MAGICGNSS USER TERMINAL QUICK START GUIDE

MAGICGNSS

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DOCUMENT STATUS SHEET

Issue	Revision	Date	Pages	Changes
1	1	22 February 2018	10	First version of the document.
1	2	05 July 2018	10	Second version of the document, aligned with FW+SW version 1.10.0, generated for compliance with EMC Directive 2014/30/EU and RoHS2 Directive 2011/65/EU, and forcing Wi-Fi module always on, and Bluetooth module always off.

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1. INTRODUCTION

This Quick Start Guide provides an overview of the most relevant features and basic instructions for setting up and operating the *magicGNSS* User Terminal for PPP and SBAS solutions.

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2. A FEW SIMPLE STEPS TO GET STARTED

This guide provides an overview of the most relevant features and basic instructions for setting up and operating the *magicGNSS* User Terminal for PPP and SBAS solutions.

- **Step 1** Unpack and check the contents.
- **Step 2** Charge battery and attach antenna. If required, insert micro-SIM card.
- **Step 3** Turn on the magicGNSS User Terminal device and launch SBAS/PPP applications
- **Step 4** Collect output data.
- **Step 5** Turn off the magicGNSS User Terminal device.

Additional information

For further information about the User Terminal and SBAS/PPP applications user manual, please refer to the complete User Manual, which can be accessed at https://magicgnss.gmv.com/userterminal/.

***magicGNSS* User Terminal support**

For *magicGNSS* User Terminal support, please contact magicgnss@gmv.com.

Icon guide

⚠ Danger: This icon indicates situations that could pose a risk to personal safety or health.

! Warning: situations with pose a risk to the correct functioning of the device but not to personal safety or health.

2.1. STEP 1 UNPACK AND CHECK THE CONTENTS

1	**2**	**3**

Number	Description
1	magicGNSS User Terminal device, including internal Li-Ion battery.
2	USB cable: interface to connect the magicGNSS User Terminal device to charger and computer.
3	QSG card: Contains QR code for Quick Start Guide information.

Additional required elements not included in the packaging:

Number	Description
1	Charger: AC/DC USB plug. For optimum charging, using a 5 V 2 A charger is recommended.
2	Antenna
3	micro-SIM card: to be provided by a local cellular network service provider.

Parts of the *magicGNSS* User Terminal device:

Opening the micro-SIM and SD slot cover:

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2.2. STEP 2 CHARGE BATTERYAND ATTACH ANTENNA. IF REQUIRED, INSERT MICRO-SIM CARD.

If the device was shutdown in storage mode, for example if it the first time it is used, the device must be switched on following these steps:

- • Connect the device to a power supply (mains or a PC micro USB)
- • Press the Power ON button
- • Set the time in the device

Charging the Li-Ion battery

A rechargeable Li-Ion battery is supplied, integrated in the magicGNSS User Terminal device. Before using the battery for the first time, charge it completely using the USB cable provided, attached to the (not provided) AC/DC USB plug charger. The battery charge status is displayed with an icon in the Menu Bar.

Allowing the battery to charge fully (~2.5 h with a 5V 2A USB output port) is recommended when you charge it for the first time as this will help calibrating the battery meter. Bear in mind that some batteries perform better after completing a number of charge/discharge cycles.

If you foresee that the remaining battery charge could be not enough for completing the SBAS/PPP process, we recommend to connect the device to an external power source and to select the "charge" option before starting the SBAS/PPP execution.

Attaching the antenna

The antenna has to be attached to the female SMA port (output voltage 5.0 VDC, maximum current 200 mA).

The antenna is not included in the packaging.

Inserting micro-SIM card

The mico-SIM card can be inserted in the corresponding slot, with the metal pins at the bottom and facing backwards (i. e. towards the back of the device), as indicated by the micro-SIM card icon next to the micro-SIM card slot. Push the card in until you notice a slight click, with indicated that it has been inserted correctly. To eject the micro-SIM card, slightly push it in to trigger the spring-loaded release mechanism.

The SD card element is not currently in use, but could be exploited in future evolutions of the magicGNSS User Terminal device.

Optional accessories, such as holder and base station are available: [Base Support Ref. A9107508](#) and [Wall support Ref. A9107628](#).

2.3. STEP 3 TURN ON THE MAGICGNSS USER TERMINAL DEVICE, INSTALL FIRMWARE/SOFTWARE UPDATES AND LAUNCH SBAS/PPP APPLICATIONS.

To turn on the magicGNSS User Terminal device, press the power button.

Then, the starting screen will be shown, allowing the user to access certain configuration elements ("Settings" button), choose between the SBAS or the PPP processing modes ("magicSBAS" and "magicPPP" buttons) and read this Quick Start Guide ("Quick Start Guide" button).

⊕ If the magicGNSS User Terminal is used for the first time, do please connect it to the internet. Please note that it can be done either by enabling a Wi-Fi network (recommended, see information for Wi-Fi configuration below), or, alternatively, by inserting an active micro-SIM card, so that the first compulsory firmware/software OTA update can be properly installed.

⊕ If the magicGNSS User Terminal is used for the first time, and once it has been connected to the internet, a pop-up widow will notify that the fist compulsory firmware/software OTA update is available, and the user shall proceed to the upgrade installation. Using a Wi-Fi connection is recommended to download the update package. The system will guide you through the installation process to ensure that it is completed as quickly and conveniently as possible.

For information about further OTA updates, please refer to the complete User Manual, which can be accessed at https://magicgnss.gmv.com/userterminal/.

Regarding the four buttons in the starting screen:

<u>"Settings" button for accessing different configuration options:</u>

• DATA USAGE: With this option, you can view each application's statistics for data transfers via Wi-Fi or mobile internet.

• MORE: With this option, you can enable the following features:

    o Tethering and portable hotspots: You can convert your device into a Wi-Fi or USB access point to share the connection with one or multiple devices.

    o Cellular networks: Access the setting of the micro-SIM card where you can enable data roaming, select the preferred network type, set up the APN and select a network operator.

    o Emergency broadcasts: Displays the emergency alerts that you have selected.

• DISPLAY: Here you can customize the brightness of your screen, set the time delay before the screen automatically switches off, turns the screen on when a notification arrives, font size and screen rotation behaviour.

• SOUND AND NOTIFICATIONS: You can adjust the volume of the ringtone, alarm, and notifications as well as the volume of the multimedia content.

• STORAGE AND USB: You can query the total and used amount of space on the device. The amount of space taken up by each file type is listed below this information. This setting includes an internal file browser to explore the contents of your device's internal storage without having to use an external file manager. You can access this browser via Settings > Storage and USB > Explore.

• LANGUAGE AND INPUT: Here you can set up the system language, activate the spell checker and the personal dictionary. You can also configure the keyboard, text input methods, voice typing and pointer speed.

• RESET & STORAGE MODE: Here you can reset all network settings, carry out a factory data reset and storage shutdown mode to use in case we need to keep the device shut down for a long period of time.

• DATE AND TIME: In this section, you can adjust the time automatically based on location information or the mobile network. Enables/disables the automatic time zone provided by the network or Enables/disables the 24-hour time display format.

• ABOUT PHONE: This section displays the status of the device (battery, micro-SIM data, serial number, etc.), legal information, Android version, model number, baseband, kernel versions and the build number. Here you can manually check for system updates.

<u>"*magicSBAS*" and "*magicPPP*" buttons:</u> the SBAS and PPP processing modes can be accessed through their respective buttons. For further information about the SBAS and PPP applications, please refer to the complete User Manual, which can be accessed at https://magicgnss.gmv.com/userterminal/.

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⚠ Please do not launch the magicGNSS User Terminal device *magicSBAS*/*magicPPP* applications if the first compulsory firmware/software OTA update installation has not been correctly completed.

The "Quick Start Guide" button: shows this Quick Start Guide (QSG). For ensuring that the latest version is shown, please connect the *magicGNSS* User Terminal device to the internet when consulting the QSG.

2.4. STEP 4 COLLECT OUTPUT DATA.

There are two main options for accessing the generated output data:

• Real-time mode: standard NMEA position file, accessible through a specified TCP/IP port, and distributed via Wi-Fi/3G.

• After-session mode, including:

    o Observation RINEX (RINEX v3.03) logging information for all the received measurements, even if they have not been used in the process execution.

    o Input navigation RINEX (RINEX v3.03)

    o SBAS EMS 2.0

    o Standard NMEA file containing positioning data

    o Proprietary NMEA file containing positioning and integrity data

    o Land mark file

    o KML file containing positioning data and landmaks, if any

    o Other secondary outputs: summary, indicators and log files, providing additional information about the SBAS/PPP processing.

All these files are stored on the internal memory and are accessible through USB. For copying or moving the required output files, please select the "STORAGE AND USB" option accessible from the "Settings" button.

⚠ Please note that during transfer mode through USB, the 3G connection will be interrupted, and the *magicSBAS*/*magicPPP* applications, if running, may be negatively affected. Once you disconnect USB cable, micro-SIM PIN code will be required.

For further information, please check the "Transferring Files" paragraph in the "2.2 Getting Started" section of the magicGNSS User Terminal Manual.

2.5. STEP 5 TURN OFF THE MAGICGNSS USER TERMINAL DEVICE.

Please make sure that the SBAS/PPP applications have been properly stopped before pressing the power button, otherwise the applications will not be able to perform a controlled closing, and some of the output data files might be lost. The SBAS/PPP applications can be closed by pressing the stop button in the applications windows, or by pressing the "back" button, and affirmatively answering the request for permission to close the active application. Then, once redirected back to the launcher application screen, the magicGNSS User Terminal device can be turned off by pressing the power button for 3 seconds, and then selecting the Power off option.

If you briefly press the power button, the screen will switch off but not the device.

Shutdown in storage mode. It is highly recommended to use storage mode when the device is going to be switched off for a long period of time. Battery life is notably lengthened in such a scenario.

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