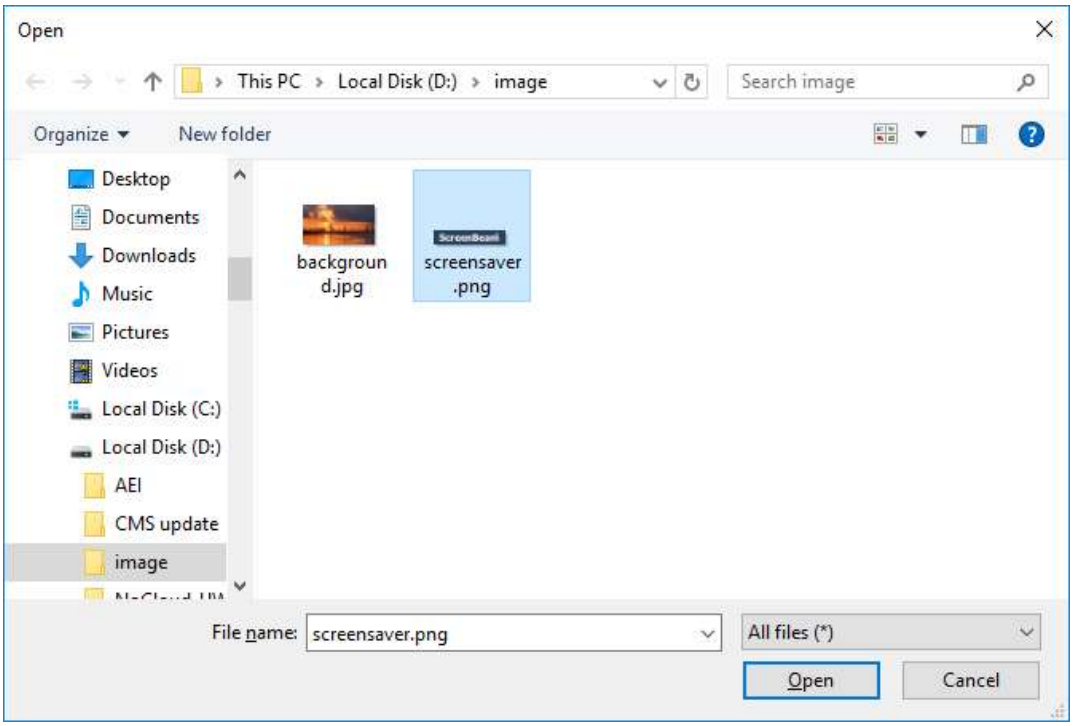
To update the receiver's screen saver, follow this procedure:

1. Go to the **Features** tab page by clicking the **Features** tab.



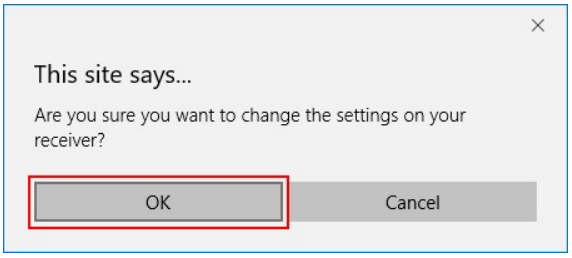
2. Go to the **Display Setting** section, and click the **Browse** button next to the **Screen Saver Image** box.

3. The **Open** window appears. Select an image for the screen saver and click the **Open** button to confirm.
   - The image must be in .png format.
   - The file size must not exceed 200 KB.
   - The best image size is 300*60 pixels.



4. Click the **Apply** button to upload the screen saver image to the receiver.

5. A confirmation message appears. Click **OK** to continue.



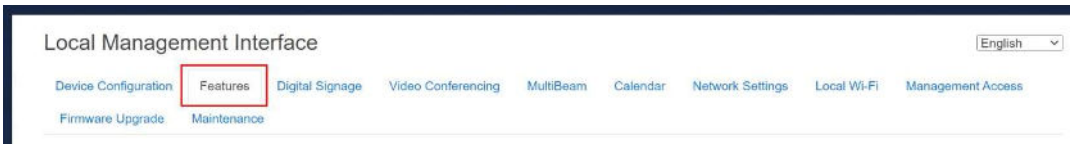
6. After a while, the screen saver image will be updated. You can check it on the connected display when the screen saver is running.

5.3.6 Digital Signage Settings

ScreenBeam receiver's Digital Signage mode can turn your display into a digital signage player.

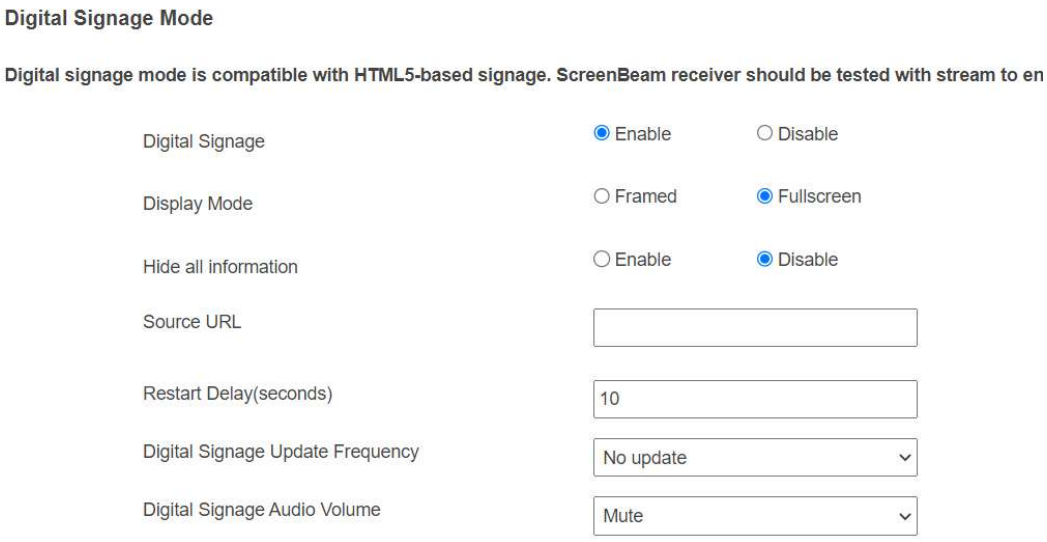
To set up the receiver's digital signage mode, follow this procedure:

1. Go to the **Digital Signage** tab page by clicking the **Digital Signage** tab.

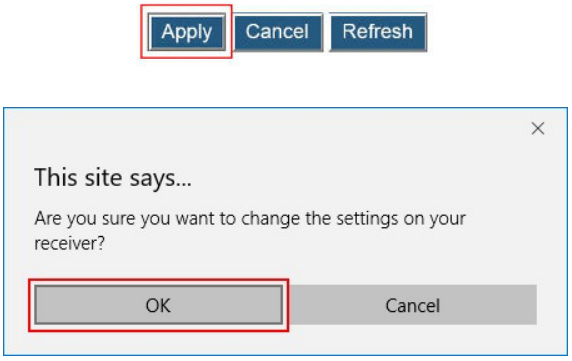


2. Properly configure the Digital Signage options.
   - **Digital Signage**: Selecting **Enable** will turn the digital signage feature on, while selecting **Disable** will turn this feature off.
   - **Display Mode**: Selecting **Framed** will display the signage in a framed window, together with other information such as Internet access connection, wireless display instruction, and receiver name, while selecting **Fullscreen** will display the signage in full screen, together with only the receiver name.
   - **Hide all information**: Receiver information will be hidden when **Enable** is selected; Receiver information will show when **Disable** is selected.
   - **Source URL**: The URL of the source content.
     The digital signage supports content delivered using HTML5/CSS/JavaScript with the following features:
     - Chromium engine only (latest available in Android)
     - H.264 video up to 4096x2160/3840x2160 @ 30fps
     - Audio: MP3, AAC-LC, HE-AAC v1/v2
     - Static images: JPG, PNG, GIF
     - WebGL

     All content shall be tested for viewability in Android Webview by users to validate its suitability.
   - **Restart Delay** (seconds): It is the delay time to restart the signage playback after a wireless display connection ends or after the receiver is restarted. The delay time range is 10-1000 seconds.
   - **Digital Signage Update Frequency**: It sets the frequency for the receiver to reload contents from the Source URL. Available options are **No update**, **5 minutes**, and **24 hours**.
   - **Digital Signage Audio Volume**: It is used to control audio volume for digital signage playback. Currently, available options are **Mute**, **Low**, **Medium**, and **High**.



3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.



5.3.7 Network Settings

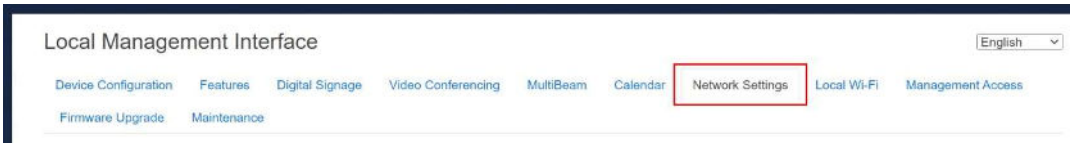
This section introduces settings about network connection, such as local Wi-Fi networking mode, CMS interface/Internet WAN interface assignment, connection and TCP/IP settings for Ethernet/Wireless interface, etc.

5.3.7.1 Setting up Local Wi-Fi Network Mode

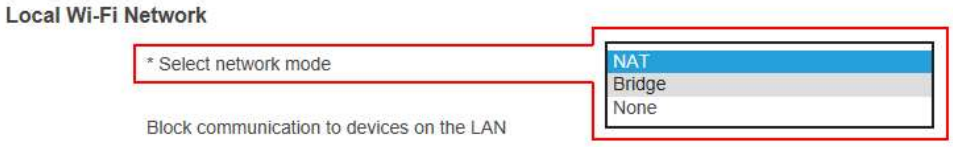
The receiver provides a local Wi-Fi network for wireless display over LAN and receiver management. This network can be routed to an external network through the receiver's Ethernet or wireless interface so that the device that connects to the local Wi-Fi can have access to the Internet.

To set up the receiver's local Wi-Fi network mode, follow this procedure:

1. Go to the **Network Settings** tab page by clicking the **Network Settings** tab.



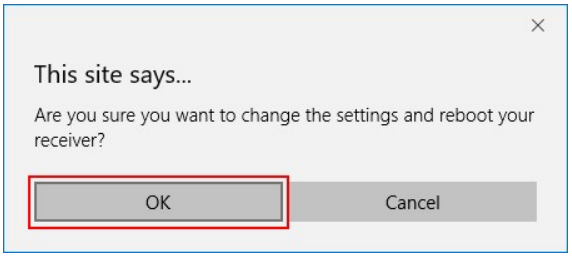
2. Go to the **Local Wi-Fi Network** section, and select an option from the **Select Network Mode** box. There are three options available: **NAT**, **Bridge**, and **None**.
   - **NAT**: The receiver's local Wi-Fi network is routed to the network where the Ethernet or wireless interface connects by NAT method.
   - **Bridge**: The receiver's local Wi-Fi network is routed to the network where the Ethernet or wireless interface connects by Bridge method.
   - **None**: The receiver's local Wi-Fi network is not routed to the network where the Ethernet or wireless interface connects.



3. Set **Block communication to devices on the LAN** to **Enable** or **Disable**. By default, this feature is set to **Disable**.
   - **Enable**: Communication to the devices that connect to the receiver's local Wi-Fi is blocked, which means these devices that connect to the receiver's local Wi-Fi can't see or talk to the devices that connect to the AP that the receiver connects to.
   - **Disable**: Communication to the devices that connect to the receiver's local Wi-Fi is not blocked, which means these devices that connect to the receiver's local Wi-Fi can see or talk to the devices that connect to the AP that the receiver connects to.

   Note: This feature is available when the network mode is set to NAT.

4. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.

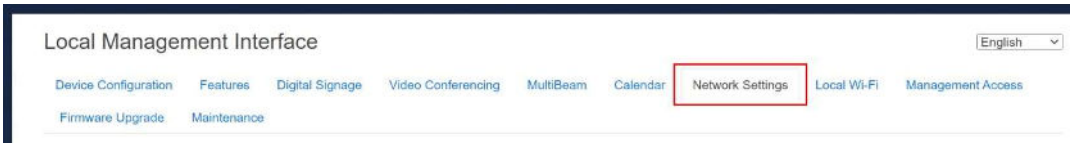


5.3.7.2 Setting up an Interface for CMS Connection

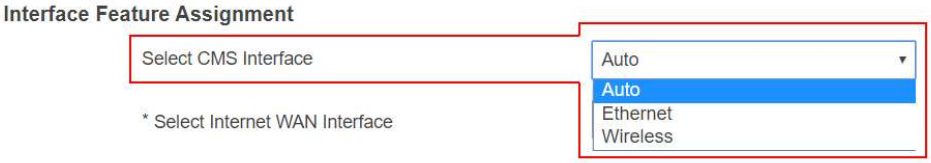
ScreenBeam 1100 Plus allows customizing an interface for connecting to CMS.

To define an interface for connecting to CMS, follow this procedure:

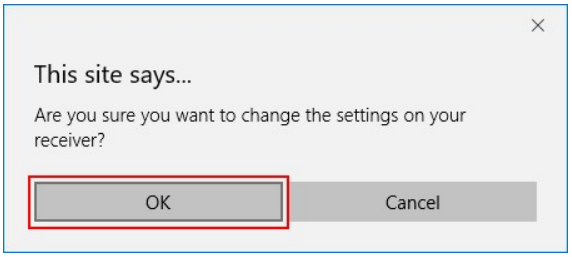
1. Go to the **Network Settings** tab page by clicking the **Network Settings** tab.



2. Go to the **Interface Feature Assignment** section, and select an option from the **Select Internet CMS Interface** box. Available options include: **Auto**, **Ethernet**, and **Wireless**.
   - **Auto**: The receiver will automatically select an interface to connect to CMS.
   - **Ethernet**: The receiver will connect to CMS using the Ethernet interface only.
   - **Wireless**: The receiver will connect to CMS using the wireless interface only



3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.

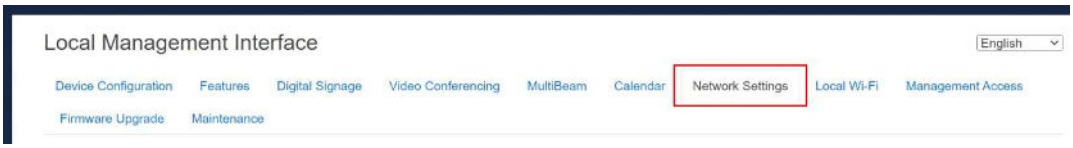


5.3.7.3 Setting up an Internet WAN Interface

The receiver's Local Wi-Fi can be routed to the receiver's wired or wireless interface for Internet access.

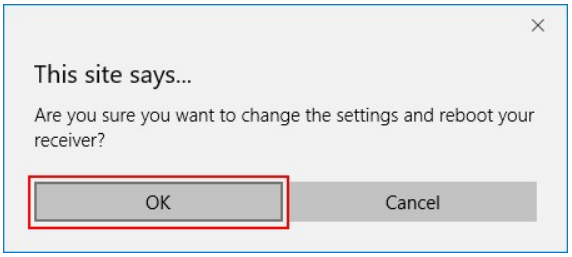
To define an interface for connecting to Internet, follow this procedure:

1. Go to the **Network Settings** tab page by clicking the **Network Settings** tab.



2. Go to the **Interface Feature Assignment** section, and select an option from the **Select Internet WAN Interface** box. There are two options available: **Ethernet** and **Wireless**.
   - **Ethernet**: The receiver routes its local Wi-Fi to the Ethernet interface for Internet access.
   - **Wireless**: The receiver routes its local Wi-Fi to the wireless interface for Internet access.

3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.

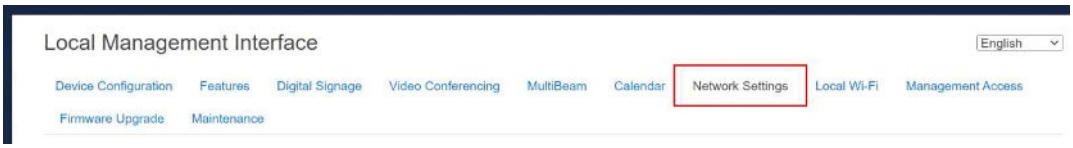


5.3.7.4 Renaming Ethernet Interface's Network Name

Ethernet interface's network name can remind users which Ethernet network the receiver is connecting to.

To rename the Ethernet interface's network name, follow this procedure:

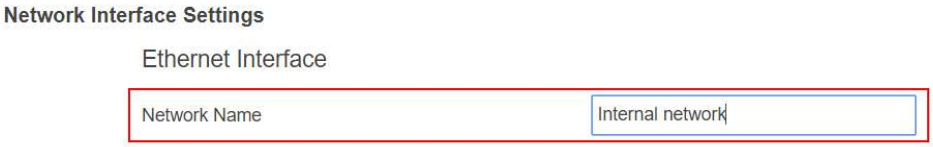
1. Go to the **Network Settings** tab page by clicking the **Network Settings** tab.



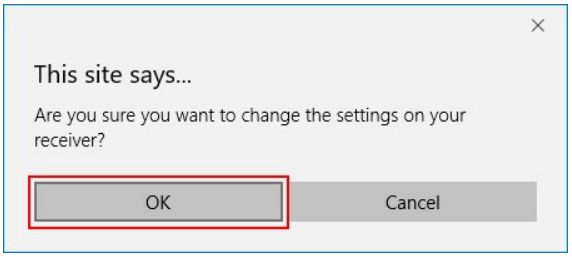
2. Go to **Network Interface Settings** > **Ethernet Interface**, and rename the **Network Name**.

   The supported characters for the network name include: A-Z, a-z, 0-9, and _-

   The length of the network name should be 1-16 characters.



3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.

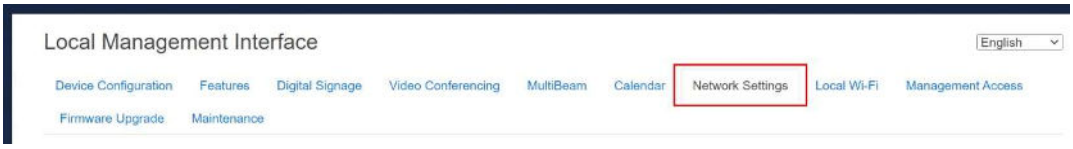


5.3.7.5 Setting up the Receiver's IP Address

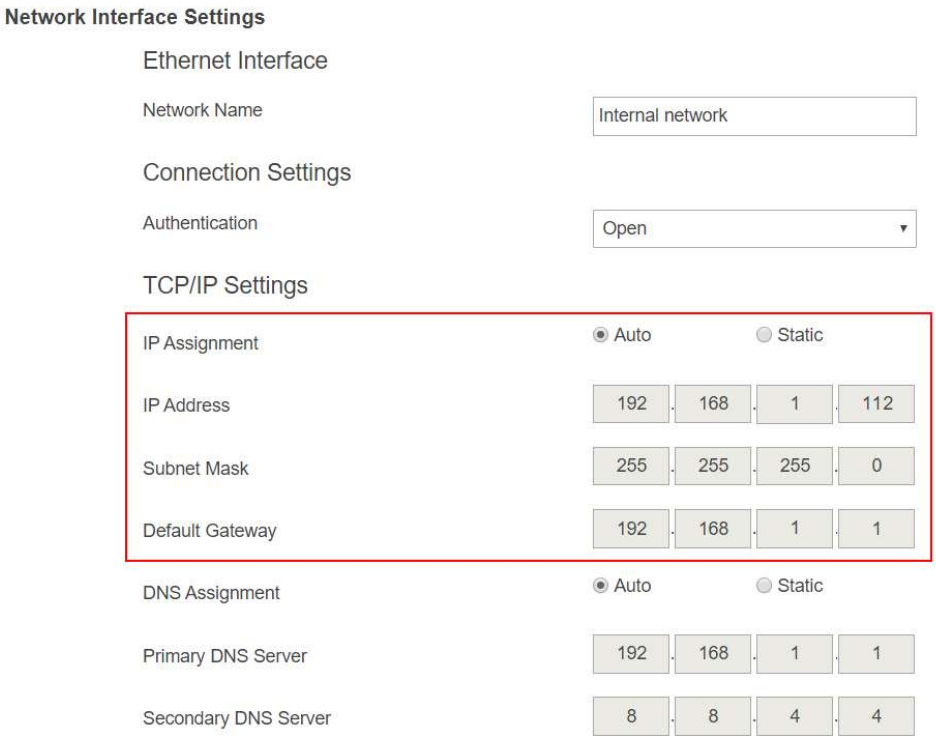
The receiver provides both Ethernet and wireless interfaces for connecting to networks. Separate IP configuration is required for these interfaces. By default, the receiver is set to obtain an IP address automatically. Make sure a DHCP server is available on your network. IP configuration procedures for the Ethernet and the wireless interfaces are same.

To set up the receiver's IP address, follow this procedure:

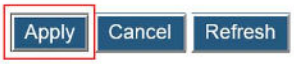
1. Go to the **Network Settings** tab page by clicking the **Network Settings** tab.

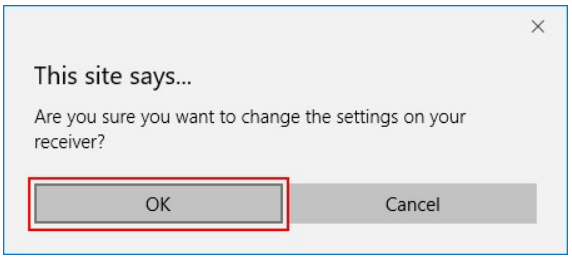


2. Go to **Network Interface Settings** > **TCP/IP Setting**, and set **IP Assignment** to **Auto** or **Static**.
   - **Auto**: The receiver will be assigned an IP address by the DHCP server.
   - **Static**: Users are allowed to define the IP address, subnet mask, and default gateway for the receiver.



3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.



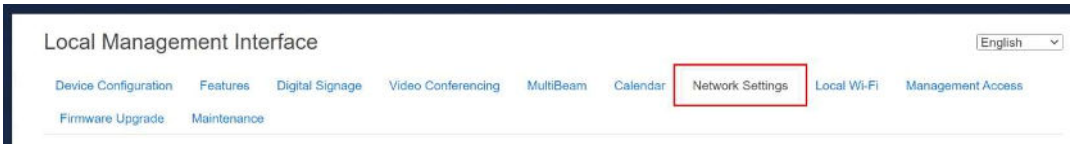


5.3.7.6 Specifying a DNS Server for the Receiver

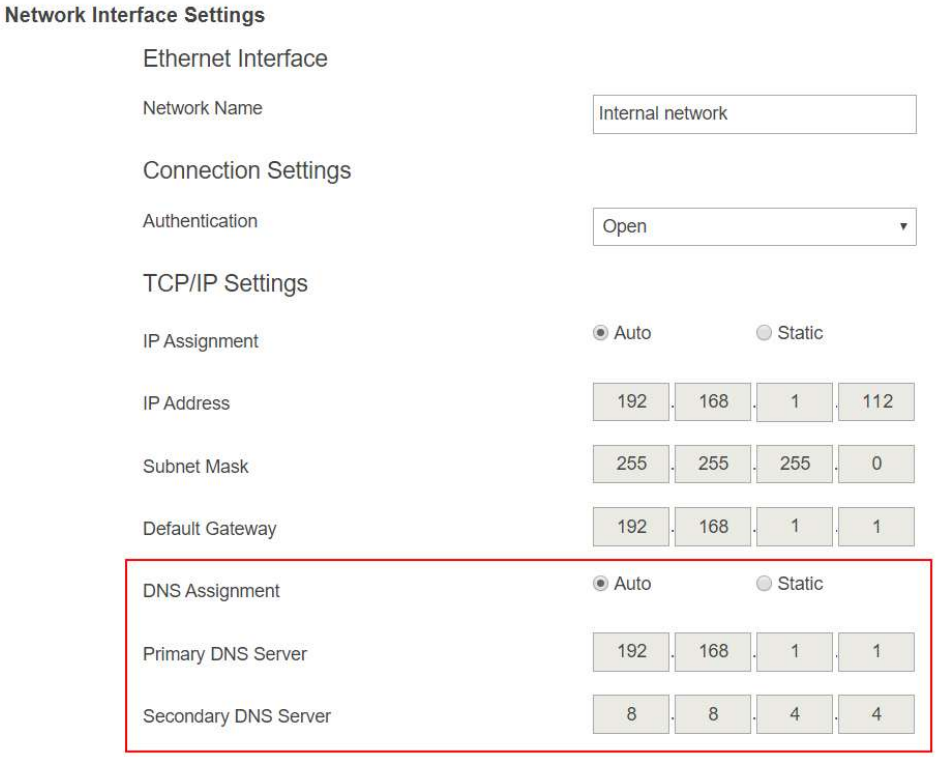
The receiver provides both Ethernet and wireless interfaces for connecting to networks. Separate DNS configuration is required for these interfaces. By default, the receiver is set to obtain DNS configuration automatically.
DNS configuration procedures for the Ethernet and the wireless interfaces are same.

To specify a DNS server for the receiver, follow this procedure:

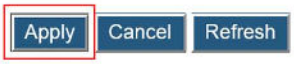
1. Go to the **Network Settings** tab page by clicking the **Network Settings** tab.

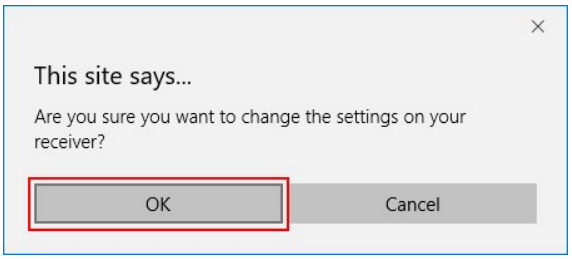


2. Go to **Network Interface Settings** > **TCP/IP Setting**, and set **DNS Assignment** to **Auto** or **Static**.
   - **Auto**: The receiver will be assigned a DNS server automatically.
   - **Static**: Users are allowed to define a DNS server for the receiver. If **Static** is selected, a DNS server must be defined.



3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.



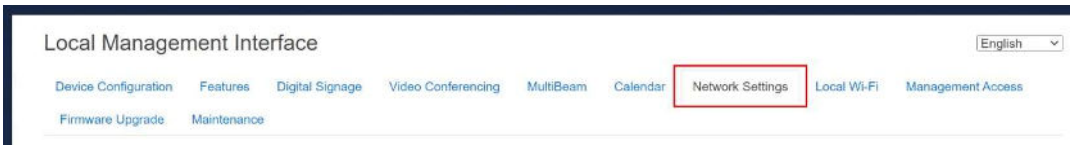


5.3.7.7 Setting up VLAN Tagging

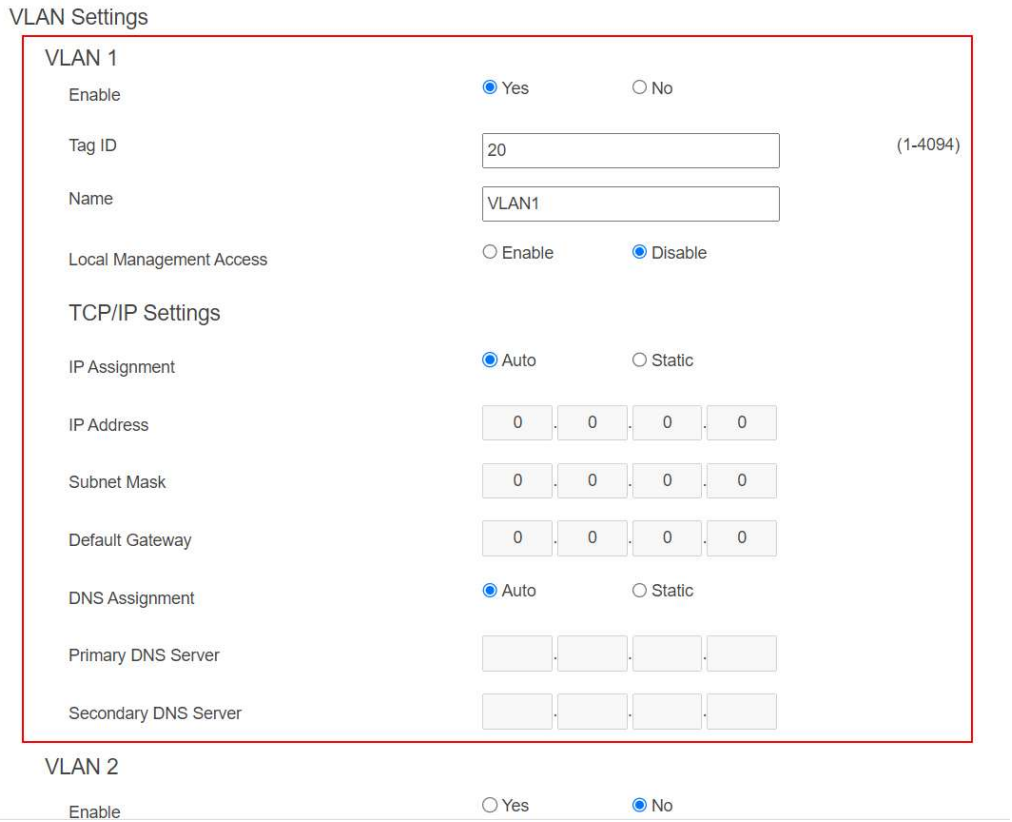
The ScreenBeam receiver provides VLAN integration of up to three VLANs.
The ScreenBeam receiver must be deployed to be connected to a trunk port on the switch, and this trunk port must be configured to allow pass for the VLANs where source devices will wireless-display to the receiver.

To set up VLAN tagging for the receiver, follow this procedure:

1. Ensure that VLANs are properly configured and VLAN IDs are available.
2. Ensure that a trunk port that allows these to-be-configured VLANs to pass is configured on the switch.
3. Go to the **Network Settings** tab page by clicking the **Network Settings** tab.



4. Go to **Network Interface Settings** > **VLAN Settings**, and set **Enable** to **Yes** for **VLAN1/VLAN2/VLAN3**.

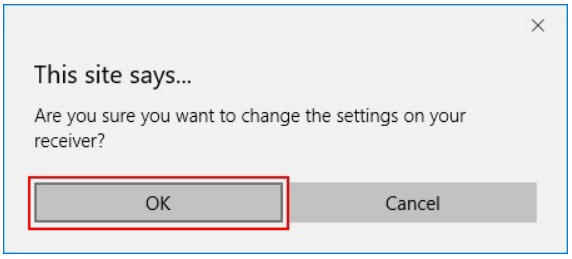


- **Yes**: The VLAN is enabled.
  - **Tag ID**: It is the ID (or number) of the VLAN. This VLAN must be configured to allow-pass for the Trunk port where the receiver is connected. The range is 1 to 4094.

- **Name**: It is the description for this VLAN.
- **Local Management Access**: LMI access is allowed for the devices that are connected to this VLAN when this setting is set to **Enable**; LMI access is NOT allowed for the devices that are connected to this VLAN when this setting is set to **Disable**.
- **IP Assignment**: Refer to Section **5.3.7.5 Setting up the Receiver's IP Address** for details. IP settings for the VLAN follow common IP configuration principles.
- **DNS Assignment**: Refer to Section **5.3.7.6 Specifying a DNS Server for the Receiver** for details. DNS settings for the VLAN follow common DNS configuration principles.

- **No**: The VLAN is disabled.

5. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.

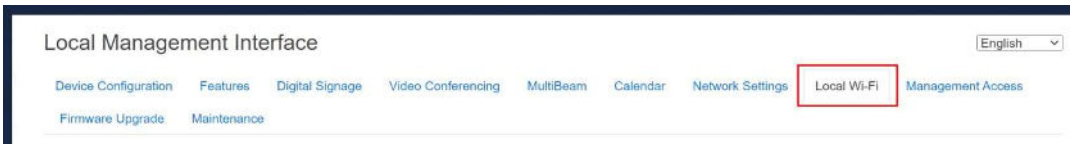


6. Deploy the ScreenBeam receiver in place and connect the Ethernet port on the receiver to the trunk port on the switch.

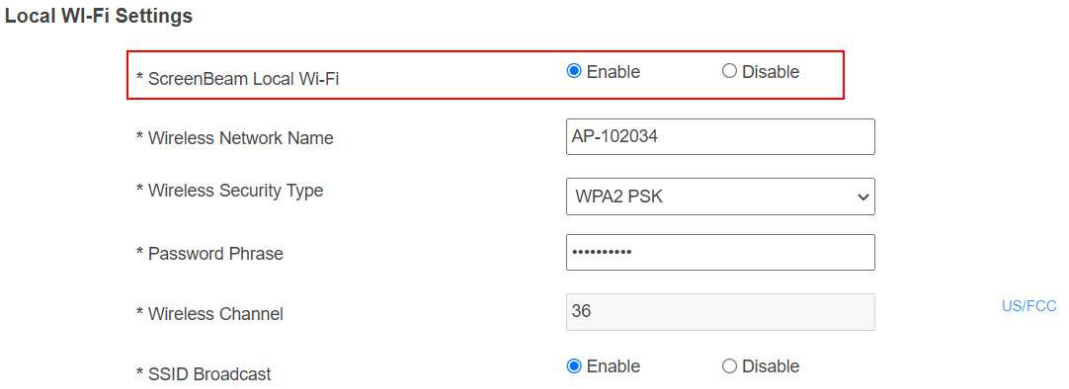
5.3.8 Local Wi-Fi Settings

ScreenBeam 1100 Plus provides a local Wi-Fi network for wireless display over LAN (such as Windows 10/11 Infracast, Apple AirPlay, and Google Cast) and receiver management.
To set up the receiver's local Wi-Fi, follow this procedure:

1. Go to the **Local Wi-Fi** tab page by clicking the **Local Wi-Fi** tab.

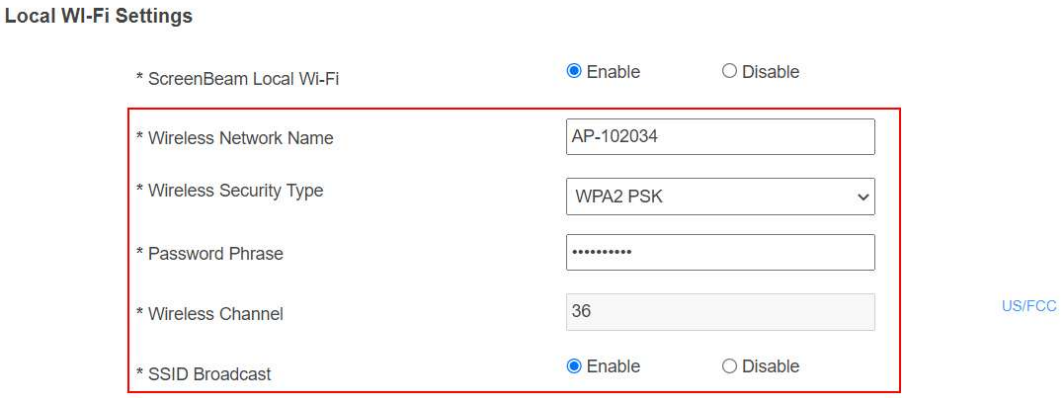


2. Go to the **Local Wi-Fi Settings** section, and set **ScreenBeam Local Wi-Fi** to **Enable** or **Disable**.
   - **Enable**: The receiver's local Wi-Fi is turned on.
   - **Disable**: The receiver's local Wi-Fi is turned off.

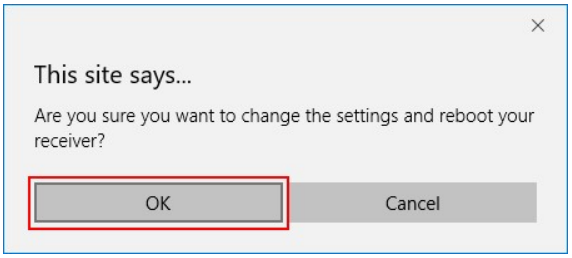


3. When the receiver's local Wi-Fi feature is enabled, configure the Wireless Network Name, Wireless Security Type, Password Phrase, Wireless Channel, and SSID Broadcast.
   - **Wireless Network Name**: It is the network name of the receiver's local Wi-Fi. This network name can be detected on a Wi-Fi (5 GHz) enabled device if the local Wi-Fi is enabled.
     Note: The Wireless Network Name supports all characters except <>, and the length should be 1-32 characters.
   - **Wireless Security Type**: It is the security verification method for connection to the Wi-Fi.
   - **Password Phrase**: It is the password for connecting to the Wi-Fi. The default password is **screenbeam**.
     Note: The Password Phrase supports these characters: a-z, A-Z, 0-9, and ~`!@#$%^&*()-_, and the length should be 8-63 characters.
   - **Wireless Channel**: It is the wireless channel used for the Wi-Fi connection. This channel is associated with the P2P operating channel. Refer to Section **5.3.3.2 Setting up P2P Operating Channel** for details.
   - **SSID Broadcast**: The SSID of the receiver's Local Wi-Fi will be broadcasted when this setting is enabled; the SSID of the receiver's Local Wi-Fi will be not

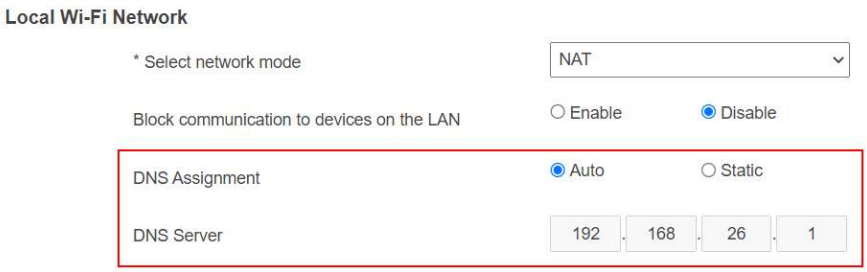
broadcasted when this setting is disabled. If SSID Broadcast is disabled, you need to manually connect your device to the receiver's Local Wi-Fi.



4. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.



To specify a DNS server for the Local Wi-Fi, go to the **Network Settings** tab page, and then go to **Local Wi-Fi Network** > **DNS Assignment**. Select **Auto** and click **Apply**; or select **Static** and enter a desired DNS server address and click **Apply**.



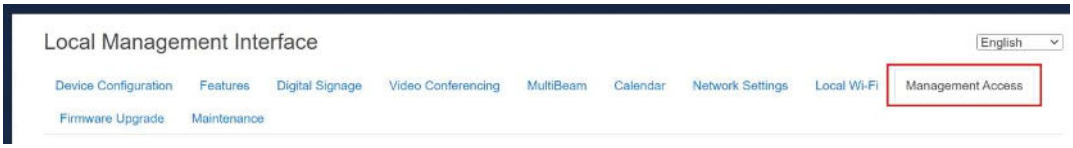
5.3.9 Receiver Management Access Settings

This section introduces settings for receiver management.

5.3.9.1 Specifying ScreenBeam CMS for the Receiver

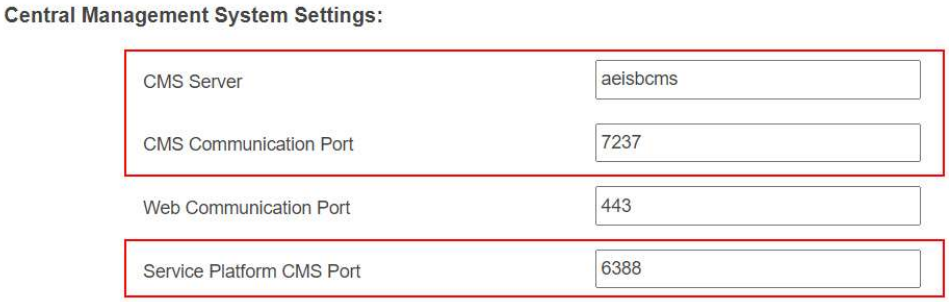
To specify a CMS server for the receiver, follow this procedure:

1. Go to the **Management Access** tab page by clicking the **Management Access** tab.

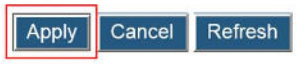


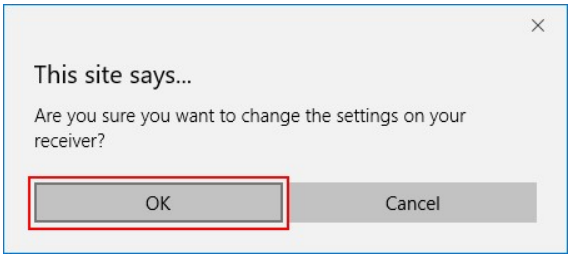
2. Go to the **Central Management System Settings** section, and define the **CMS Server**, the **CMS Communication Port**, and the **Service Platform CMS Port**.

- **CMS Server**: It is the IP address or the FQDN/hostname/domain name/alias name (if a DNS server and a DHCP server are properly configured) of the server that hosts the ScreenBeam CMS. It supports a domain with six labels at most.
  Note: It is recommended to use DNS configuration for CMS Server.
- **CMS Communication Port**: It is the communication port between a ScreenBeam receiver and the ScreenBeam CMS. The port range is from 5000 to 65535. By default, 7237 is used.
- **Service Platform CMS Port**: It is the communication port between a ScreenBeam receiver and the Service Platform CMS (SPCMS). The port range is from 5000 to 65535. By default, 6388 is used. It is reserved for use with ScreenBeam CMSE 4.3.10.13 or older.



3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.

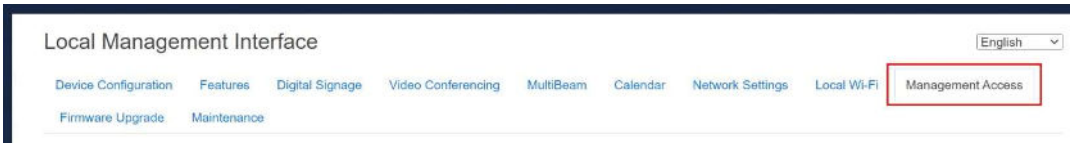




5.3.9.2 Specifying a Port for the Receiver's LMI

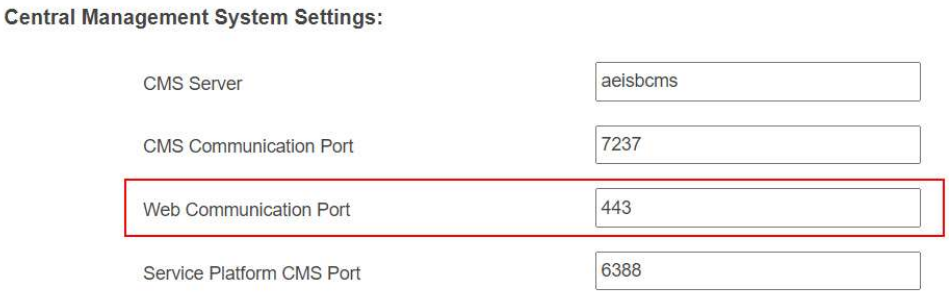
To specify a communication port for the receiver's local management interface, follow this procedure:

1. Go to the **Management Access** tab page by clicking the **Management Access** tab.

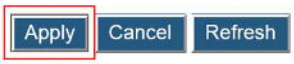


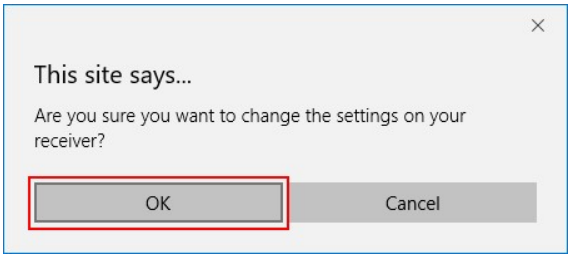
2. Go to the **Central Management System Settings** section, and define a port for **Web Communication Port**.

- **Web Communication Port**: It is the communication port for the receiver's Local Management Interface. The port range is from 5000 to 65535 (except 5555). By default, port 443 is used.



3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.

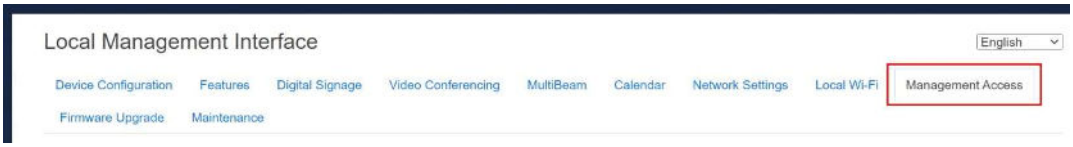




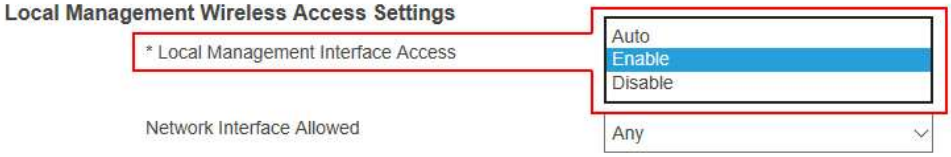
5.3.9.3 Setting up Local Management Interface Access

The receiver's Local Management Interface (LMI) is used to manage the receiver locally. To set up the receiver's LMI access, follow this procedure:

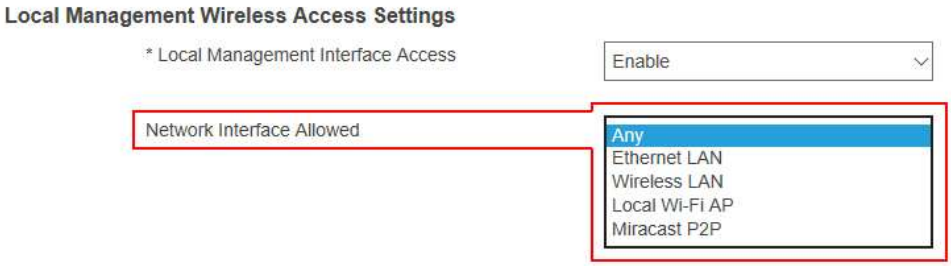
1. Go to the **Management Access** tab page by clicking the **Management Access** tab.



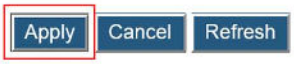
2. Go to the **Local Management Interface Access Settings** section, and select an option from the **Local Management Interface Access** box. There are three options available: **Auto**, **Enable**, and **Disable**.
   - **Auto**: The accessibility to the receiver's LMI depends on the availability of the CMS connection. When the receiver is connected to CMS, access to the receiver's LMI is disabled automatically; otherwise, access is enabled.
   - **Enable**: Access to the receiver's LMI is enabled no matter the receiver is connected to CMS or not.
   - **Disable**: Access to the receiver's LMI is not allowed.

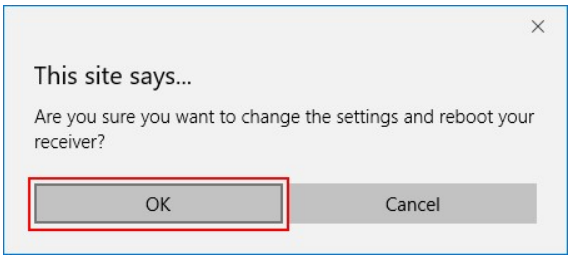


3. Select an option from the **Network Interface Allowed** box.
   - **Any**: Access to the receiver's LMI is allowed on any network interface.
   - **Ethernet LAN**: Access to the receiver's LMI is limited to the receiver's Ethernet interface.
   - **Wireless LAN**: Access to the receiver's LMI is limited to the receiver's Wireless interface.
   - **Local Wi-Fi AP**: Access to the receiver's LMI is limited to the receiver's local Wi-Fi interface.
   - **Miracast P2P**: Access to the receiver's LMI is limited to the receiver's Miracast P2P interface.



4. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.





5. The receiver reboots, and new setting takes effect after the reboot.

Part VI Updating Firmware for the Receiver

ScreenBeam 1100 Plus allows updating its firmware wirelessly through the LMI or locally through a USB flash drive.

6.1 Firmware Update via LMI

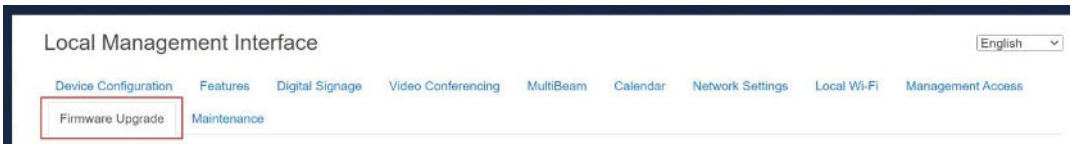
There are two ways to update the receiver's firmware via LMI: from a local PC or from the ScreenBeam firmware update server.

6.1.1 Updating Firmware from a Local PC

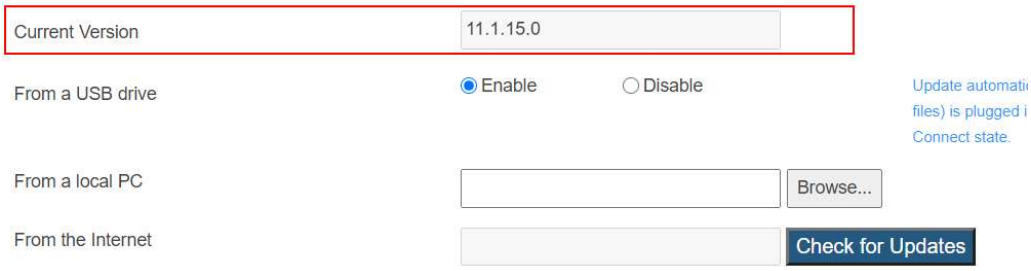
Users can wirelessly update the receiver's firmware by transferring the firmware update file from a local PC.

To upgrade the receiver from a local PC, follow this procedure:

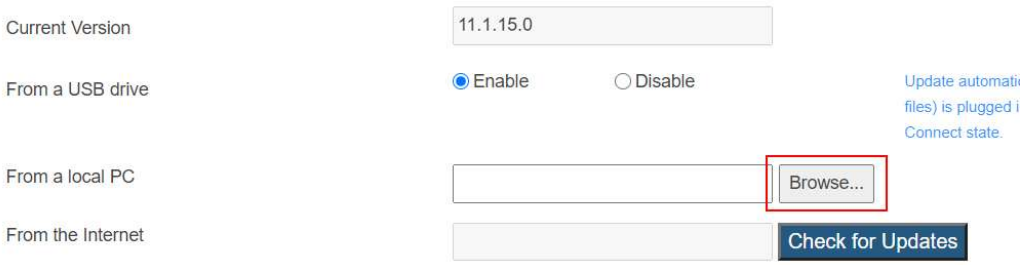
1. Download the latest firmware from ScreenBeam's website: https://support.screenbeam.com.
2. Log into Local Management Interface on ScreenBeam 1100 Plus, and go to the **Firmware Upgrade** tab page by clicking the **Firmware Upgrade** tab.



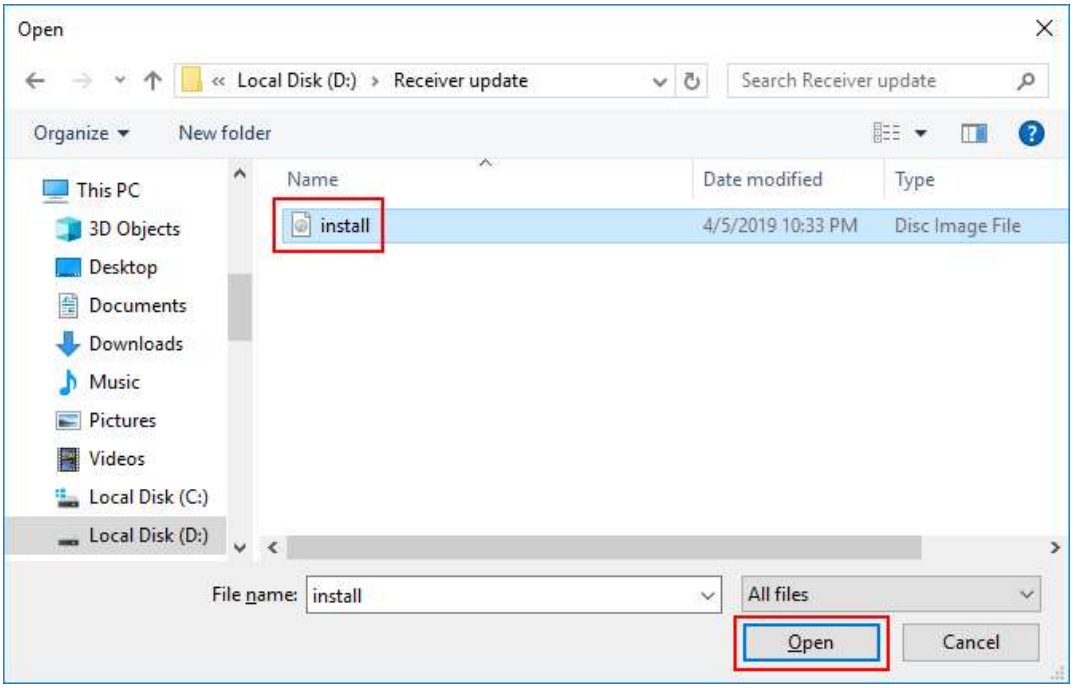
On the **Firmware Upgrade** tab page, users can check the current firmware version in the **Firmware Version** section.



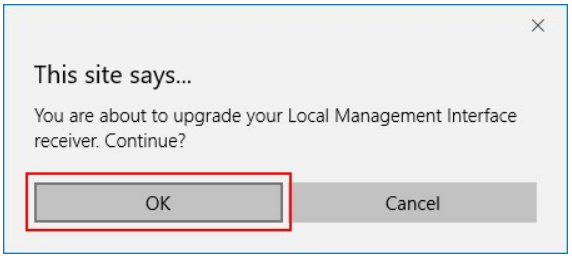
3. Select the **Browse** button next to the **From a local PC** box.



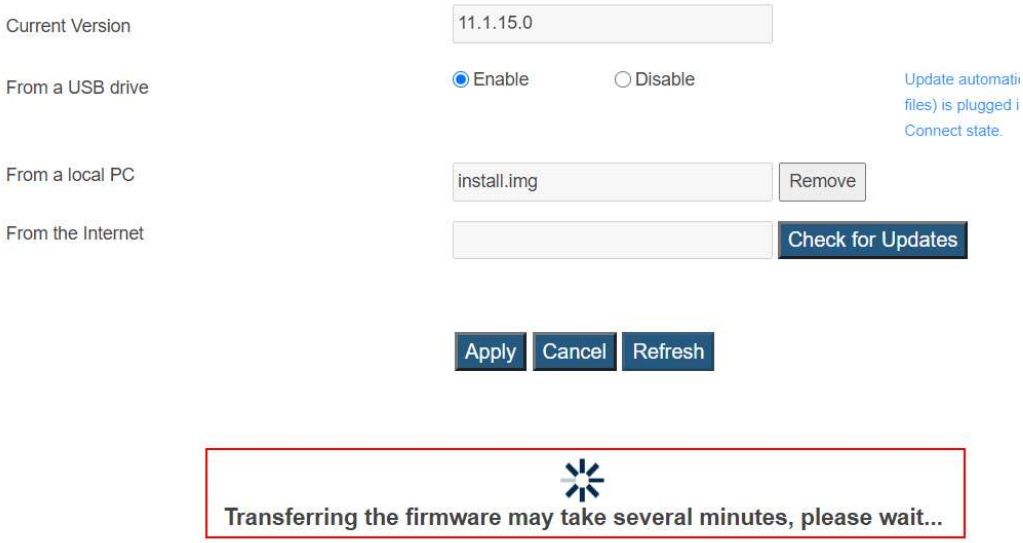
4. The **Open** window appears. Navigate to the extracted firmware file folder. Select the firmware file ("**install.img**") and click the "**Open**" button to continue.



5. Click the **Apply** button, and then click **OK** on the pop-up message box to continue.



6. The web server starts transferring the firmware file to the receiver.



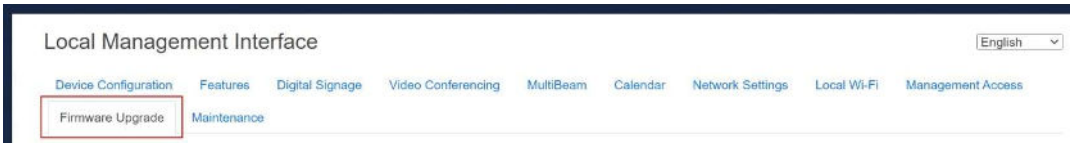
7. The receiver reboots and upgrades itself after the file is uploaded successfully. Firmware upgrade status is displayed on the connected display.
8. When the receiver returns to the idle Screen, the receiver has been upgraded.

Warning! Do NOT power off your receiver during the upgrade process. The upgrade will take some time. Please be patient.

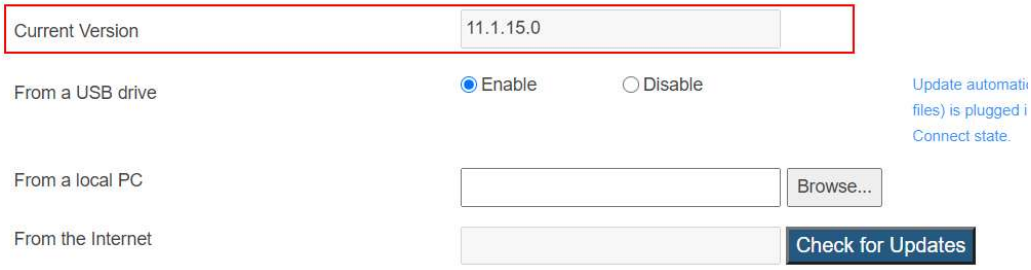
6.1.2 Updating Firmware from the Internet

Users can wirelessly update the receiver's firmware with the online update server.
To upgrade your receiver from the Internet, follow this procedure:

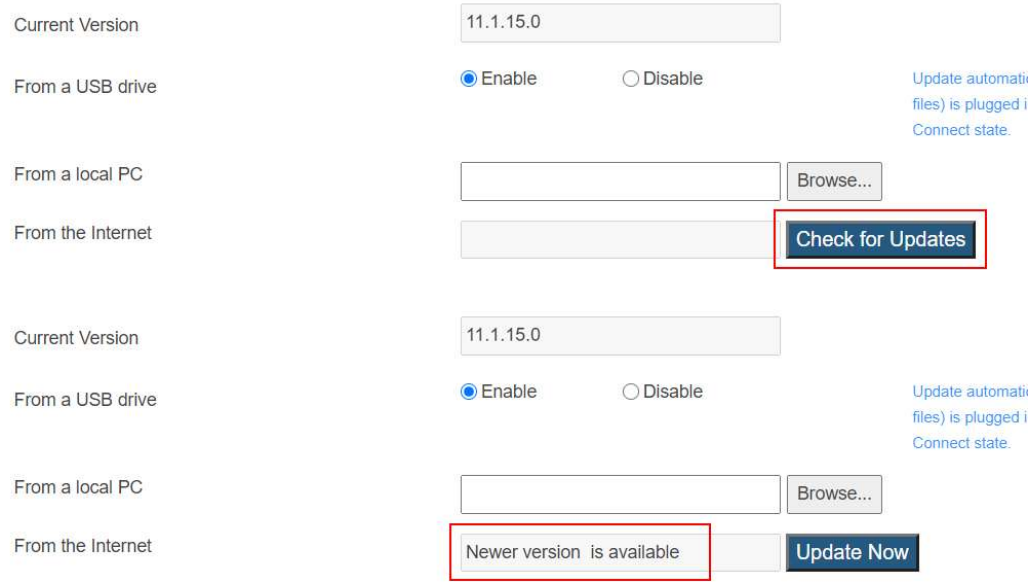
1. Ensure the receiver is connected to a network that has access to the Internet.
2. Log into Local Management Interface on ScreenBeam 1100 Plus, and go to the **Firmware Upgrade** tab page by clicking the **Firmware Upgrade** tab.



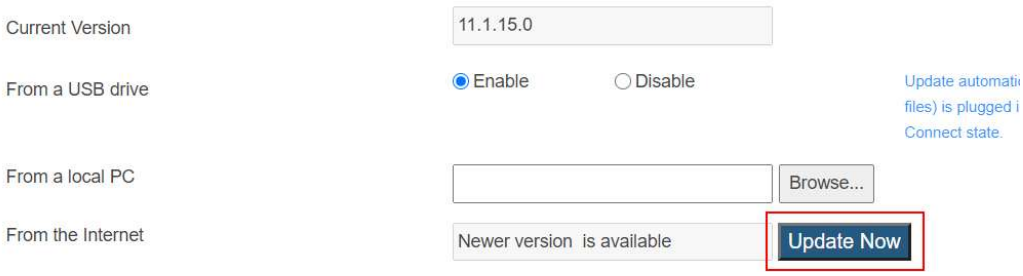
On the **Firmware Upgrade** tab page, users can check the current firmware version in the **Firmware Version** section.



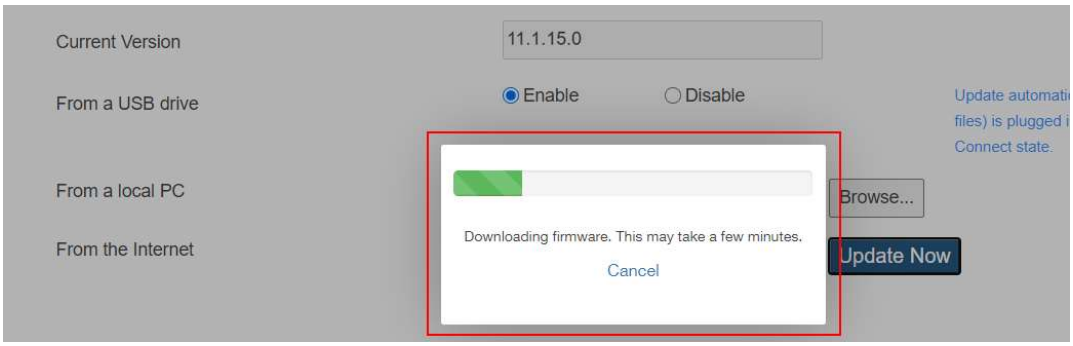
3. Click the **Check for Updates** button next to the **From the Internet** box. If there is new firmware update available, a message will show in the **From the Internet** box as "Newer version is available".



4. Click the **Update Now** button to start firmware update for the receiver.



5. The receiver downloads firmware from the Internet update server.



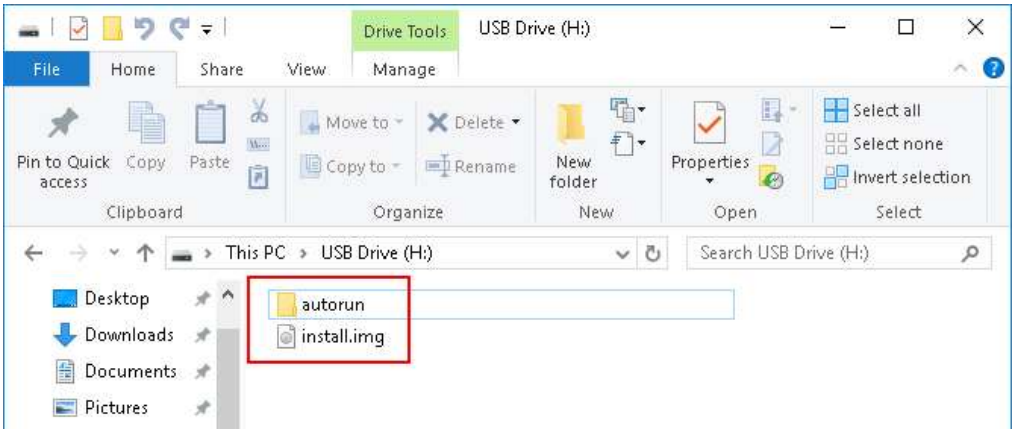
6. The receiver reboots and upgrades itself after the file is downloaded successfully. Firmware upgrade status is displayed on the connected display.
7. When the receiver returns to the idle Screen, the receiver has been upgraded.

Warning! Do NOT power off your receiver during the upgrade process. The upgrade will take some time. Please be patient.

6.2 Firmware Update using a USB Flash Drive

To update the receiver's firmware with a USB flash drive, follow this procedure:

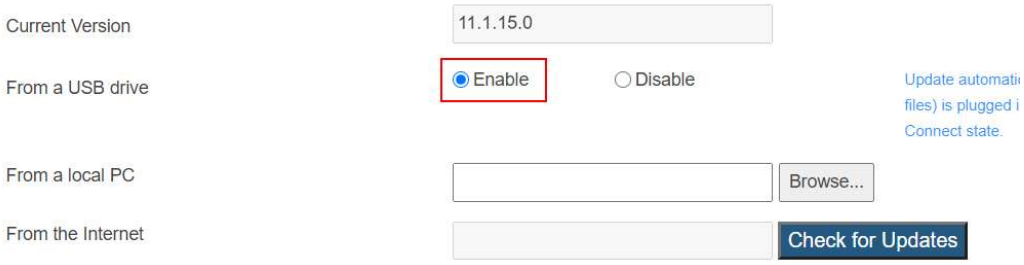
1. Download the latest firmware from ScreenBeam's website: https://support.screenbeam.com.
2. Extract the downloaded file and copy the "**install.img**" file and the "**autorun**" file folder to the root directory of a USB flash drive.



Note:

- Do not use a portable hard drive. It is recommended to use a FAT/FAT32 formatted USB flash drive only.
- Do not make any change to the extracted files.

3. Ensure the receiver's idle screen appears on your TV.
   Note: Ensure that the receiver is in idle state before starting the upgrade process.
4. Log into the receiver's LMI. Go to the **Firmware Upgrade** page, and make sure **From a USB Drive** is set to **Enable**.



5. Plug the USB flash drive into the USB port on the receiver.
6. The receiver starts to update its firmware automatically. Firmware upgrade status messages appear on your TV.
   Warning! Do not power off the receiver or remove the USB flash drive while the upgrade is in progress. Otherwise, firmware upgrade fails.
7. The receiver reboots after firmware update completes.
8. You may now remove the USB flash drive when you see the receiver's idle screen again.
   Note: Ensure that the **sbrun.txt** file is not present on the USB flash drive if you want to use the same USB flash drive to upgrade the same receiver again.

Part VII Receiver Maintenance

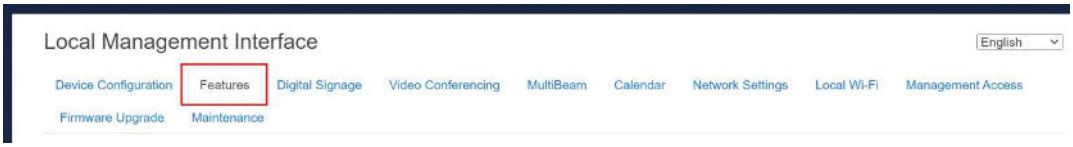
This section introduces setups for receiver maintenance.

7.1 Setting up Receiver Auto Reboot

After a long period of continuous running, the receiver may not react as responsively as it should be. We can restart the device to restore its responsiveness.

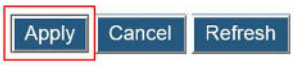
To set the receiver to reboot automatically, follow this procedure:

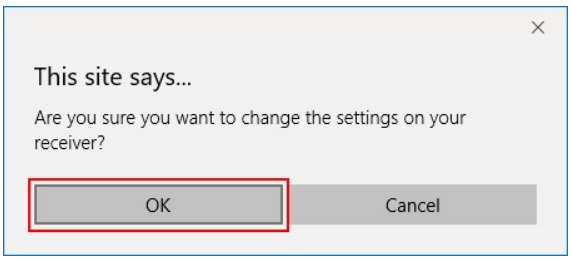
1. Go to the **Features** tab page by clicking the **Features** tab.



2. Go to the **Operation** section, and select an option from the **Auto-reboot receiver when idle for** box.
   - **Never** indicates that the receiver will not restart automatically. This is the default setting.
   - **xx hour(s)** indicates that the receiver will restart automatically after the receiver is idle for xx hour(s).

3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.



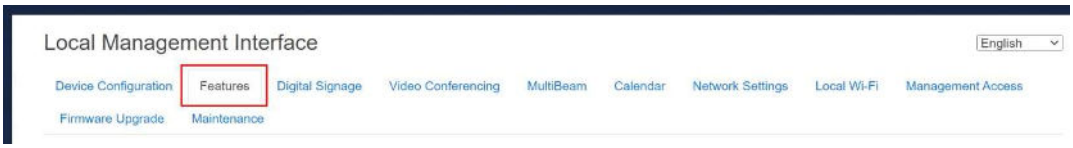


7.2 Setting up Receiver Logging

ScreenBeam receiver can save events in logs, and these logs can be retrieved by the receiver's LMI or ScreenBeam CMS. Refer to the ScreenBeam CMS user guide for details.

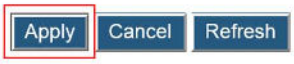
To set up the receiver's logging, follow this procedure:

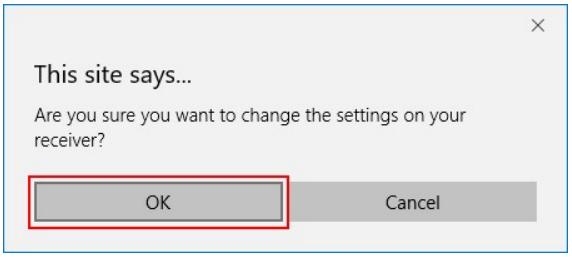
1. Log into the receiver's LMI, and go to the **Features** tab page.



2. Go to the **Operation** section, and set **Receiver Logging** to **Enable** or **Disable**.
   - **Enable**: The receiver will record logs when there are events happen.
   - **Disable**: The receiver will NOT record any events.

3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.

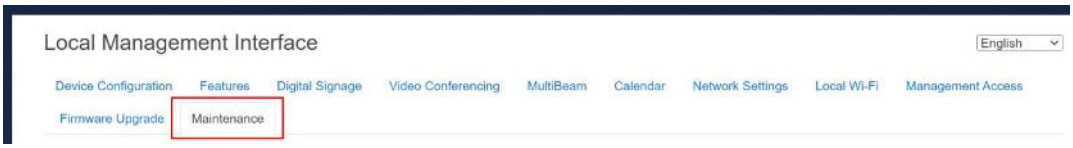




7.3 Exporting Receiver Log with LMI

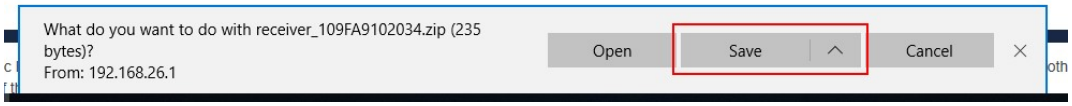
To export logs from the receiver, follow this procedure:

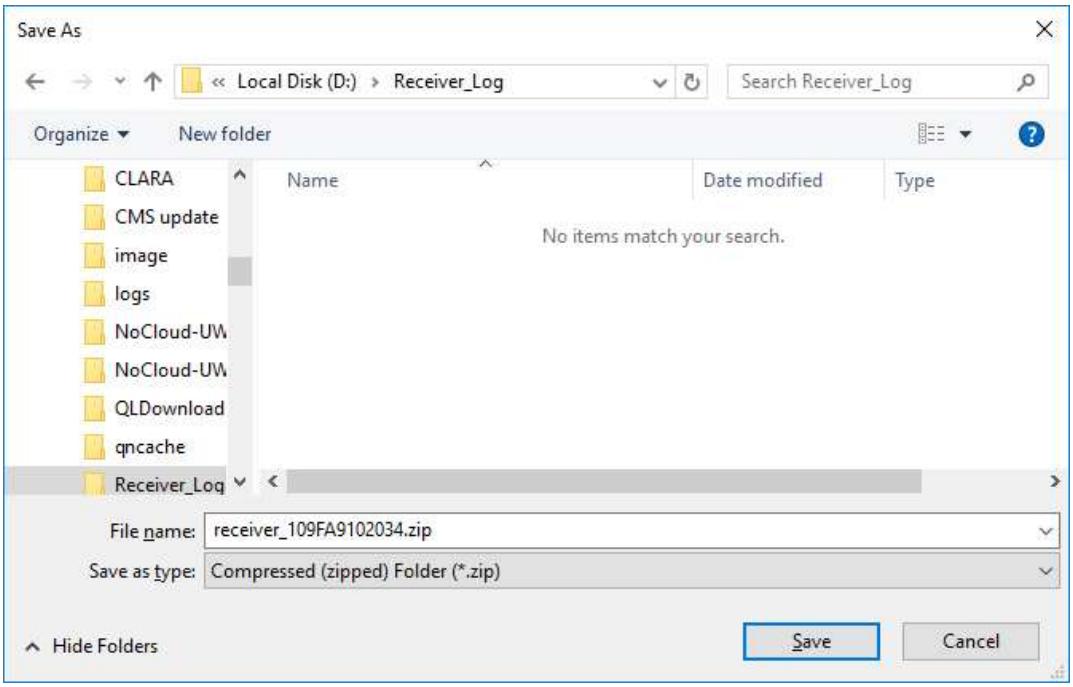
1. Ensure receiver logging is enabled. Refer to Section **7.2 Setting up Receiver Logging** for details.
2. Log into the receiver's LMI, and go to the **Maintenance** tab page.



3. Go to the **Export Logs** section, and click the **Export** button next to **Export Receiver Logs**.

4. The file download dialog box appears. Click **Save** or **Save as** to save the receiver log.



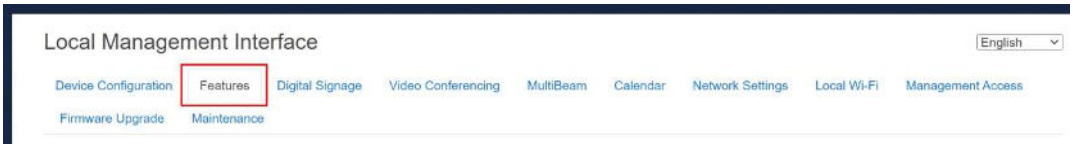


7.4 Disabling the Reset Button

ScreenBeam 1100 Plus provides a button to reset the receiver to default settings. It is the reset button. ScreenBeam 1100 Plus also allows users to disable all functions of this button.

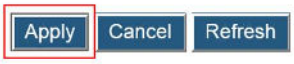
To enable or disable functions of the reset button, follow this procedure:

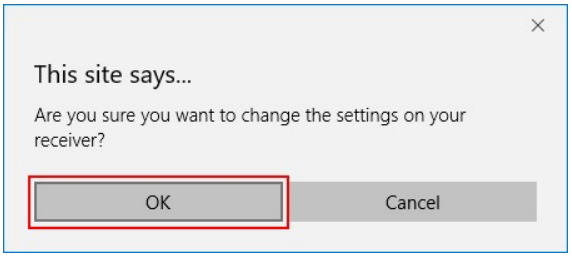
1. Log into the receiver's LMI, and go to the **Features** tab page.



2. Go to the **Operation** section, and set **Push Button** to **Enable** or **Disable**.
   - **Enable**: Functions of the reset button are available.
   - **Disable**: Functions of the reset button are not available.

3. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.



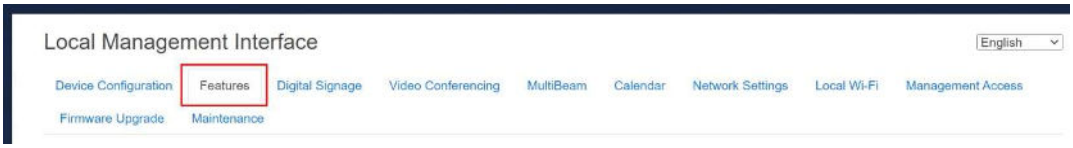


7.5 Setting up the USB Ports

ScreenBeam 1100 Plus provides two USB 2.0 ports and one USB 3.0 port for performing various tasks, such as receiver configuration, touch screen support, and USB firmware upgrade. ScreenBeam 1100 Plus also allows users to disable functions of these ports.

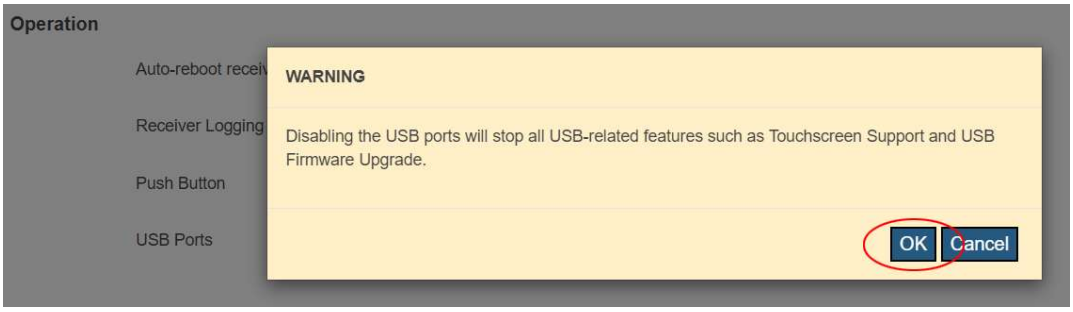
To disable or enable functions of the USB ports, follow this procedure:

1. Log into the receiver's LMI, and go to the **Features** tab page.

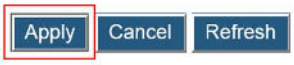


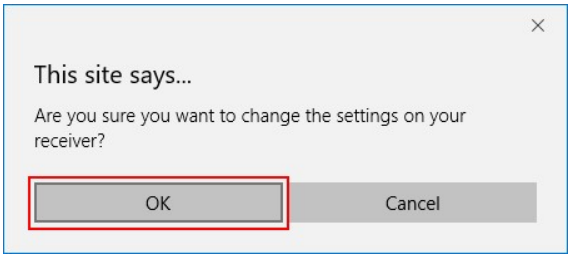
2. Go to the **Operation** section, and set **USB Ports** to **Enable** or **Disable**.
   - **Enable**: Functions of the USB ports are available.
   - **Disable**: Functions of the USB ports are not available.

3. A warning message box appears if **USB Ports** is set to **Disable**, saying that USB port related features will be disabled as well. Click **OK** to continue.



4. Click the **Apply** button, and then click **OK** on the pop-up message box to confirm.

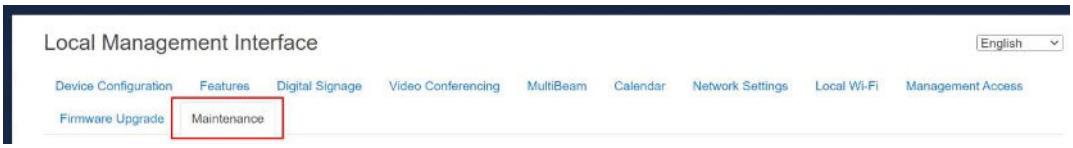




7.6 Viewing System Uptime

To view the receiver's system uptime, follow this procedure:

1. Log into the receiver's LMI and go to the **Maintenance** tab page.



2. Go to the **System Uptime** section, and check the time period displayed on the **Time since last boot** line.

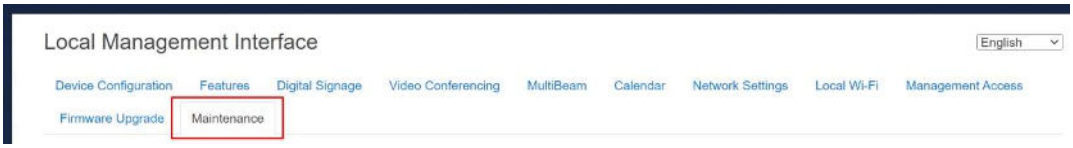
7.7 Rebooting the Receiver

To reboot your receiver, unplug the power adapter from the power outlet, wait 5 seconds and then plug it in.

If you can't access the receiver locally, you can reboot the receiver through the receiver's LMI.

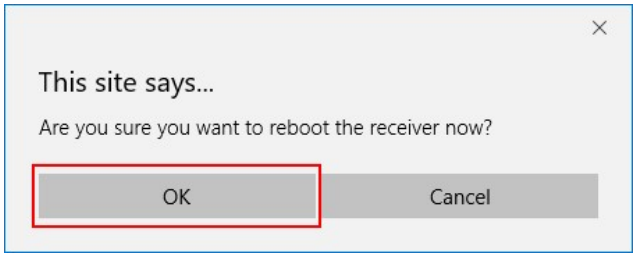
To reboot the receiver with LMI, follow this procedure:

1. Log into the receiver's LMI and go to the **Maintenance** tab page.



2. Go to the **Device Utilities** section and click the **Reboot** button next to "**Reboot Receiver**".

3. Click **OK** on the pop-up message box to confirm.



7.8 Resetting the Receiver to Default

To reset all settings of the receiver to default, follow this procedure:

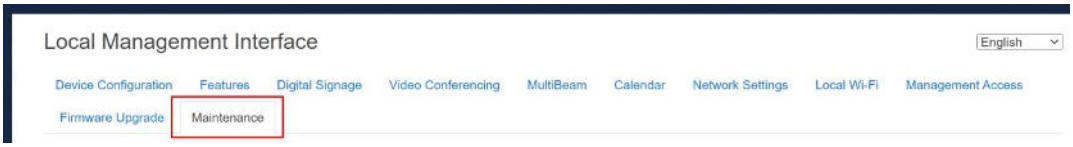
1. Power on the receiver and wait until the receiver's idle screen appears.
2. Ensure that the **Push Button** feature is enabled. Refer to Section **7.4 Disabling the Reset Button** for details.
3. Press and hold the receiver's reset button.
4. When the "**Resetting to factory defaults**" screen appears on the HDTV, release the reset button.

The receiver reboots, and it will be running with its default settings.

Note: This method will reset all settings to defaults.

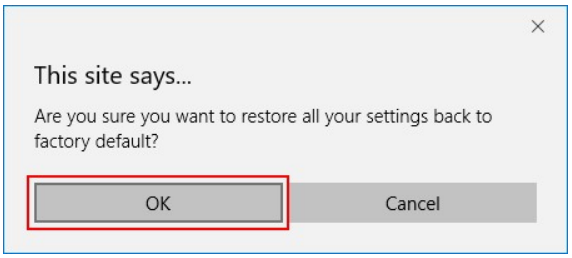
If you can't access the receiver locally, you can reset the receiver through the receiver's LMI. To reset the receiver with LMI, follow this procedure:

1. Log into the receiver's LMI and go to the **Maintenance** tab page.



2. Go to the **Device Utilities** section and click the **Reset** button next to "**Reset**". This button works the same as the physical button on the receiver.

3. Click **OK** on the pop-up message box to confirm.



4. The receiver reboots, and the receiver is reset to factory defaults after the reboot.

5. If you want to reset the receiver but retain the network connection settings and remote management settings, click the **Reset** button next to "**Soft Reset**".

When you soft-reset your receiver through the LMI, the following settings will be retained:

● CMS Server IP address ● CMS communication port ● Service Platform CMS port ● Receiver IP setting (DHCP or Static IP) ● Receiver IP address ● Receiver Subnet Mask ● Receiver Gateway ● Receiver DNS setting (Dynamic or Static)	● Primary DNS ● Secondary DNS ● Host Name ● Wired connection settings ● Wireless connection settings ● Timezone

7.9 Tips for Optimal Performance

For optimal performance, you can try these tips:

- Keep the receiver within line-of-sight of the source device. Doing this will help ensure the receiver receives the best possible signal.
- The receiver's optimal wireless range is within 30 feet from the source device. However, actual range and effectiveness depends on many factors, including other sources of interference and the building materials used in the surrounding structure.
- Avoid placing the receiver near wireless interference sources, such as metal shelf, electric fans, items with motors, microwave ovens, cordless phones, and 2.4 GHz Non-Wi-Fi radio devices.

Appendix I Troubleshooting and FAQs

This chapter describes some problems you may encounter using ScreenBeam 1100 Plus, and possible solutions to those problems. Also included are frequently asked questions (FAQs), and answers to those questions.

Troubleshooting

I'm not seeing anything on my HDTV screen after powering on the receiver.
Check the cable connections and make sure the TV Input setting is the same as the HDMI® port to which the receiver is connected.

I'm seeing artifacts and experiencing a choppy, juddering video stream.
In noisy Wi-Fi environments, audio and video freezes may be observed while playing video content, and longer than expected latency may occur when streaming. To ensure you have an optimal Wi-Fi environment:

- Disconnect and reconnect the receiver.
- If the source device is connected to a wireless router, restart the router, or change the wireless channel on your wireless router/AP. Refer to the wireless router's user manual for more information.

I'm seeing choppiness and brief pauses while watching Internet video on my Miracast™ device.
Wireless interference may cause Internet video playback to be choppy. If this occurs, try the following:

- Disconnect the device from the receiver. Make sure the Internet connection is good and that the video playing on the phone is smooth.
- Clear the YouTube cache and try playing the video again.

I'm seeing choppiness and brief pauses while watching local video on my Miracast™ device.
Wireless interference may cause the video playback to be choppy. If this occurs, try the following:

- Make sure you are in the same room as the receiver is.
- Set the media player to use the H/W decoder, if available.
- Reboot the Miracast™ device and receiver and connect again.
- Avoid moving the Miracast™ device around too much.
- Change the wireless channel on your wireless router/access point, or on your receiver.

My Windows 10/11 displays to the TV but the four edges are cut off (overscan).

This is expected with some system's supported display resolution. You can adjust Windows screen resolution settings to fit the PC's screen on your TV display.

I encounter connection failure with ScreenBeam 1100 Plus and my device can't connect to it any more.

- Reboot the ScreenBeam 1100 Plus and try connection again. Or, reboot your device (laptop/Ultrabook/tablet/smartphone) and try connection again.
- Reboot both the ScreenBeam 1100 Plus and your device and try connection again.
- If you are using Windows 10 operating system, go to **Settings** > **Devices** > **Bluetooth & other devices** > **Wireless displays & docks** (or **Settings** > **Devices** > **Wireless displays & docks**, or **Settings** > **Devices** > **Connected Devices** > **Projectors** on older versions**)**, remove the profile of the ScreenBeam 1100 Plus from your device (PC/laptop/Ultrabook), and try connection again.
- If you are using Windows 11 operating system, go to **Settings** > **Bluetooth & devices** > **Devices** > **Wireless displays & docks**, remove the profile of the ScreenBeam 1100 Plus from your device (PC/laptop/Ultrabook), and try connection again.

I can't connect to the receiver with ScreenBeam Configuration Utility on my device. The Utility can't find the receiver.

ScreenBeam 1100 Plus is not compatible with ScreenBeam Configuration Utility. To configure or upgrade the receiver, you should use the receiver's Local Management Interface or ScreenBeam Central Management System.

When I connect the source device to a wireless network (router/AP), why ScreenBeam 1100 Plus disconnects automatically?

The source device's communication channel has changed when you connect your device to a wireless network (router/AP) in the situation that the source device is connected to ScreenBeam 1100 Plus. As a result, ScreenBeam 1100 Plus disconnects from the source device.

If the source device doesn't support Different Channel Mode, you need to set the receiver to work on the same channel with your router/AP.

My Chromebook or Chrome browser can't find ScreenBeam.

Try one or more methods below:

- Make sure the Wireless Display over LAN feature is enabled for Google Cast, and ScreenBeam and your device are connected to the same network.
- Make sure your receiver have access to the Internet so that it can synchronize its time with an NTP server.
- Access google.com on your device to verify that your device have access to a Google server.
- Reset your receiver's time zone to Universal Time if you have changed its time zone. (This method is applicable to ScreenBeam with firmware 11.0.6.0.)

FAQs

How can I tell if my device supports Wi-Fi Miracast?

Look for one of the following Miracast applications on your device. Only some application names are listed below. Different manufacturers may have different names for the Miracast apps on their products. But, they should indicate similar meaning.

- Connect
- Wireless display
- Wireless mirroring
- Screen mirroring
- AllShareCast (Samsung devices only)
- Cast screen

Visit ScreenBeam 1100 Plus compatibility page for the recommended Miracast devices.

Do I need to install drivers/apps to use the ScreenBeam 1100 Plus Receiver?

- For **Windows 11/10**, you only need to install the latest Windows updates.
- For **Android 8** or higher, no app is required.
- For **Apple** devices that support AirPlay, no app is required.
- For **ChromeOS** devices with Cast, no app is required.

How can I improve my video/audio performance?

You can try the following methods to improve video/audio performance for the ScreenBeam 1100 Plus receiver:

- Place your device closer to the receiver.
- Connect your device to a wireless network that is using a cleaner wireless channel or change the wireless channel on the current wireless network, and then connect the device to the receiver.
- Turn off the Wi-Fi devices that are not in use currently.

What wireless signal range can I expect with the receiver?

The receiver is designed to be used in the same room with the source device. For best performance, the source device should be placed within 20 meters to the receiver.

How can I adjust the display to fit properly to my TV screen?

You can adjust the display by using the receiver's Local Management Interface or ScreenBeam Central Management System.

- Log into the receiver's Local Management Interface and adjust the display in the **Adjust TV Screen Size** section of the **Features** page.
- In the ScreenBeam Central Management System, double click the receiver to open the receiver configuration page, and then adjust the TV screen size in the **Features** section.

How to set the ScreenBeam video output to fit a display with aspect ratio other than 16:9?

ScreenBeam receiver's HDMI® output supports 16:9 resolutions only.

Can I extend my Windows desktop to the HDTV or Projector from my Miracast device?

Yes. After the connection to ScreenBeam 1100 Plus receiver is established, by default you should see the laptop screen mirrored to the HDTV or Projector.

To extend your Windows desktop to an HDTV or a Projector, press the Windows key and **P** key together, and select the "**Duplicate**", "**Extend**" or "**Second screen only**" mode.

To extend your macOS desktop to an HDTV or a projector, select Screen Mirroring icon  on the menu bar and select a desired projection mode from **Mirror Built-in Rentina Display**, and **Use As Extended Display**.

What is Wi-Fi Miracast™?

Wi-Fi Certified Miracast™ is a groundbreaking solution for seamlessly displaying video between devices, without cables or a network connection. Users can view pictures from a smartphone on a big screen television, share a laptop screen with the conference room projector in real-time, and watch live programs from a home cable box on a tablet. Miracast™ connections are formed using Wi-Fi Certified Wi-Fi Direct™, so access to a Wi-Fi® network is not needed–the ability to connect is inside Miracast™-certified devices.

What is Wi-Fi Direct and can I connect to the receiver using Wi-Fi Direct?

Wi-Fi Direct is a peer-to-peer technology that Miracast™ connections are formed in. Even though some newer Android 4.0 and Windows 8.1 devices may detect the receiver in the Wi-Fi Direct devices scan list, they will not be able to connect to the receiver. The device must support Miracast™ to connect with the receiver.

Can I connect to the Wi-Fi router and the receiver simultaneously with my compatible laptop?

Yes. Connect the laptop to an available Wi-Fi router first, and then connect to the receiver. You can then view online content and beam it to the HDTV.

Can I connect to the Wi-Fi router and the receiver simultaneously with my Miracast™ device?

Some Miracast™ devices cannot connect to both the Wi-Fi router and the receiver at the same time. Refer to the device manufacturer's or carrier's user manual for more information.

Can I connect several Miracast devices to the receiver simultaneously?

When Multiview mode is enabled, up to four Miracast devices can connect to the receiver simultaneously.

Can I connect to multiple ScreenBeam 1100 Plus Receivers simultaneously?

No. You can only connect to one ScreenBeam 1100 Plus at a time by default.

However, a user device can project to multiple ScreenBeam 1100 Plus receivers that are configured in a MultiBeam setup. Refer to the MultiBeam User Guide for details.

Can ScreenBeam 1100 Plus support wireless touch and inking?

Yes. ScreenBeam 1100 Plus supports UIBC. The source device must install a Window 10 system and meet the following hardware requirements:

- 6th Gen Intel Core (or better) processor
- AMD A4-5000 (Kabini or better) processor

Can I push media to the receiver using DLNA?

No. The receiver is not a DLNA media receiver.

Does the receiver work with the Apple iPhone, iPad, or iPod?

Yes. ScreenBeam 1100 Plus can works with Apple devices that support AirPlay screen mirroring.

"Allow mouse, keyboard, touch, and pen input from this device" is displayed even no USB device is connected to the ScreenBeam receiver. Would it have any impact on the Miracast connection if the option is checked while no USB device is present?

No. This is a standard behavior of Windows 10/11.

Appendix II Notices

Warranty

This product has a one-year Limited Hardware Warranty and 90-day free software updates from the date of purchase.

- **Local Law**

This Limited Warranty Statement gives the customer specific legal rights. The customer may also have other rights which vary from state to state in the United States, from province to province in Canada, and from country to country elsewhere in the world.
To the extent that this Limited Warranty Statement is inconsistent with local law, this Statement shall be deemed modified to be consistent with such local law. Under such local law, certain disclaimers and limitations of this Warranty Statement may not apply to the customer.

GPL Info

For GNU General Public License (GPL) related information, go to
https://opensource.screenbeam.com.

Technical Support

For FAQs, troubleshooting tips, documentation, firmware update and support, visit:
https://support.screenbeam.com
To open a ticket for support, visit:
https://support.screenbeam.com/ticket
Website: www.screenbeam.com

FCC Warning

This device complies with part 15 of the FCC Rules. Operation is subject to the condition that (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC’s RF Exposure guidelines, this equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body. Use only the supplied antenna.

CE Statement

Manufacturer's name: ScreenBeam Inc.
Address: 220 Devcon Dr., San Jose, CA 95112 USA
Product Name: ScreenBeam 1100 Plus;
Trade Mark: ScreenBeam
Model Number: SBWD1100
Operating Temperature: 0°C to 40°C
This device is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. All essential radio test suites have been carried out.
Detailed DOC file please visit our website: www.screenbeam.com/

Testing standards:

EN IEC 62368-1:2020+A11:2020
EN 62311:2020;
ETSI EN 301 489-1 V2.2.3 (2019-11);
ETSI EN 301 489-3 V2.1.1 (2019-03);
ETSI EN 301 489-17 V3.2.4 (2020-09);
ETSI EN 300 328 V2.2.2 (2019-07);
ETSI EN 301 893 V2.1.1 (2017-05);
ETSI EN 300 440 V2.2.1 (2018-07);
EN 55032:2015+A1:2020;
EN 55035:2017+A11:2020;
EN IEC 61000-3-2:2019+A1:2021;
EN 61000-3-3:2013+A2:2021;

The device complies with RF specifications when the device used at 20cm from your body.

Operating Frequency Range band 5150-5350MHz "for indoor use only."

Care for the environment! Must not be discarded with household waste!

RF Specification:

Function	Operation Frequency	Max RF output power:	Limit
BT(BLE)	2402MHz~2480MHz	-0.31dBm	20 dBm
Wi-Fi 2.4G (802.11b/g/n20/n40)	802.11b/g/n20: 2412MHz~2472MHz; 802.11n40: 2422MHz~2462MHz;	19.98dBm	20 dBm
Wi-Fi 5.2G (802.11a/n20/n40/ac20/ac40/ac80)	802.11a/n(20MHz): 5180~5240MHz 802.11n/ac(40MHz): 5190~5230MHz 802.11ac(80MHz): 5210MHz	22.93dBm	23 dBm
Wi-Fi 5.3G (802.11a/n20/n40/ac20/ac40/ac80)	802.11a/n(20MHz): 5260~5320MHz 802.11n/ac(40MHz): 5270~5310MHz 802.11ac(80MHz): 5290MHz	22.98dBm	23 dBm
Wi-Fi 5.6G (802.11a/n20/n40/ac20/ac40/ac80)	802.11a/n(20MHz): 5500~5700MHz 802.11n/ac(40MHz): 5510~5670MHz 802.11ac(80MHz): 5530~5610MHz	22.95dBm	23 dBm
Wi-Fi 5.8G (802.11a/n20/n40/ac20/ac40/ac80)	802.11a/n(20MHz): 5745~5825MHz 802.11n/ac(40MHz): 5755~5795MHz 802.11ac(80MHz): 5775MHz	13.96dBm	13.98 dBm

Restrictions in the 5 GHz band:

According to Article 10 (10) of Directive 2014/53/EU, the packaging shows that this radio equipment will be subject to some restrictions when placed on the market in Belgium (BE), Bulgaria(BG), the Czech Republic (CZ), Denmark (DK), Germany (DE), Estonia (EE), Ireland(IE), Greece (EL), Spain(ES), France (FR), Croatia (HR), Italy(IT), Cyprus (CY), Latvia (LV), Lithuania(LT), Luxembourg(LU), Hungary(HU), Malta(MT), Netherlands(NL), Austria(AT), Poland (PL), Portugal(PT), Romania (RO), Slovenia(SI), Slovakia (SK),Finland (FI), Sweden(SE), Turkey (TR), Norway(NO), Switzerland (CH), Iceland(IS), and Liechtenstein(LI).

ES	LU	RO	CZ	FR
HU	SI	DK	HR	BE
BG	DE	EE	IE	EL
IT	CY	LV	LT	SK
MT	NL	AT	PL	PT
FI	SE	LI	TR	NO
CH	IS			

TELEC Statement

Indoor use only (except when communicating with 5.2 GHz high power base stations or relay stations).

NCC 警语

取得審驗證明之低功率射頻器材，非經核准，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。低功率射頻器材之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前述合法通信，指依電信管理法規定作業之無線電通信。低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。