



User Guide v1.6

FlooGoo™ FMA100 Bluetooth Dongle

Flairmesh Technologies

PO Box 4086, Croydon Hills, Victoria 3136, Australia

© 2022-2023 Flairmesh Technologies. All Rights Reserved.

Introduction



LED status	Explanation
Flash fast	Ready for a new pair/connection
Flash slow	Only allow paired phones to connect back
On	Connected

F100Goo FMA100 is a unique Bluetooth dongle that works with mobile and desktop Apps to help handle information between mobile devices and host PCs. Contrary to the standard Bluetooth dongle, it needs no driver on PC. All functions are instantly available after installing the mobile Apps and/or the desktop Apps.

Currently, there're five applications for the dongle.

1. F100Pen. Use Apple Pencil, finger touch, or third-party stylus pen with iPad to draw on Windows/Mac.
2. F100GPS. Use your phone as an external GPS receiver for your desktop GPS Apps.
3. F100Paste. Allows copy-paste between iOS device and Windows/Linux PC.
4. ScanToPC. Use your phone as an OCR/QR/Barcode scanner for PC/POS machines or other hosts.
5. Serial Bluetooth adapter with USB virtual COM interface.

Since there's no driver needed for FMA100, it also doesn't conflict with the standard Bluetooth dongle which enables PCs to connect with Bluetooth mice, and earphones.

Apple®, Apple Pencil®, and iPad® are trademarks of Apple Inc., registered in the U.S. and other countries and regions. Android® is a trademark of Google LLC. Windows® is a trademark of Microsoft Corporation in the U.S.A. and other countries. Linux® is a trademark owned by Linus Torvalds in the U.S., Germany, the E.U., and Japan. IOS is a trademark or registered trademark of Cisco in the U.S. and other countries and is used under license.

Application 1: FlooPen

Getting Started

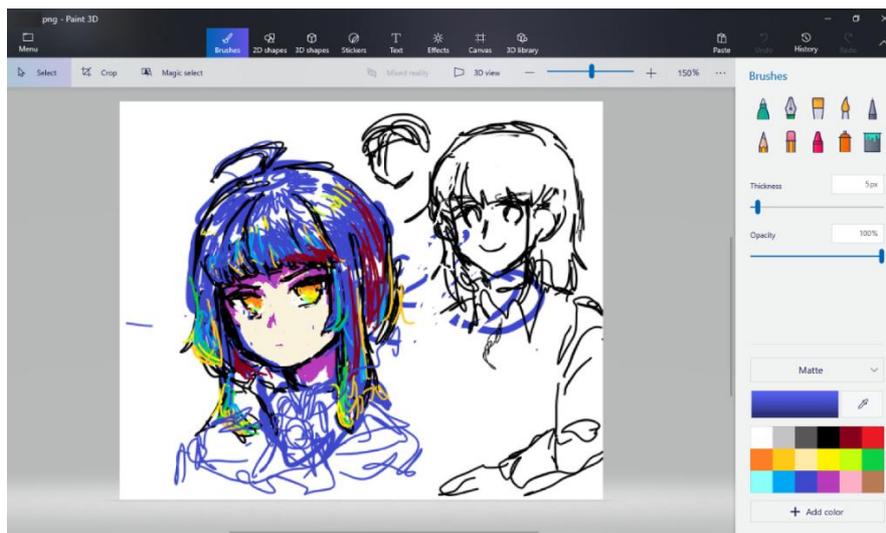
1. Plug FMA100 into your PC. The red LED will flash when it is ready for pairing/connection.
2. On your iPad device (iOS 9 or later), use the following QR code, or search & download “FlooPen” from the AppStore. Open it, click the “gear” button, and use the “New Pairing” button to pair and connect with the dongle. Once the device icon in the App turns green, it is connected and the setup on your iPad is done. Be sure to permit accessing Bluetooth since it is necessary for the App to function.

Apple



iOS9 or later

3. On Windows, FMA100 works as a standard USB digitizer pen without an additional driver. Including the “Paint3D” bundled with the OS, all sorts of drawing Apps, such as Photoshop, are supported without any additional driver.



4. By default, FMA100 is recognized by Windows as a standard HID digitizer. It maps the drawing area to the full virtual desktop. When a user has multiple displays connected or needs to only draw on a portion

of the display, an additional driver can be used. Please set the screen ratio in the App's settings to "4:3" in this condition.

- a. Install "FlooPenDriver" from Microsoft Store. Run it for only once and it'll replace the default Windows driver for the dongle.
 - i. <https://www.microsoft.com/store/productId/9PPRVTKM5LDR>
- b. After that, install an open-source, user-mode tablet driver. A version later than 0.6.0.4 is required to support FMA100.
 - i. <https://opentabletdriver.net/>
- c. To have pressure support, please install "windowsink" plugin by using OpenTabletDriver's plugin manager.

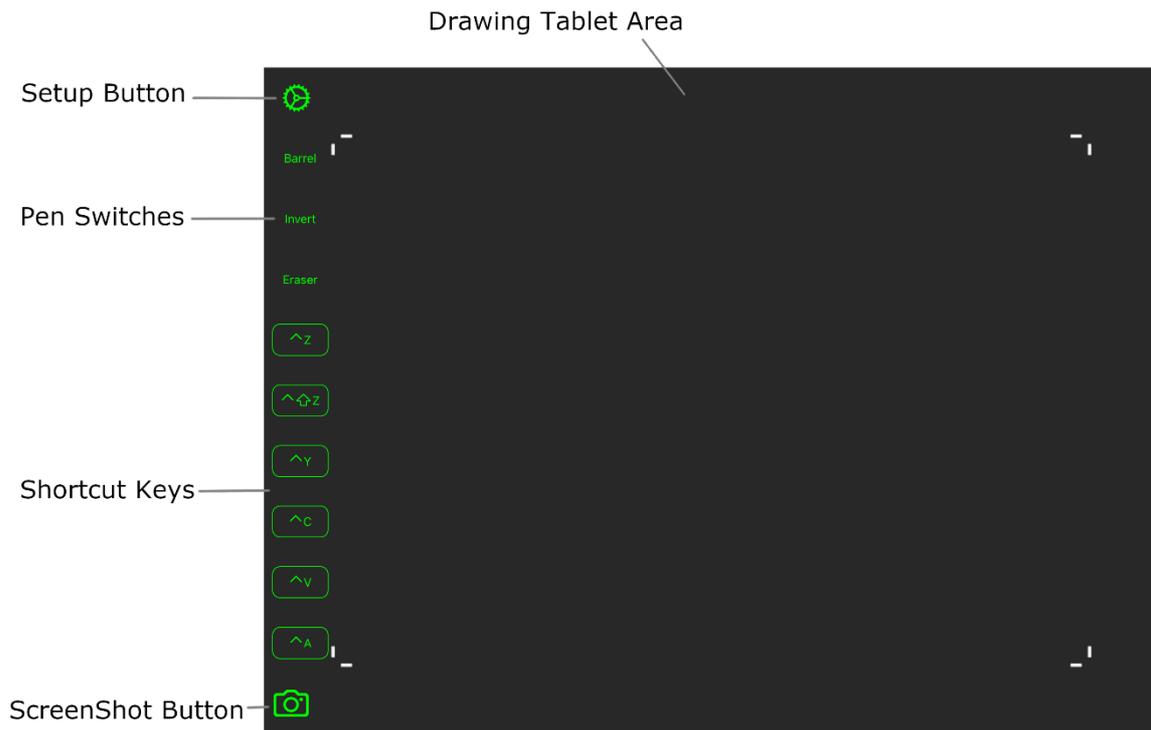
Please check the FAQ if you need to revert to the default Windows driver.

FlooPen on iPad

The main window of the App emulates a traditional drawing tablet.

When the dongle is connected, the gear icon turns green. Then the user can start drawing with an Apple Pencil, fingers, or a third-party stylus pen on the screen of the iPad. All Apple Pencil sensor data, including pressure, azimuth, and altitude are sent to the host via standardized USB HID digitizer pen protocol. Most drawing Apps, such as Paint3D, and Photoshop work instantly without any further settings. When using fingers or a third-party stylus pen, pressure can be simulated by swiping another finger.

Change the minimum pressure level in settings for your preference.



Floopen on Windows

A Windows app also named “Floopen” can be used to send screenshots to the iPad app so users can use them as backgrounds when drawing.

The app can be downloaded from Microsoft Store,

<https://www.microsoft.com/store/productId/9PFCP87H92XT>

Application 2: FlooGPS

Getting Started

1. Plug FMA100 into your PC. The red LED will flash when it is ready for pairing/connection.
2. On your iOS (14 or later) or Android (5 or later) device, use the following QR code, or search & download “FlooGPS” from the AppStore/Google Play. Open it and use the “New Pairing” button to pair and connect with the dongle. Once the device icon in the App turns green, it is connected and the setup on your mobile device is done. Be sure to give permissions for accessing Bluetooth and location since they are necessary for the App to function. You may also need to allow location access in the background so it can always update location information with your host.

Apple



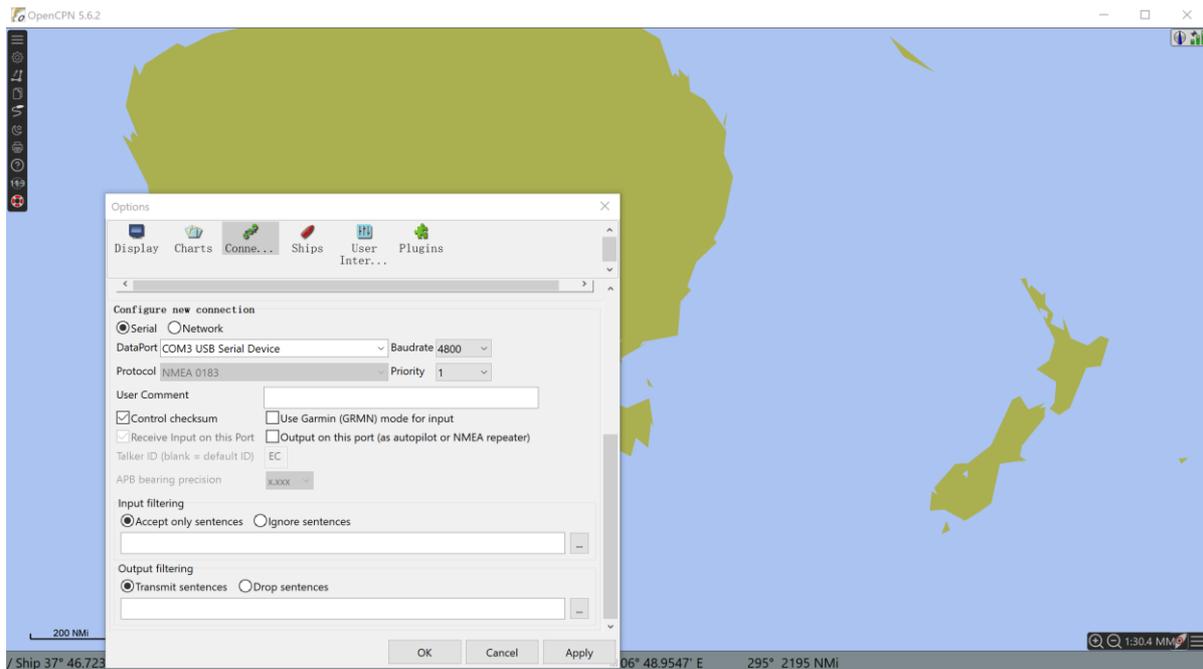
iOS14 or later

Android



Android 5.0 (Lollipop) or later

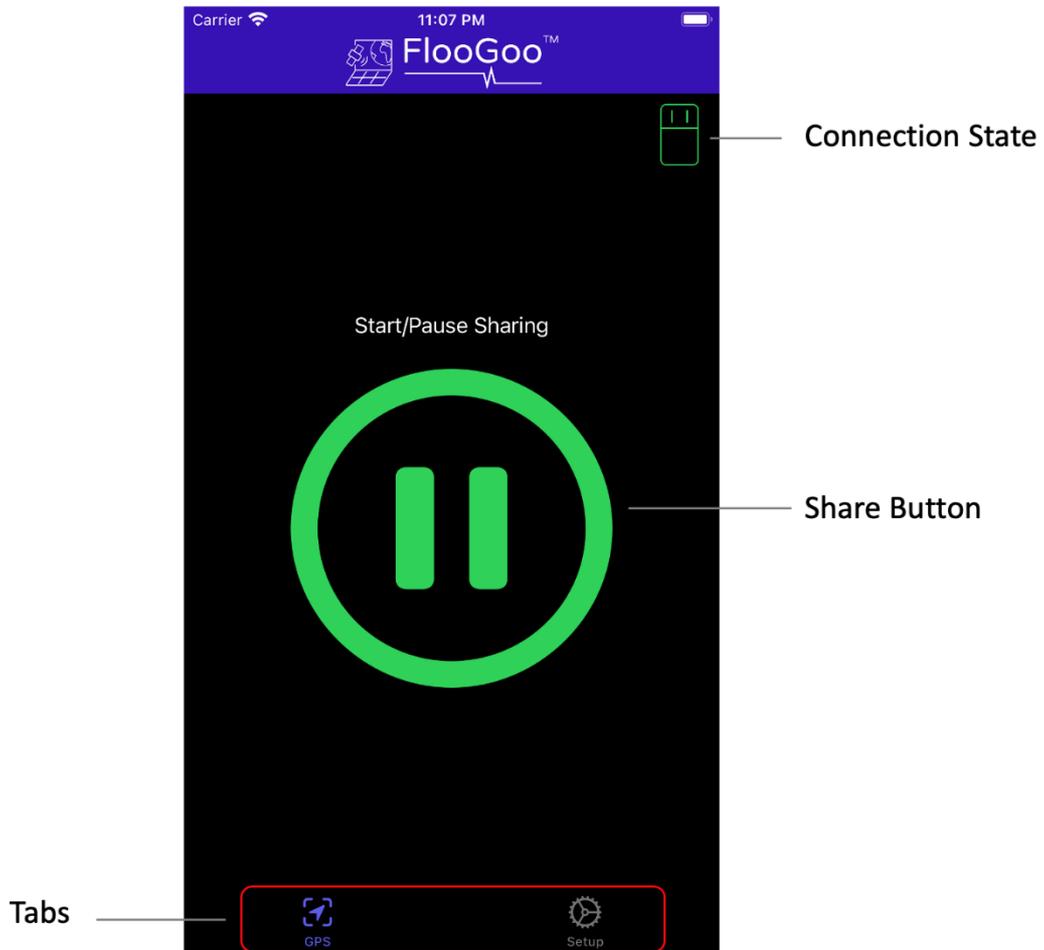
3. On your host (Windows 10, Mac, or Linux/Raspberry Pi), FMA100 works as a standard USB serial port without an additional driver. Please set the corresponding GPS COM port in your GPS application. An example setting in OpenCPN is shown below.



FlooGPS App Overview

The mobile App has two tabs. The “GPS” tab shows a button to start/pause sharing location data. The “Setup” tab has controls for pairing and misc. settings.

When the dongle is connected, the device icon turns green. Then the user can start sharing the location by clicking the sharing button or setting it as automatically.



Please also enable “Location access” as “Always” when prompted by iOS, which keeps the App updating the location in the background.

On Android please also ignore battery optimization of the App to let it continuously update GPS data in the background.

Application 3: Universal pasteboard

FlooGoo FMA100 Bluetooth dongle is the world's first Bluetooth dongle allowing copying & pasting between an iOS device and a Windows or Linux PC.

All information is transferred by Bluetooth locally, nothing goes to the Internet. You do not need to worry about your privacy.

Please install "FlooPaste" App on both your iOS device and your host.

Getting Started

1. Plug FMA100 into your PC. The red LED will flash when it is ready for pairing/connection.
2. On your iOS device (iOS 14 or later), use the following QR code, or search & download "FlooPaste" from the AppStore. Open it and use the "New Pairing" button to pair and connect with the dongle. Once the device icon in the App turns green, it is connected and the setup on your iOS device is done. Be sure to give permission for accessing Bluetooth and notifications since they are necessary for the App to function.



3. On Windows 10 PC, search for "FlooPaste" in Microsoft Store, or click the following link, to install the Windows App. Once it is installed, open it and the default setting of the App is already ready for common usage.

<https://apps.microsoft.com/store/detail/floopaste-windows/9NR5HM41GKHH?hl=en-us&gl=US>

4. For Linux, please download the Python App directly from our Github repository below. Refer to the README.md file to install and run it.

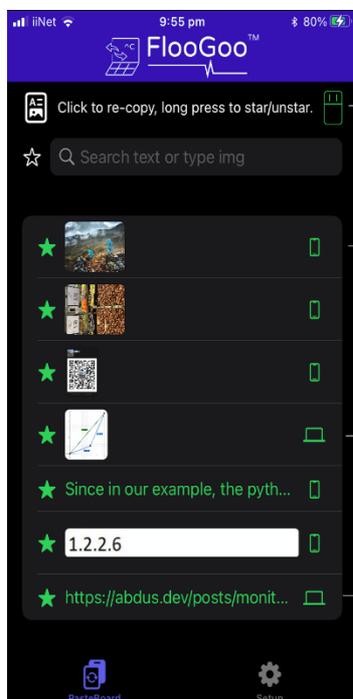
<https://github.com/Flairmesh/FlooPaste>

FlooPaste on iOS

The mobile App has two tabs. The “PasteBoard” tab shows a history list of shared or copied items. The “Setup” tab allows the user to control the Bluetooth pairing/connection and other configurations.

When the dongle is connected, the device icon turns green. Then the user can share, copy & paste between the mobile and the host.

If an item is shared frequently, long pressing it puts a star before it. Starred items will be stored in the private folder inside the App and restored when the App relaunches. Unstarred items are cleared from the list when the App gets a fresh relaunch.

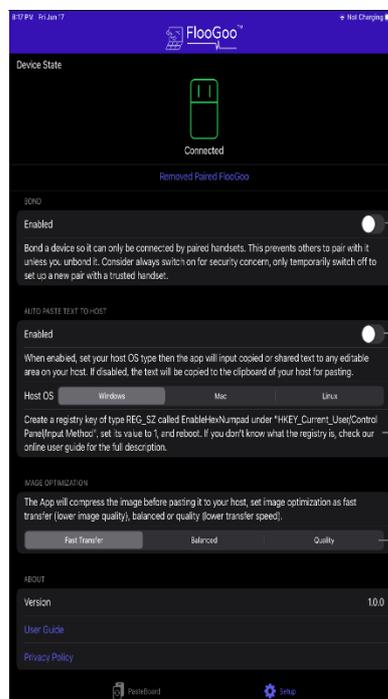


Connection state indicator: grey when not paired, orange in connecting, green when connected.

Icon type(phone or laptop) indicates the origin of the item.

Icon color indicates sending state from mobile to host: green when successfully sent, orange when not send.

Starred items are stored and reloaded when the App relaunches from a fresh start.



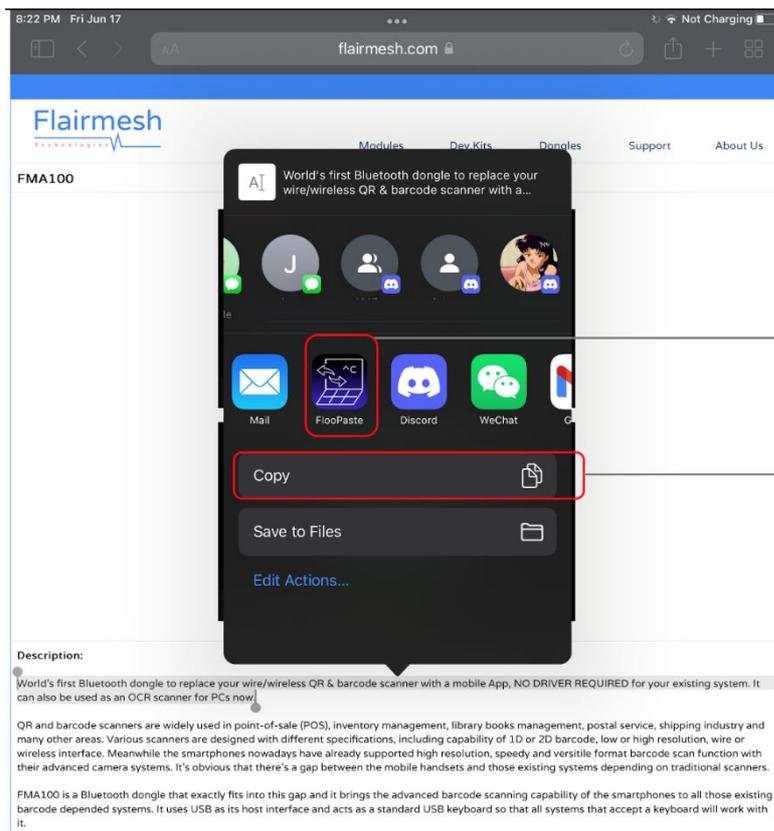
Switch on “BOND” to block new pairs/connections from other phones. If the bonded phone is lost or unavailable, check FAQ in the user guide.

Switch on “AUTO PASTE TEXT TO HOST” to automatically input copied or shared text to any editable area on the host. If it's off, the text is copied to the clipboard of the host. Then user can paste the text in the target editable area.

Instructions for Host OS setting.

Three image optimization options to trade-off between image quality and image transfer speed.

Since the App can run in the background, it's convenient to use the “Share” operation from other Apps to send text, URL, and image to “FlooPaste” without switching the app to the foreground. Below is a screenshot when sharing text from the browser “Safari” to “FlooPaste” on an iPad. “FlooPaste” will forward the shared item to the connected host.



By "Share" operation, the shared information is sent to the App in background and then forwarded to the host's clipboard automatically.

By "Copy" operation, user needs to open the FloopPaste App to paste it. Then the information will be forwarded to the host's clipboard.

The selected text to be shared or copied to the host.

For shared text/URL, if "AUTO PASTE TEXT TO HOST" is enabled, the text/URL will be input directly to the currently active text box, or it will be copied into the host's clipboard.

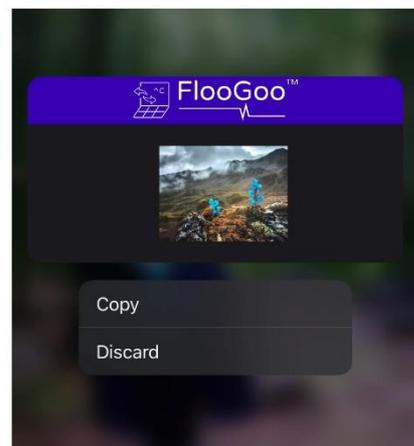
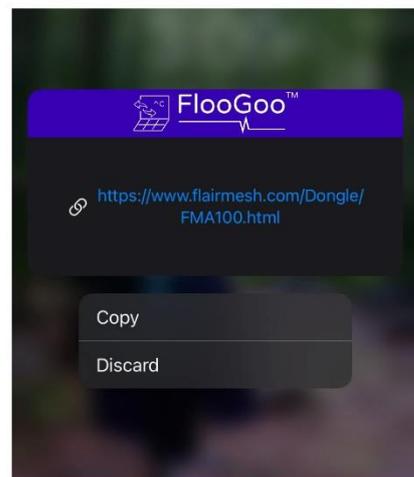
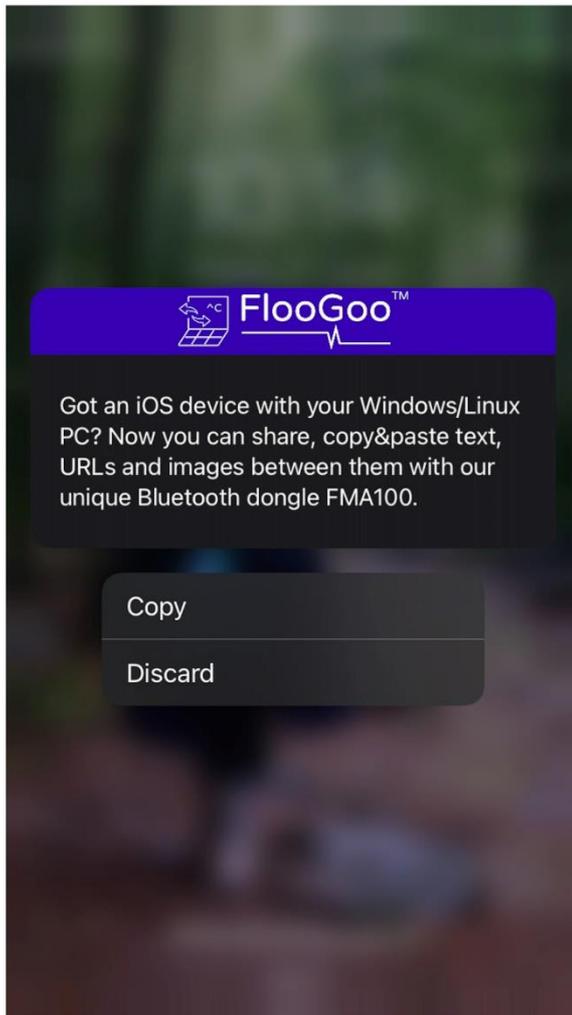
For shared URLs, when "AUTO PASTE TEXT TO HOST" is disabled and the "Auto open shared URL from Mobile" is enabled, the host will open a new browser window opening the URL.

For shared images, a notification will be triggered on the host when it is fully transferred. It is always put in the host's clipboard.

Some Apps on iOS don't allow "Sharing" for their contents, so the user needs to copy them first, then open "FloopPaste" to manually apply it to the pasteboard list. The app reads the copied content and sends it to the host.

On the other way around, when a copied item on the host arrives at the mobile, the "FloopPaste" App generates a notification if it's in the background on the iOS device, and the user can choose whether to copy or discard the information. If it's in the foreground, it is pasted directly to the mobile's pasteboard.

URL in the notification can be opened by clicking.



FlooPaste on Windows



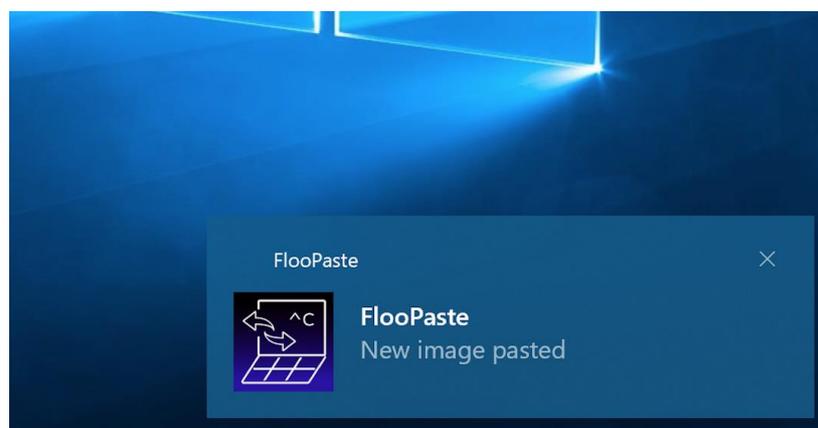
Status bar indicates whether the FlooGoo device is inserted and working. The number in "COM9" might vary.

On Windows, the App shows a control panel with a status bar when started. It automatically copies items sent from the mobile to the host's clipboard and sends changes in the host's clipboard to the mobile. Most of the time users may choose to minimize it to the system tray.

There're several configurations in the control.

- Start when logged into Windows
If the App is downloaded directly from Microsoft Store, this configuration has no effect. Please config it in "Startup Apps" in the "System settings". The default setting is "enabled".
- Share to Mobile
Sometimes you may need to pause sending the changes of the clipboard on the host to the mobile, which can be done by switching this setting off.
- Auto open Shared URL from Mobile
Enabling this will automatically open the shared URL from the mobile. Or else it will only be pasted to the clipboard.
- Notification upon receiving images
Since shared graphics are transmitted by Bluetooth which is not a high-speed channel, they always take some time. Enabling this will generate a notification in your Windows when an image from the mobile arrives.
- Image optimization when sharing from PC
The App will compress images before sending them to the mobile. Users can make trade-offs between fast transfer, high quality, or balanced.

(Below is a notification received when an image arrives)



On the other hand, every time something is copied into the system's clipboard, it is forwarded to the iOS device automatically. If the mobile App is running in the background, it generates a notification for the user to paste it.

FlooPaste on Linux

The graphic user interface is almost identical to the one on Windows. The App has several limitations under Linux,

1. “Start when logged in Windows” has no effect. Since it is provided as a Python App with full source codes, users can add it as a startup script according to the routines under their Linux distributions.
2. Image copying & pasting is not supported yet.
3. “Minimize to System Tray” has problems due to some depending modules. Please only minimize its window to the taskbar.

Application 4: Text & QR & Barcodes Scanning

The perfect companion for your PC, the FlooGoo FMA100 Bluetooth dongle lets you scan text, QR, and barcodes by your mobile handset and send them to your PC instantly, no drivers required. Whether your host is a POS machine or a Windows/Mac/Linux computer, if it accepts a common USB keyboard, it will work seamlessly with the dongle.

Getting Started

1. Plug FMA100 into your POS, PC, or other host's USB-A port.
2. Put the text cursor where the barcode/text will be inputted to, e.g. the barcode input area on a POS machine, a cell in a spreadsheet, or within an opened word file.
3. Scan the QR codes to download the "ScanToPC" app, use it to pair your FMA100 with your phone, and start scanning.

Apple



Apple iOS10 or later, 64-bit devices

Android



Android 5.0 (Lollipop) or later

ScanToPC App Overview

There're three scan modes supported. Each mode is designed with a special function and purpose.

1. QR/Barcode. Replace the traditional QR & barcode scanners.
2. Both text and codes. Specially designed to help POS users to input item names and barcodes simultaneously.
3. Text only. Turn a smartphone into an OCR scanner for a PC.

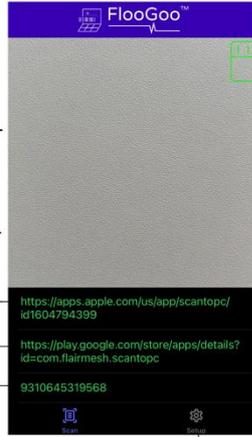
The following screenshots show an overview of the App in "QR/barcode" mode.

Connection state indicator grey when not paired, orange in connecting, green when connected.

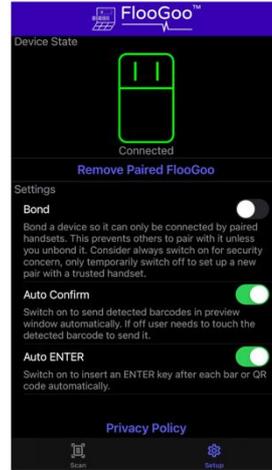


Items sent successfully in green, otherwise in orange.

Use Scan tab to scan text/barcode.



Use Setup tab to pair with the Dongle and config misc. settings.



Switch on Bond to block new pairs/-connections from other phones. If the bonded phone is lost or unavailable, check FAQ of the user guide.

When "Scan Mode" is set to QR/barcode, Switch on Auto Confirm to send detected codes automatically. If it's off, user needs to touch the code in preview window to send it.

Switch on Auto ENTER to insert an ENTER after a barcode or a block of text.

Application 5: Serial Bluetooth Adapter

FMA100 can also be used as a serial Bluetooth adapter for those PCs without an RS232 port. It is configured as a driver-free USB virtual COM port when plugged into a Windows/Mac/Linux host. Via the USB virtual COM port, many Bluetooth profiles such as SPP, HID, and OPP can be accessed by using the ASCII message interface described in the following manual,

https://www.flairmesh.com/support/Flairmesh_BAI_V1.7.pdf

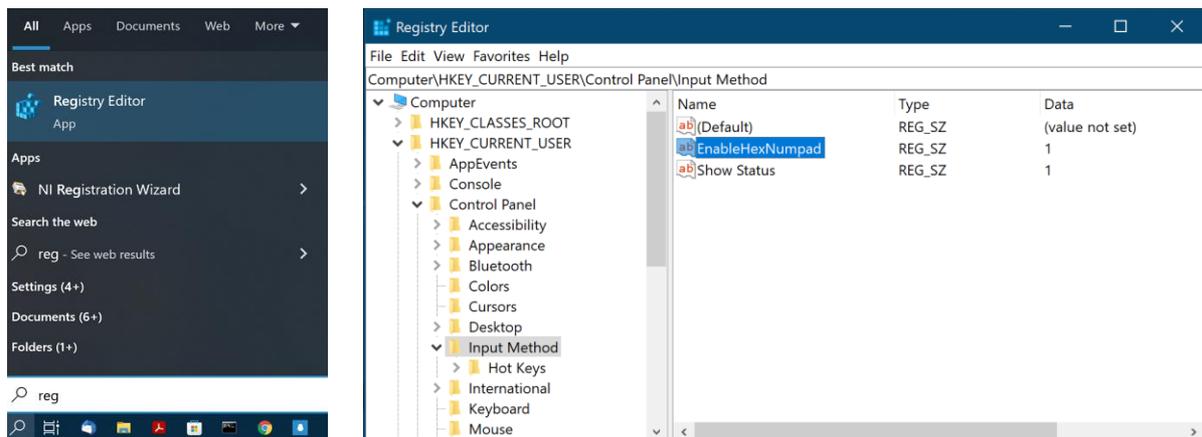
Configuration for Directly Inserting Unicode Text String under Different OSs

For both FlooPaste (When “Auto Paste Text” enabled) and ScanToPC, the text string sent from the mobile App to the host can be directly inserted into an input area. To allow strings in various languages to be inputted correctly, the following configurations should be applied depending on the type of OS. You don't need to worry about this if the text contains only numbers and English letters.

Windows

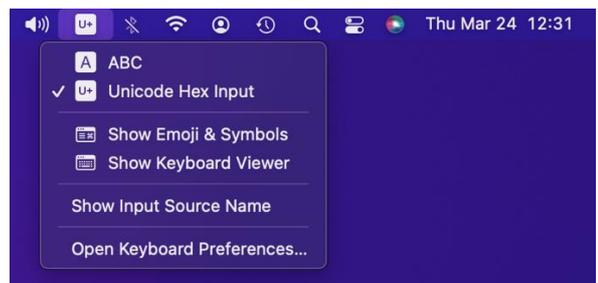
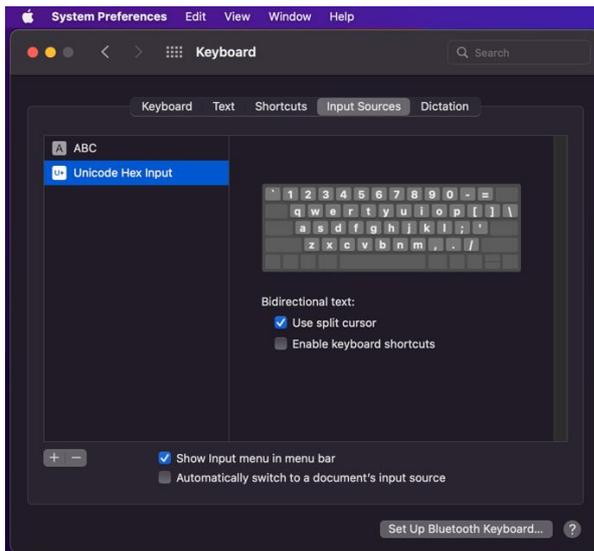
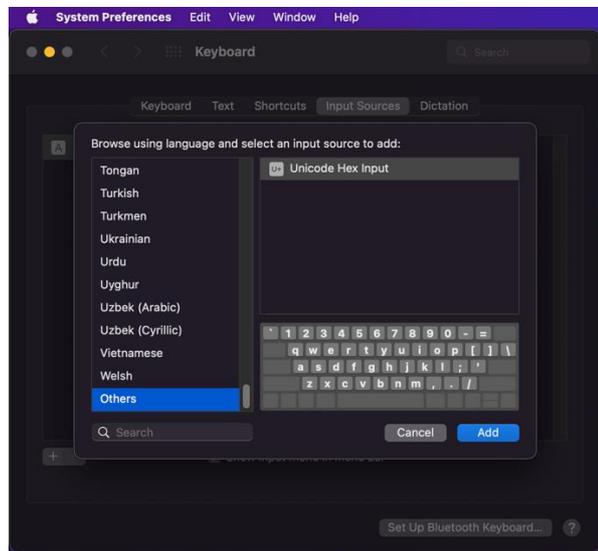
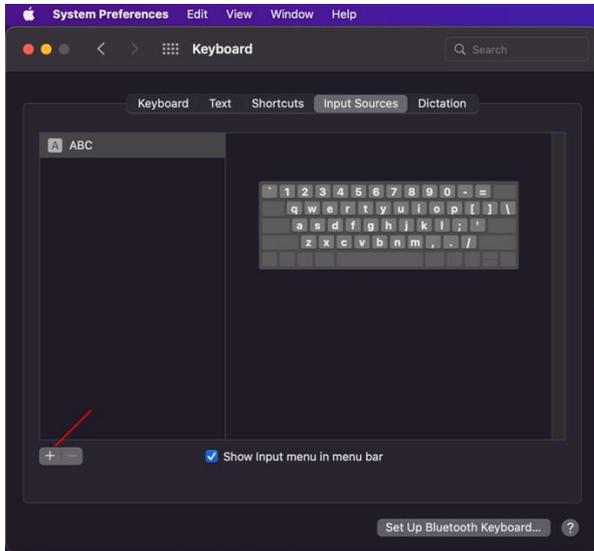
As the screenshots show below, open the App “Registry Editor”, create a registry key of type REG_SZ called “EnableHexNumpad” under "HKEY_Current_User/Control Panel/Input Method", set its value to 1, and reboot.

Please note that some input methods may conflict with the dongle. Try using the default/plain one.



Mac

Select “Unicode Hex Input” in your keyboard preference. Add the input source of “Unicode Hex Input” if necessary.



Linux

No additional settings are needed.

Specification

- Bluetooth V5.2
- USB-A plug, 5V 100mA
- Operational Temperature: -40 - +70 ° C
- Dimensions: 38.6mm x 19.5mm x 6.8mm
- Item weight: 3.8g
- Package weight: 6.8g
- Package size: 10cm x 6.2cm x 0.8 cm

Troubleshooting Q&A and Support

Q: The LED doesn't flash/light on when I insert it into a USB port.

A: FlooGoo FMA100 can be inserted into a USB-A socket from both sides, but it only works when the correct side is used. Check if the golden connectors on FMA100's USB connector are contacting the receptors of the USB port when inserted.

Q: Can I use third-party stylus pens on iPad with "FlooPen"?

A: Yes. You may also use finger touches directly, just enable "Touch as Pen" in the settings.

Q: When using "FlooPen", the pen/mouse can move by finger touches but Apple Pencil doesn't work.

A: Check in the system Bluetooth settings to see if Apple Pencil is connected. Sometimes it won't automatically connect when iPad gets rebooted.

Q: I already have a common Bluetooth adapter, will FMA100 conflict with it?

A: No. FMA100 runs all its functions, including Bluetooth stack, within the embedded high-performance processors inside. It doesn't require an additional driver on the host so it won't conflict with other Bluetooth adapters.

Q: When I scan/auto-paste non-ASCII characters, the host can't receive the correct string.

A: On Windows, after setting the required registry key, please also turn off any conflicting input method and use the default one. On Mac, make sure "Unicode Hex Input" is selected.

Q: What if I lost my handset which my FlooGoo has been bonded with?

A: Under this situation, use the host Apps we provide at <https://www.flairmesh.com/Dongle/FMA100.html> to reset the dongle, so it can be paired and connected by a new mobile device.

Q: When I make a connection from a phone that has been paired before, why is it not connecting?

A: FlooGoo FMA100 keeps the most recent 8 paired/used devices in its memory. If the dongle is paired with more than 8 devices, the older device records get overwritten. To solve this problem, remove the paired dongle from both the App's settings and the Bluetooth settings of the mobile device and make a new pairing.

Q: Can I run "FlooPaste" and "ScanToPC" simultaneously?

A: Yes, just make sure not to scan large blocks of text while "FlooPaste" is transferring images.

Q: Can I run "FlooPaste" and my desktop GPS App simultaneously on my host?

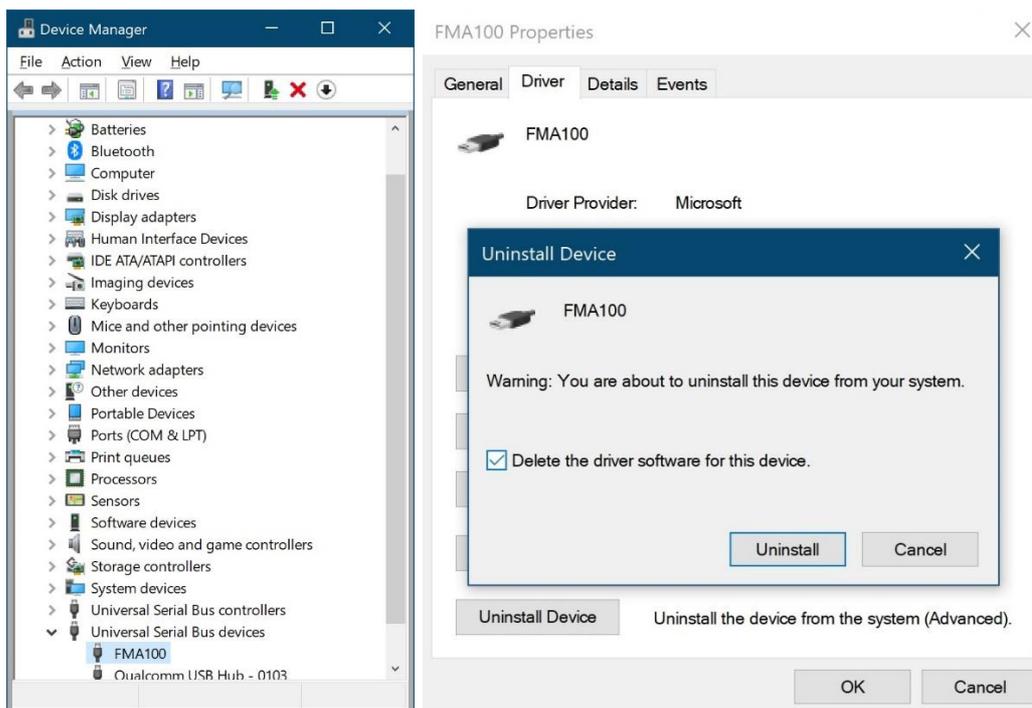
A: No. "FlooPaste" also depends on the USB serial port of FMA100. So they can not be used simultaneously.

Q: Can I run "FlooPen" and "FlooPaste" simultaneously?

A: Currently no. They can be used alternately.

Q: How can I revert to the default HID driver for the dongle on Windows?

A: Locate FMA100 in the Windows "Device manager". Right-click on it and open its properties. Choose the "Driver" tab and then click "Uninstall Device" WITH the "Delete the driver software for this device" ticked.



[FMA100 FCC SDoc](#)