GL530MG Manage Tool User Guide

EGPRS/LTE Cat-M1/LTE Cat-NB2/GNSS Tracker

TRACGL530MGMT002

V4.00



Driving Smarter IoT

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History

Version	Date	Author	Description of Change
1.00	June 24, 2021	Tammy Tian	Initial.
2.00	January 28, 2022	Tammy Tian	Replaced the sample picture and changed the description.
3.00	May 18, 2022	Tammy Tian	Replaced the sample picture.
4.00	November 21, 2022	Tammy Tian	Added **AT+GTNTS**.

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1. GL530MG Manage Tool Interface

The GL530MG Manage Tool is a PC software which can be used to configure the GL530MG through UART. Configuration is easy for the backend server developers as the tool has a user-friendly interface. The correct command messages sent to the device will be displayed on the Manage Tool. (These messages can also be sent by SMS, LTE or EGPRS).

The administrators can also use the Manage Tool to configure the device before sale. We recommend to establish a backend server and use the device by SMS, LTE or EGPRS. Please refer to GL530MG @Track Air Interface Protocol for details.

To get started, please install the driver for the UART cable. Then, find the new COM port in your PC system and follow the steps as follows:

1. Connect the device to PC by using the UART cable.
2. Run **Queclink_GL530MG_Manage_Tool_Rx.x.exe**.

1.1. System Requirements

The tool can run on all Windows operating systems, for example, **.NET Framework 3.5** (and above).

1.2. COM Setting

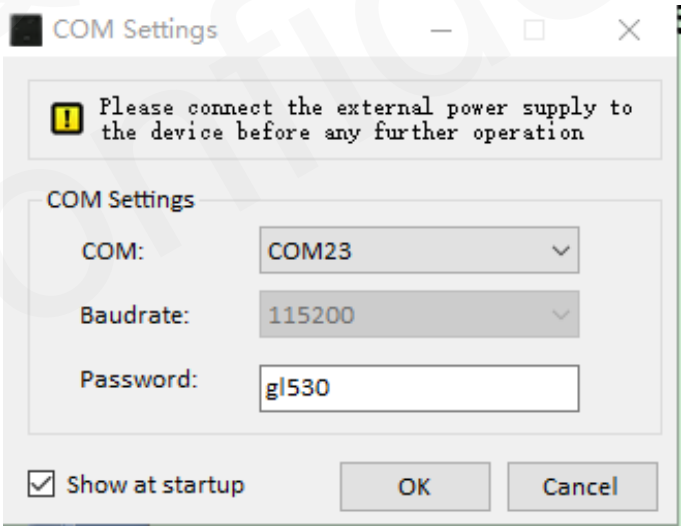


Figure 1: COM Setting

Select the COM port and baud rate (115200bps by default), enter the password **gl530** by default, and select **OK**. Then the setting window will be displayed.

1.3. Quick Setting Wizard

The Quick Setting Wizard allows you to set basic settings for the device (Please refer to Chapter 2.1 for the instructions). If you want to use more functions of the device, select **Cancel** on the Quick Setting Wizard page to enter the professional setting interface.

Note: To enter the Quick Setting Wizard page or the professional setting interface, please configure the COM setting first.

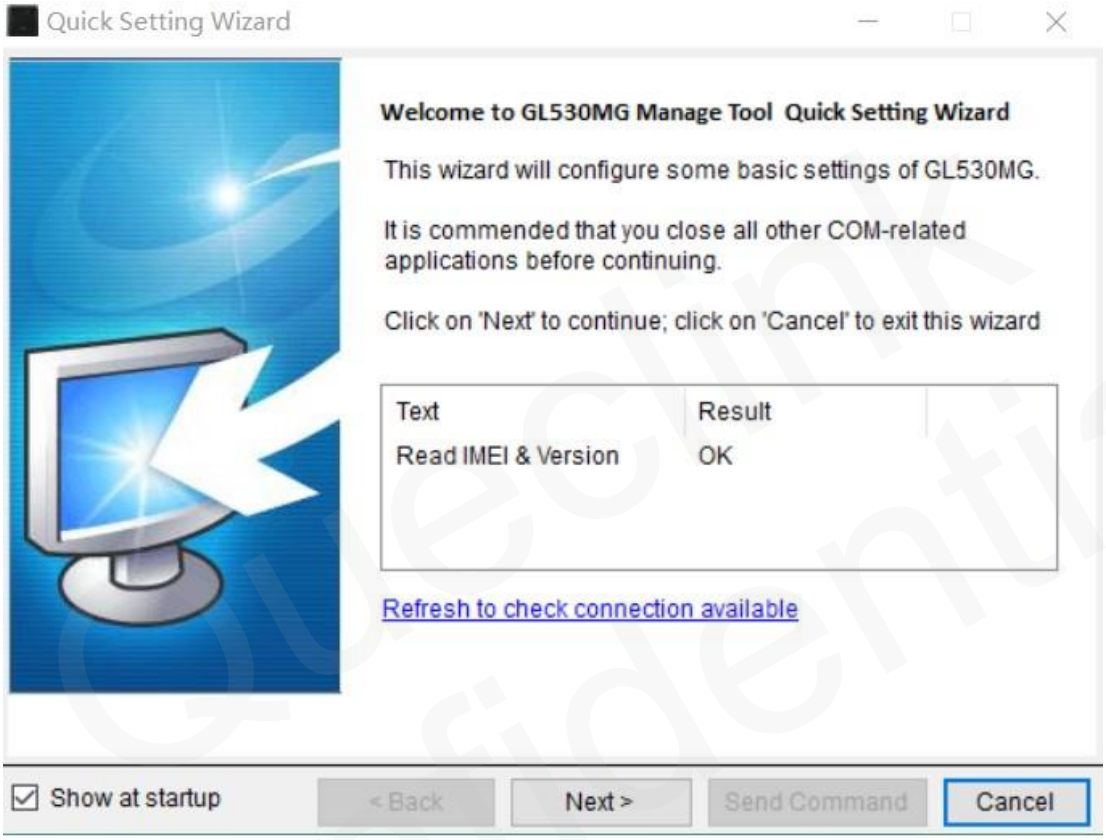


Figure 2: Quick Setting Wizard

1.4. Professional Setting Windows

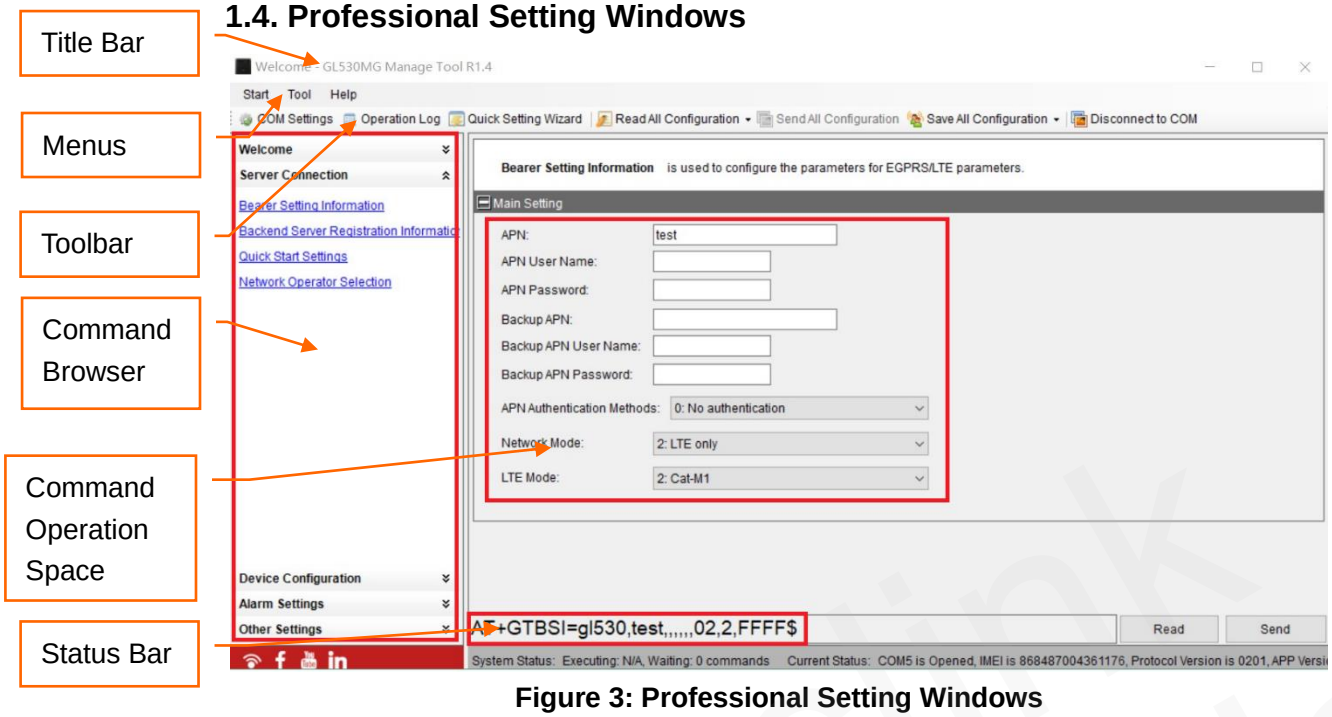


Figure 3: Professional Setting Windows

1.4.1 Title Bar

It indicates the version of the Manage Tool.

1.4.2 Menus

It includes “Start”, “Tool”, and “Help”.



Figure 4: Menus

1.4.2.1 Start Menu

It includes “COM Settings”.

[COM Setting]: It is used to set the COM information and password. For setting details, please refer to Chapter 1.2.

1.4.2.2 Tool Menu

It includes “Quick Setting Wizard”, “Operation Log”, and “Options”.

[Quick Setting Wizard]: It is used to open Quick Setting Wizard directly. Please refer to Chapter 2.1 for details.

[Operation Log]: It is used to display/hide the operation log.

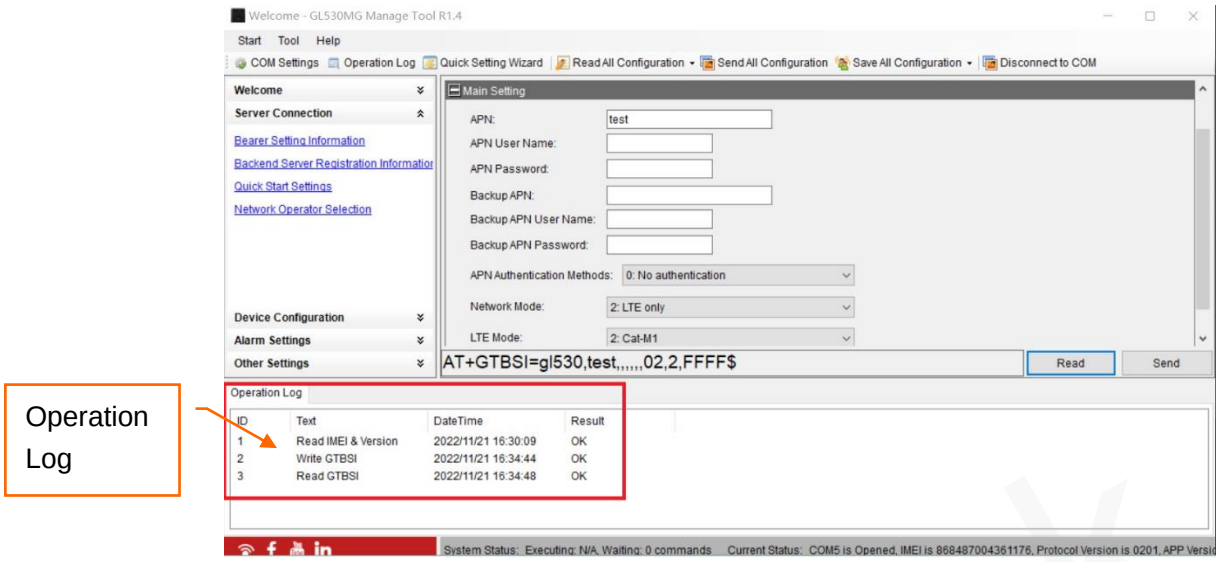


Figure 5: Operation Log

[Options]: It is used to configure the basic settings of the Manage Tool, which includes "Basic Options" and "Advanced Options".

Basic Options (as shown in Figure 6) includes "Startup Settings" and "Other Settings". "Startup Setting" can configure whether show COM Settings at startup. "Other Settings" can select the address where you want to save the file.

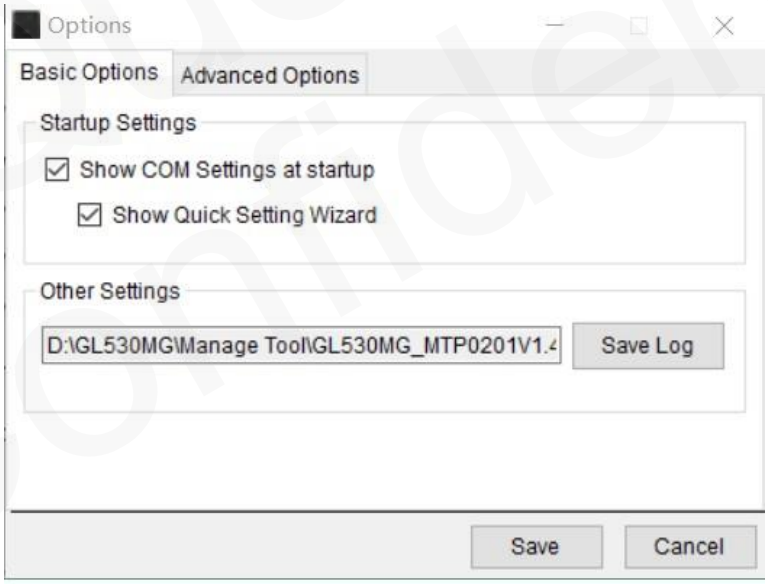


Figure 6: Basic Options

Advanced Options (as shown in Figure 7) includes "Other Settings". "Other Settings" can configure the Timeout For Command Executing.

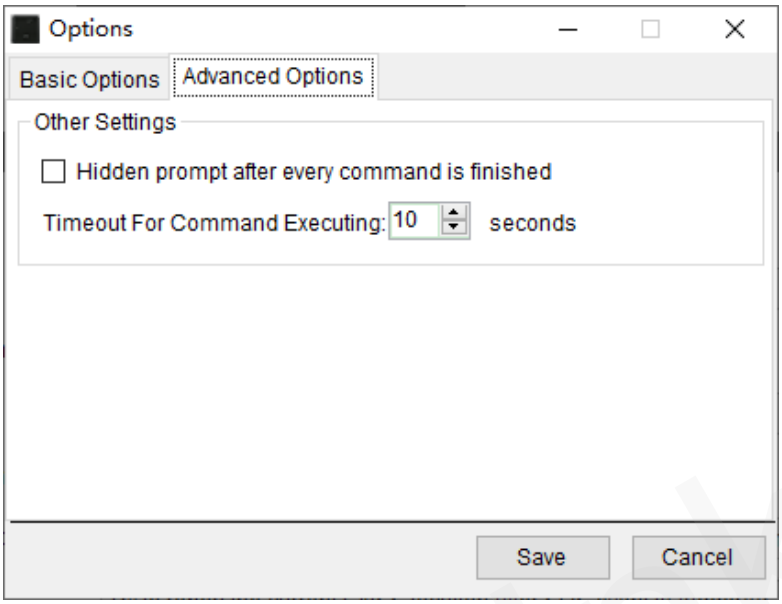


Figure 7: Advanced Options

1.4.2.3 Help Menu

[About]: Select **About**. Then the following pop-up window will be displayed.



Figure 8: About

"*Manage Tool Version*" indicates the version of the Manage Tool.
"Support Protocol Version" indicates the protocol version for which the Manage Tool is used.
"*APP Version*" indicates the firmware version of the device which connects to the PC.
"*Mcu Version*" indicates the MCU version of the device which connects to the PC.
"*Hw Version*" indicates the hardware version of the device which connects to the PC.

1.4.3 Toolbar

It includes “COM Setting”, “Operation Log”, “Quick Setting Wizard”, “Real All Configuration”, “Send All Configuration”, “Save All Configuration”, and “Connect/Disconnect to COM”.



Figure 9: Toolbar

[COM Setting]: It is used to set the COM information and password. For setting details, please refer to Chapter 1.2.
[Operation Log]: It is used to display/hide operation log.
[Quick Setting Wizard]: It is used to open the **Quick Setting Wizard** directly. Please refer to Chapter 2.1 for details.
[Read All Configuration]: It is used to display/hide “Read From Device” and “Load Configuration From File”. “Read From Device” is used to read all configurations (except commands **AT+GTRTO** and **AT+GTFVR**) from the device which connects to PC. “Load Configuration From File” is used to load configuration file to the Manage Tool.

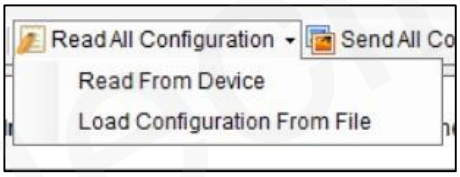


Figure 10: Read All Configuration

[Send All Configuration]: It is used to send all configurations (except commands **AT+GTQSS**, **AT+GTRTO**, **AT+GTFVR** and **AT+GTUPC**) in Command Operation Space.
[Save All Configuration]: It is used to save all configurations in Command Operation Space to file.
[Connect/Disconnect to COM]: It is used to Connect/Disconnect COM manually.

1.4.4 Status Bar

It includes “System Status” and “Current Status”.



Figure 11: Status Bar

[System Status]: It indicates the count of commands which are waiting and being executed.
[Current Status]: It indicates current COM status, IMEI, protocol version and software version read from the device.

1.4.5 Command Browser and Command Operation Space

It is mainly used to read and set parameters of the device.

1.4.5.1 Command Browser

All @Track protocol commands are divided into several parts. Select a command in Command Browser, then the parameters of this command will be shown in Command Operation Space.

Command Browser	Function Description	Related Command
Server Connection	Bearer Setting Information	**AT+GTBSI**
	Backend Server Registration Information	**AT+GTSRI**
	Quick Start Setting	**AT+GTQSS**
	Network Operator Selection	**AT+GTNTS**
Device Configuration	Global Configuration	**AT+GTCFG**
	Auto Unlock PIN	**AT+GTPIN**
	Protocol Watchdog	**AT+GTDOG**
	Time Adjustment	**AT+GTTMA**
	Non-movement Detection	**AT+GTNMD**
	Settings for Preserving Device's Specified Logic States	**AT+GTPDS**
Alarm Settings	Circular Geo-Fence Information	**AT+GTGEO**
	Temperature Alarm	**AT+GTTEM**
	Light Sensor Alarm	**AT+GTLSA**
	Light Tamper Alarm	**AT+GTLTA**
Other Settings	Real Time Operation	**AT+GTRTO**
	Allowed Number List Configuration	**AT+GTWLT**
	Settings for SMS with Google Maps Link	**AT+GTGLM**
	Over-the-Air Configuration Update	**AT+GTUPC**
	Configuration File Version	**AT+GTFVR**

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1.4.5.2 Command Operation Space

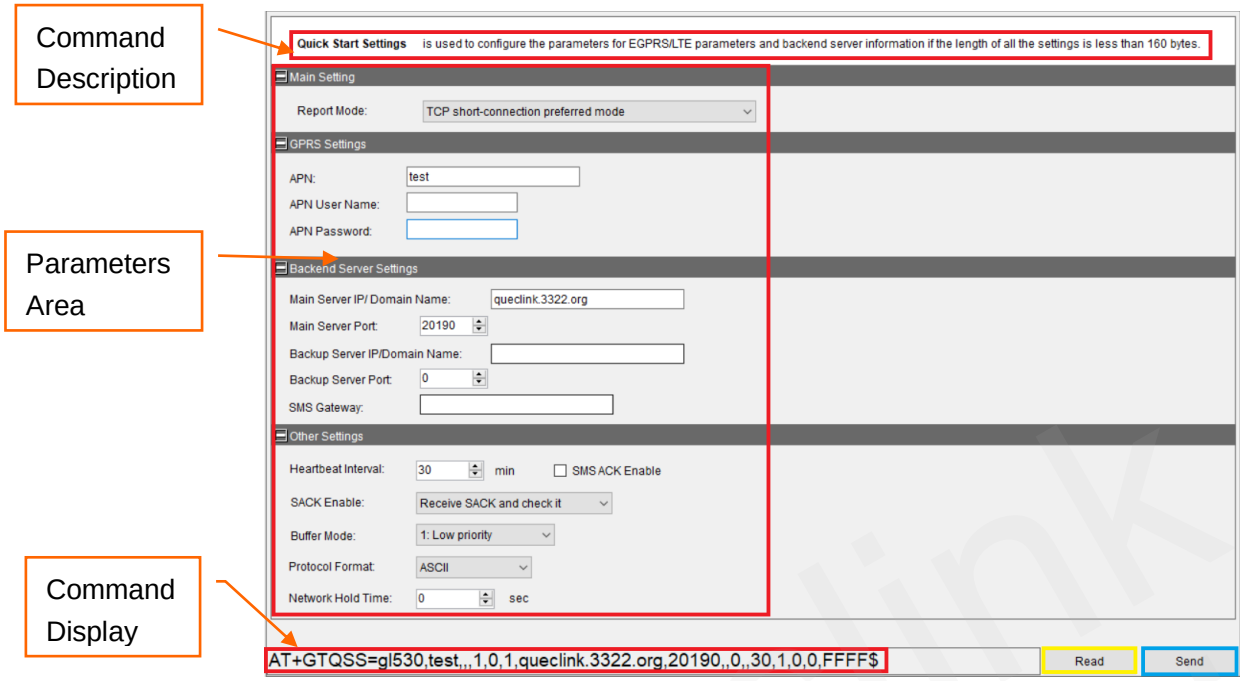


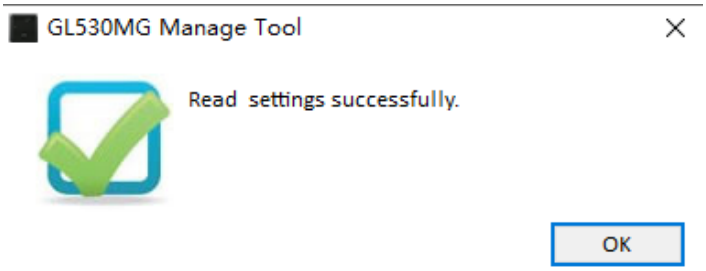
Figure 12: Command Operation Space

[Command Description]: It is a short description for the related command.
[Parameters Area]: It indicates the area where to set/read parameters of the related command.
[Command Display]: It indicates the area which displays the related command with set parameters.
[Read]: It is a button to read the related command from the device.
[Send]: It is a button to send this command to the device.

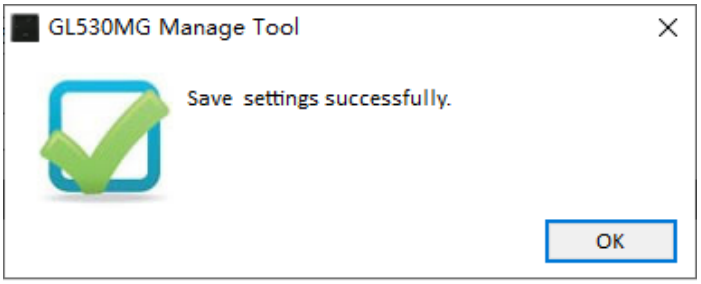
1.5. Operation Result Interface

1.5.1 Operation Successful Interface

The following shows that the command is read successfully.

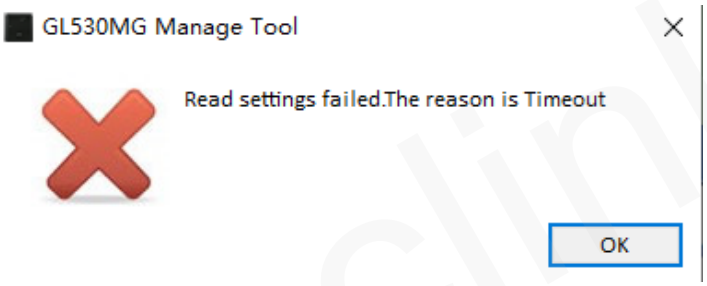


The following shows that the command is sent successfully.

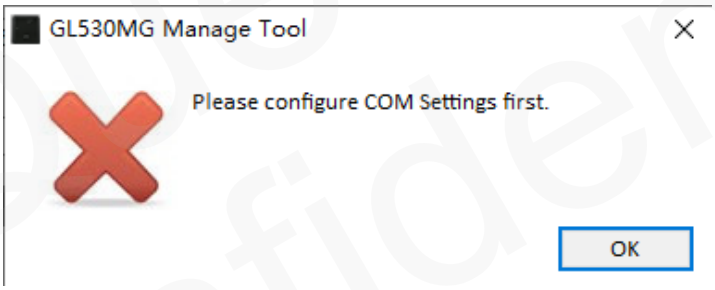


1.5.2 Operation Error Interface

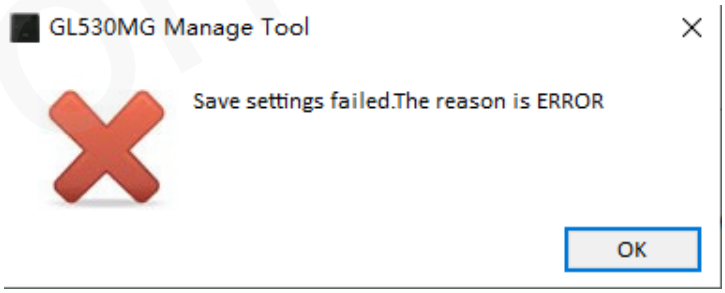
There should be something wrong with COM port connection if the failure reason is timeout.



The COM port should be occupied. Please close all other COM-related applications.



Please enter the correct device password if Password Error occurs.



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2. Operation Instructions

The Manage Tool is developed based on the @Track Air Interface Protocol. Please refer to GL530MG @Track Air Interface Protocol for details.

2.1. Device Configuration with Quick Setting Wizard

2.1.1 Welcome to Quick Setting Wizard

Select **Quick Setting Wizard** in toolbar. If **Result** in this window is OK, click **Next**. If not, please check the COM port connection till it is OK.

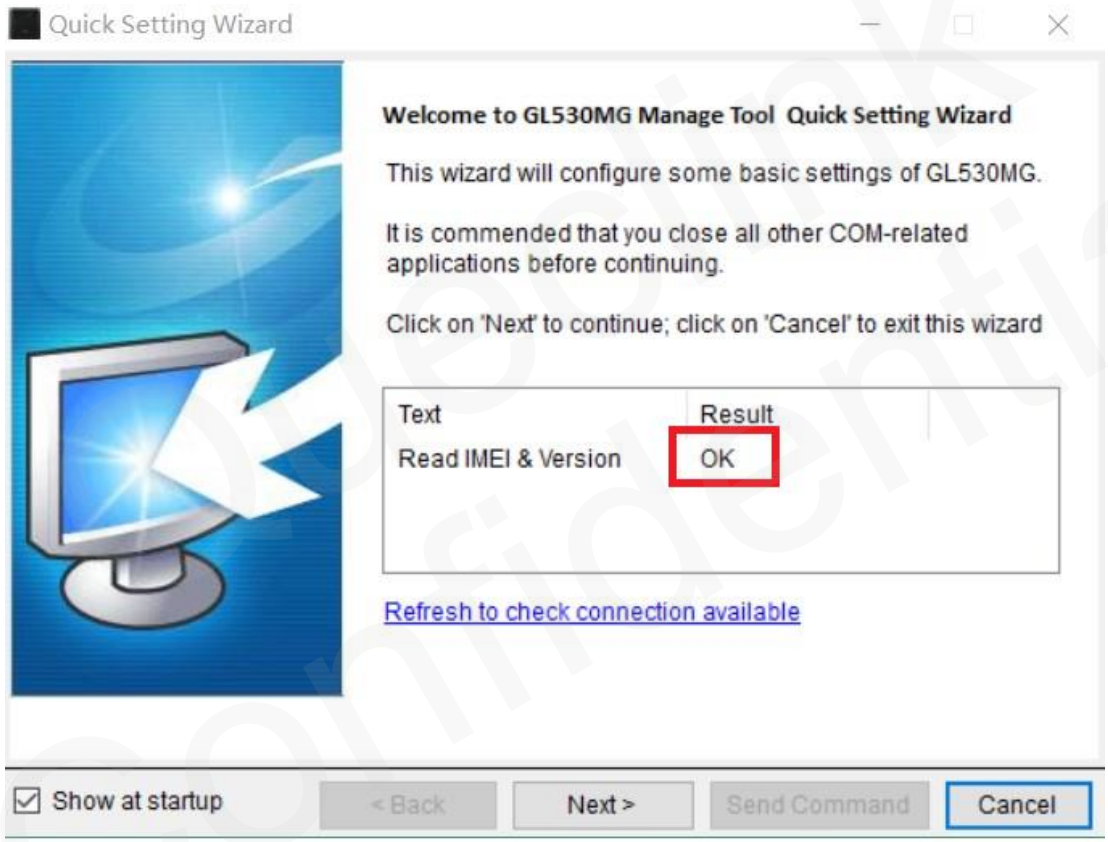


Figure 13: Welcome to Quick Setting Wizard

2.1.2 Network Setting

Step 1

Enter the APN, the username, the password, and select the network mode and LTE mode in this window. Please refer to the GL530MG @Track Air Interface Protocol to set these parameters.

Step 2

Click **Next**.

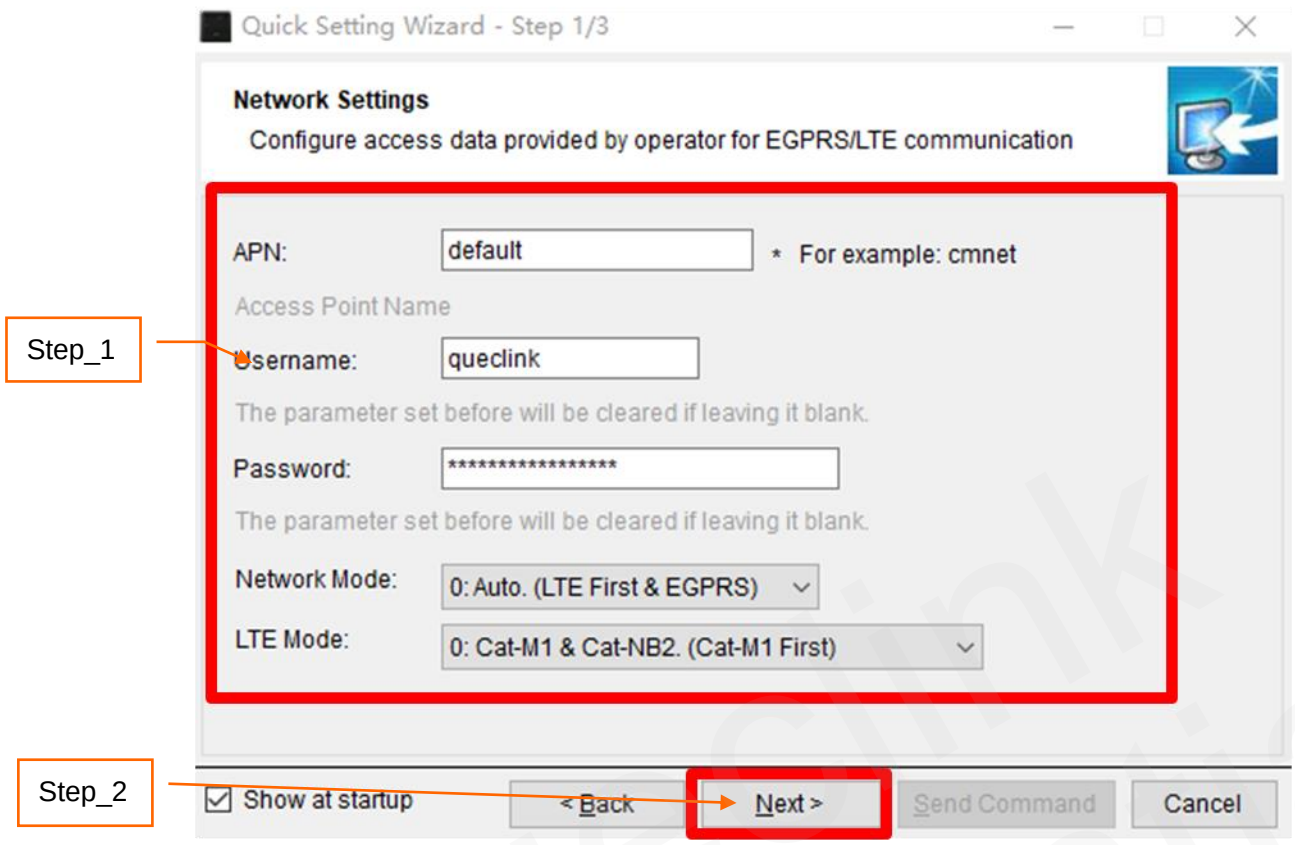


Figure 14: Network Setting

2.1.3 Main Server Setting

Step 1:

Select the report mode, enter the main server IP/ domain name, the main server port and the SMS gateway in this window. Please refer to the GL530MG @Track Air Interface Protocol to set these parameters.

Step 2

Select **Check if main backend server is available** to check if the main server IP and port are valid. If the result is “Error”, please check the server connection. You cannot get report from the backend server if there is a backend server connection problem.

Step 3

Click **Next**.

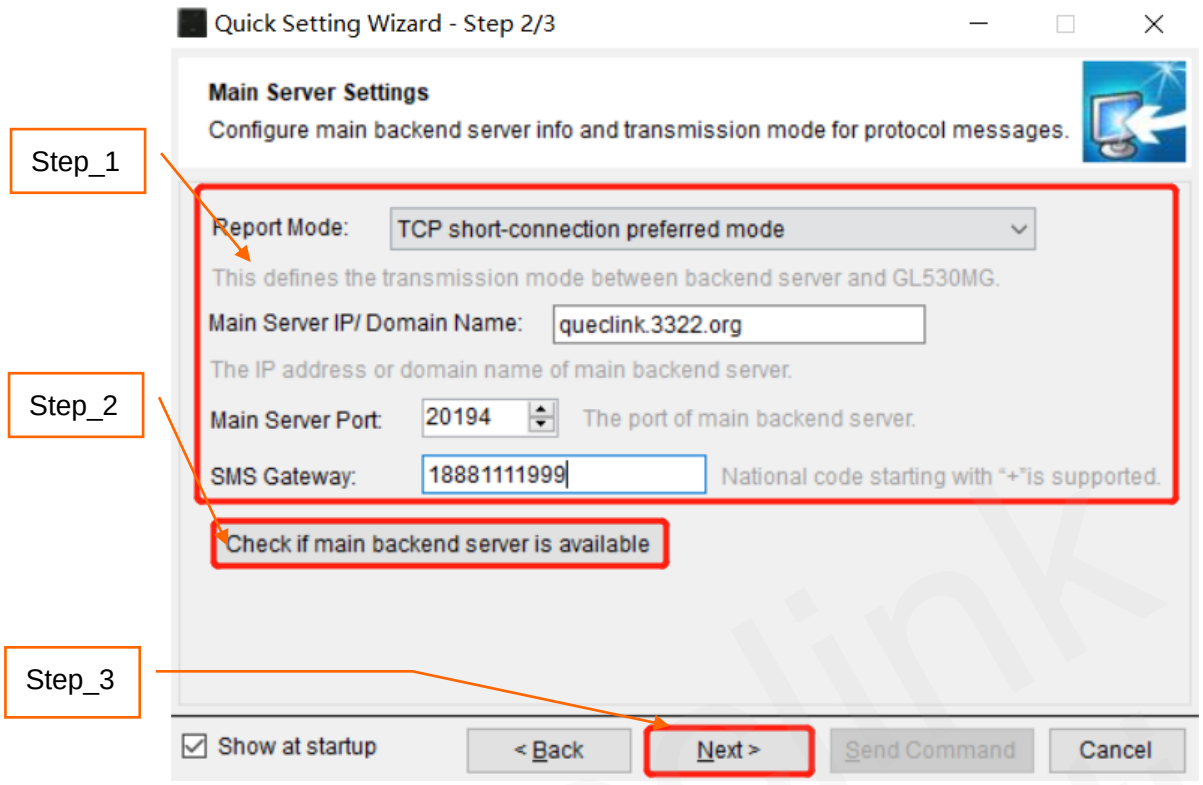


Figure 15: Main Server Setting

2.1.4 Sending Command to Device

Step 1

Select **Send Command**. Then commands **AT+GTBSI** and **AT+GTSRI** will be sent to the device.

Step 2

If the settings are downloaded successfully, Select **OK** on the Save All settings successfully pop-op window. The quick setting is completed.

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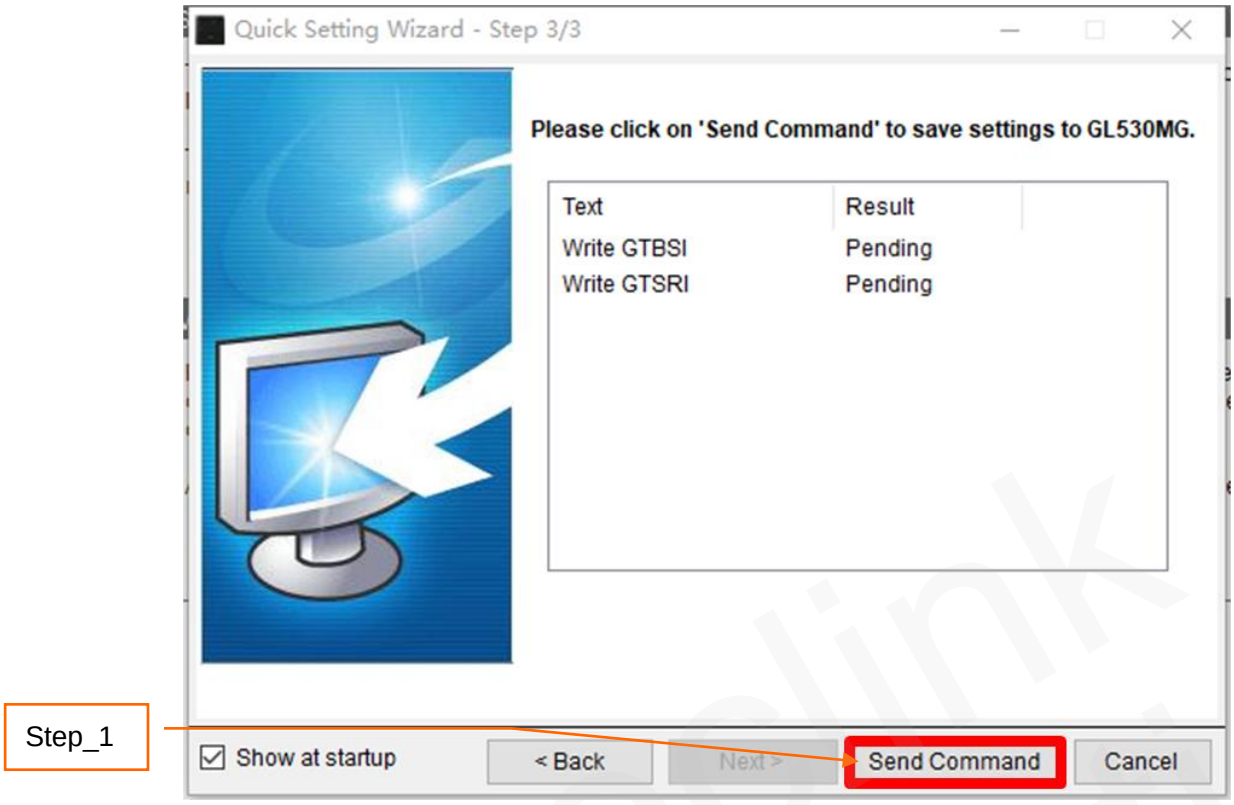


Figure 16: Sending Command to Device

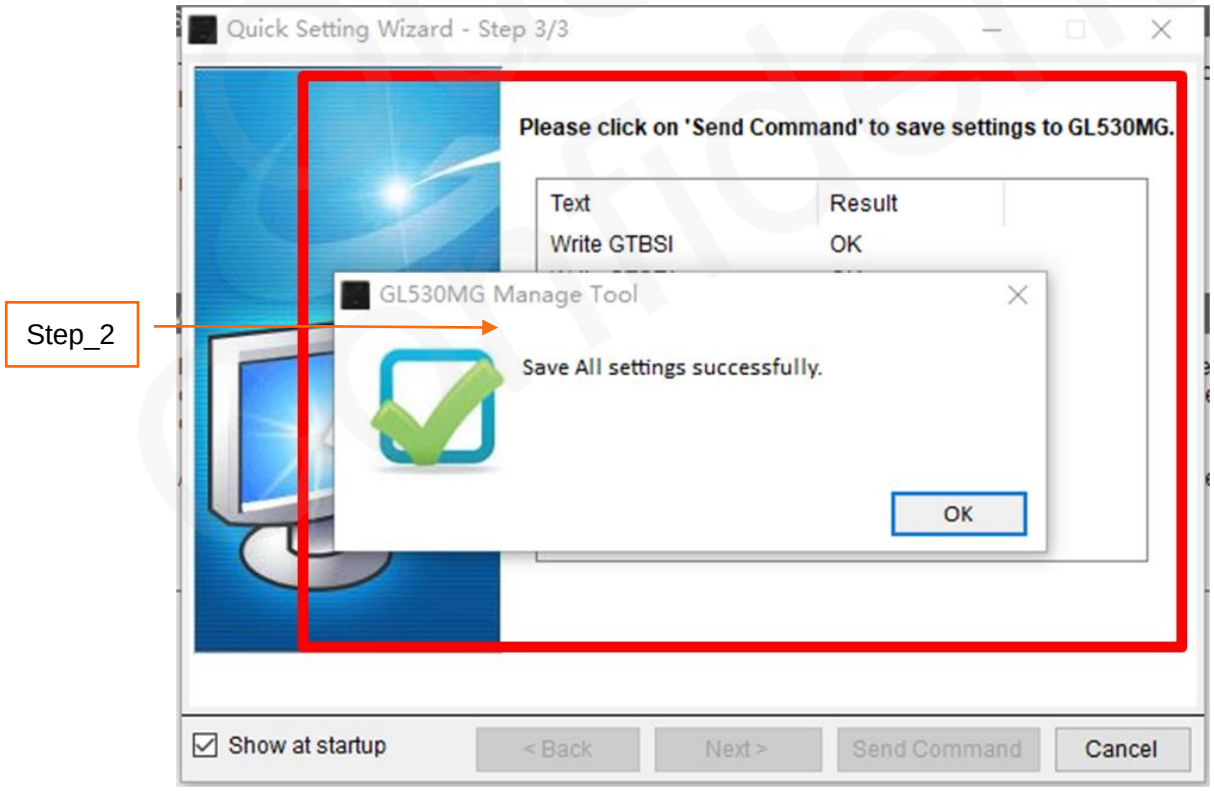


Figure 17: Save All settings successfully

2.2. Device Configuration in Professional Setting Mode

The following is the general instruction which shows how to configure the device by the Manage Tool in professional setting mode.

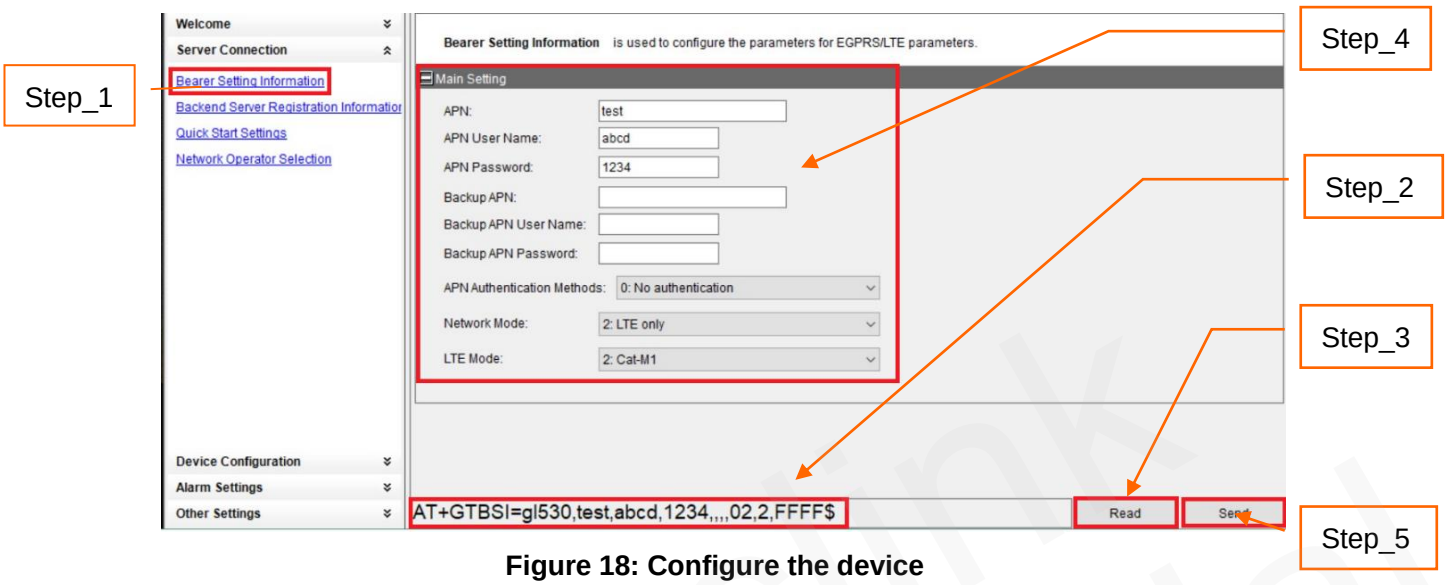


Figure 18: Configure the device

Step 1

Select **Server Connection**>**Bearer Setting Information**. The corresponding parameters of the **AT+GTBSI** command are shown in Command Operation Space.

Step 2

The command message which shall be sent to device will be generated based on input and be displayed in Status Bar. Please note this command message can also be sent to the device through SMS, LTE or EGPRS.

Step 3

We recommend to read the parameters from the device first and then configure settings.

Step 4:

Set **Main Settings**. Please refer to GL530MG @Track Air Interface Protocol to set these parameters.

Step 5

Select **Send** and the **AT+GTBSI** command will be sent to the device.

Note: The parameters of commands **AT+GTSRI** and **AT+GTBSI** will be changed when the parameters of the **AT+GTQSS** command change.

2.3. Read/Save All Configurations

Step 1

We recommend to read all configurations from the device before saving all configurations to file. Select **Read All Configuration**>**Read From Device**.

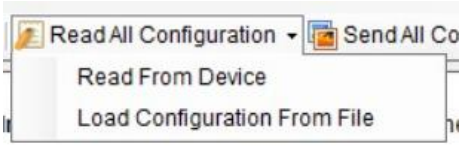


Figure 19: Read All Configurations

Note: For Read From Device, the command **AT+GTRTO** will not be read from the device by using Manage Tool.

Step 2

After reading successfully, select **Save All Configuration**>**Save File Configuration**.

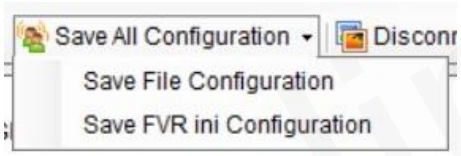


Figure 20: Save All Configurations

Note: If you want to save the configurations of the parameters specified in the **AT+GTFVR** command, select **Save FVR ini Configuration**.

Step 3

Select a folder, type the name of configuration file, and then click **Save**.

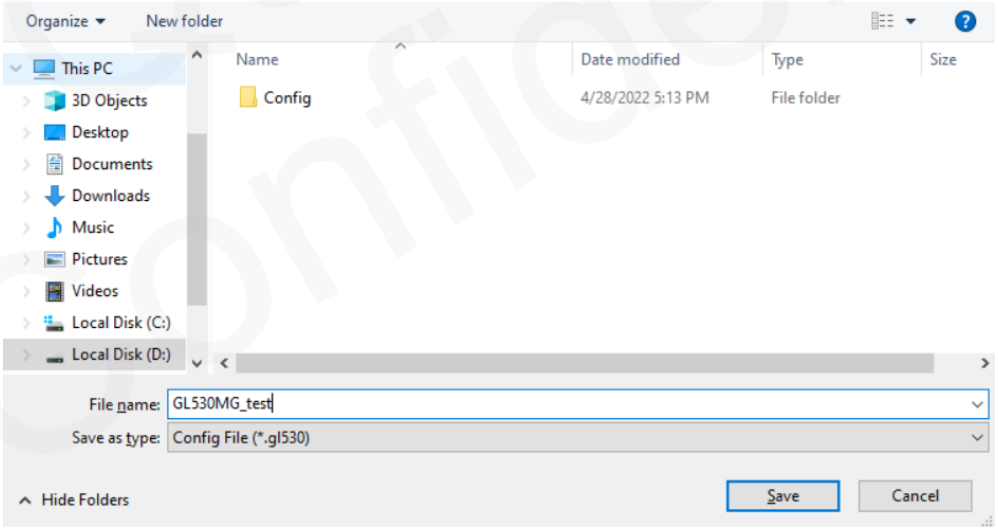


Figure 21: Save File

Step 4

Saving all configuration is successful.

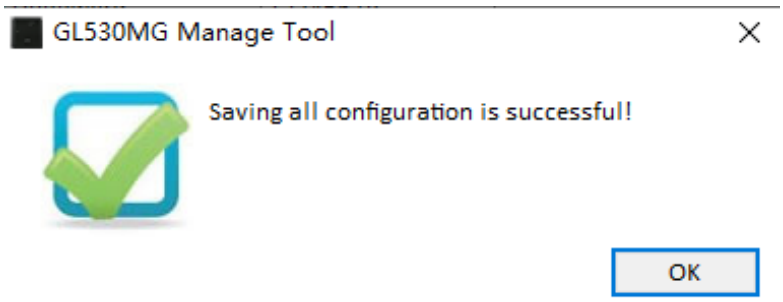


Figure 22: Save all configuration is successful

Note: The Manage Tool will generate a configuration file with parameter configuration and an .ini file with AT commands (which the Manage Tool has saved except the **AT+GTRTO**, **AT+GTUPC** and **AT+GTFVR** commands). The name of the .ini file is composed of configuration file name and "_at".
For example, if you click **Save All Configuration** and type in the name of configuration file with "test", it will generate "test.gl530" configuration file and "test_at.ini" file.
We recommend that you save all configurations before sending commands, especially the command **AT+GTCFG**, whose <*New Password*> can change the existing password and may affect the following configuration if you forget the new password.

2.4. Load/Send All Configurations

Step 1
Before sending all configurations, load the configuration file or set all parameters in commands. To load configuration file, select **Read All Configuration**>**Load Configurations From File**. Then select the configuration file you need.

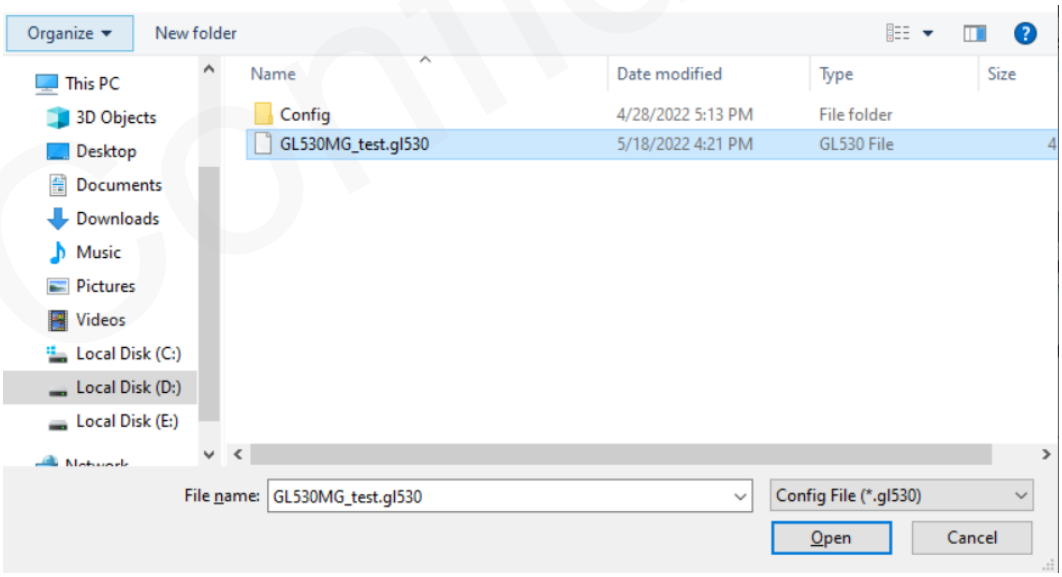


Figure 23: Choice File

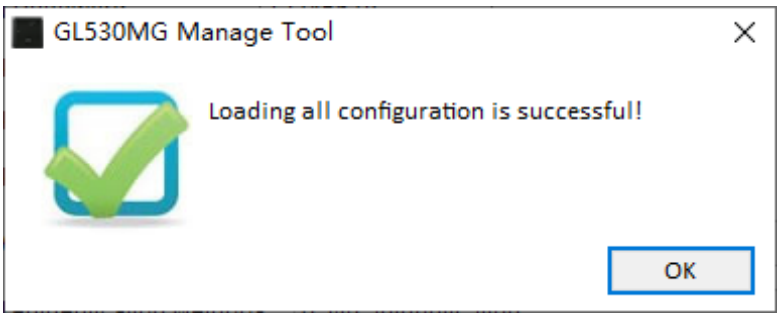
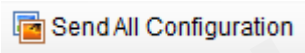


Figure 24: Loading all configuration is successful

Step 2

You can set the parameters in commands based on the configuration file, and then click **Send All Configuration** in the toolbar.



Note: The commands **AT+GTQSS**, **AT+GTRTO**, **AT+GTFVR** and **AT+GTUPC** will not be sent to the device by using Manage Tool.

Step 3

The Manage Tool will send all commands to the device.

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2023.04.13