

> ViewBoard®
Network Requirement



Introduction

These notes will introduce the network requirements for ViewBoard®'s preloaded software and help IT administrators setup ViewBoard® products in their IT infrastructure.

Ensure the wireless infrastructure supports broadcast service and is turned on. To get a stable transmission, it is strongly recommended to have ViewBoard® connected via an Ethernet cable, and client devices on a 5GHz Wi-Fi band.

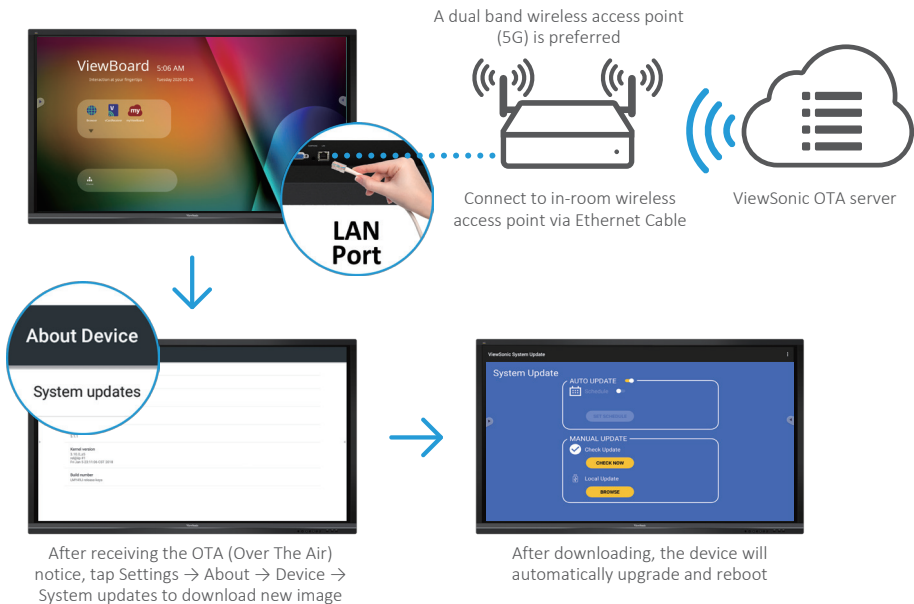
Over-The-Air (OTA) service

ViewBoard® automatically searches for firmware updates whenever connected to the Internet. With just one click or every time the ViewBoard is powered off, users can update their version of ViewBoard® firmware.

Network information

- Server FQDN Name: <https://ifp-ota.s3.amazonaws.com>
- Server Port: TCP443

OTA Service



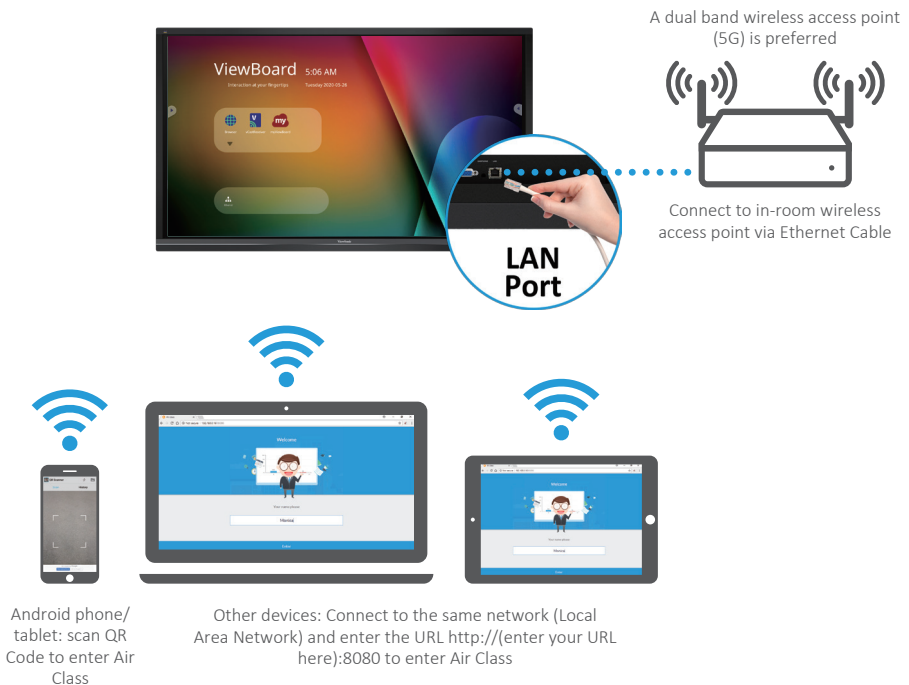
Air Class

Display quiz questions on ViewBoard® and allow up to 30 mobile users to submit answers remotely. Whether administrating single or multiple-choice questions, ViewBoard® will record the results of each device being used.

Network information

- PC (Windows/Mac/Chromebook) and tablet/mobile (iOS/Android) devices, as well as ViewBoard®, need to be linked to the same LAN network subnet.
- Ports : TCP 8080

Air Class

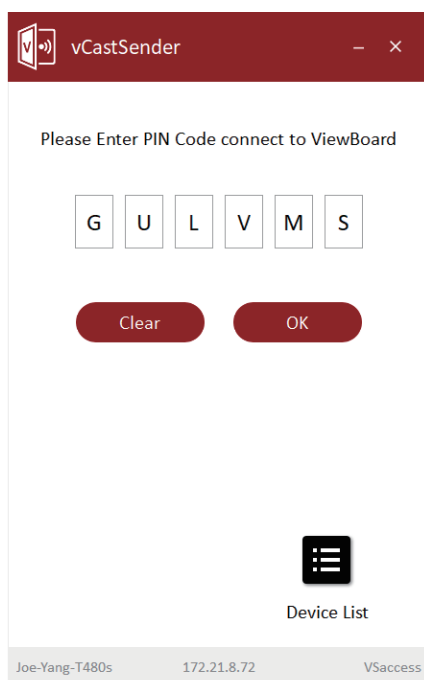


vCastReceiver & vCastSender Service

Working with ViewBoard® Cast software, the vCastReceiver app, will allow ViewBoard® to receive vCastSender laptop screens (Windows/Mac/Chrome) and mobile (iOS/Android) users' screens, photos, videos, annotations, and camera(s). It is also compatible with Apple AirPlay®.

Network information

- ViewBoard® Cast software, laptops, and mobile devices can connect to both the same subnet and across the subnet network.
- Please enter the on-screen PIN-code to connect to the ViewBoard.

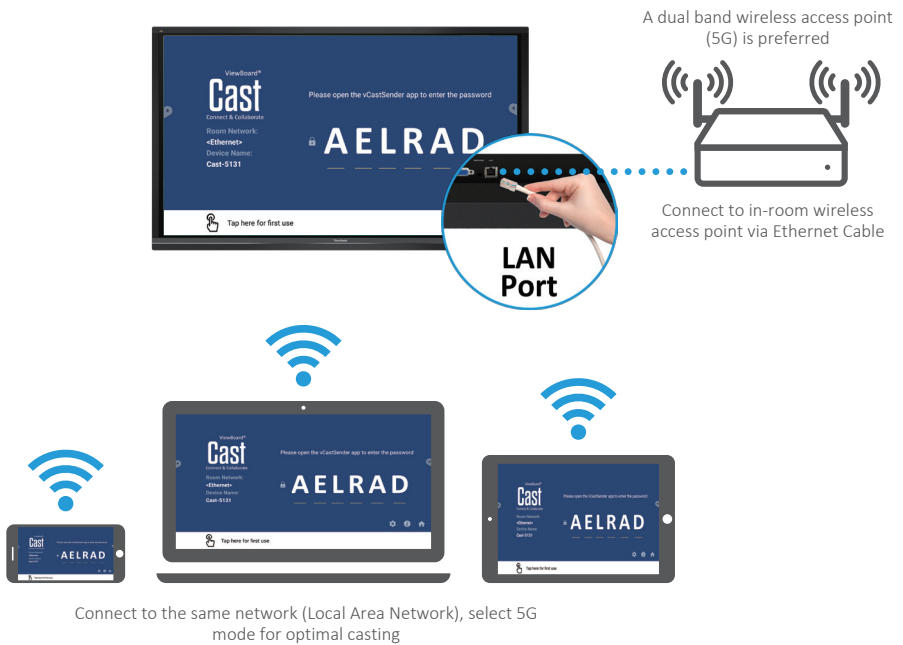


The screenshot shows the vCastSender application window. The title bar is dark red with the vCastSender logo and text. The main content area is white and displays the instruction "Please Enter PIN Code connect to ViewBoard". Below this, there are six input boxes containing the letters G, U, L, V, M, and S. Underneath the input boxes are two red buttons labeled "Clear" and "OK". At the bottom of the screen, there is a "Device List" section with a hamburger menu icon. The status bar at the very bottom shows the device name "Joe-Yang-T480s", the IP address "172.21.8.72", and the status "VSaccess".

Device Name	IP Address	Status
Joe-Yang-T480s	172.21.8.72	VSaccess

- Ports :
 - TCP 56789, 25123, 8121 & 8000
 - UDP 48689, 25123
- Port and DNS for activation:
 - Port: 443
 - DNS: <https://vcastactivate.viewsonic.com>
- OTA service:
 - Server Port: TCP443
 - Server FQDN Name: <https://vcastupdate.viewsonic.com>

vCastReceiver

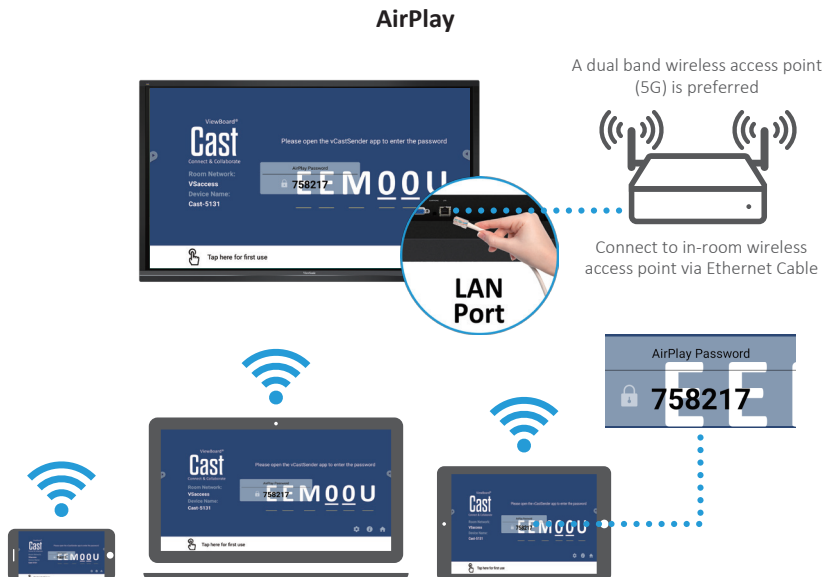


Airplay Service

Please ensure that DNS is enabled on the network/access point/wireless controller.

Network information

- Ports:
 - TCP 51040, 51030, 51020 & 51010
 - UDP 5353 (mDNS to broadcast Airplay)
- How to verify Airplay is broadcasting:
 1. Ensure that your iOS device and ViewBoard® are connected to the same subnet network.
 2. Open **Control Center** and touch **Airplay Mirroring** on an iOS device, e.g. iPhone/iPad.
 3. You should see a device prefixed with "Cast-xxxx".
 4. If "Cast-xxxx" is showing then this confirms that the vCastReceiver is broadcasting Airplay services.
 5. Click on the broadcasted "Cast-xxxx" device to mirror your iOS device to ViewBoard®.



Note:

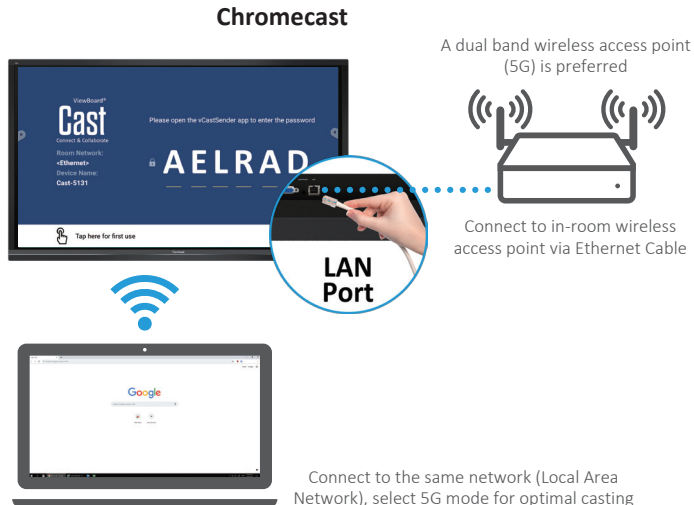
1. Connect to the same network (Local Area Network), select 5G mode for optimal casting
2. ViewBoard® Cast will stay up to date with the latest version of AirPlay for ongoing compatibility

Chromecast Service

ViewBoard® Cast software supports native Chromecast screen sharing via the Chrome browser casting respectively with the Chromecast feature enabled. Please ensure that mDNS is enabled on the network/access point/wireless controller (where applicable).

Network information

- Ports:
 - TCP 8008 & 8009
 - UDP 5353 (mDNS to broadcast CCast)
- How to verify Chromecast is broadcasting:
 1. Ensure that your Chromebook and ViewBoard® are connected to the same subnet network.
 2. It is recommended to use Wi-Fi: 802.11n 5GHz.
Note: See 5 GHz channel for a table on non-DFS channels in your country. In the USA, those channels are 36-48 and 149-165.
 3. Bandwidth: At least 2~5 Mbps per user in a typical deployment. Latency should be less than 100ms when ping Google's public DNS server at 8.8.8.8 for HD video streaming preferably >5Mbps is required.
 4. Access points:
 - i. For small deployments of under 30 devices, consumer-grade networking equipment is sufficient.
 - ii. For deployments greater than 30 devices or involving multiple rooms, enterprise-grade, centrally managed networking equipment is recommended.

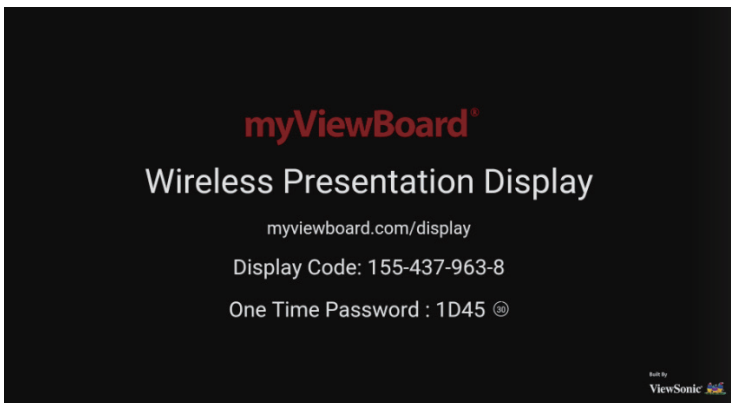


Display service

myViewBoard Display allows users to mirror their desktop wirelessly to supported Interactive Flat Panels (IFP) and Wireless Presentation Displays (WPD). myViewBoard Display comes preinstalled on selected ViewBoard hardware, but can also be installed manually on any IFP or WPD that runs Android 6 or higher. Once myViewBoard Display is installed on an IFP or WPD, users will only need to use a compatible browser to start mirroring their device screen to the host.

Network information

- Ports:
 - TCP Port 443 (HTTPS): outbound
 - UDP and TCP port 3478 bidirectional to the WebRTC servers
 - UDP Ports 50,000 – 65,535 (RTP/sRTP/RTCP) bidirectional to the WebRTC servers (These ports are optional; if blocked, media will be proxied using TURN on port 3478.)



Manager service

myViewBoard Manager is a tool for Entity Admins to remotely manage multiple installations of ViewSonic visual solution devices such as ViewBoard. To access, click the Entity Management tile, then click Devices on the side panel. Note that this option is only available for users signed in using an Entity Admin account.

Network information

- Ports:
 - TCP Port 443 (HTTPS): bidirectional
 - Whitelist “myviewboard.com” and “myviewboard.com” URL



Miracast service

Miracast helps you wirelessly stream content from Windows and Android devices to a ViewBoard.

Please ensure that mDNS is enabled on the network/access point/wireless controller (where applicable).

Network information

Ports: The endpoint is listen in on the following ports

- TCP Port 7236 : Wi-Fi direct control port used to establish and manage sessions between the source device and ViewBoard.
- UDP port 21200 for RTP packets and UDP port 21201 for RTCP packets.
- UDP 5353 : This port is used for multicast DNS (mDNS) broadcast to the local subnet.
- IP address(s): IPv4 address: 192.168.49.0, Subnet mask: 255.255.255.

