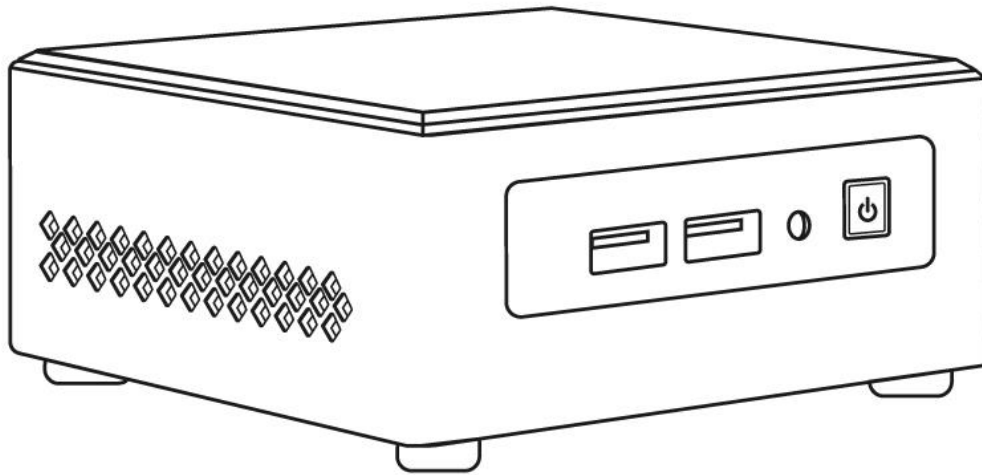


# AirServer Connect

Developed by App Dynamic



**User Guide**

Version 2.2 - September 2018

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## Welcome

Gone are the days of looking for cables and adapters, switching inputs and hoping for things to work. AirServer Connect takes everything we have learned as pioneers in wireless screen mirroring and puts it all into one easy to use hardware unit.

## Unique features

AirServer Connect contains several unique features:

- World's first all in one mirroring device than supports 4k UHD resolution and 60 frames per second
- Uses native casting technology to receive screen mirroring over AirPlay, Google Cast and Miracast
- Supports all major devices using iOS, MacOS, Android and Windows at the same time with up to 8 simultaneous connections in 1080p full HD quality
- No apps needed to mirror or cast to your screen
- Locked and secured purpose-built hardware and operating system
- Automatic updates
- Built-in secure wireless guest network
- Works without any network connectivity
- No information is sent outside the local network
- Supports Miracast over infrastructure and routing for AirPlay



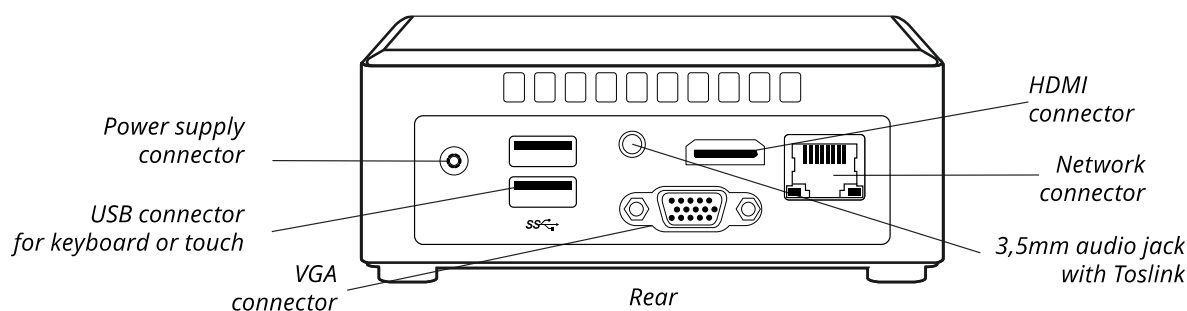
## Set up your AirServer Connect

Before we continue, let's make sure you have all the components you need to start sharing. In the box, you should find the following:

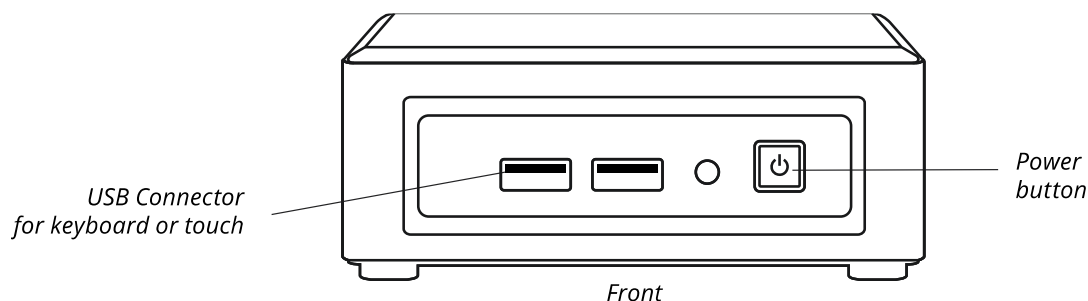
- AirServer Connect unit
- Universal power supply and plug adapters
- VESA mounting panel
- Quick start guide
- EULA and Warranty Certificate

With the AirServer Connect, you can choose to connect to a display via either HDMI or VGA cables. If your display has other video inputs such as DisplayPort or DVI, you can purchase adapters or cables that fit. We recommend using digital connections such as HDMI when possible.

Next connect your AirServer device to a power outlet using the supplied power adapter and plug for your region.



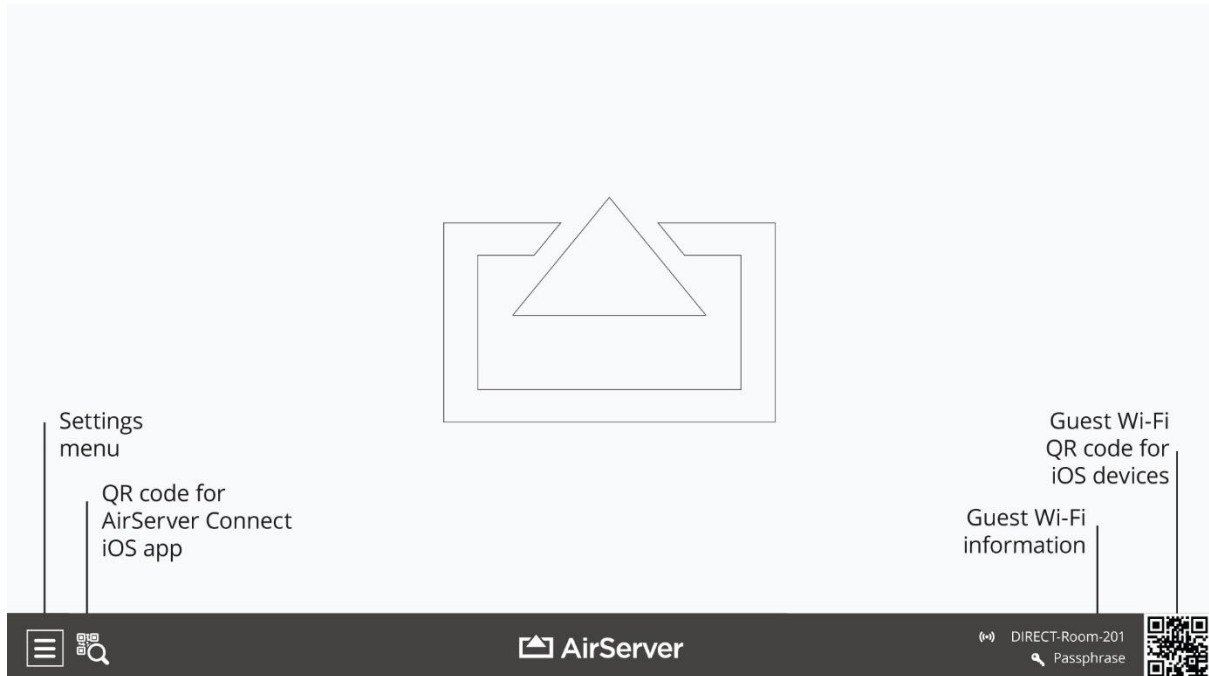
AirServer Connect does not need a network connection to function, but we recommend connecting to a wired network via network cable to receive software updates and allow connections from devices on the building network. AirServer Connect has a wireless access point that is used to connect guests and devices not connecting through existing network infrastructure to AirServer.



Press the power button on the right side of the front panel to power up the AirServer Connect. The power button should now glow blue indicating the unit is turned on. After a few seconds you will be presented with the **Home screen** and at this point AirServer Connect is ready to receive mirroring connections and show your content on the screen.

## The Home Screen

The AirServer Connect home screen contains information on how to connect your device. The settings menu and QR code for AirServer Connect iOS app are accessible using a USB keyboard, mouse or a touch enabled screen.



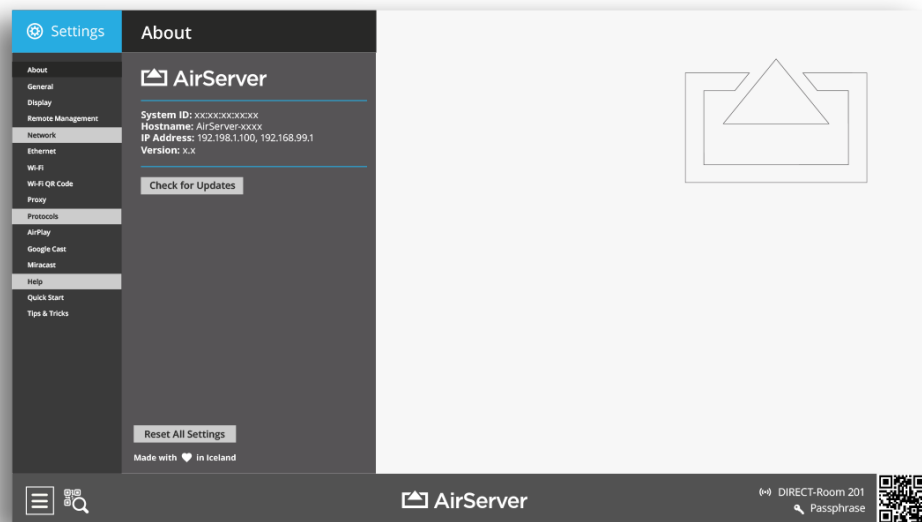
## Navigating Menus

There are three ways to enter the Settings menu or view the QR code for the AirServer Connect iOS app:

- If your screen has USB **touch**, connect it to the AirServer Connect and you can navigate menus using touch.
- Connect a USB **mouse**.
- Connect a USB **keyboard** and use the **arrow buttons** and **enter** to navigate.

## Configuring Basic Settings

The AirServer Connect works out of the box, but in an environment with multiple AirServer Connect devices, it is recommended to first perform some basic configuration in the **Settings menu**.



In the **General** section you can give the AirServer Connect a unique **friendly name** such as the room name or number. This name will be visible when selecting the AirServer to cast to, for remote management as well as part of the Wi-Fi guest network name.

Go to the **Protocols menu** to review security settings for the screen mirroring protocols.

Select **Remote Management** and set an administrator password to be able to remotely manage this AirServer Connect.

Access the **Wi-Fi** menu to configure guest access to your network and set a passphrase for the guest network. You can then select what type of access guests get to the building network through the guest network:

- No Access (Isolated Network) – Only allows guests to cast their screens to AirServer Connect, no internet access.
- Internet Only (Guest Network) – Gives guest only access to cast to AirServer Connect and public internet. This is the default setting.
- Internet + LAN – Gives the guest full access to the wired network. Note that access can be limited by your network administrators.

For more information on settings, see the

**Detailed Settings** section.

## Screen Mirroring Methods


AirServer Connect uses the built-in casting methods from your device and thus does not require setting up any apps on your device. Connection methods depend on your device. This section gives instructions how to connect from most devices. Check our support webpage <https://support.airserver.com/> for more information or to ask questions.

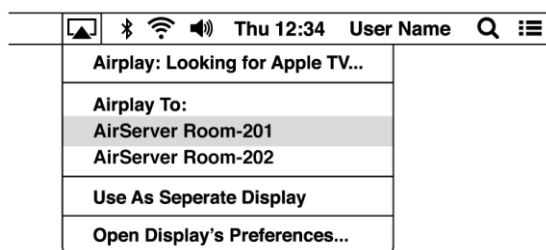
### Airplay

#### Mac


You can mirror your Mac display or use AirServer Connect as an extended display for your Mac.

First make sure your device is on the same network as the AirServer Connect. This can be either through the Wi-Fi guest network on the AirServer Connect or through the building network.

To start mirroring your screen, choose the  icon in the menu bar, then choose the name of your AirServer from the menu. You can then choose to mirror your primary display by selecting **Mirror Built-in Display** or extend your screen by selecting **Use as Separate Display**.



To stop Airplay choose **Turn AirPlay Off**.

If the  icon is not visible in the menu bar, go to **System Preferences**, select **Displays** and select the **Show mirroring options in the menu bar when available** checkbox.

For more information regarding AirPlay refer to Apple documentation and support.

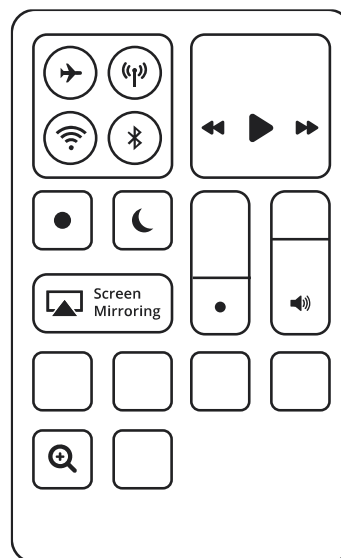
#### iPhone or iPad

First make sure your device is on the same network as the AirServer Connect. This can be either through the Wi-Fi guest network on the AirServer Connect or through the building network.

If the AirServer Connect is not visible from your iOS device after connecting to the building network, see the troubleshooting section regarding titled **Problems using AirPlay on a busy or complex network**.

To connect an iOS 11 device to the Wi-Fi guest network of AirServer Connect, open your camera app and focus on the QR code at the bottom right of the AirServer home screen. You will be asked on your device if you want to connect to AirServer. Press **Join** and close the camera app. You have now joined the Wi-Fi guest network.

Next open the **Control Center** on your iOS device by swiping up from the bottom or top of the screen depending on the device and iOS version. Press **Screen Mirroring** and then **AirServer**. AirServer Connect will now mirror the screen on your device.



To stop mirroring open the **Control Center**, press **Screen Mirroring** and choose **Stop Mirroring**.

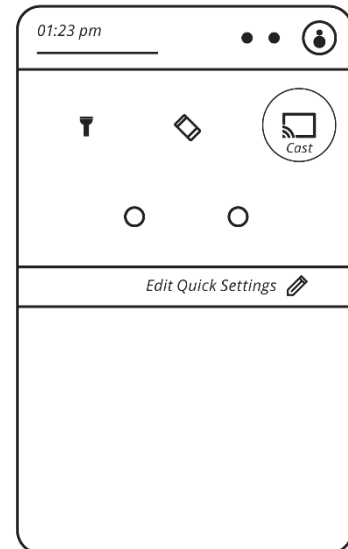
## Google Cast

### Android

First make sure your device is on the same network as the AirServer Connect. This can be either through the Wi-Fi guest network on the AirServer Connect or through the building network.

Most modern Android devices have a **Cast Screen** button in the **Quick Settings** pane that can be accessed by swiping down from the top of the device screen. Pressing the **Cast** button allows you select any available Google Cast devices including AirServer Connect. If the **Cast** button is not visible in the Quick Settings pane you may need to configure the Quick Settings pane. In most Android devices there is a **pencil graphic** button to configure the Quick Settings pane.

Another method to connect your Android device to AirServer Connect is to use the **Google Home** app that often comes pre-installed on your device or can be downloaded from Google Play Store. In the Google Home app, press **Discover** and you will see a list of available devices.



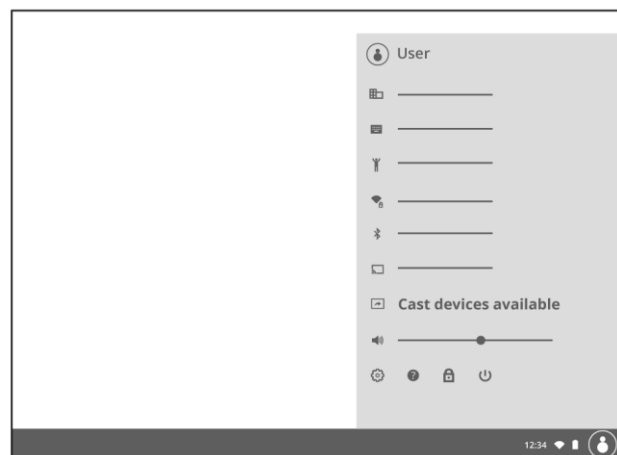
To stop casting go to the notifications by swiping down from the top of the screen. In the notifications select **Cast** and then the name of the AirServer you are connected to. Select **Disconnect** to stop casting.

### Chromebook

First make sure your device is on the same network as the AirServer Connect. This can be either through the Wi-Fi guest network on the AirServer Connect or through the building network.

Click your **account image** in the lower right corner of the screen, choose **Cast devices available**, select the name of your AirServer Connect follow the on-screen instructions.

To stop casting your Chromebook to AirServer Connect, click your **account image** and select **Stop** in the casting section.



## Miracast

Miracast is a standard to send video and audio wirelessly from device to screen often described as HDMI over Wi-Fi. Miracast is fully supported in Microsoft Windows 10 but requires the sending device to have Miracast compatible Wi-Fi and video drivers. Thus, some older devices may not be able to utilize Miracast.

First make sure your device is on the same network as the AirServer Connect. This can be either through the Wi-Fi guest network on the AirServer Connect or through the building network.



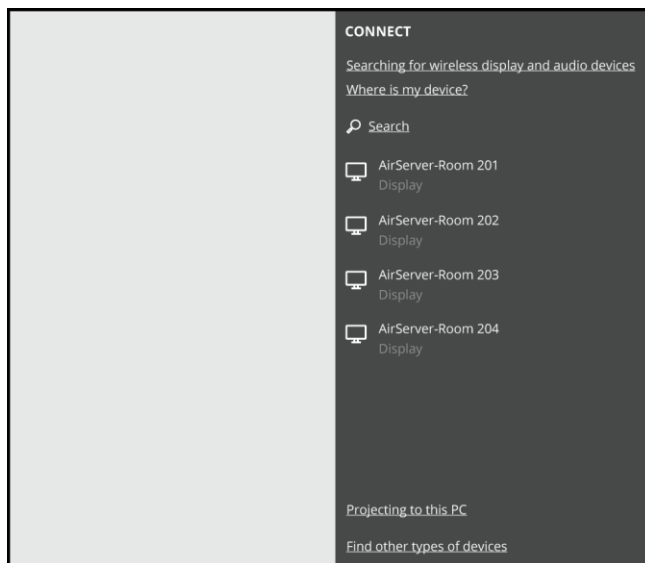
## Windows 10

To use the built-in screen projection in Windows 10 press **Windows + K** or **swipe from the right** on your touchscreen to open the **Connect sidebar** menu where you can select AirServer from available Miracast receivers.

AirServer Connect supports extended screen view. Select **Change Projection Mode** in the **Connect sidebar** menu and then **Extend** in the **Project sidebar** menu.

To stop casting go back to the **Connect sidebar** menu by pressing **Windows + K** and select **Disconnect**.

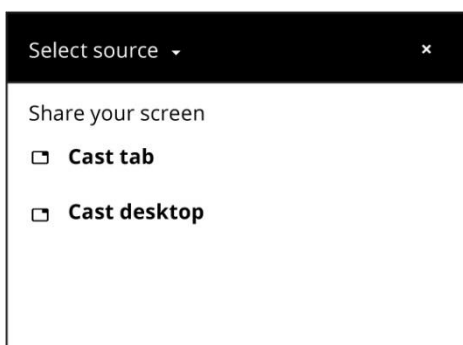
We have seen considerable improvement in Miracast quality with recent Windows 10 versions and do not recommend using versions older than 1709.



## Earlier Windows versions and Linux

Microsoft Windows 7 and Linux do not support Miracast natively. However, it is possible to connect to AirServer Connect by using the Google Chrome browser. More information about Chrome can be found at <https://www.google.com/chrome/>

Once installed, launch the **Chrome browser**. To the right of the address bar you will see an icon with three vertically arranged dots (:). Select **Cast...** from the pull-down menu. In the menu that appears you can choose between the **Cast to** and **Select Source** menus by clicking the text at the top of the menu. Click on **Cast tab** to mirror the current tab in or **Cast desktop** to mirror the entire desktop including audio.

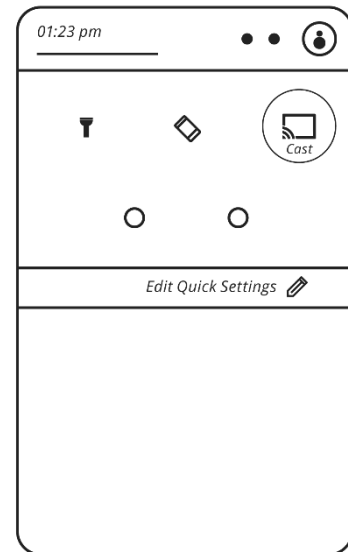


### Samsung and some other Android devices

The Android operating system has support for Miracast, but by default it is not enabled. Samsung and some other Android device manufacturers have enabled Miracast, often using a different name.

Look for names such as **Smart View**, **AllShare**, **Quick Connect** or **Cast** – most often accessible from the **Quick Settings** pane by sliding down from the top of the device screen. Note that you may have to slide to the right in the Quick Settings pane to see additional buttons. If the Cast button is not visible in the Quick Settings pane you may need to configure the Quick Settings pane. In most Android devices there is a **pencil graphic** button to configure the Quick Settings pane.

For more assistance check your device user manual or other instructions from the device manufacturer.



## Detailed Settings

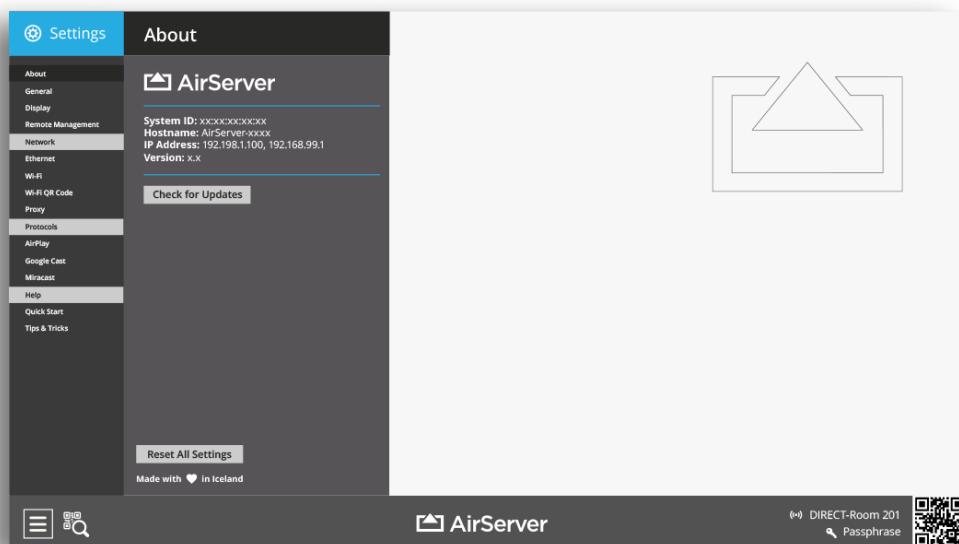
This section guides you through the settings menu of the AirServer Connect. If you have trouble getting into the settings menu see **The Home Screen** and **Navigating Menus** sections.

### About

The **About** menu gives information about the AirServer Connect unit such as the System Id, Hostname, IP Address and Version number. Details in this menu can be helpful for troubleshooting if you need to contact AirServer support for some reason.

Note that Hostname cannot be changed from the settings menu, if you wish to change the Hostname, it can be done through the DHCP server that gives the AirServer Connect device an IP address.

AirServer Connect has automatic updates but from this menu it is also possible to manually **Check for Updates**.



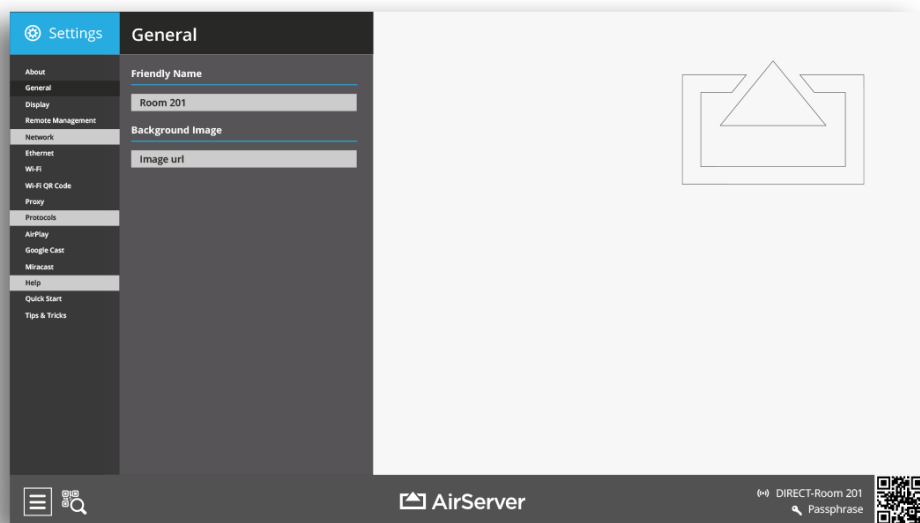
At the bottom of the screen there is the option to **Reset All Settings**. This performs a factory reset so all settings go to initial values.

## General

In the **General** section you can give the AirServer Connect a unique **Friendly Name** such as the room name or number. This name will be shown when you select a where to mirror to from your device as well as being used for remote management and as the name of the Wi-Fi hotspot.

You can also set a URL path to a background image to replace the standard images in AirServer. This can be a great feature to add your logo or a basic information screen.

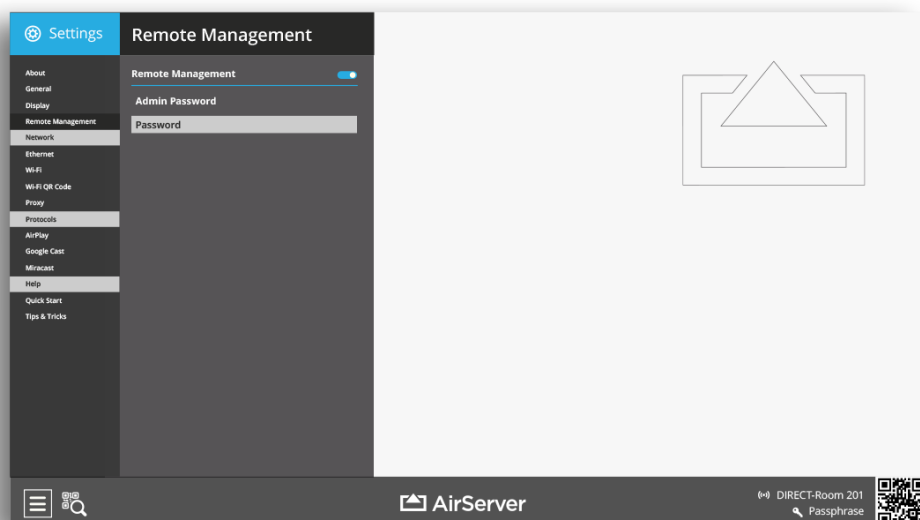
The formats supported are JPG, PNG and GIF and the URL can be a redirect link to an image. AirServer Connect will fetch the image when starting, so if you replace the image in the URL, please restart AirServer for the new image to be displayed. For best quality, make sure the image is in the native resolution of the screen.



## Remote Management

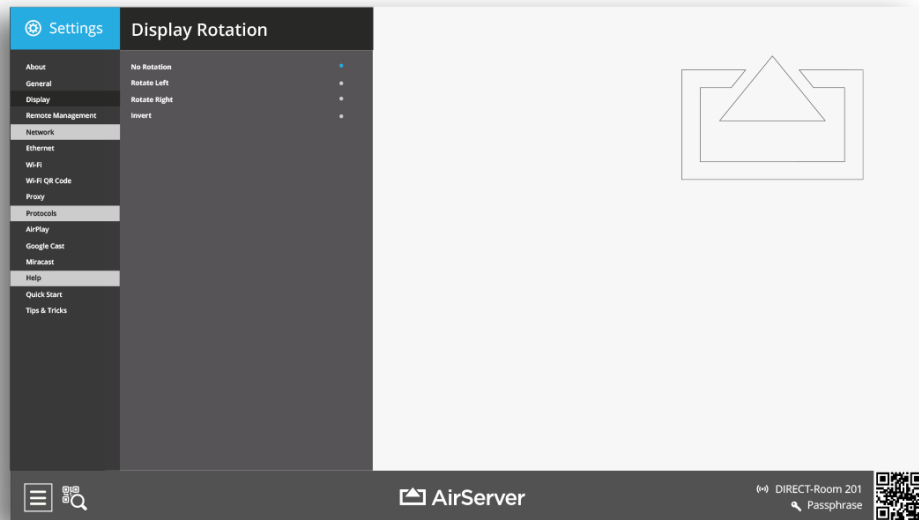
It is possible to remote manage the AirServer Connect through a webpage. To enable remote management, you need to set a password to be able to log in to the remote management interface.

The remote management interface is accessed through a web browser by going to the URL shown in the Remote Management screen.



## Display

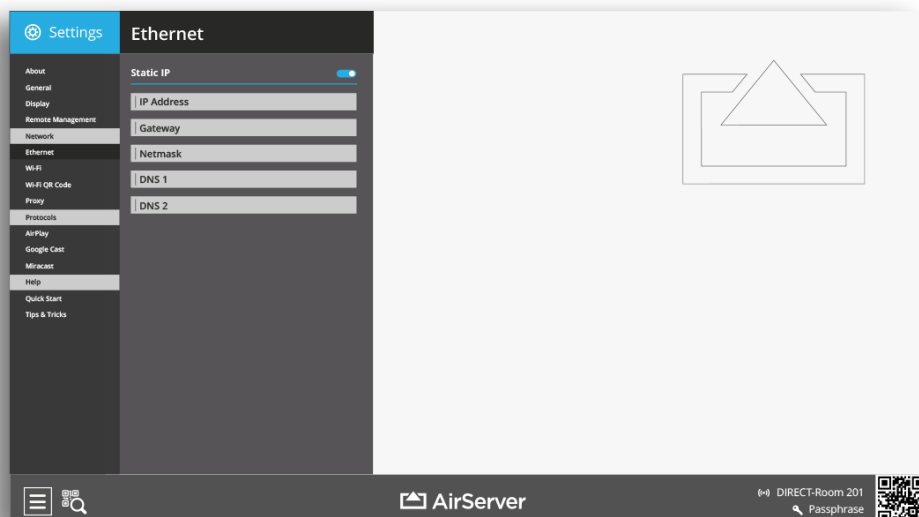
Many users, for instance mobile game developers want to have their screens set up in a **portrait** orientation to mirror smartphone screens in full size. In the Display menu it is possible to change the **Rotation** and invert the information on the home screen and menus.



## Ethernet

The Ethernet menu shows the current network settings and allows you to set a **static IP address, Gateway, Subnet mask** and **DNS servers**.

If you enable **Static IP**, please enter the network settings information and press **Apply**. After you disable Static IP, the AirServer Connect will contact the DHCP server to get a dynamic IP address, gateway, subnet mask and DNS servers.



## Wi-Fi

The **Wi-Fi** menu allows you control the built in Wi-Fi hotspot and turn it off if desired.

You can set a **Passphrase** for the guest network. The passphrase will be displayed on the home screen. We recommend keeping this field empty as then the AirServer Connect will generate a passphrase and automatically change it regularly. That will prevent you from overloading the built in guest Wi-Fi as users that have previously used the guest Wi-Fi may reconnect to it automatically even though they are not using the Air'

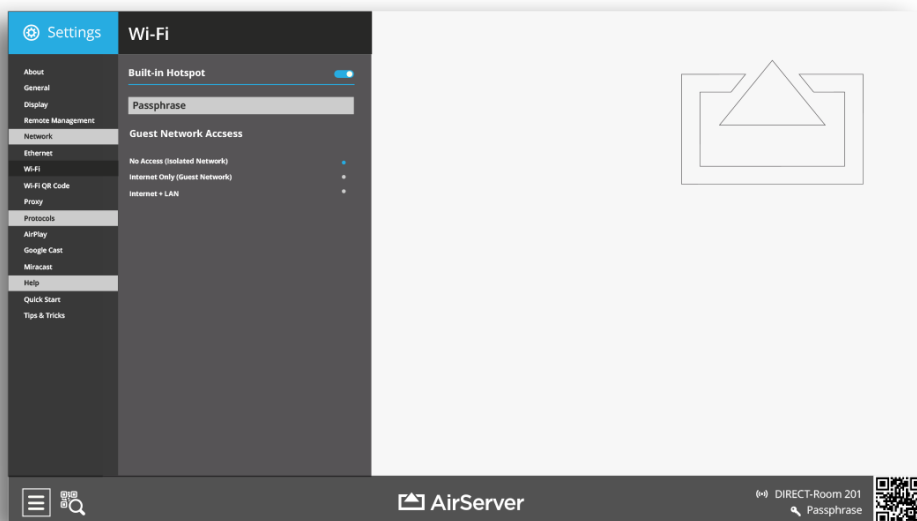
You can then select what type of access guests get to the building network through the guest network:

**No Access (Isolated Network)** – Only allows guests to cast their screens to AirServer Connect, no internet access.

**Internet Only (Guest Network)** – Gives guest only access to cast to AirServer Connect and public internet.

**Internet + LAN** – Gives the guest full access to the wired network. Note that access can be limited by your network administrators.

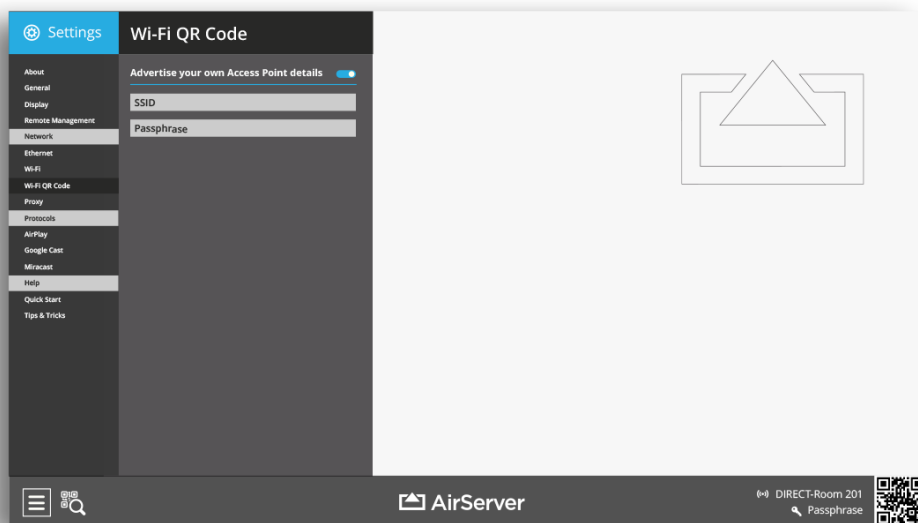
The Wi-Fi hotspot is encrypted and secured using the WPA2 security protocol.



## Wi-Fi QR Code

Using the built in Wi-Fi access point for a guest network is easy, but in some cases our customers want to use their own Wi-Fi infrastructure and guest networks. Thus, it is possible to override the Wi-Fi QR code in the lower right corner of the home screen if you want to use existing Wi-Fi infrastructure but still have iOS users be able to join by scanning a QR code.

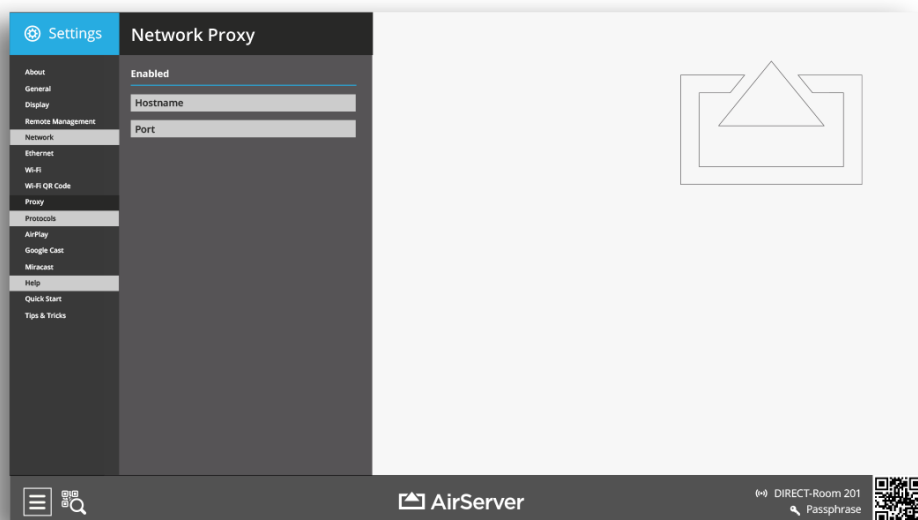
If you already have a guest network in place and do not wish to use the Wi-Fi access point on the AirServer Connect, enable the **Advertise your own Access Point Details** setting. Then add the Wi-Fi access point **SSID** and **Password** and the QR code will update to reflect your Wi-Fi infrastructure instead of the built-in access point. If disabled, the QR code will revert to the built-in access point on the AirServer Connect.



## Proxy

Should your network require a **Network Proxy** it can be enabled in the Proxy menu.

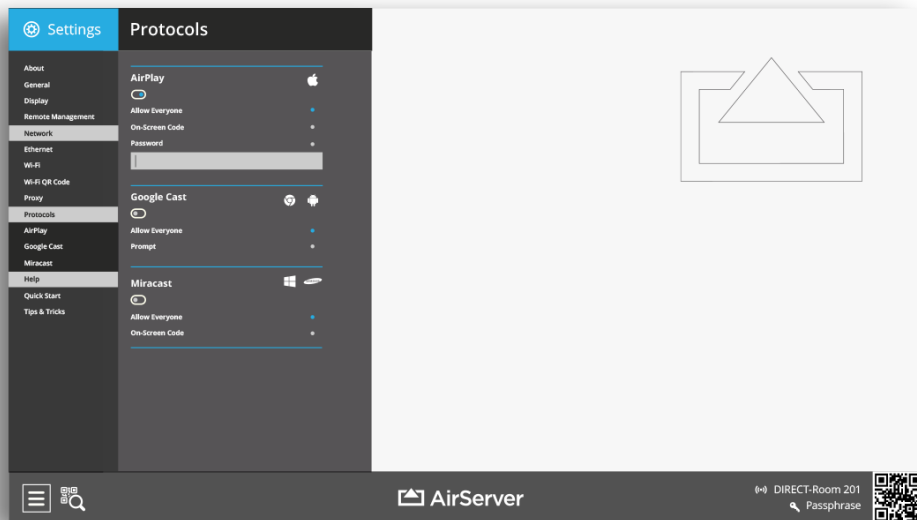
Select **Enabled** to activate proxy settings, then fill out **Hostname** and **Port**.



## Protocols

The Protocols menus allow you to set security and access settings for **AirPlay**, **Google Cast** and **Miracast**.

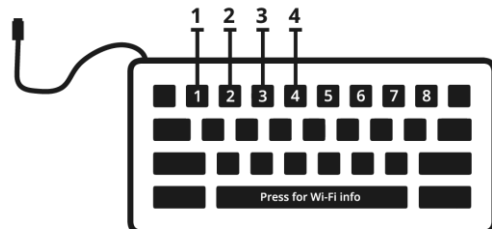
For each protocol it is possible to turn them on or off, as well as setting access control settings such as **On-Screen Code**, **Password** or **Prompt**. The available options are dependent on the protocol.



## Advanced Features

There are two advanced features when a keyboard is attached:

- To see the Home screen overlay while mirroring your devices, press **Space bar**
- When multiple devices are connected it is possible to show only one device at a time by connecting a USB keyboard and pressing the **number keys** (1, 2, 3, ...). To go back to viewing all connected devices press **Space bar**.



## Known Limitations

There are some limitations in that services offering DRM (Digital Rights Management) protected content such as (but not limited to) Netflix, Hulu, Amazon Prime and rentals from Apple cannot be mirrored for copyright and legal reasons. This a limitation set by the content providers.

Google Cast and Miracast transmit black borders to the left and right of the image for devices in portrait mode. This will be noticeable when two or more devices are connected to the AirServer Connect at a time.



## Troubleshooting

In the event that you encounter an issue with your AirServer Connect, please read through the following list and check our support page ( <http://support.airserver.com> ) for more information

### Nothing is displayed on my screen

- First check that the screen is set to the correct input and all cables are correctly connected.
- Make sure the AirServer Connect unit is on and the power button glows a constant blue.
- Restart the AirServer Connect by pressing the power button, wait until it turns orange and then press power button again.
- If the front panel of around the power button blinks for an extended period of time, note the blink pattern and contact AirServer support.

There is a known issue with Android devices not being able to reconnect if the Prompt setting is enabled in Protocols. If this is an issue, please reboot your Android device.

### The image does not fit the screen

This can be for a number of reasons, including:

- Your device is in portrait mode. AirServer Connect mirrors exactly what is on the device so black borders appear to the side of your image. Furthermore, a device using Miracast or Google Cast will transmit those black bars, so they will also be visible when multiple devices are connected at the same time.
- The aspect ratio of your screen does not fit the aspect ratio of the device. Most devices have a widescreen aspect ratio such as 16:9 whereas many older displays and projectors have a traditional 4:3 aspect ratio. The same can happen with many modern screens that have a wider aspect ratio than 16:9. This will cause black borders to appear at the top, bottom or sides of the screen.
- Your screen is not reporting its native resolution or an incorrect resolution. This can result in the image being blurry or partial. Check your cables and update firmware on your screen if possible. We recommend using HDMI cables and if VGA cables need to be used, make sure they are fully wired to report EDID resolution information.

### Audio and video quality is poor

Your existing **Wi-Fi infrastructure may be overloaded**. This can happen if the network connection is poor or cannot handle many devices mirroring screens at the same time. Try connecting directly to the access point on the AirServer Connect or through a wired ethernet connection if possible on your device.

AirServer Connect **guest network may be overloaded**. The built-in access point in AirServer Connect can only handle a limited number of guest network connections at a time. We do not recommend having more than four devices connected to the guest network at the same time. There may be a lot of devices connected to the guest network that have previously connected to the AirServer Connect. These users take up bandwidth. If you have set your own passphrase for the built-in guest network, we recommend changing the passphrase in the Settings > Wi-Fi menu regularly to reduce the number of connections.

Make sure your sending device is up to date and supports the same mirroring and cast protocols as AirServer Connect. Refer to documentation from your device manufacturer.

Google notes on their support page that any device running Android 4.4.2 and above is capable of casting, but some devices are better suited for such a task. Google maintains a list of optimized devices, which can be found at: <https://support.google.com/chromecast/answer/6293757>.

We have seen considerable improvement in Miracast quality with recent Windows 10 versions and do not recommend using versions older than 1709.

### Problems using Miracast over infrastructure for instance on a corporate network

AirServer Connect supports Miracast over infrastructure for more complex building networks. If there are problems with starting to cast, try the following:

- Go into **Settings > About** on the AirServer Connect and note down the hostname which usually looks like airserver-XXXX (16 digits).
- From the client machine ping this hostname. If the client cannot resolve this hostname to the units IP address, Miracast over infrastructure will not work.
- Also make sure that connectivity from AirServer unit to the client is allowed. The way Miracast works is that after the initial handshake, the receiver (AirServer unit) connects back to the client typically over TCP port 7236. If the client firewall or the network infrastructure prohibits this, you will experience similar issues.

### Problems using AirPlay on a busy or complex network

Connectivity with AirServer Connect on iOS relies on the Bonjour protocol by Apple. Bonjour is not designed for complex networks with multiple subnets / VLANs. If you do not see the AirServer on the list of devices to mirror to, please download the **AirServer Connect app** on the **Apple App Store**. Then use the QR Code for AirServer Connect iOS app button on the home screen and scan the QR code using the iOS app. This will send information about the network settings on the AirServer Connect to your iOS device and facilitate a connection. Note that there must be a network route between the AirServer Connect and your device for this to function.

