emesent

EMESENT COMMANDER APP INSTALLATION

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Using this manual

Hovermap is a powerful system that can be used as a LiDAR mapping payload, but also as an advanced autopilot for drones and other platforms. We therefore recommended that you read the user manual thoroughly to make use of all its capabilities in a safe and productive way.

Disclaimer and safety guidelines

This product is *not* a toy and must not be used by any person under the age of 18. It must be operated with caution, common sense, and in accordance with the instructions in the user manual. Failure to operate it in a safe and responsible manner could result in product loss or injury.
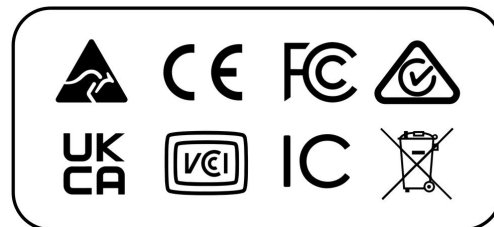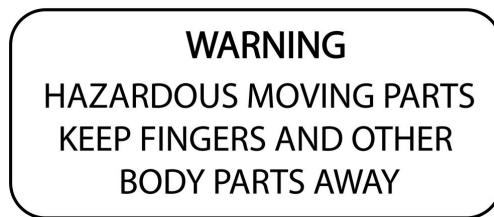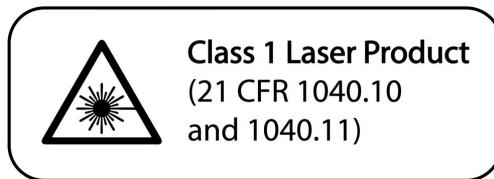
By using this product, you hereby agree that you are solely responsible for your own conduct while using it, and for any consequences thereof. You also agree to use this product only for purposes that are in accordance with all applicable laws, rules and regulations.

The use of Remotely Piloted Aircraft Systems (RPAS) may result in serious injury, death, or property damage if operated without proper training and due care. Before using an RPAS, you must ensure that you are suitably qualified, have received all necessary training, and read all relevant instructions, including the user manual. When using an RPAS, you must adopt safe practices and procedures at all times.

Warnings

- This document is legally privileged, confidential under applicable law and is intended only for the use of the individual or entity to whom it is addressed. If you have received this transmission in error, you are hereby notified that any use, dissemination, distribution or reproduction is strictly prohibited. If you are not the intended recipient, please notify the sender and delete the message from your system.

- Do not attempt to disassemble, repair, tamper with, or modify the this product. This product contains no user-serviceable parts inside. Any disassembly of the product enclosure will invalidate the IP65 rating and disrupt the factory calibration of LiDAR. Contact Emesent for any repairs or modifications.

- Always be aware of moving objects that may cause serious injury, such as spinning propellers or other components. *Never* approach a drone while the propellers are spinning or attempt to catch an airborne drone.

Class 1 Laser Product
(21 CFR 1040.10
and 1040.11)

WARNING
HAZARDOUS MOVING PARTS
KEEP FINGERS AND OTHER
BODY PARTS AWAY

Contents

1.   Overview

This guide walks you through the installation of the Emesent Commander application on your device.

Before starting with the installation, ensure you meet the following requirements:

- stable internet connection during installation, initial run, and activation

- compatible Android device and Operating System version

- sufficient storage space to download and install the app

2.   Install and Uninstall Procedures

2.1   Installation Essentials

In addition to the requirements listed above, there are some key things you need to do to ensure you have the best experience.

- **Complete the mandatory online training**

  - Completing the Emesent Commander training module is important to ensure safe and effective product use and that your warranty remains valid. The training will take approximately 2 hours and 30 minutes.

  - If you do not have a login, click here to register and simply follow the prompts. Should further support be required, please contact academy@emesent.io.

  - Ensure all your operators have completed the training

- **Refer to the related documentation**

  - Emesent Cortex Release Notes

  - Emesent Commander Release Notes

  - Hovermap user manual

  - Upgrading Emesent Cortex

  - If you have been using the previous Hovermap app, refer to our Quick Comparison Guide to see what's changed

- **Brief system operators**
  - If you have multiple Hovermap operators, make sure the entire team is up to date once you install Emesent Commander and before using the system

2.2   Supported Devices

Emesent Commander is supported on the following Android devices, which contain the minimum and recommended specifications required to run the application.

Device	Minimum Android Version
Samsung Galaxy Tab S9 (recommended specifications)	Android 13.0.0
Samsung Galaxy Tab Active4 Pro 5G (recommended specifications)	Android 10.0.0
Samsung Galaxy S23	Android 13.0.0
DJI RC Plus Remote Controller	Android 10.0.0
Freefly Pilot Pro Tablet	Android 13.0.0

> ℹ️ **Note**
>
> You can install and operate the application on an Android smartphone or tablet with similar or higher capabilities. However, it is advised to use the device with the recommended specifications listed above as it has been thoroughly tested for installing and operating the app to ensure a smooth and reliable user experience.

2.3   Upgrading the Firmware

For Hovermap to operate correctly, it requires the appropriate software, firmware, and entitlements. Refer to Upgrading Emesent Cortex for instructions on upgrading the firmware to the latest version.

2.4   Installing via the Android Application Package (APK)

> ⚠️ If you have an earlier version of the Emesent Commander application installed, you will need to uninstall it first. Refer to the "Uninstalling Emesent Commander" section for instructions.

1.   Go to the Emesent Software Downloads page to download the application package.

2.   To install on a standalone tablet, connect the tablet to your computer with the USB cable. The tablet should appear as a USB device.
- or -
To install on a tablet on the Freefly Pilot Pro controller, connect the external storage device containing the downloaded .apk file to one of the USB-C ports on the controller.

3.   Copy the .apk file to your tablet.

4.   Locate the .apk file using the file browser on your tablet.

5.   Select it to start the installation.

6.   Follow the installation steps.

7.   If necessary, grant the file browser permission to install apps.

2.5   Installing via the Freefly Updater App (for Freefly Pilot Pro tablet only)

1. Hold the power button on the PilotPro tablet for 4 seconds. This will power on both the tablet and the controller. Press again when prompted on the controller to complete powering on.

2. The PilotPro tablet screen turns on and a blue status light appears on the controller.

3. Enable Wi-Fi on the tablet and connect to a nearby wireless network or hotspot that has internet access.

4. Open the Freefly Updater app.

5. Tap the **Settings** icon then go to the **Repositories** menu

6. Tap **New Repository** on the top right.

7. In the repository address, enter the following address and click **ADD**:
    http://freefly-updater.freeflysystems.com/v1_third_party/emesent/beta_repo/

> ℹ️ **Note:** The above address begins with **http://** not **https://** - you need to clear out the pre-entered text and enter the one above.

8. Once the new repository has been added, it is marked as "Unsigned" in red. Ignore this and continue with the installation process. Make sure the toggle for the repository is enabled

9. Tap the back arrow and go to the **Latest** menu. Pull down to refresh the list of apps.

10. Tap the Commander app entry to open it then tap **Install**.

11. Follow the installation steps.

12. Wait for the installation to complete.

2.6   Uninstalling Emesent Commander

1. Go to the "App Drawer" to display a list of all your installed apps.

2. Scroll through the list of apps to find Emesent Commander then press and hold its icon to see a list of options.

3. Tap **Uninstall**.

4. A confirmation message will appear, asking if you want to uninstall the app. Read the message carefully and select **Uninstall** to proceed. The app will now begin to uninstall from your Android device.

5. Once the process is complete, you will see a notification confirming that Emesent Commander has been uninstalled.

3.   Critical Post-installation Procedures

3.1   Emesent Commander App Permissions and Setup

Enabling device location, phone call management, and access to media ensures precise mapping with location tags, uninterrupted robot operations, and efficient storage and retrieval of mapping data. These permissions ensure Emesent Commander maintains precise control over your Hovermap, guaranteeing reliable data collection in varied and challenging environments.

3.1.1 Activate location services

Follow these procedures to ensure the device's Location services are enabled.

1. Go to the **Settings** app then select **Location**.

2. If the switch at the top is **Off**, turn it **On**.

    Alternatively, swipe down on the screen to bring up the **Quick panel**, and then tap the **Location** icon to enable or disable **location** services.
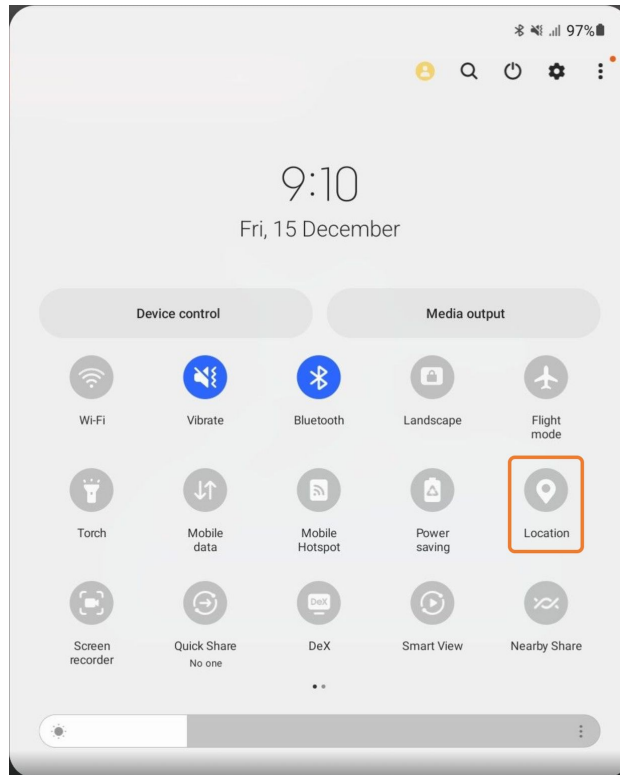
3.1.2 Enable permissions (when running Emesent Commander for the first time)

1. Launch the application.

2. Allow the following permission requests when prompted.

Device location = While using the App

Make and manage phone calls = Allow

Access photos and media on your device = **Allow**

3.   Read the **Emesent Terms of Use**, then accept the terms by tapping the **Accept** button.

4. Enter the user information then tap **Continue**.

5. The application takes you to a landing page, ready for connection to Hovermap.
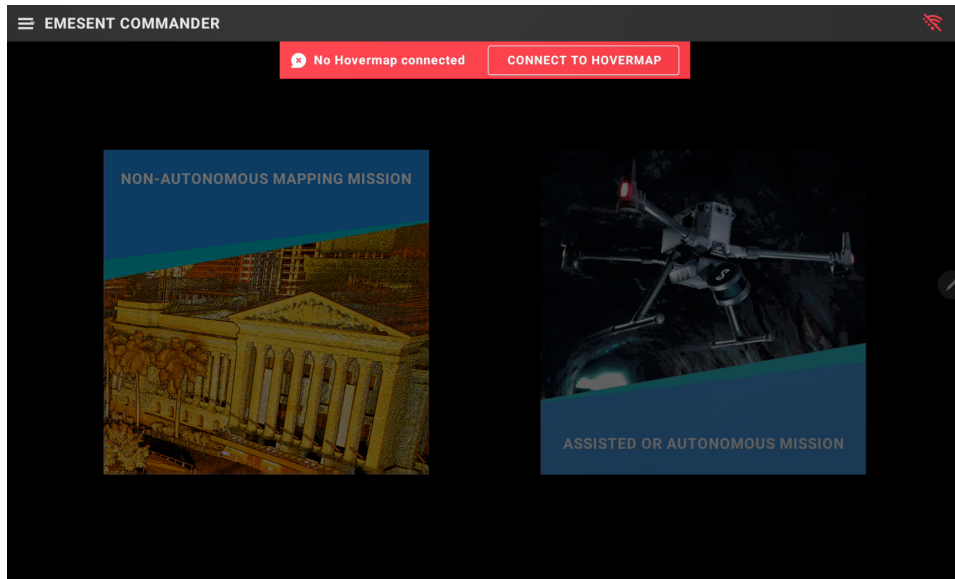
For more information, refer to the *Emesent Commander App* section of the Hovermap user manual.

3.2   Emesent Commander App Registration

Emesent Commander app registration is an important step in establishing a vital connection between the app and the robot (when connected to a Hovermap) allowing for effective communication and control. This initial registration serves as a crucial safety measure, preventing potential accidents and ensuring the smooth operation of your robot in various environments.

> ⚠️ **Important**
> Internet connection is required to register the Emesent Commander app.

3.2.1   Register App (for DJI drones)

If you are using a DJI drone, you must enable the **Allow registration with DJI to use DJI drones** option to allow automatic detection of the DJI drone while connected to Emesent Commander. Registration with DJI allows the configuration of remote controls, geofence information, and flight control settings required for the autonomous control of DJI drones when they are connected to your Hovermap. This option can be enabled in two places:

- In the user information page, when running the app for the first time

- In the **Application settings** page of the Emesent Commander app
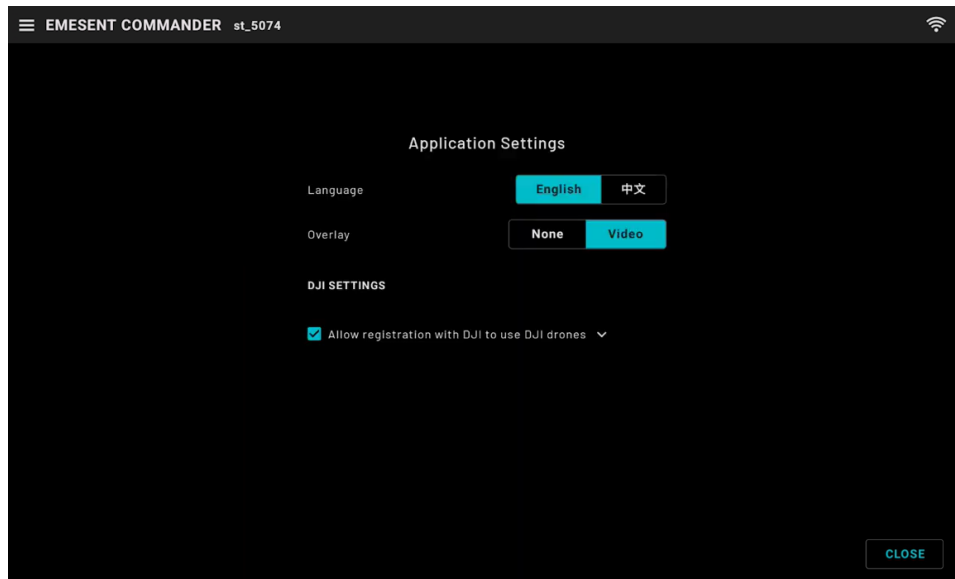
3.2.2   Register App (for DJI and non-DJI drones)

1. Connect the tablet to a Wi-Fi network with internet access.

2. Launch Emesent Commander.

3. If you are not connected to the internet, the **DJI: App is not registered** notification is displayed in the following locations:

> ℹ️ **Note**
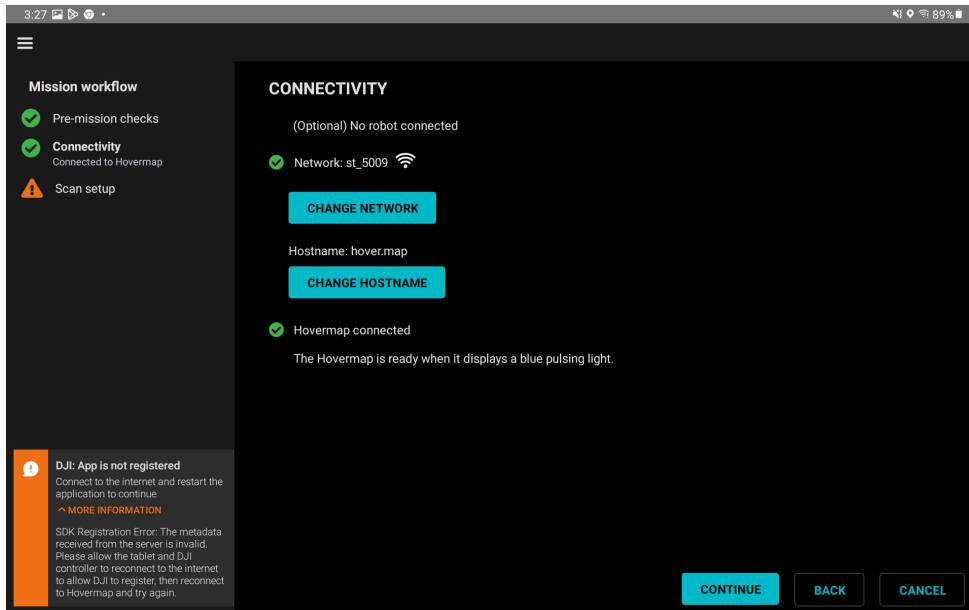> The notification is shown only if you select enabled the **Allow registration with DJI to use DJI drones** option on the user information page (when running the app for the first time) or on the **Application settings** page of the Emesent Commander app.
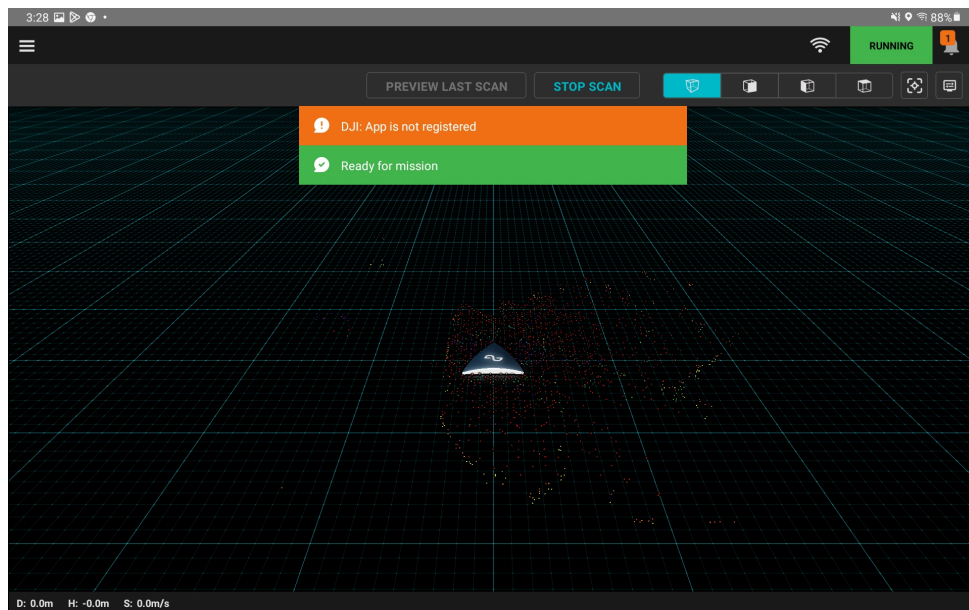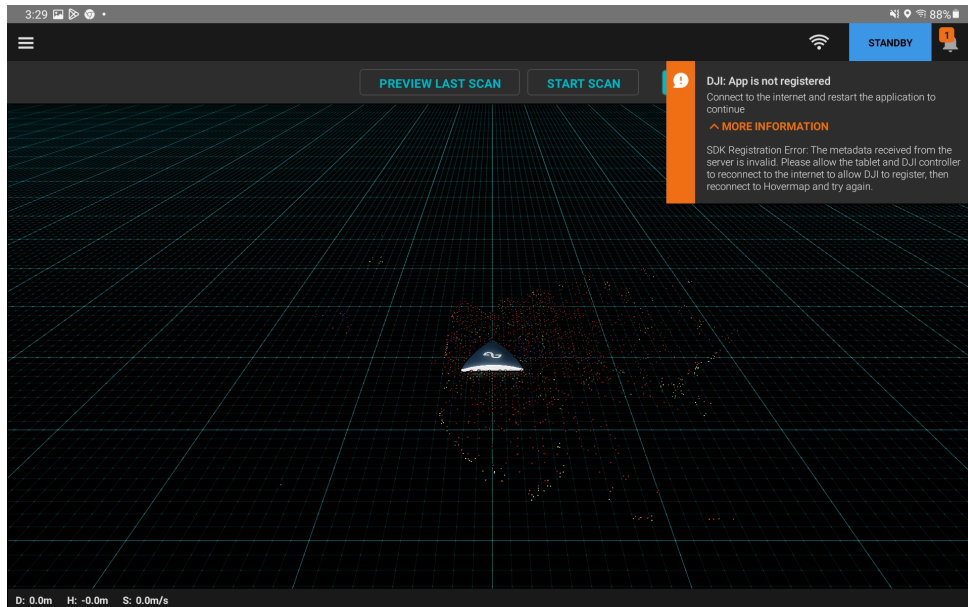
In the Mission workflow

If you choose to continue and start the scan, you will see the notification at the top of the display in the Main View.

If you close the message, it will still be available in the Notifications panel.

4. Ensure that the tablet is connected to Wi-Fi with internet access to clear the notification.
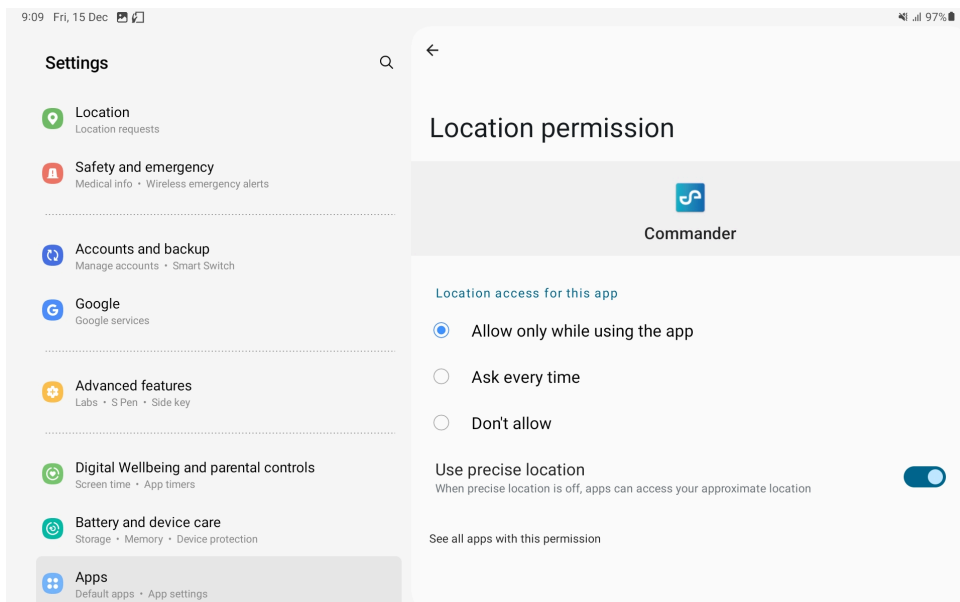
3.2.3   Change permission settings

If you need to change the permission settings, you can do this via the **Settings** app.

1. Go to the **Settings** app then select **Apps**.

2. Tap the **Commander** app to see all allowed or denied permissions.
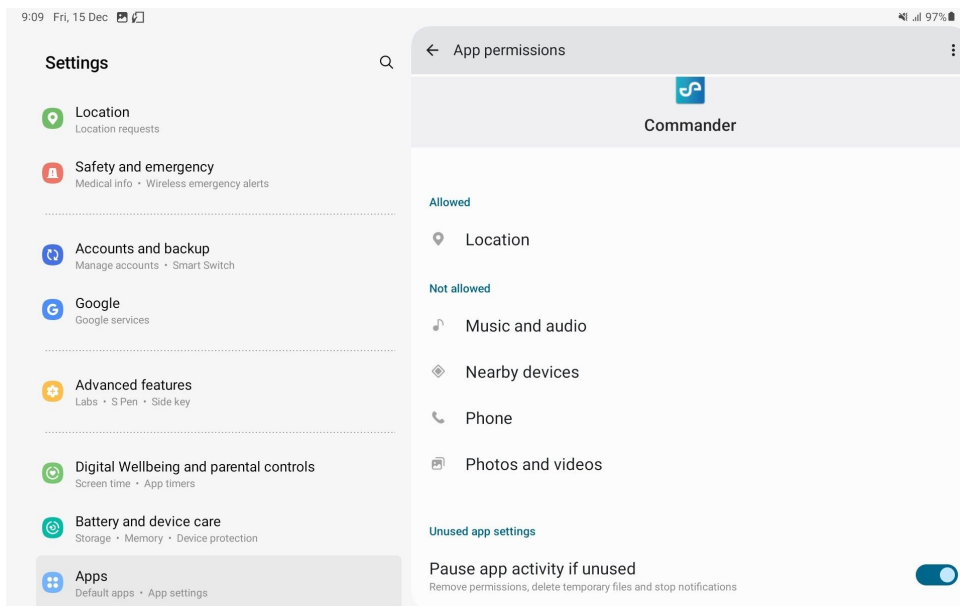
3. To change a permission setting, tap it then choose the necessary permission.

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