

## ScreenBeam MultiBeam Software User Guide

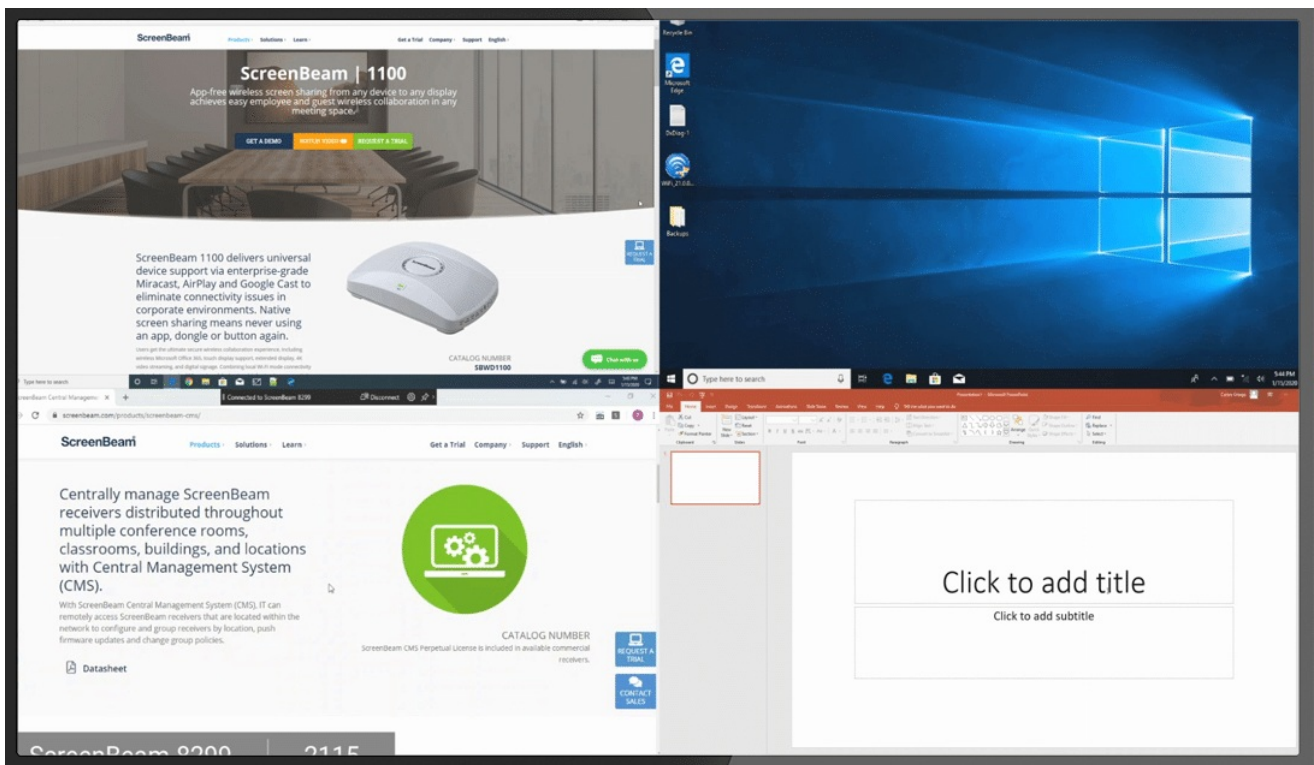
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# ScreenBeam®

ScreenBeam MultiBeam Software



## Introduction

ScreenBeam MultiBeam allows you to distribute a wireless display or an HDMI video from the Primary receiver to multiple Remote receivers, over the IP network or over Wi-Fi Direct network or a combination both, at 1080p resolution.

ScreenBeam MultiBeam, which enables screen mirroring from a Primary ScreenBeam receiver to multiple Remote ScreenBeam receivers in the MultiBeam cluster (group), is an added feature to ScreenBeam 1100P Wireless Display Receiver. ScreenBeam MultiBeam is a pre-installed app and it is available on ScreenBeam Service Platform (SPCMS).

A MultiBeam cluster consists of one Primary receiver and multiple Remote receivers. When the Primary receives video streaming from a source device, it simultaneously mirrors the video streaming to all Remote receivers in the cluster.

A ScreenBeam 1100 Plus receiver is allowed to be configured as a primary receiver (Primary), a dedicated Remote receiver (Standalone), or full featured Remote receiver (Multi-function).

## Features

- Enables ScreenBeam 1100P receiver to split and extend AV signal over IP.
- IT configurable; select any 1100P receiver as the primary receiver and up to 8 as remote receivers for a MultiBeam cluster.
- IP Multicast over the network; works via Ethernet or Wi-Fi Direct or a combination of both.
- Up to 4k30p resolution for 4 remote receivers or 1080p30 for up to 8 remote receivers.
- Manageable cluster via ScreenBeam Service Platform and Central Management Server (SPCMS)
- Primary receiver supports screen mirroring of Miracast, Airplay, Chromecast
- The remote receiver can be configured as Dedicated or Multi-function.

## Requirements

Ensure that the following requirements are met:

- Two or more ScreenBeam 1100 Plus Wireless Display Receiver (with firmware 11.1.13.0 or later) are available
- ScreenBeam CMS Enterprise (version 4.3.8.0 or later) is available
- Four consecutive communication ports (default: 24035-24038) is available
- Deployment of ScreenBeam 1100 Plus receivers is completed

## Receiver Deployment

A MultiBeam cluster consists of one Primary receiver and multiple Remote receivers. The ScreenBeam receivers should be planned and deployed in advance.

- **Primary receiver:** It multicasts video streaming to the MultiBeam cluster when the Primary is connected to a wireless display source device.
- **Remote receiver:** It receives video streaming from the MultiBeam cluster.

There are two connection methods for connecting MultiBeam receivers to a MultiBeam cluster.

- **Wired connection (Wired Ethernet):** The remote receiver should connect to a network (such as the corporate network) via Ethernet; and the Primary receiver should connect to the same network as the remote via Ethernet

or wireless.

**Note:** The Primary receiver and Remote receivers must be deployed in the same subnet if Wired Ethernet is used. And the Primary should connect to one network only.

- **Wireless connection (Wifi Direct):** A hidden AP is created after the MultiBeam feature is enabled. Remote receivers will connect to this hidden AP automatically if the Remote receiver's MultiBeam interface is set to Wifi Direct.

In a MultiBeam cluster, both wired and wireless connections are allowed. For example, one Remote receiver is set to use Wired Ethernet, and another is set to use Wifi Direct.

## Related Documents

To better understand the management of ScreenBeam MultiBeam app, we recommend you read the following documents:

- ScreenBeam 1100 Plus Wireless Display Receiver user guide
- ScreenBeam CMS Enterprise deployment guide

**Note:** ScreenBeam Central Management System (CMS) Enterprise is recommended for managing ScreenBeam MultiBeam app. For more detail or support, go to the address below:

<https://www.screenbeam.com/products/screenbeam-cms/>.

## Setting up MultiBeam

The MultiBeam feature is implemented through the ScreenBeam MultiBeam app, which is pre-installed and can be managed on SPCMS or the receiver's Local Management Interface (LMI).

SPCMS is an extension of ScreenBeam CMS Enterprise and is seamlessly accessible through the CMS dashboard. For details about managing apps on SPCMS, refer to ScreenBeam CMS Enterprise Deployment Guide.

LMI is a web-based tool for managing a single ScreenBeam receiver. Refer to the receiver's User Guide for more details.

This User Guide will describe MultiBeam management using SPCMS.

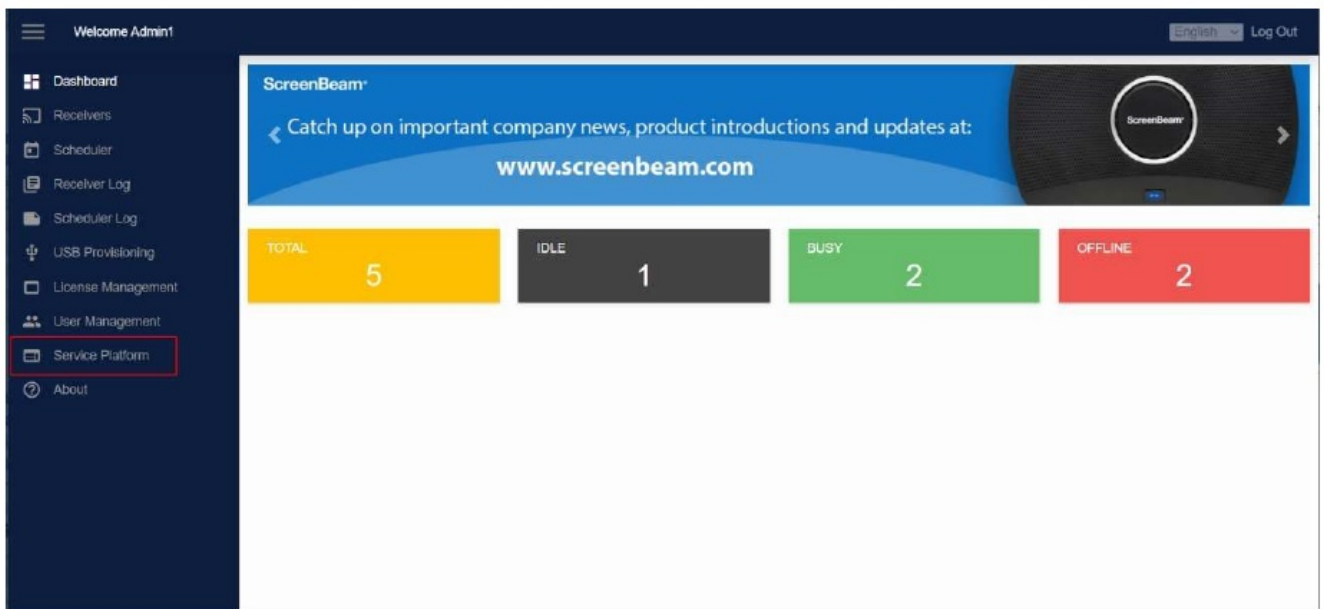
### Install ScreenBeam MultiBeam App

The ScreenBeam MultiBeam app is pre-installed and it is free. If the MultiBeam app is uninstalled, you can follow the procedure below to install the app again.

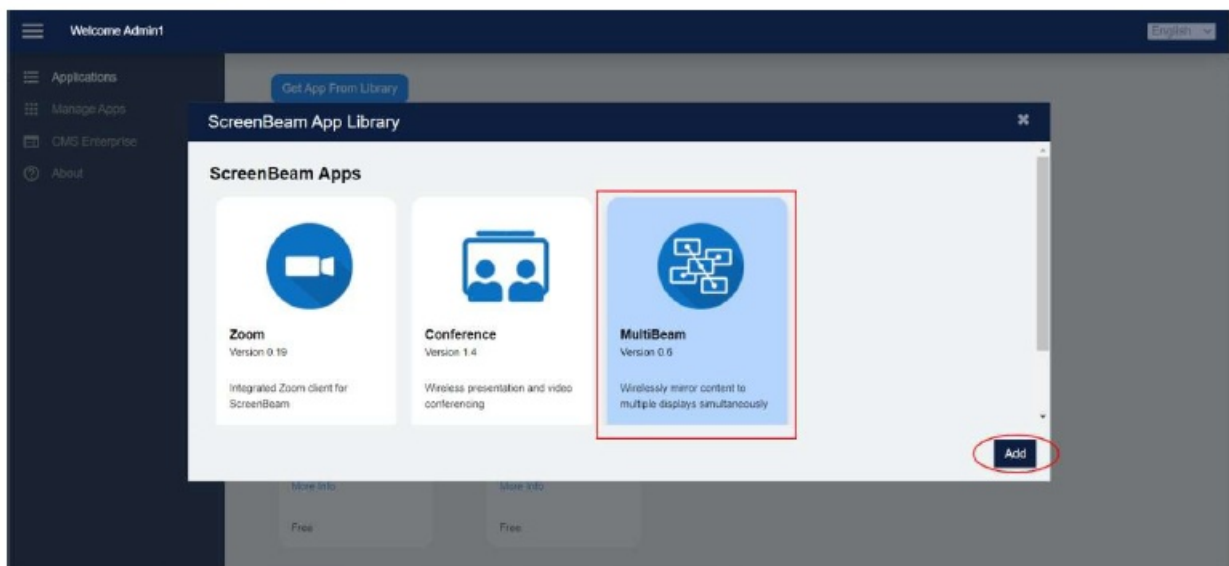
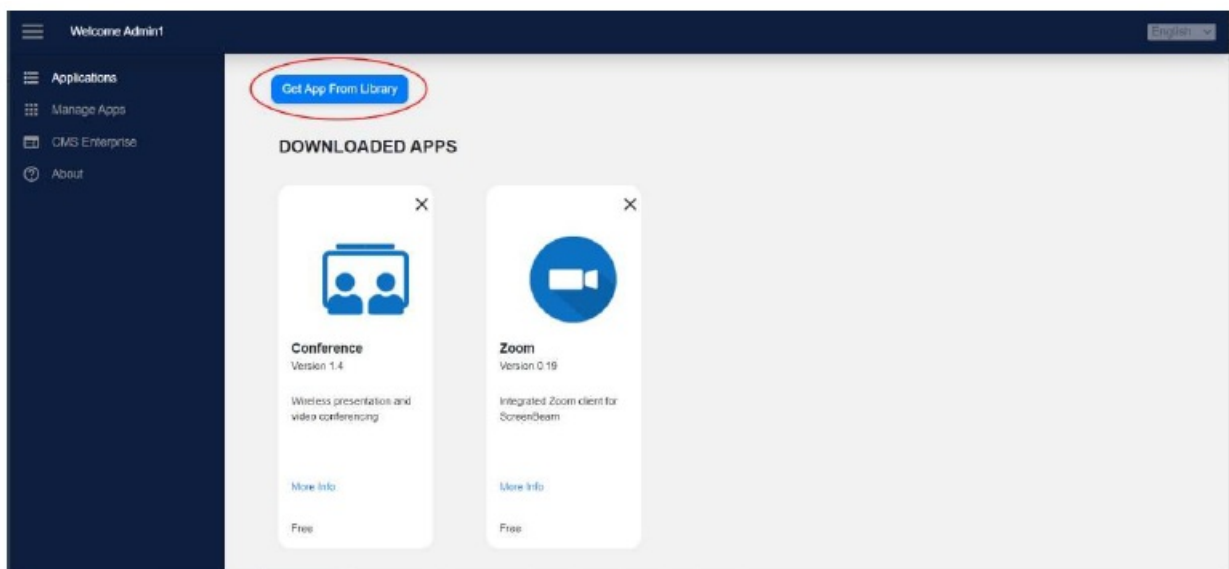
### Install ScreenBeam MultiBeam App

To install ScreenBeam MultiBeam app, follow this procedure:

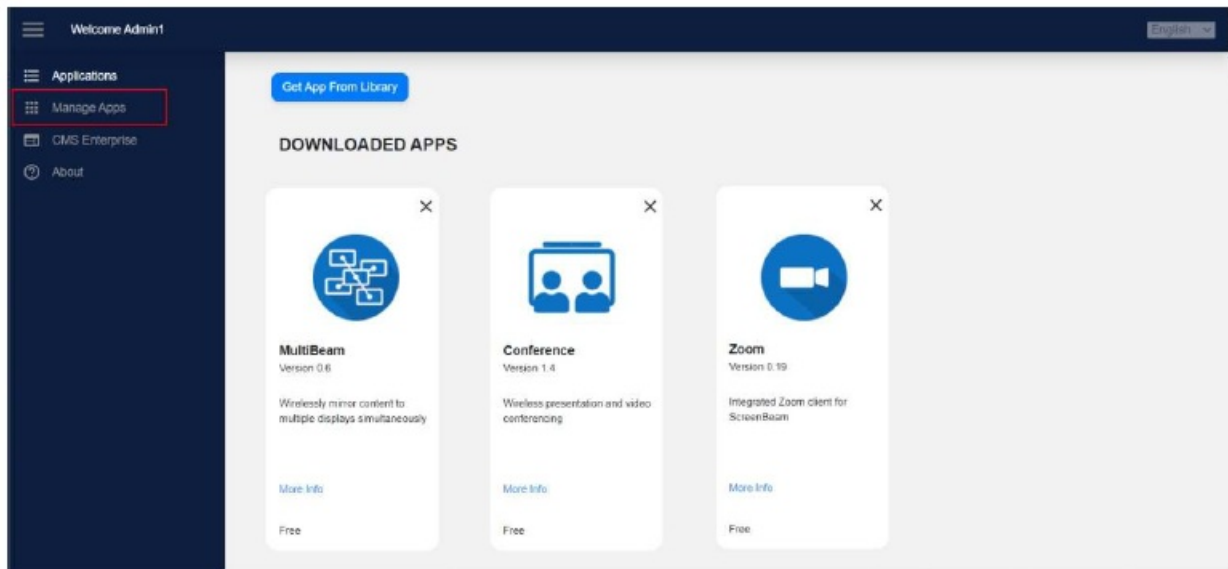
1. Ensure that ScreenBeam 1100 Plus has Internet access.
2. Ensure that ScreenBeam 1100 Plus is connected to ScreenBeam CMS Enterprise (version 4.3.8.0 or later).
3. Access ScreenBeam CMS Enterprise and go to SPCMS by clicking Service Platform on the left pane.



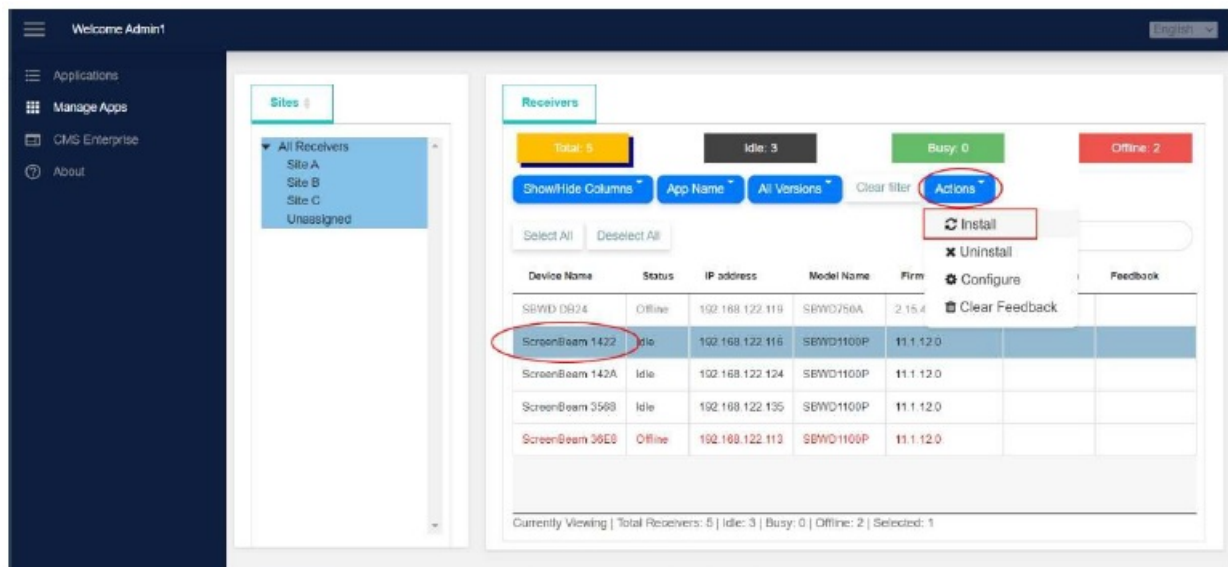
4. SPCMS will be opened, and the Applications page will be displayed by default. Check if MultiBeam app is present on the **DOWNLOADED APPS** list or not.
5. (Optional) If MultiBeam app is not there, click the Get App From Library button, and then choose the MultiBeam app in the **ScreenBeam App Library** window. Click Add to add the MultiBeam app to the **DOWNLOADED APPS** list.



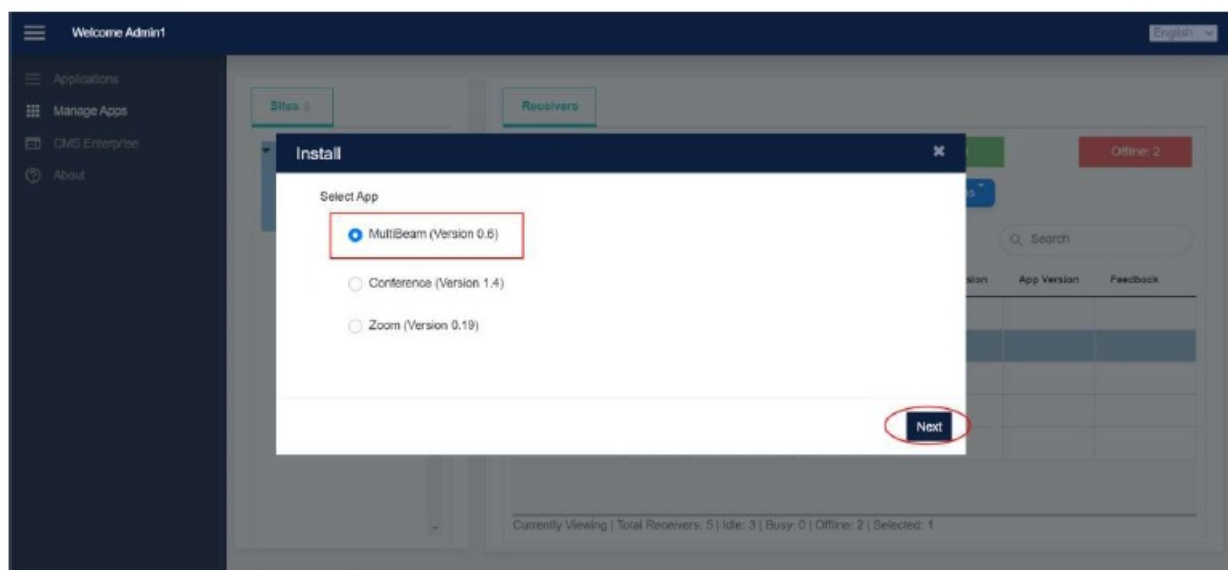
6. Go to the Manage Apps page by clicking Manage Apps on the left pane.



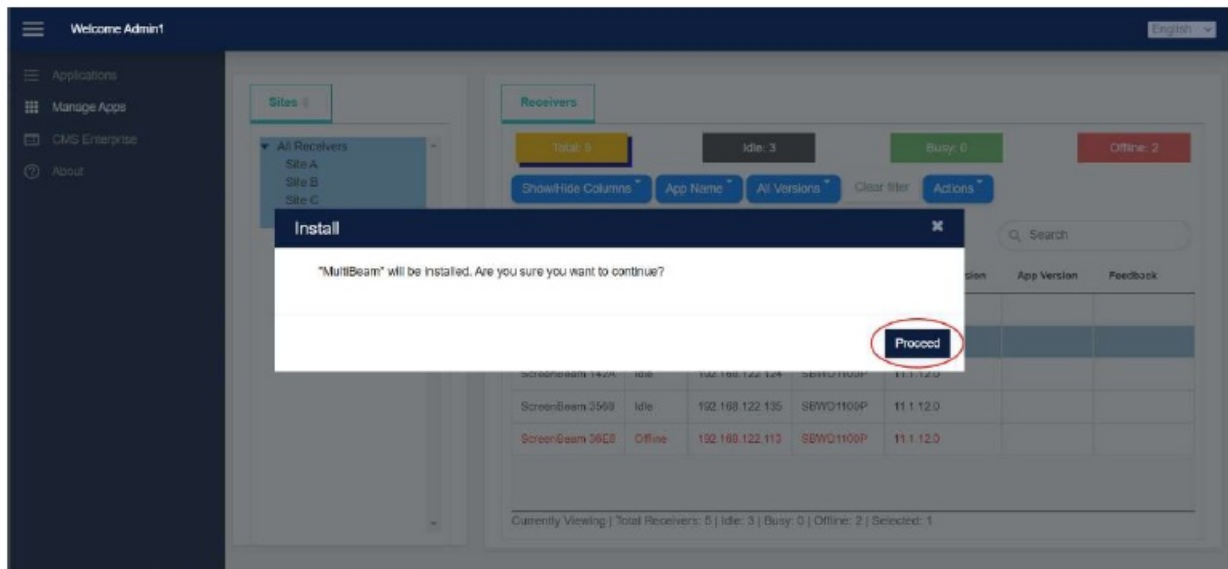
7. Select one or more receivers on the Receivers pane, and then select Actions > Install.



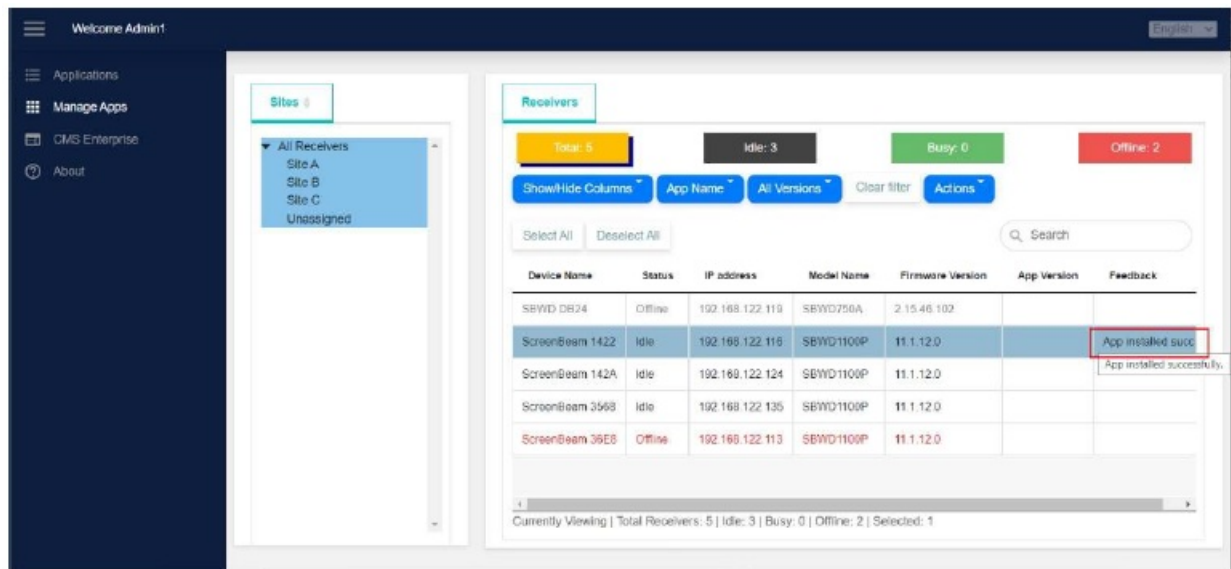
8. The Install window appears. Select MultiBeam from the App list and click Next.



9. The Install message box appears. Click Proceed.



10. The **MultiBeam** App will be installed onto your receiver shortly. App installation status is displayed in the **Feedback** column.

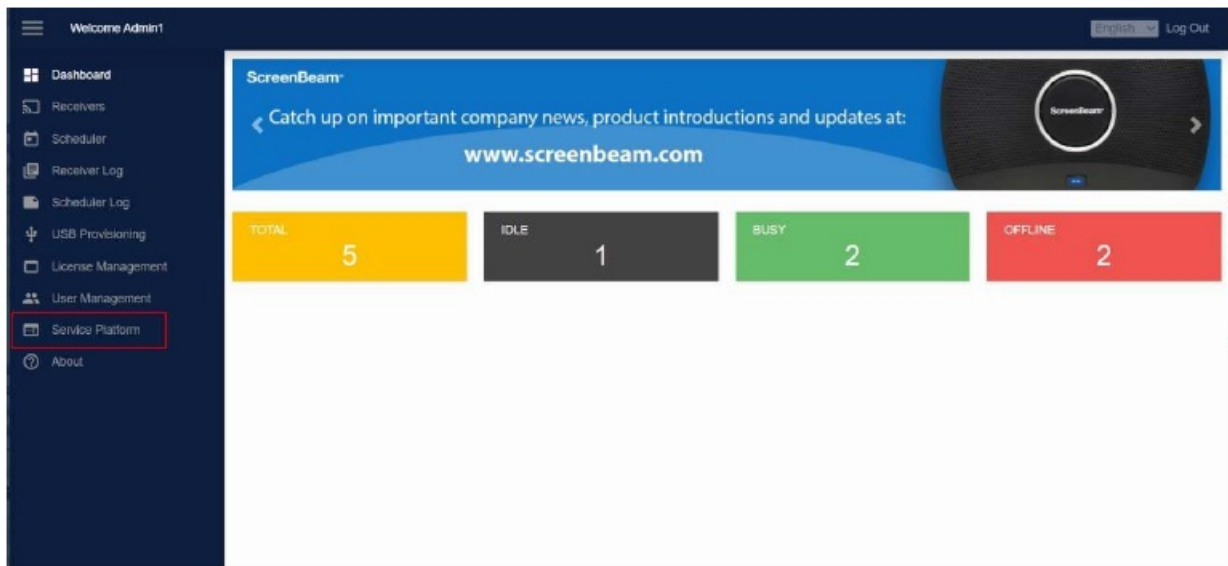


## Uninstall ScreenBeam MultiBeam App

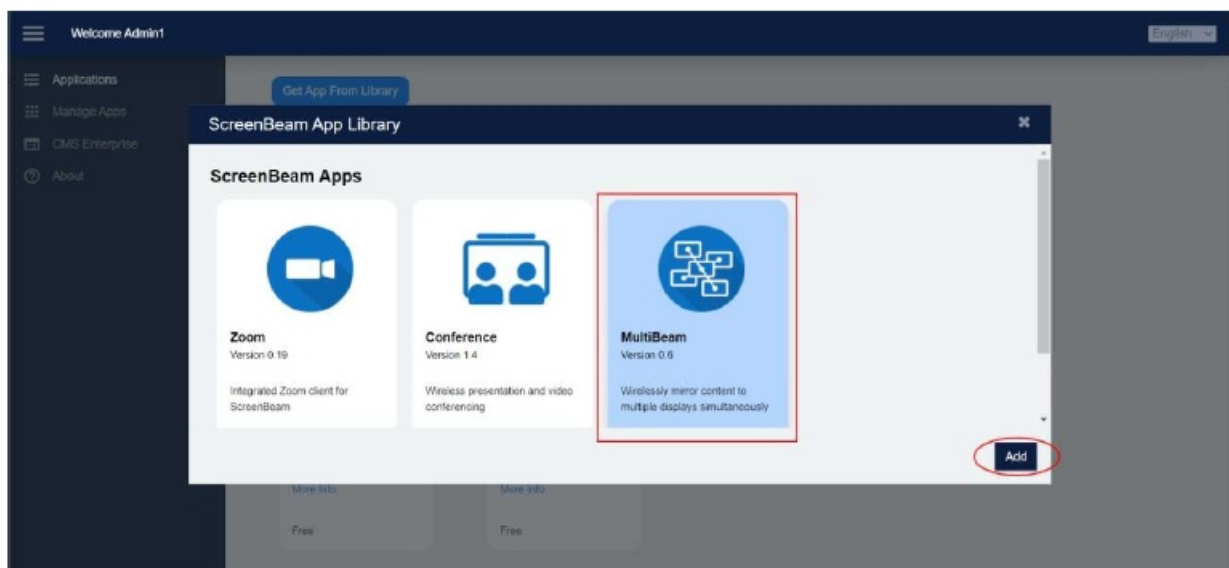
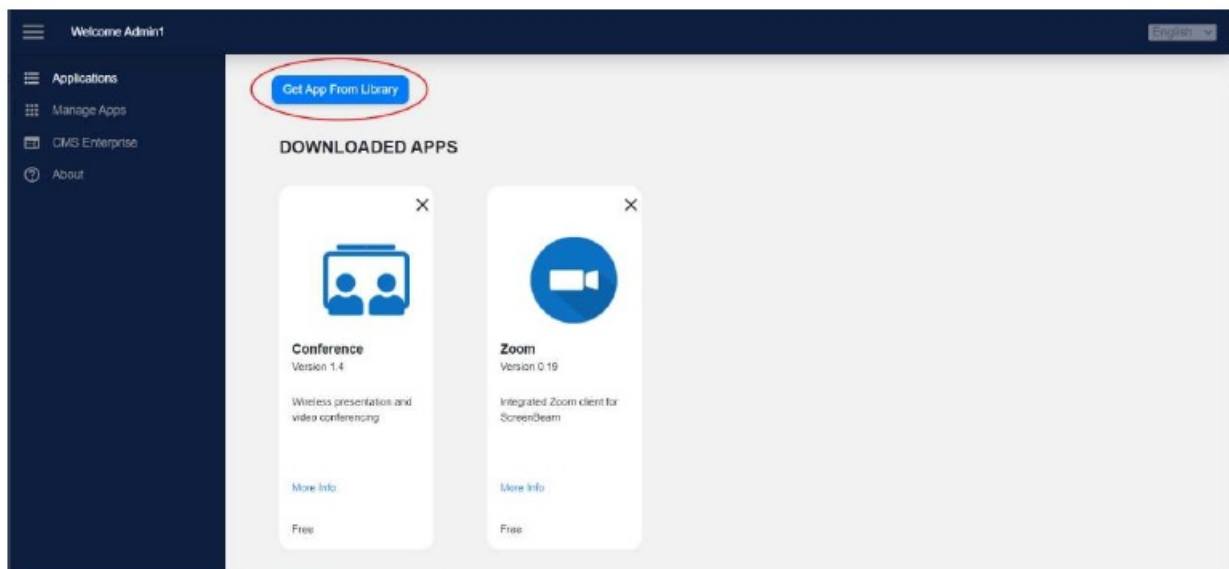
To uninstall ScreenBeam MultiBeam app, follow this procedure:

1. Access ScreenBeam CMS Enterprise and go to SPCMS by clicking Service Platform on the left pane.

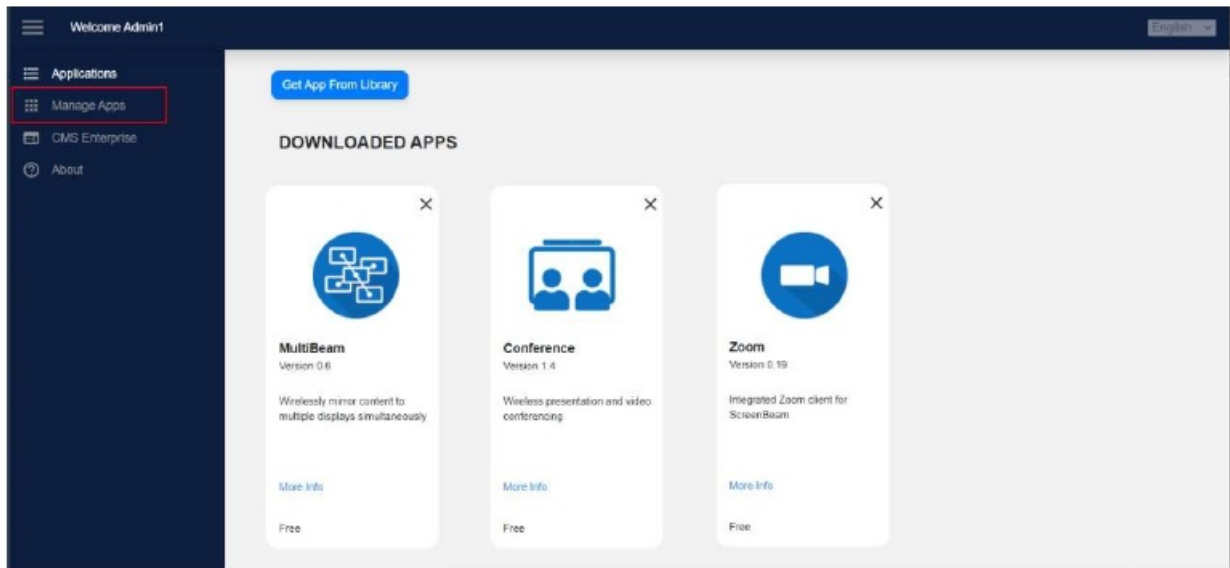




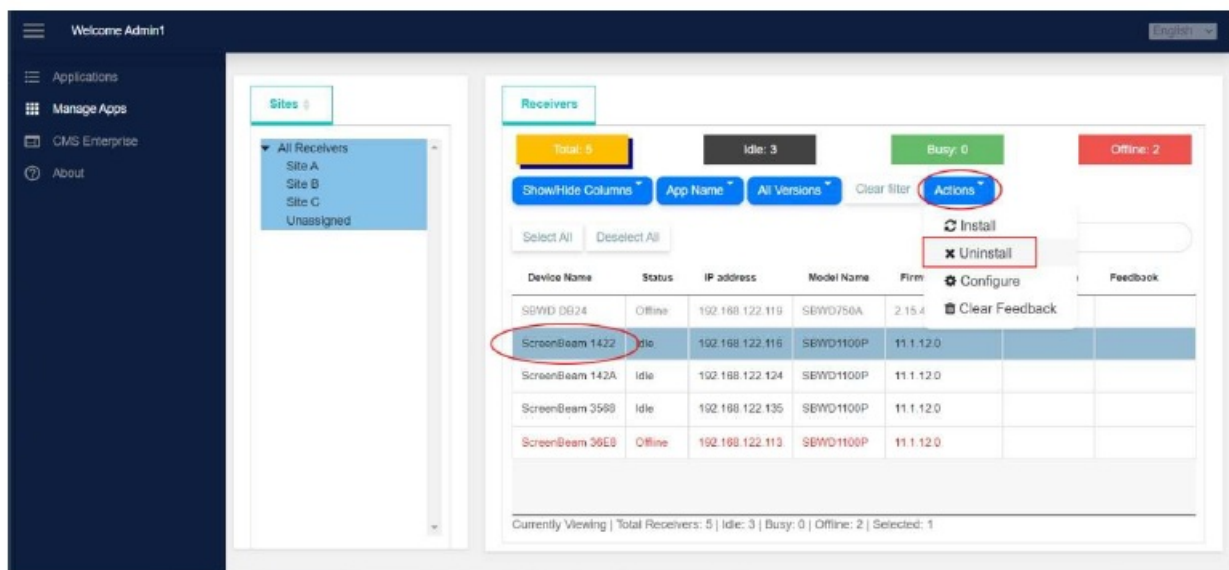
2. SPCMS will be opened, and the Applications page will be displayed by default. Check if MultiBeam app is present on the DOWNLOADED APPS list or not.
3. (Optional) If MultiBeam app is not there, click the Get App From Library button, and then choose the MultiBeam app in the ScreenBeam App Library window. Click Add to add the MultiBeam app to the DOWNLOADED APPS list.



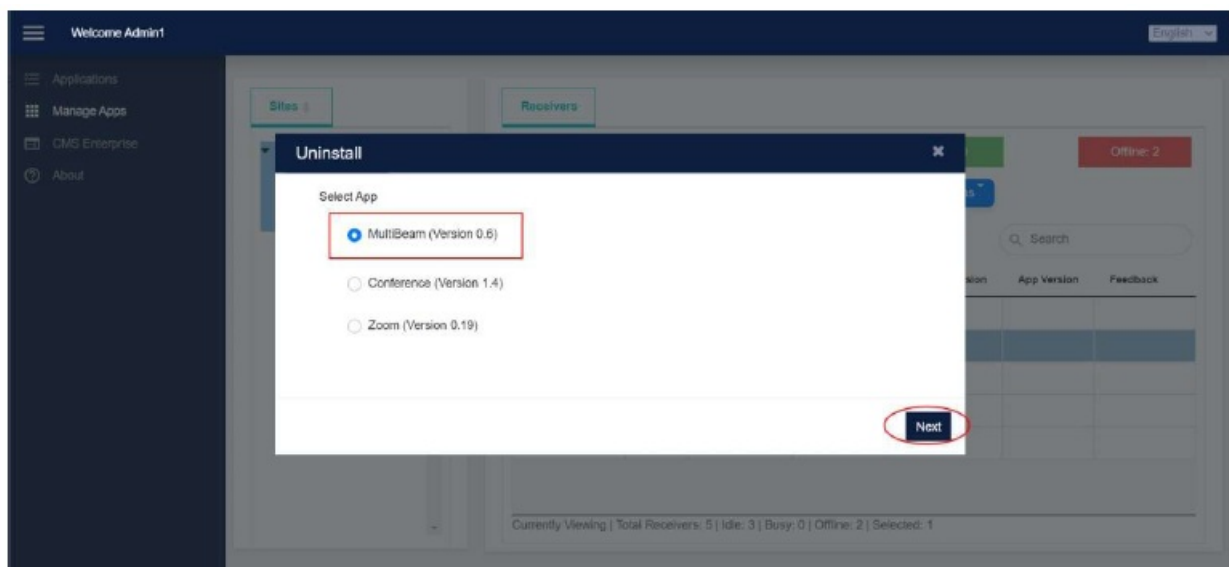
4. Go to the Manage Apps page by clicking Manage Apps on the left pane.



5. Select one or more receivers on the Receivers pane, and then select **Actions > Uninstall**.

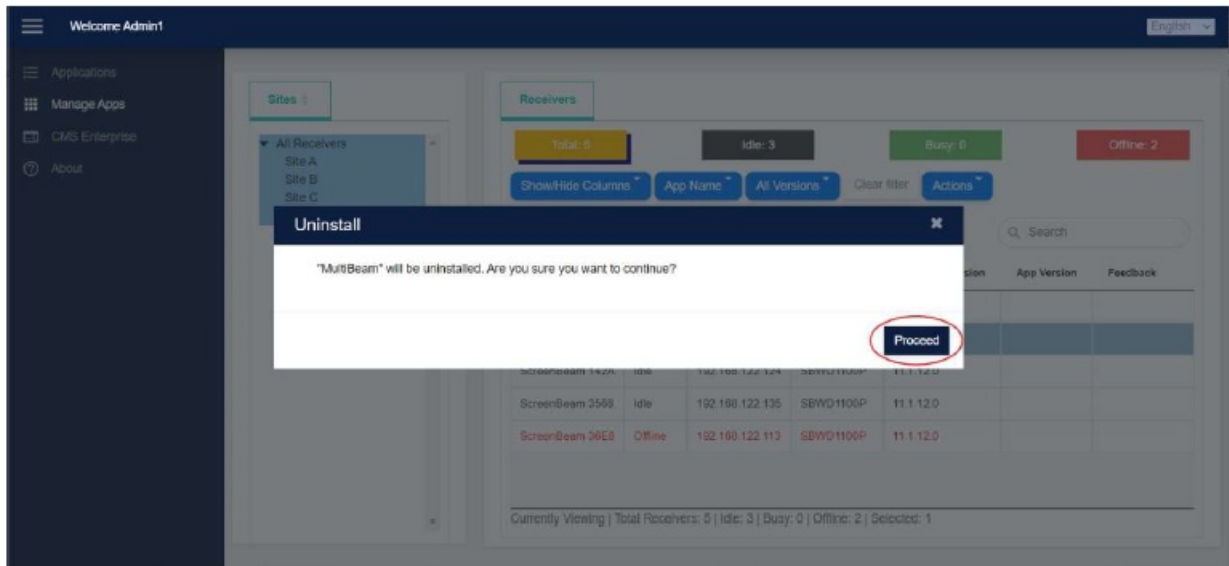


6. The Uninstall window appears. Select MultiBeam from the App list and click Next.

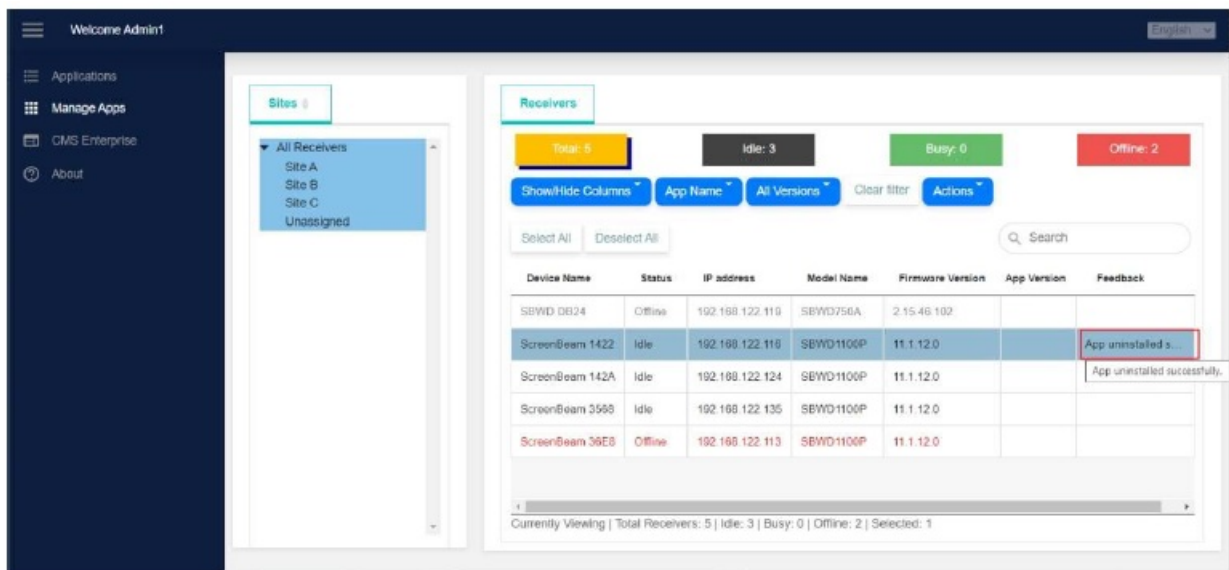


7. The Uninstall message box appears. Click Proceed.





8. The MultiBeam App will be uninstalled from your receiver shortly. App uninstallation status is displayed in the Feedback column.



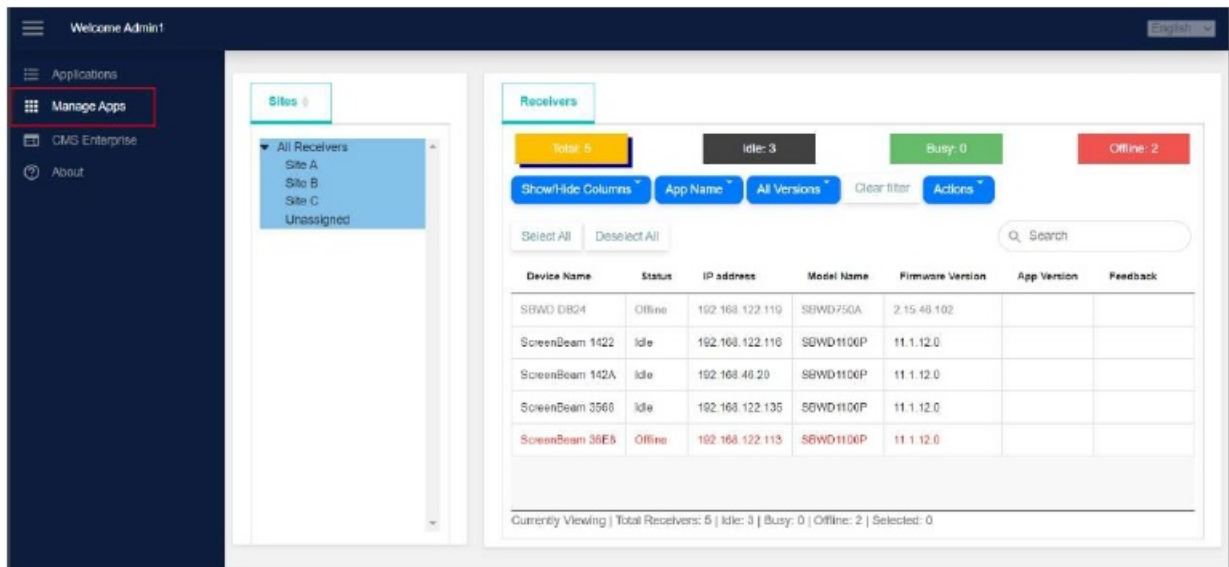
## Setting up MultiBeam

The ScreenBeam MultiBeam feature is not enabled after the MultiBeam app is installed. Proper configurations are required to make the MultiBeam feature work. This section describes configuration procedures on SPCMS.

Note: Refer to the receiver's user guide for details about how to configure a ScreenBeam receiver on the receiver's LMI.

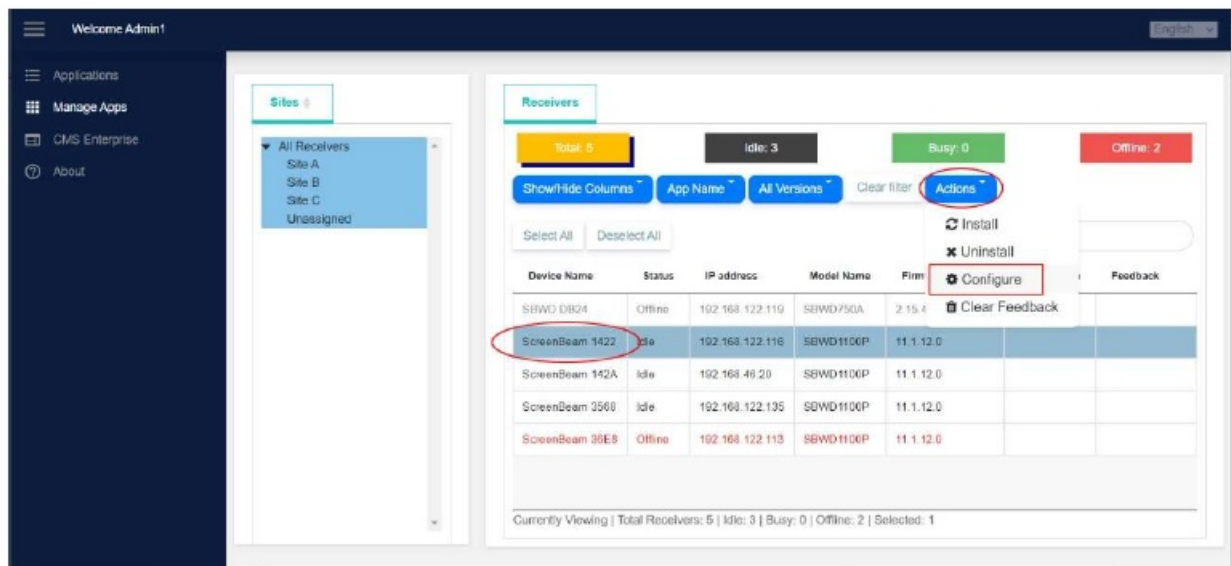
To configure MultiBeam settings, follow this procedure:

1. Go to the Manage Apps page by clicking Manage Apps on the left pane.

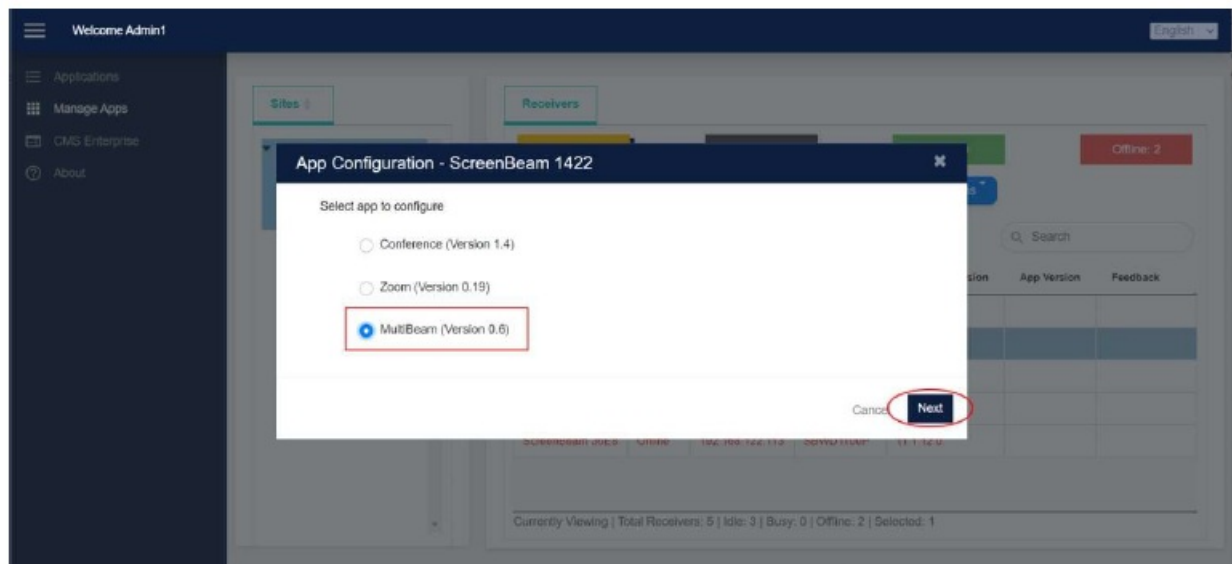


2. Select one or more receivers on the Receivers pane, and then select **Actions >Configure**.

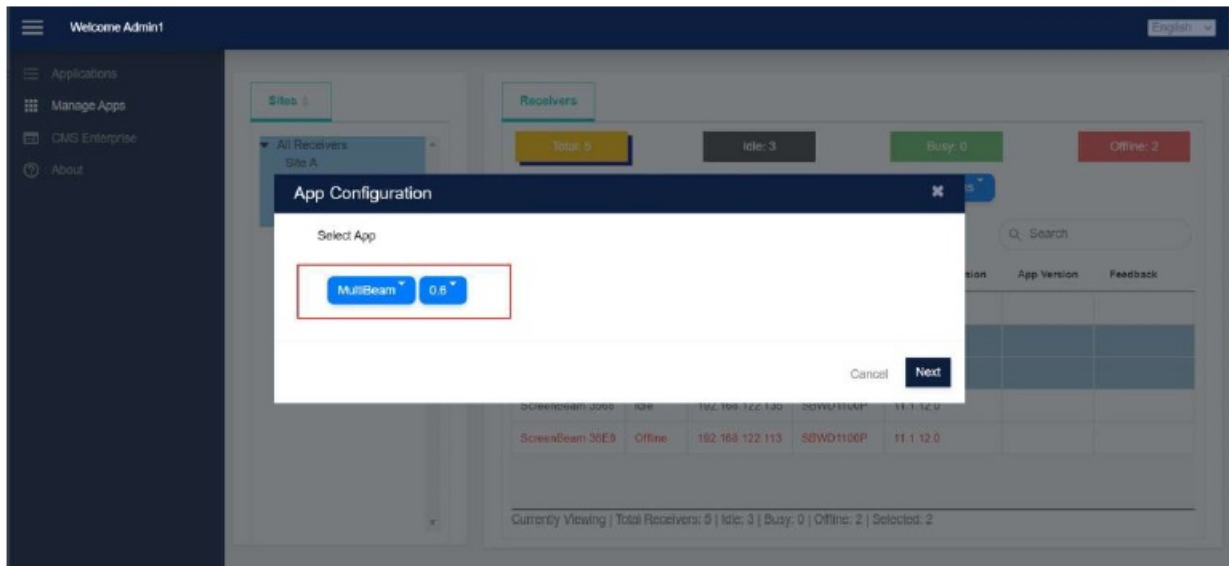
**Note:** ScreenBeam 1100 Plus receivers that are deployed as Primary receivers must have the MultiBeam feature enabled one by one, as a Primary receiver must have a unique Cluster Name and a unique Multicast IP address. ScreenBeam Plus receivers that are deployed as Remote receivers can have the MultiBeam feature enabled by batch if these remote receivers connect to the same Primary (the same cluster name).



3. The **App Configuration** window appears. Select MultiBeam from the available app list and click **Next**.

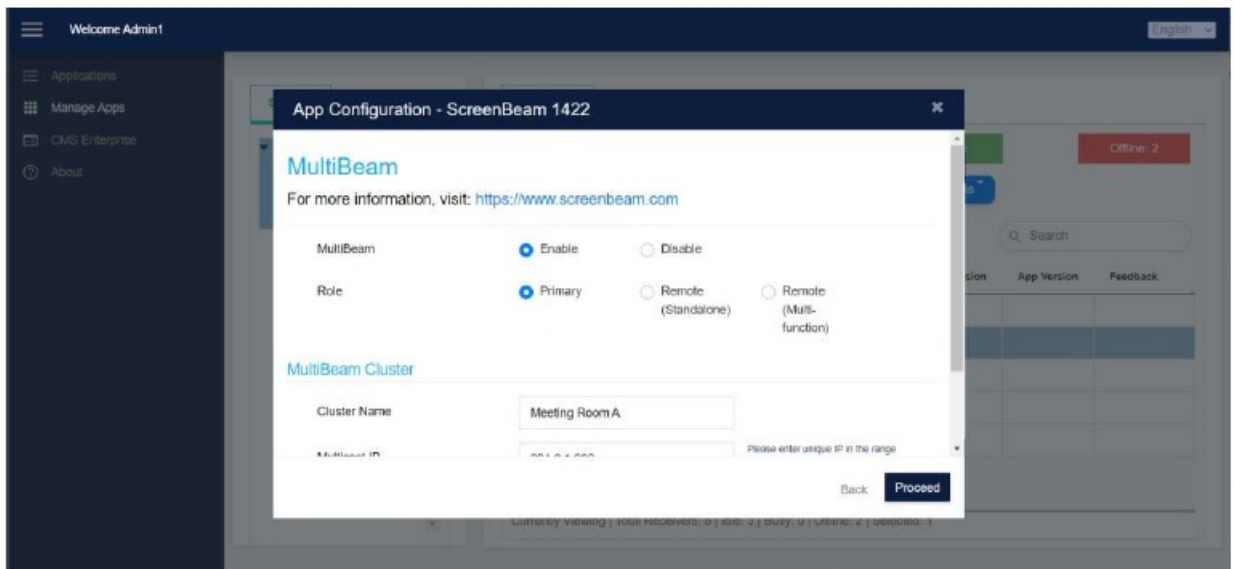


If multiple receivers are selected, it is necessary to choose the App and its version.

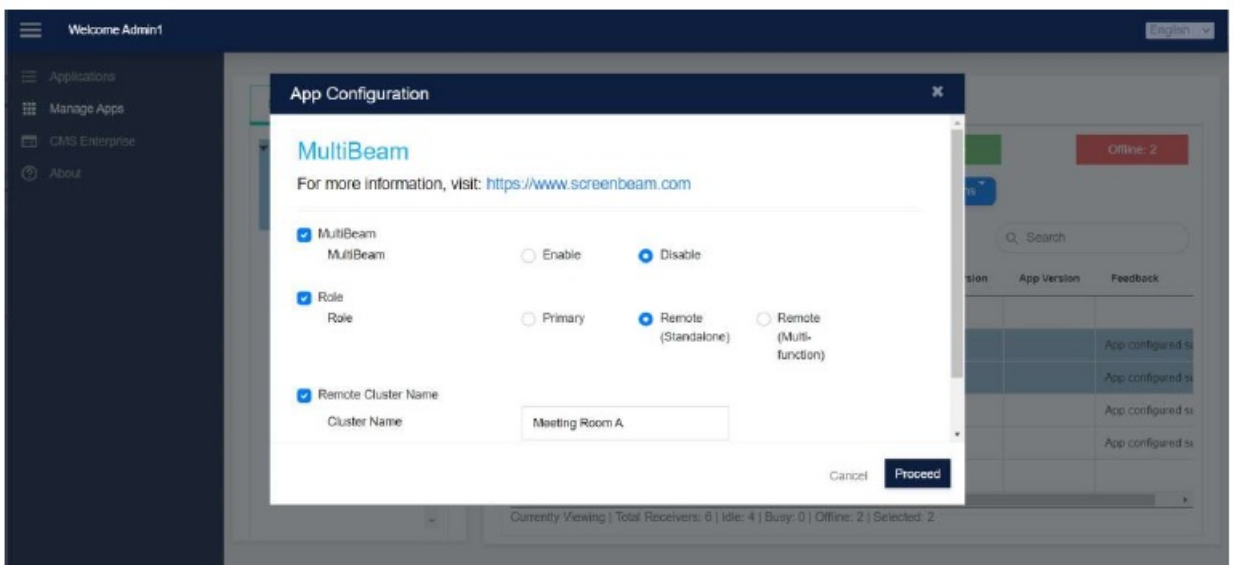


4. Configure MultiBeam settings on the App configuration window. Click Proceed.

- **Configuring a single receiver:**



- **Configuring multiple receivers:**



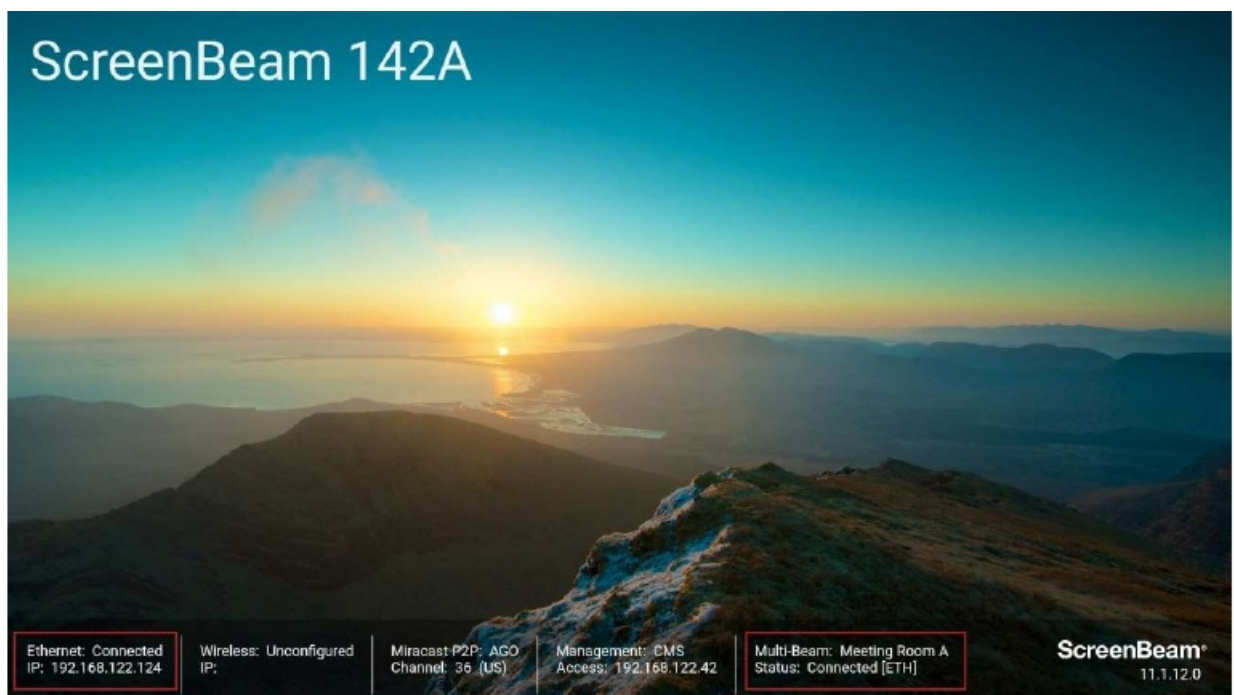
- **MultiBeam:** Select Enable to enable the MultiBeam feature; or select Disable to disable the MultiBeam feature.
- **Role:** A Primary receiver will actively stream the wireless display source device's video feed to the

MultiBeam cluster; a Remote (Standalone) receiver can join the MultiBeam cluster and receive video streaming in the cluster only and has all other features disabled; a Remote (Multi-Function) receiver is a MultiBeam Remote receiver and also has full-featured functionalities when it is not in a MultiBeam session. In a MultiBeam cluster, there is one Primary receiver and multiple Remote receivers.

**Note:** Standard wireless display features will be disabled after ScreenBeam 1100 Plus receivers are set to Remote (Standalone) while these features are still available when the receivers are set to Remote (Multi-Function).

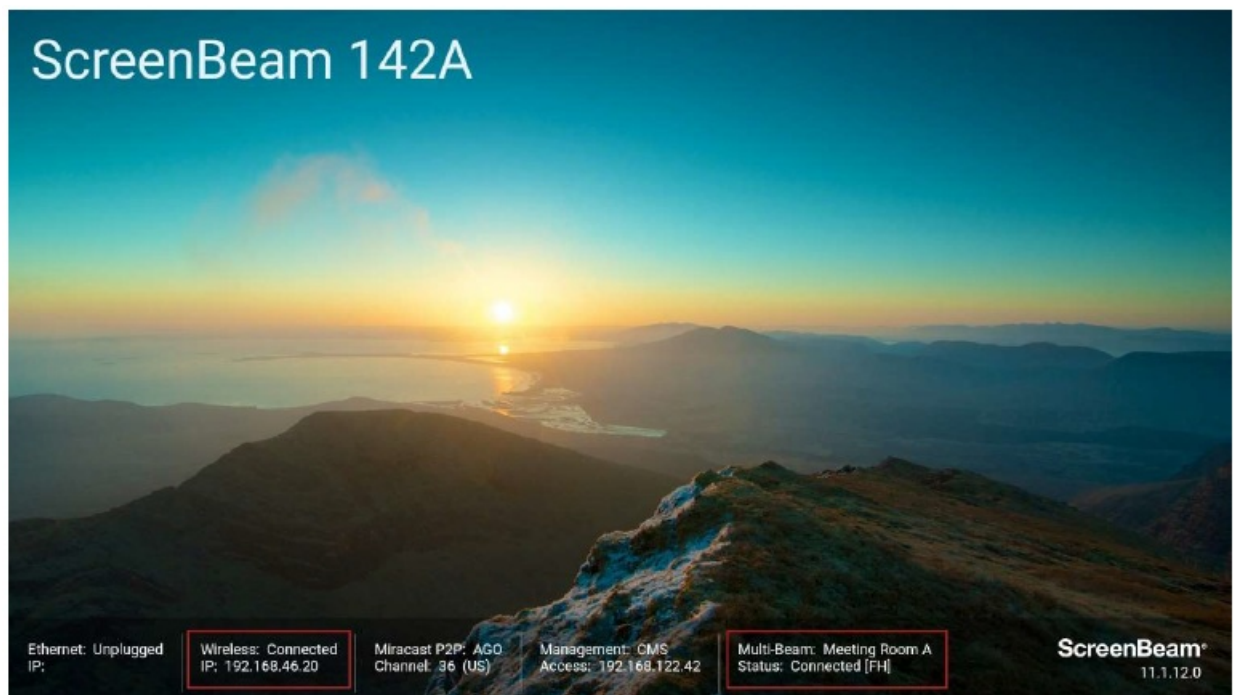
- **Cluster Name:** It is the name of a MultiBeam cluster (group). The Remote receivers will join the MultiBeam cluster through this cluster name. Generally, a MultiBeam cluster consists of one Primary receiver and multiple Remote receivers. The Cluster Name must be unique on your network.
- **Multicast IP:** This is the IP address of the MultiBeam cluster. The Primary will stream video to the MultiBeam cluster using this IP. The Multicast IP must be unique on your network.
- **Port (Base):** Four consecutive ports are required for Multibeam communication between the Primary and Remote receivers. This is the starting port. The default starting port is 24035. Port range is 5000 to 65530.
- **Interface:** This is the interface on which the Remote receiver connects to the MultiBeam cluster.

**Wired Ethernet:** It refers to the Ethernet connection through which the Remote receiver connects to a network. The Primary receiver must connect to the same network with the Remote receiver via its Ethernet or wireless connection when a Remote receiver's MultiBeam Interface is set to Wired Ethernet.



**Wifi Direct:** After the MultiBeam feature is enabled, a hidden AP is created on the Primary receiver, and the Remote receiver will connect to this hidden AP by wireless when MultiBeam Interface is set to **Wifi Direct**.

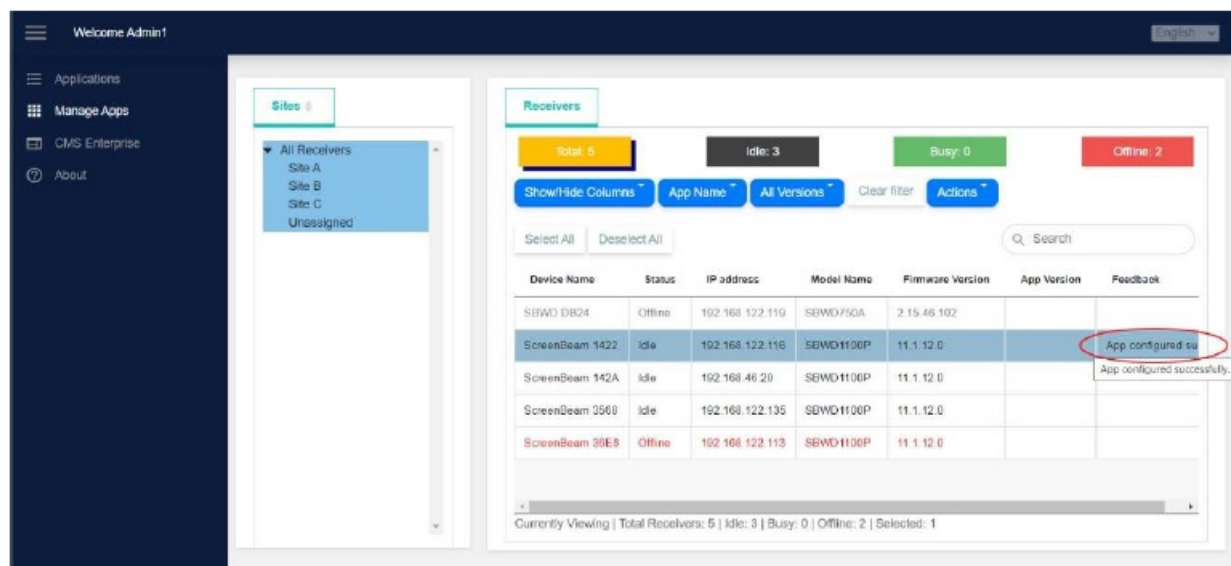




If your Infrastructure network is robust and stable, it is highly recommended to use a Wired Ethernet connection. Compared to the Wifi Direct method, the Wired Ethernet method can support more Remote receivers.

**Note:** If only wireless connection is available on the Remote receiver and Wifi Direct is used to connect to the MultiBeam cluster, the Remote receiver will bridge its network connection to the Primary's network connection. If you want to modify the name of the MultiBeam cluster, you should configure the cluster name for the Remote receiver first, then the Primary. Otherwise, the remotes will lose connection to the network.

5. The MultiBeam settings will be configured successfully, and the configuration status will be displayed in the Feedback column.



**Note:**

Currently, mouse cursor is not displayed or not correctly displayed on video of Remote receivers.

Be sure to switch the Remote (Multi-Function) receiver's Display Sharing Mode to Single if you experience video/audio streaming issues on those remote receivers.

Documents / Resources

<div>ScreenBeam MultiBeam</div> <div>User Guide</div>	<div><a href="#">ScreenBeam MultiBeam Software</a> [pdf] User Guide</div> <div>MultiBeam Software, MultiBeam, Software</div>
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References

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[ScreenBeam Central Management System \(CMS\) | ScreenBeam](#)