



## Android GX WiFi Display

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# 1. Introduction

An Android tablet or phone can serve as a dedicated display for a GX device when running in kiosk mode. By connecting over WiFi, the Android device acts as a remote display for the local GX device.

The Android device display can function independently in systems without a dedicated screen, like a standalone Cerbo GX. The Android device can also act as an additional display when used alongside the GX Touch display or Ekrano GX built-in display.

It's also possible to connect multiple Android devices to a single GX device at the same time.

You can repurpose an older Android device instead of buying a brand new one specifically for this task.

When the App is running in kiosk mode, it takes complete control over the Android device, allowing only the desired functions to be accessible. This setup ensures that the Android device will be exclusively dedicated to the remote GX display task, offering a consistent and reliable user experience.

An internet connection is required to install the software. Once installed, the Android device can connect to a WiFi network without internet access, or directly to the GX's built-in WiFi access point.

## 1.1. Limitations

There are few things to beware of before starting with the setup:

- When running in kiosk mode, the Android device will act solely as a dedicated remote GX display. Access to regular apps and features on the device will not be possible.

You will not be able to use the tablet for tasks like web browsing, email, or any other apps.

The device will remain like this until it is factory reset.

- The Android device needs a factory reset.

If you are planning to repurpose a previously used device, be aware that it will be wiped, and all data on it will be permanently erased.

- Although the Android device connects wirelessly, it still needs a permanent charging source to keep the display on.

## 2. Installation



Be aware that this process will result in the loss of all data on the Android device.



The Android operating system is customised by the device manufacturer. The steps outlined in this manual may have a slightly different look or feel from your particular device.

Before you start, make sure you meet these requirements:

- **Android device:** The minimum supported Android version is Android 8.
- **QR code:** You'll find the Victron QR code on the following page, so have it ready for scanning when needed during the process.
- **Venus OS:** Your GX device firmware must be version 3.50 or higher.
- **Factory reset the Android device:** Check that the Android device has been factory reset. If you are using a brand-new device, it should already be in a factory reset state.

If you are using a previously-owned Android device, please refer to the manufacturer's documentation for specific instructions on how to perform a factory reset.

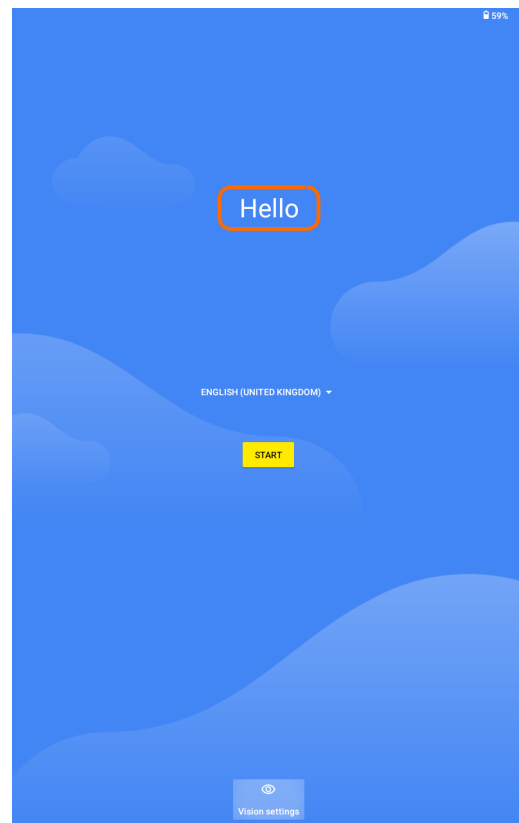
Turn the device on with its power button. The device should automatically restart if you have just performed a factory reset.

You should be presented with a welcome screen.

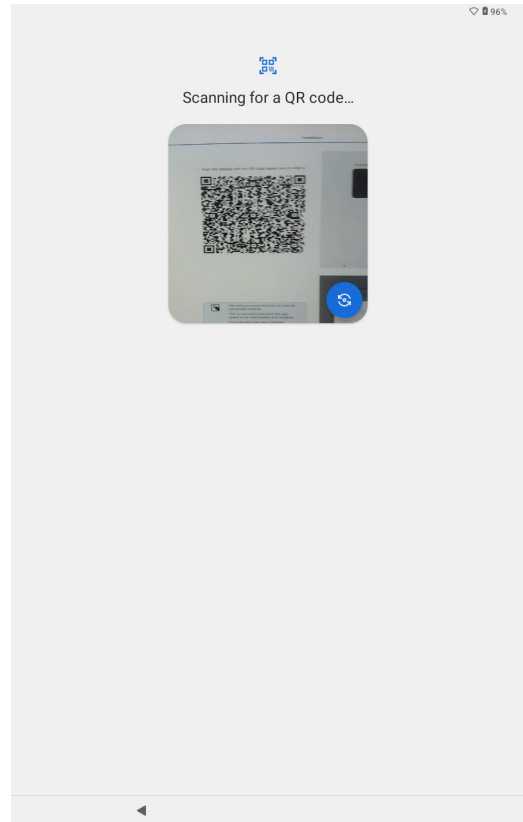
- On your Android device, you should find a greeting such as 'Hello' or 'Welcome.' Tap on the text six times in quick succession to start the QR code setup process.




Do not tap on the "Start" button.



- Align the window with the QR code below here to scan it.

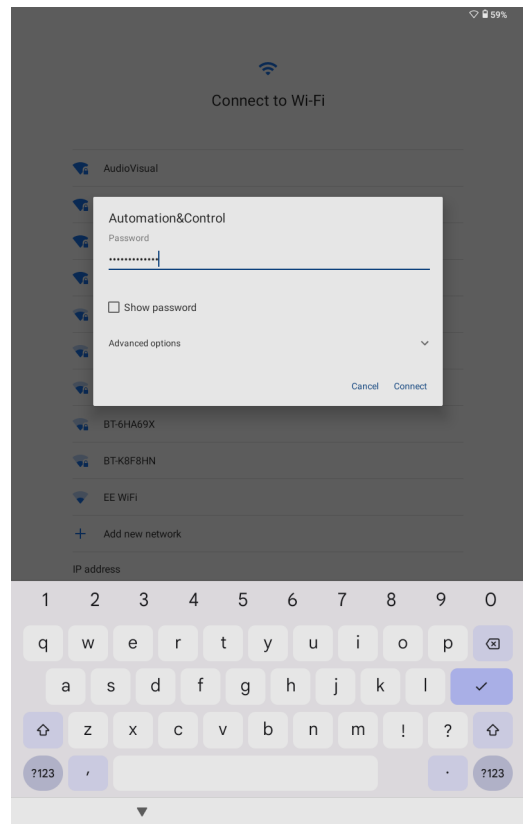





The setup process requires an internet-connected network. This is necessary because the app needs to be downloaded and installed. Once the app has been installed, you will no longer need an internet connection.

After scanning the QR code, your Android device should display a list of nearby WiFi networks.

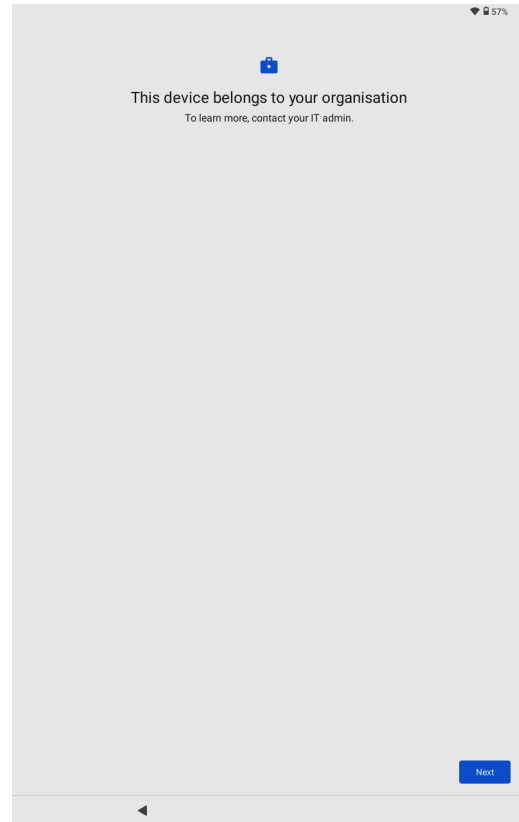
- Choose the WiFi network you want to connect to.
- Enter the required password to complete the connection process.



 The setup method we are using is most commonly found in corporate environments. It is known as MDM (Mobile Device Management).

- Tap "Next" to proceed.
- During the setup process, you may encounter additional screens that ask you to accept terms and conditions.

After you have accepted the terms and conditions, the device will begin installing the app. The device will also check for any available updates during the installation process.

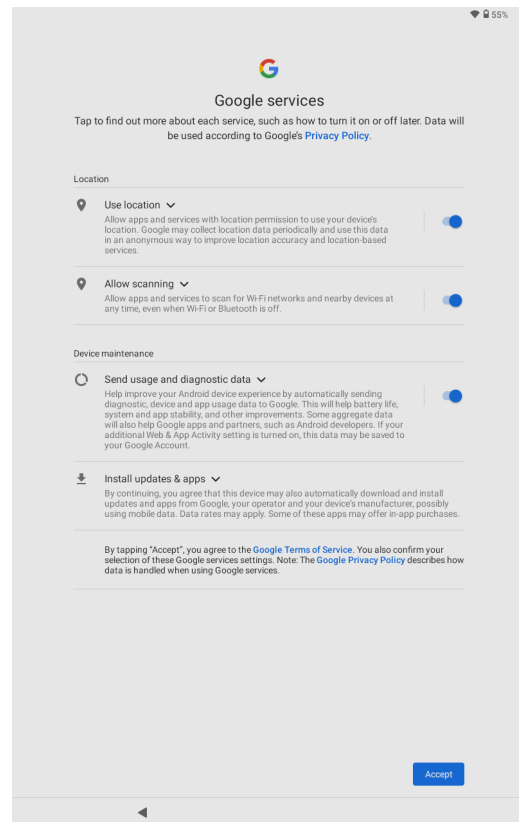


Some devices may ask you to select location and WiFi scanning permissions.

These are optional settings, but can be left enabled to enhance your WiFi connection and help find GX devices on your network.

- Choose your preferences from the Google services page.
- Tap "Accept" to proceed.

This will complete the app installation.



### 3. Initial configuration

When the installation process has finished, the Setup Wizard screen will appear.

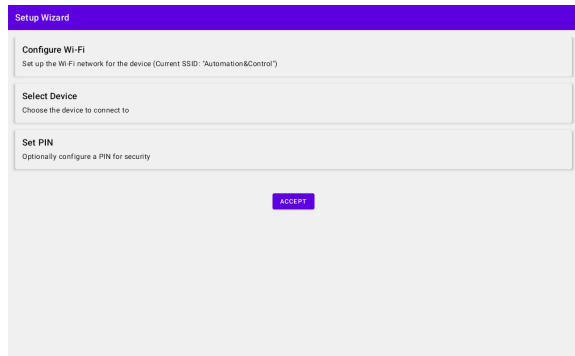
To complete the setup wizard, tap on each section and enter the necessary information.

- **Configure WiFi:** The device will already be connected to the WiFi network that was used during installation. You may change this to another one if you wish.

Tap the box to launch the WiFi Wizard.

- **Select Device:** Choose a GX device to connect to from the device list.

- **Set PIN:** You have the option to set a PIN to restrict access to the Android device settings. Setting a PIN is recommended.



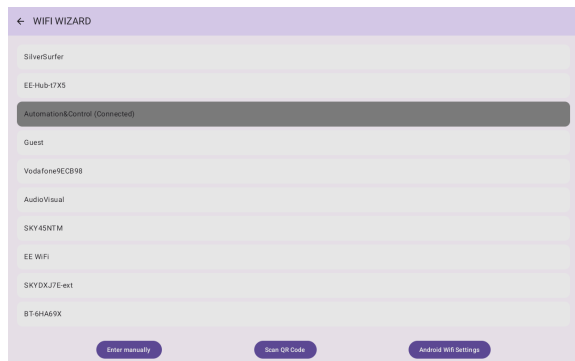
- **WiFi Wizard:** The WiFi network that was configured in the previous installation steps will be automatically connected.

You can choose a different network if you prefer.

If the GX device has been configured as an access point, you will find its network among those displayed in the list of available networks. Selecting this network allows your device to connect directly to the GX device.

- From the list of available networks, select the one you want to connect to.

Enter the network's password in the pop-up box that appears after your selection.



Located at the bottom of the screen, you will find three buttons that represent alternative WiFi connection methods.

- **Enter manually:** Using this method, you can connect to networks that are not displayed in the list or have a hidden SSID.

A popup box will appear where you can enter the network's SSID and password to establish the connection.

- **Scan QR code:** If you have a QR code for your preferred WiFi network, you can use this method to connect.

This will activate your Android device's camera to scan the QR code and automatically establish the connection.

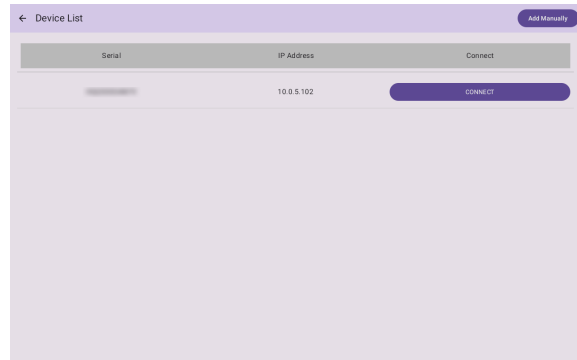
- **Android WiFi Settings:** If the steps provided using the WiFi wizard don't work, you can connect to WiFi by accessing your Android device's native settings.

After successfully connecting to your WiFi network, press the back button to return to the WiFi Wizard page.

To navigate back to the Setup Wizard page, locate the arrow on the top left corner of your screen and tap it.

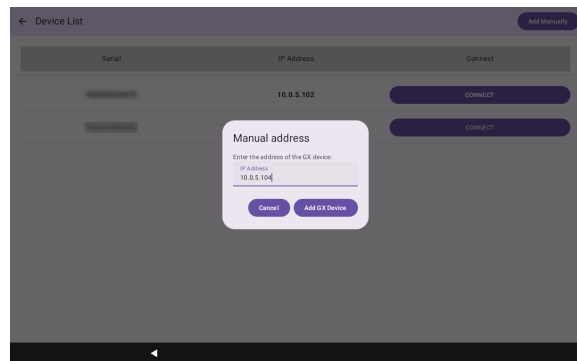



- **Device list:** It can take a short amount of time for the device list to populate, displaying the available GX devices on your network.  
To connect to your chosen GX device, simply tap on the connect button to the right.  
You'll then return to the Setup Wizard page.



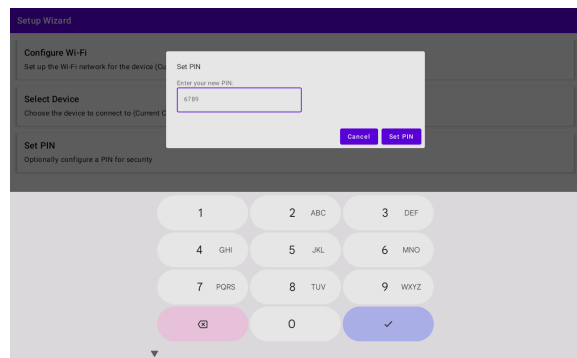
In some cases, the GX device might not automatically appear in the device list. Perhaps the GX device is on a different subnet.

- **Add Manually:** If your desired GX device is not found in the displayed list, look for the option to add a device manually by tapping the "Add Manually" button at the top-right corner of the screen.  
Type the IP address of the GX device in the popup box, and press "Add GX Device".

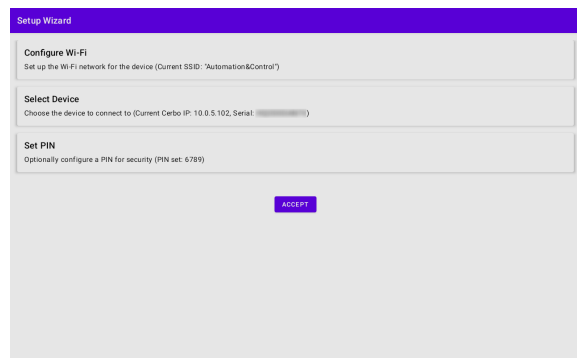


 You should consider setting a PIN to prevent changes to the settings on the Android device's service menu.  
This PIN does not protect settings changes on the GX device.

- **Set PIN:** From the setup wizard screen tap "Set PIN" and enter a unique PIN in the popup box.

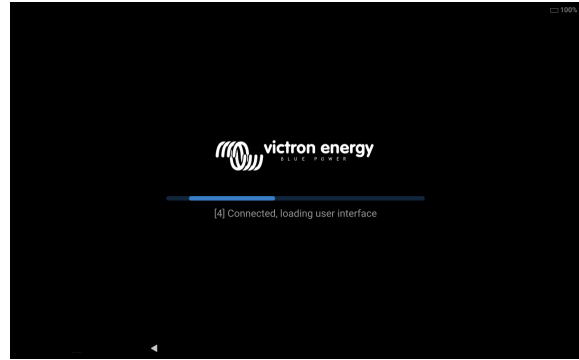


- Tap "Accept" to complete the initial setup wizard.





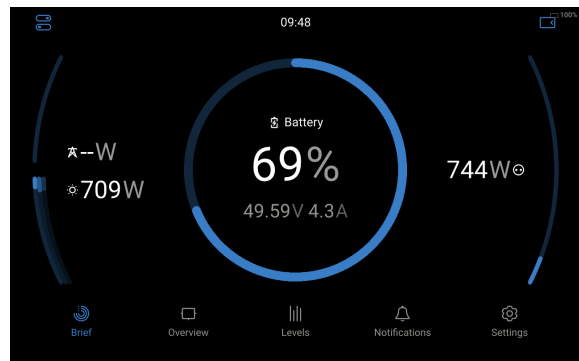
The Android device is now connecting to the GX device, which will load the required components for the display.



After a short while, the display will load.

The user interface closely mirrors that of a GX Touch or Ekrano display, with identical touch controls and menu structures.

The user interface on this device, on other devices, and on the GX Display operates independently, allowing each device to display different pages.



## 4. Service menu

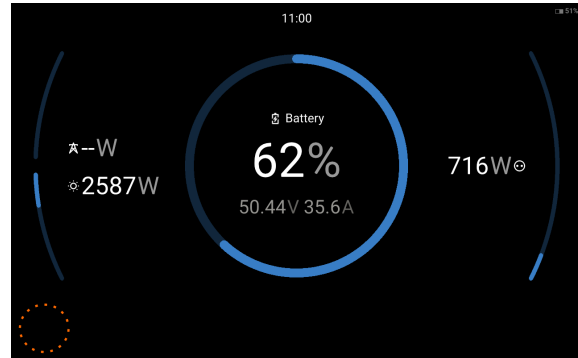
The service menu provides access to additional settings, many of which were previously set during the initial configuration. Additionally, you can access certain native Android system settings.

- Touch and hold the bottom left corner of the screen for about 5 seconds.



There is no button visible, simply touch and hold a blank area at the bottom left of the screen.

If you've previously set up a PIN, input it in the popup box.



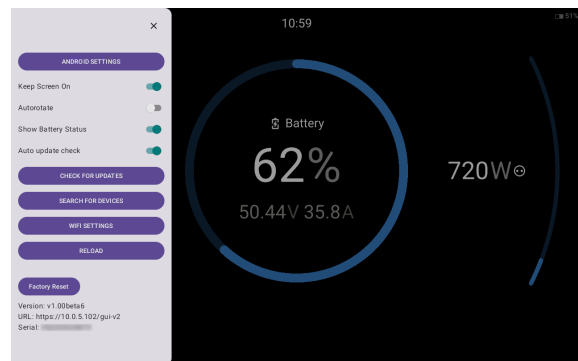
The service menu appears at the left hand side and offers several settings:

- **Android settings:** This button will open the native Android settings menu. This allows access to change Android system settings, including power, display and connection settings.
- **Keep Screen On:** Turning this feature on will keep the display active at all times. However, the screen can still be turned off manually using the device's power button.
- **Autorotate:** Activating this option enables the automatic rotation of the screen between landscape and portrait modes, depending on the orientation of the device.
- **Show Battery Status:** Enable this option to show the status of the Android device's battery.

The battery level is displayed by a small icon located in the upper-right portion of the display.

- **Auto update check:** Periodically checks for available app updates automatically. Users will be notified of new updates, but they won't be installed automatically.
- **Check for updates:** Tap to immediately check for available app updates.
- **Search for devices** This option brings up the device list to switch to a new GX device. Use this if you are replacing the GX device or if you want to use the Android device in a different installation.
- **WiFi Settings:** Allows the Android device to be connected to a different WiFi network or if it's being used in a different installation.
- **Reload:** Reloads the interface.
- **Factory reset:** Pressing this option initiates a factory reset of the Android device. A confirmatory dialog box will be displayed before proceeding.

Use this option if you want to use the device as a regular smartphone or tablet again, or if you need to reinstall the application.

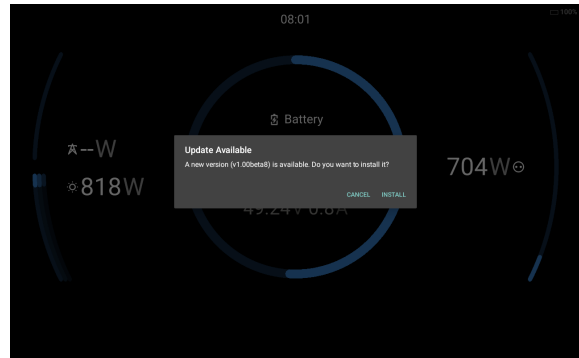


## 5. App update

If an update is available, you'll receive a notification on your device when automatic updates are enabled or if you manually request the system to check for updates.

- Tap install. The system will install the update in the background.

The app may restart during the update process.



## 6. FAQ

**Are there any recommended or specific Android brands or models?**

No. The software can be run on almost any device as long as it fulfills the necessary specifications. Choose a device that suits your preferences in terms of screen size, design, and affordability.

Generally, well known brands tend to deliver the best results.

**Is this software limited to be used on tablets, can I install it on a phone?**

The software is compatible with both phones and tablets; select the device according to your preference and form factor.

## 7. Troubleshooting

**After performing a factory reset on the device, you do not see the initial "Welcome/Hello" screen, or attempting to tap or hold does not activate the camera for QR code scanning.**

- Your device does not support MDM (Managed Device Mode).
- You could try using the alternative installation method via APK. See the "[Alternative installation via APK](#)" [12] chapter in this manual for details.

**During the installation process, I get a message stating that the app can't be downloaded.**

- In order to successfully download the application, you need to ensure that your connected WiFi network provides internet access, and that there are no network security measures, e.g. a firewall or DNS filtering, preventing the app from being downloaded.
- Check that <https://ve3.nl/gxDisplay> is reachable from your device. Otherwise, try connecting from a different network.

**During the installation process, I get a message stating that the admin app can't be installed.**

- If the device is owned by an organization (a company owned device), you may need to perform a factory reset through the Android bootloader menu. For guidance on accessing the bootloader for your particular device model, please refer to its user manual. Alternatively, consider contacting the relevant IT department for the owning company and asking them to remove the device from their management.
- The device might be subject to parental controls through Google Family Link. Remove supervision from the parental control service.
- The app may not be compatible with the device, resulting in an unsuccessful installation.

## 8. Alternative installation via APK



This installation method is not advised, particularly for end users, as it has several limitations.

Sometimes the QR code installation method might not be suitable.

- Some Android devices don't support the QR code installation method.
- Not all devices support MDM.
- Users may want to use the device for routine tasks, and the GX display function can be activated when convenient.

For these cases, it is possible to install the app manually using the APK file without the need for a factory reset of the device.

### Limitations:

- Notifications from other apps will not be blocked and might interfere with the app's visibility.
- The system might send the app to the background in order to show other apps.
- Users might accidentally close the app.
- Automatic updates are not supported. Users must manually download and reinstall the APK to upgrade.
- To perform daily tasks, users might need to switch between networks with internet access and the one used by the GX device.
- Some tablets automatically disconnect from networks without internet access, such as the GX built-in access point.

Your Android device may prevent APK installation due to security settings. To learn how to change these settings and install apps from APK files, refer to your device's user manual.

The APK file can be downloaded from this link: <https://ve3.nl/gxDisplay>

- Run the APK file to begin installing the app.
- After the app has installed, you can proceed with the [initial configuration \[5\]](#) steps.