



mictrack MT700 Cat M1 and NB IoT Asset GPS Tracker User Manual

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mictrack MT700 Cat M1 & NB-IoT Asset GPS Tracker User Manual V1.0



Preface

Thanks for purchasing the Mictrack Asset GPS tracker MT700. This manual shows how to easily program and set up the tracker for the best results. Please read this manual carefully before using this product, so as to avoid

delays or confusion with its operation. Please note that specifications and instructions are subject to change without notice to facilitate product improvement. Updates and changes will be integrated into the latest release. The manufacturer assumes no responsibility for any errors or omissions in outdated documents.

FCC Caution:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the

user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator& your body.

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Quickly Reference

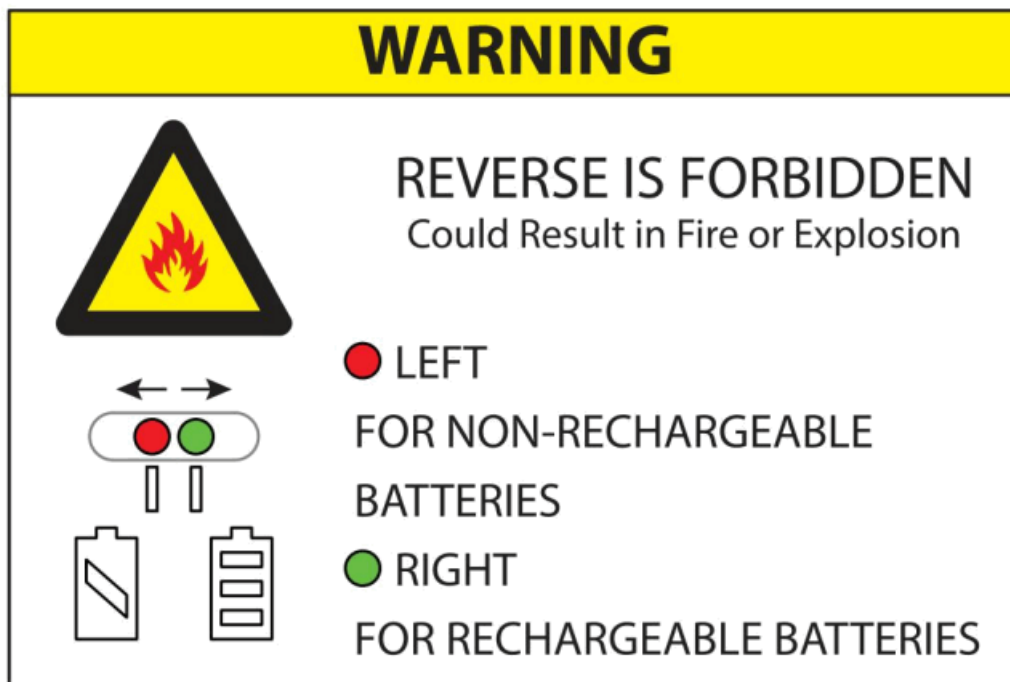


Warning

There is a Toggle Switch in the internal(following image). Please carefully operate it.

- If you use Non-rechargeable batteries, Make sure to Toggle Switch to LEFT;

- If you use chargeable batteries, Make sure to Toggle the Switch to the RIGHT;
- REVERSE IS FORBIDDEN, Could Result in Fire or Explosion.



Non-rechargeable Batteries Recommendation

- Battery Type: Lithium Iron Disulfide (LiFeSO₂) 3 x AA 1.5V cell batteries;
- Battery Brand: Energizer Ultimate L91 AA 1.5V.
- Battery holder: Buy from the Manufacture or your distributor.



NOTE:

- Lithium Thionyl Chloride (LiSOCl₂) 3 x AA 3.6V cell batteries are unavailable now, if need can customize the hardware, please contact us or your provider for more details.
- Non-rechargeable batteries need to be fully compatible with the original battery holder, or the device may cause damage, explosion, and fire.



Disclaimer

Before using this device, the customers should fully understand their usage scenarios and installation environment. Mictrack will not be held responsible for any losses caused by using the devices in the wrong scenario or reporting rate. It is highly recommended that users should contact Mictrack before deployment. We are glad to give you the suggestions.

Overview

MT700 is an IP68 waterproof asset GPS tracker that uses Cat M1 & NB-IoT technology that can provide super low power consumption of up to 15 years of standby time powered by internal batteries. Its built-in powerful magnets are easy to install without wiring.

The user can real-time track the unit via their mobile phone or PC at any time anywhere. It has been widely used in fleet management, trailer, container, logistics, car rental, automobile finance, transportation, and other segments.

Features

<ul style="list-style-type: none">• Cat M1 & NB-IoT & GSM Network• GPS+Glonass+Galileo+Beidou System• 15 Years Standby Time• IP68 Dust & Water Resistance• Dynamic Power Path Management• Ultra Low Power Consumption less than 1.5uA• Easy Installation• Powerful Magnet Mount• Bracket Kits (optional)• Rugged Construction	<ul style="list-style-type: none">• Real-timing Tracking• Geo-fence Alarm• Low Power Alarm• Removal Alerts• Smart Motion Detection• Scheduled Timing Report• GPS+WiFi Positioning (optional)• Multiple Power Saving Mode Switching• PC & Mobile App Tracking• Programmable via Web/USB/SMS• Open Protocol & Easy Integration with any third-party platform
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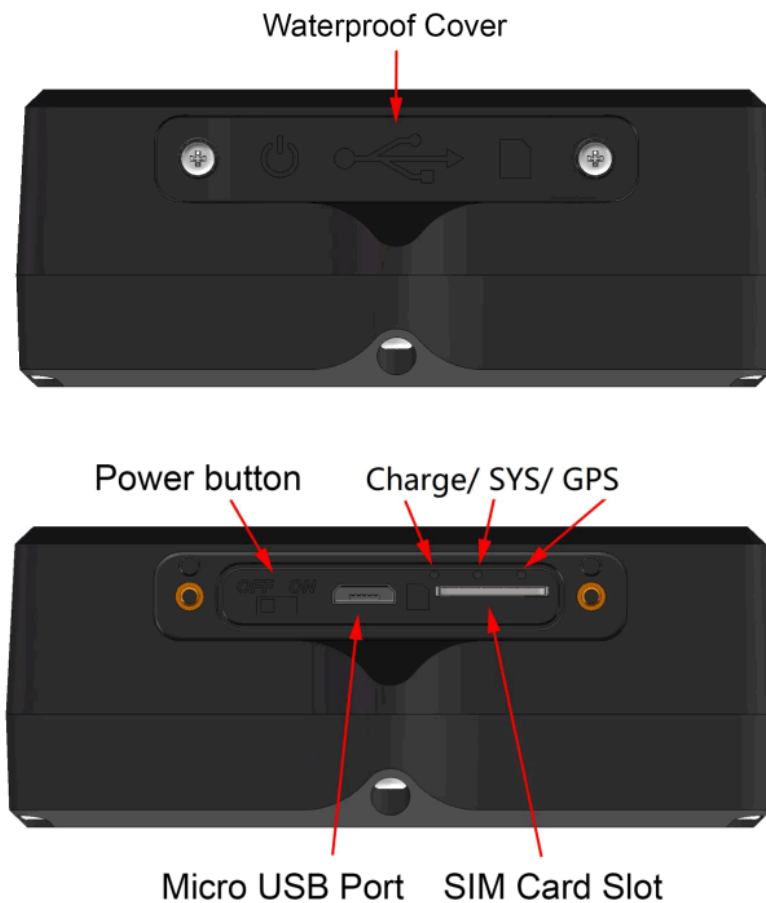
Applications

- Trailer Tracking
- Container Tracking
- Logistics Tracking
- Vehicles Tracking
- Automobile Finance
- Fleet Management

Specifications

Item	Specifications
Dimension	88mm*62mm*34mm (3.46" *2.44" *1.34")
Weight	290g (10oz)
Charging Mode	Micro USB charging DC; Quick Charge 2A@5V (for rechargeable version only)
Power Consumption	<1.5uA standby current (in lowest power configuration)
Backup Battery (Two versions)	Rechargeable 3.7V 7800mAh Li battery
	Non-rechargeable LiFeS2 (batteries are exclude)
4G Cellular Bands	Cat M1 (LTE-M, eMTC) B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B26/B28/B39 NB-IoT (CAT NB1): B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B26/B28 GSM: 850/900/1800/1900Mhz
Working temperature	-20°C to 60°C (-4°F to 140°F)
Mounting	Magnet, Bracket Kits (optional)
Positioning	GPS, WiFi (optional)
GPS	Qualcomm Gen 8C GNSS receiver
GPS Antenna	Internal
Cellular Antenna	Internal
Sensor	3-Axis Accelerometer, Light Sensor
LED	Charge/SYS/GPS
SIM Card interface	Internal Micro 3FF SIM
Protocol	TCP, UDP, SMS
Waterproof	IP68
Battery life	15 Years
Antenna Max.PeakGain	WWAN Module Antenna Gain <4dBi

MT700 Interface



In the box

7.1 Standard Accessories

- 1* MT700 Asset GPS Tracker
- 1* USB Charge Cable (for rechargeable version only)
- 1* Battery Holder (for the Non-rechargeable version only)
- 1* Quick Start Guide

7.2 Optional Accessories

- 1* Car Charger
- 1* Power Adapter
- 1* USB Config Cable

Installation

8.1 SIM Card installation

- Get ready a Micro SIM Card (Cat M1 or NB-IoT) with 15MB of data a month;
- Open the Waterproof Cover with the screwdriver;
- Insert SIM Card with a little push (as SIM icon direction), or watch the video <http://bit.ly/MT700-Install-Guide>
- Turn the Power button from OFF to ON.

8.2 LED Indications

8.2.1 Red indicator- Charge

Status	Description
OFF	No charge or fully charged
Solid Red	In charging
Blinking	Fully charged

8.2.2 Blue indicator- SYS

Status	Description
OFF	Power OFF or in sleep mode
Solid Blue	Running mode

8.2.3 Green indicator- GPS

Status	Description
OFF	Power OFF or GPS unavailable, or in sleep mode
Solid Green	GPS available

Setup and Configuration

- For the first-time to use, please connect the USB Config cable to setup the APN (CALL your sim card provider to get the correct APN) and then lock the network(base on your sim card support, please lock to CAT M1 or NB-IoT) ;
- After that you can set up other commands via the USB Config tool;
- If your sim card support SMS you can set up the unit via the following SMS commands (9.1-9.12)
- Download the USB Config tool from the link: <https://bit.ly/MT700-Config-tool>
- Config tool user guide video: <https://bit.ly/MT700-Config-Tool-User-Guide>

9.1 Change the password

SMS Command format:777+new password+old password

For example:77712340000

Reply: SET USER PASSWORD OK.

Note: The default password is 0000

9.2 Set APN (Access Point Name)

SMS Command format 1: #803#password#APN##

For example : #803#0000#nbiot##

SMS Command format 2: #803#password#APN#APN user name#APN password##

For example: #803#0000#CMNET#INTERNET#INTERNET##

Reply: SET GPRS APN OK

9.3 Set the IP and port

SMS Command format : #804#password#IP address(or domain) #port##

For example : [#804#0000#e.trackits.com#7700##](#)

Reply: SET SERVER IP AND PORT OK.

9.4 Working Mode

9.4.1 MODE 1 (Real Time Mode)

SMS Command format: MODE,1,password,T

For examples: MODE,1,0000,60

Reply: SET TRACKER MODE:1 OK

Note: The device will report data every 60s .T is interval time and the range is [60-600] seconds. On this mode, GPS and TCP will always on

9.4.2 MODE 2 (GPS Auto Mode)

SMS Command format: MODE,2,password,T, X, Y

For examples: MODE,2,0000,10,1,1

Reply: SET TRACKER MODE:2 OK

Note:

1. T is the report interval time and the range is [10,60] minutes.
2. X=0 means GPS will wake up only when the report interval time arrives; X=1 means GPS will always be on,
3. Y=0 means TCP will wake up only when the report interval time arrives; Y=1 means TCP will always be connected,.

9.4.3 MODE 3 (Deep Sleep Mode)

SMS Command format: MODE,3,password,T

For examples: MODE,3,0000,1

Reply: SET TRACKER MODE:3 OK

Note: The device will wake up and report data to the server every 1 hour, after that it will go to sleep again until the next 1 hour. T is [1-24] hours.

9.4.4 MODE 4 (Vibrate Mode)

SMS Command format: MODE,4>Password,T

For examples: MODE,4,0000,60

Reply: SET TRACKER MODE:4 OK

Note: When the device detects continuous vibration for more than 1 minute, it will wake up and starts to connect to the network, After connected it will Immediately report data to the platform;

If the device is still in a vibrating state, MT700 will report to the server every 60 seconds

If there is no vibration for more than 7 minutes:

1>During In the 7 minutes if no report data it will go to sleep soon.

2>During In the 7 minutes if have report data and after sending out the last location, it will wait for 3 minutes and then go to sleep again. T is [60-600] seconds

9.4.5 MODE 5 (WiFi Only Mode)

SMS Command format: MODE,5,password,T, X, Y

For examples: MODE,5,0000,5,0,1

Reply: SET TRACKER MODE:5 OK

Note:

1. T is the report interval time and the range is [1,60] minutes.
2. X fix to 0.
3. Y=0 means TCP will wake up only when the report interval time arrives; Y=1 means TCP will always be

connected.

9.4.6 MODE 0 (AUTO Mode)

SMS Command format: MODE,0,T1,T2

For examples: MODE,0,60,1

Reply: SET TRACKER MODE:0 OK

Note: This is a mixed mode of Mode 3 and mode 4. T1 is [60-600] seconds, T2 is [1-24] hours; When the device is still it will run as Mode 3 and when the device detects to vibrate it will run as Mode 4.

9.5 Setup Protocol

SMS Command format: #800#password#X##

For example: #800#0000#TCP##

Reply: SET SERVER TYPE OK

Note: X=TCP means setup to TCP protocol, X=UDP means set to UDP Protocol.

9.6 SET AGPS

Disable AGPS Location:190+password

For examples:1900000

Reply: SET AGPS OFF

Enable the Last Location:191+password

For examples:1910000

Reply: Reply: SET AGPS ON.

9.7 Setup Last location report

Disable the Last Location:192+password

For examples:1920000

Reply: SET LAST VALID GPS OFF

Enable the Last Location:193+password

For examples:1930000

Reply: Reply: SET LAST VALID GPS ON.

9.8 Low Power Alarm

When the unit's internal backup battery is low, it will upload location data to the server along with the status "BLP"

9.9 Remove alarm

If the device was removed and the light sensor detects the light it will report location data to the server along with the status "DEF"

9.10 Vibrate alarm

In vibrate mode (Mode 4) If the device was detected to vibrate for 1 minute, it will report location data to the server (as the customized interval time) along with the status "TOWED"

9.11 Restart

SMS Command format : *RESTART#Password##

For examples:*RESTART#0000##

The device will restart after sending this command.

Reply: DEVICE WILL BE RESTART.

9.12 Reset

SMS Command format : *RESET#Password##

For examples:*RESET#0000##

Reply: DEVICE WILL BE RESET.

App & PC Tracking platform

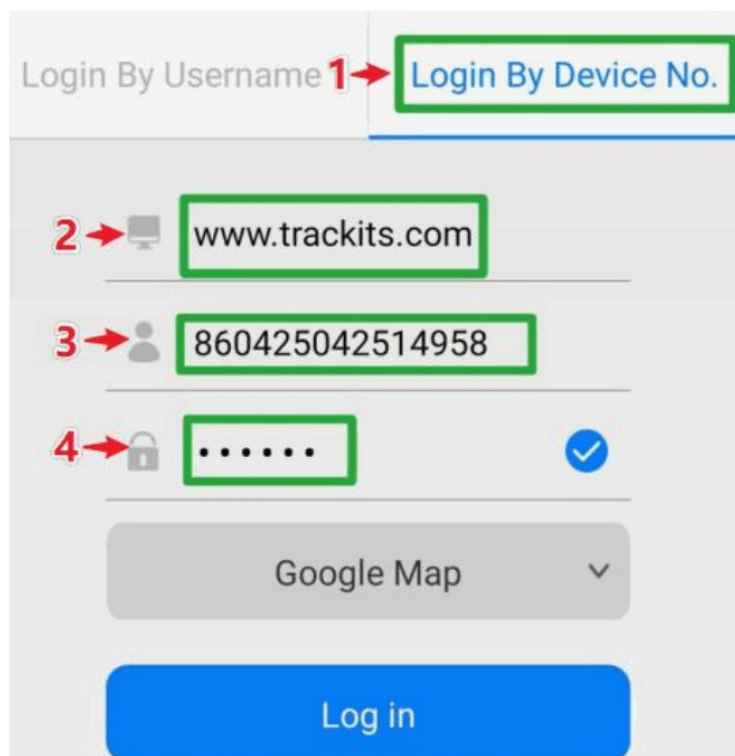
10.1 App install & Login

- Subscribe to the plan: <https://shop.mictrack.com/product/gps-tracking-platform-service/>
- if you have subscribed to the plan please ignore this step.
- Search “Yi tracker” in Google Play or iOS store(or scan the following QR code) to download the Mobile APP(not Yi tracker2);



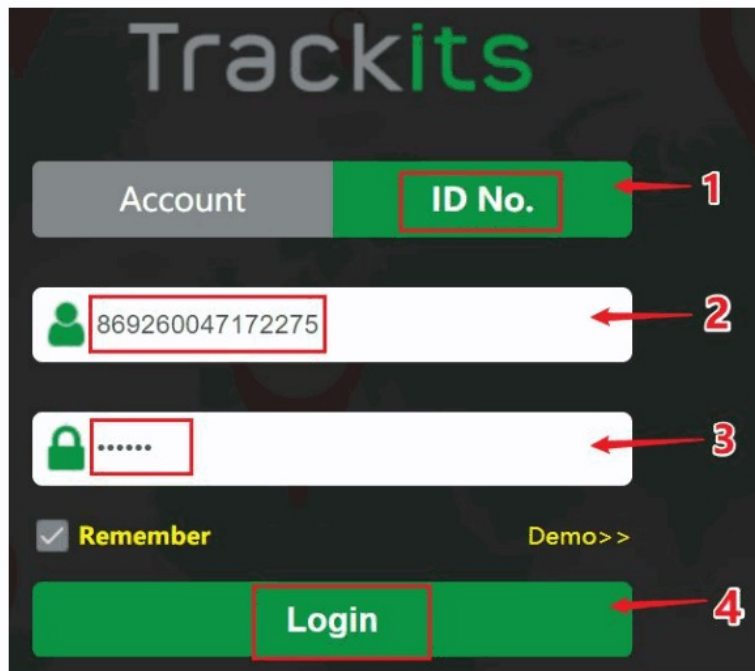
<http://onelink.to/cnyv8k>

- Choose the” Login by Device No.,
- Input server www.trackits.com
- Input your device’s ID number and password(default is 123456) to log in.

A screenshot of a mobile application's login screen. At the top, there are two tabs: "Login By Username" and "Login By Device No.". The "Login By Device No." tab is selected and highlighted with a green box, with a red arrow labeled "1" pointing to it. Below the tabs, there are three input fields, each with a red arrow and a number indicating the step: "2" points to a server URL field containing "www.trackits.com"; "3" points to a device ID field containing "860425042514958"; and "4" points to a password field containing six dots. To the right of the password field is a blue checkmark icon. Below these fields is a "Google Map" button with a dropdown arrow. At the bottom is a large blue "Log in" button.

10.2 PC login

- Web: www.trackits.com
- Choose “ID No.”
- Input your device’s ID number and password(default is 123456) to log in



Troubleshooting

Issues	Caused	Solutions
Send SMS to the device but no reply	1>The device only replies with Cat M1 sim card and will not reply to the NB-IoT SIM card 2>SIM Card has no active 3>Card balance is not enough	Please check the SIM card status and try again.
	The text command format is wrong	Please check the command format again
	Connect network fail.	Please check the LED status and make sure the network connects successfully first.
GPS platform shows logged off		1. Check the APN setting ; 2. Check IP and port 3. Check the network of matches
GPS platform shows no location or the coast of Africa.	Device indoor/garage	Take it outside for a 10-minute walk or drive, and its location should update.
LED no light	The backup battery is low power	Please charge the device for 30 minutes at least.

(End of this document)

Any questions please do not hesitate to contact us:


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	<p>mictrack MT700 Cat M1 and NB IoT Asset GPS Tracker [pdf] User Manual MT700, 2A7CE-MT700, 2A7CEMT700, Cat M1 and NB IoT Asset GPS Tracker, MT700 Cat M1 and NB IoT Asset GPS Tracker</p>
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References

- [📄 MT700 - Google Drive](#)
- [📄 Cat M1 NB-IoT GPS Tracker Manufacturer | LTE-M Asset GPS Tracker](#)
- [🌐 GPS@½ç»Ÿ GPS¹³° GPS@½â¹³°](#)
- [📄 MT700_Config_Tool_User_Guide - Google Drive](#)
- [📄 YouTube](#)
- [🌐 GPS Tracking Platform Service - Mictrack Shop](#)
- [📄 Cat M1 NB-IoT GPS Tracker Manufacturer | LTE-M Asset GPS Tracker](#)