

GL53MG(Plus) Manage Tool User Guide

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

TRACGL53MGMT001

V1.00



Document Title	GL53MG(Plus) Manage Tool User Guide
Version	1.00
Date	July 1, 2021
Status	Release
Document Control ID	TRACGL53MGMT001

General Notes

Queclink offers this information as a service to its customers, to support application and engineering efforts that use the products designed by Queclink. The information provided is based upon requirements specifically provided to Queclink by the customers. Queclink has not undertaken any independent search for additional relevant information, including any information that may be in the customer's possession. Furthermore, system validation of this product designed by Queclink within a larger electronic system remains the responsibility of the customer or the customer's system integrator. All specifications supplied herein are subject to change.

Copyright

This document contains proprietary technical information which is the property of Queclink Wireless Solutions Co., Ltd. The copying of this document and giving it to others and the using or communication of the contents thereof, are forbidden without express authority. Offenders are liable to the payment of damages. All rights are reserved in the event of grant of a patent or the registration of a utility model or design. All specifications supplied herein are subject to change without notice at any time.

Contents

Contents.....	2
History	3
1. GL53MG(Plus) Manage Tool Interface.....	4
1.1. System Requirements.....	4
1.2. COM Setting	4
1.3. Quick Setting Wizard	5
1.4. Professional Setting Windows.....	6
1.4.1 Title Bar	6
1.4.2 Menus.....	6
1.4.2.1 Start Menu.....	6
1.4.2.2 Tool Menu	6
1.4.2.3 Help Menu	8
1.4.3 Toolbar.....	9
1.4.4 Status Bar	9
1.4.5 Command Browser and Command Operation Space.....	9
1.4.5.1 Command Browser	10
1.4.5.2 Command Operation Space	11
1.5. Operation Result Interface	11
1.5.1 Operation Successful Interface	11
1.5.2 Operation Failed Interface.....	12
2. Operation Instructions	13
2.1. Device Configuration with Quick Setting Wizard.....	13
2.1.1 Welcome to Quick Setting Wizard.....	13
2.1.2 Network Setting.....	13
2.1.3 Main Server Setting	14
2.1.4 Sending Command to Device	15
2.2. Device Configuration in Professional Setting Mode	17
2.3. Read/Save All Configurations	18
2.4. Load/Send All Configurations	19

History

Version	Date	Author	Description of Change
1.00	July 1, 2021	Shirley Zhou	Initial.

1. GL53MG(Plus) Manage Tool Interface

GL53MG(Plus) Manage Tool is a PC software which can be used to configure the GL53MG(Plus) through UART. Configuration is straightforward 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 [GL53MG\(Plus\) @Track Air Interface Protocol](#) for details.

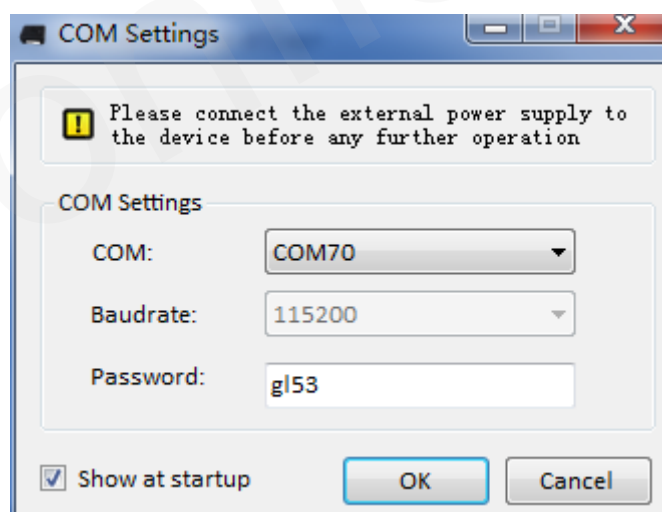
To get started, please install the driver for the UART Cable. Then, find the new COM port in your PC system and follow the steps as follows:

1. Connect the device to PC by using the UART Cable.
2. Run Queclink_GL53MG(Plus)_Manage_Tool_Rxx.

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

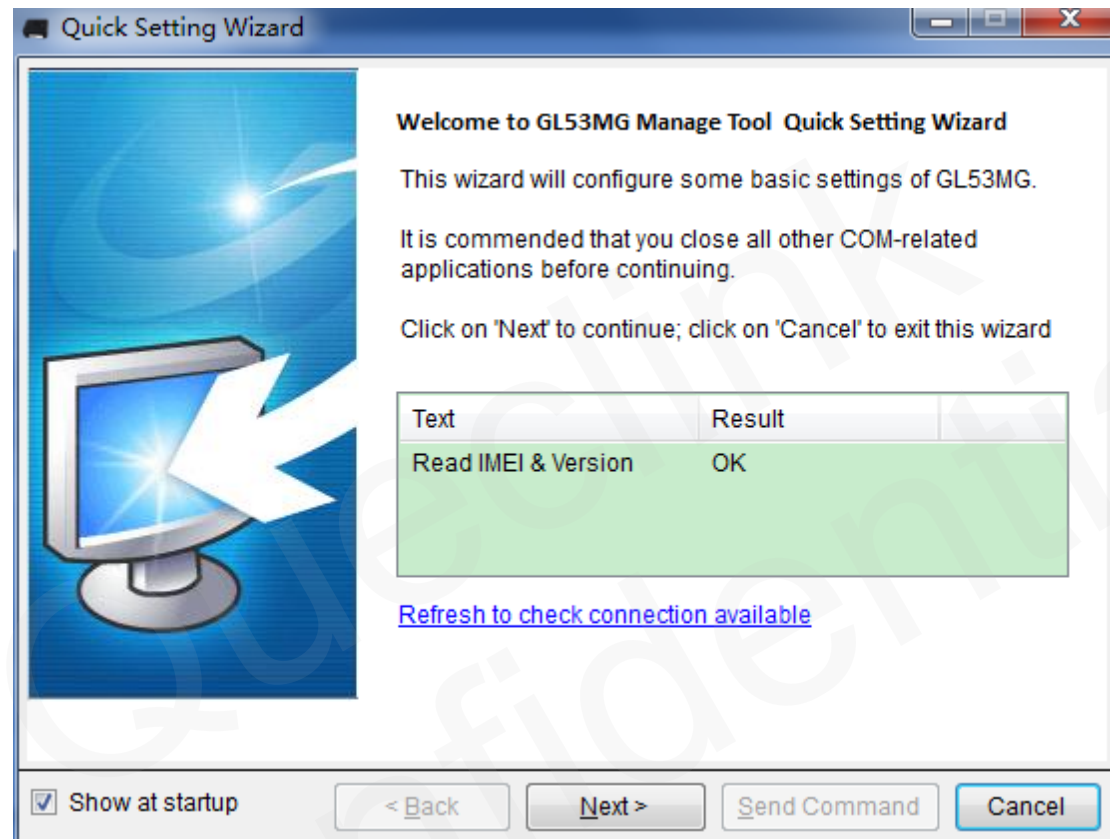


Select the COM port and baudrate (115200bps by default), enter the password **gl53** by default, and select **OK**. Then the setting window will be displayed.

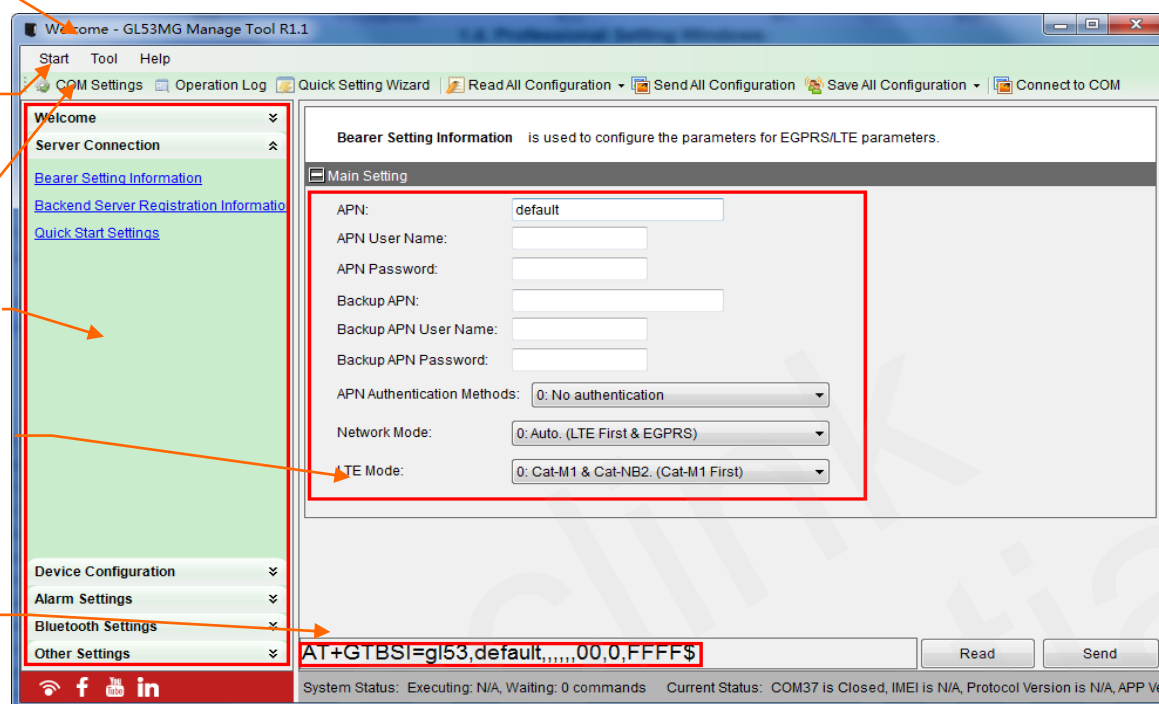
1.3. Quick Setting Wizard

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.



1.4. 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".

Start Tool Help

1.4.2.1 Start Menu

It includes "COM Settings".

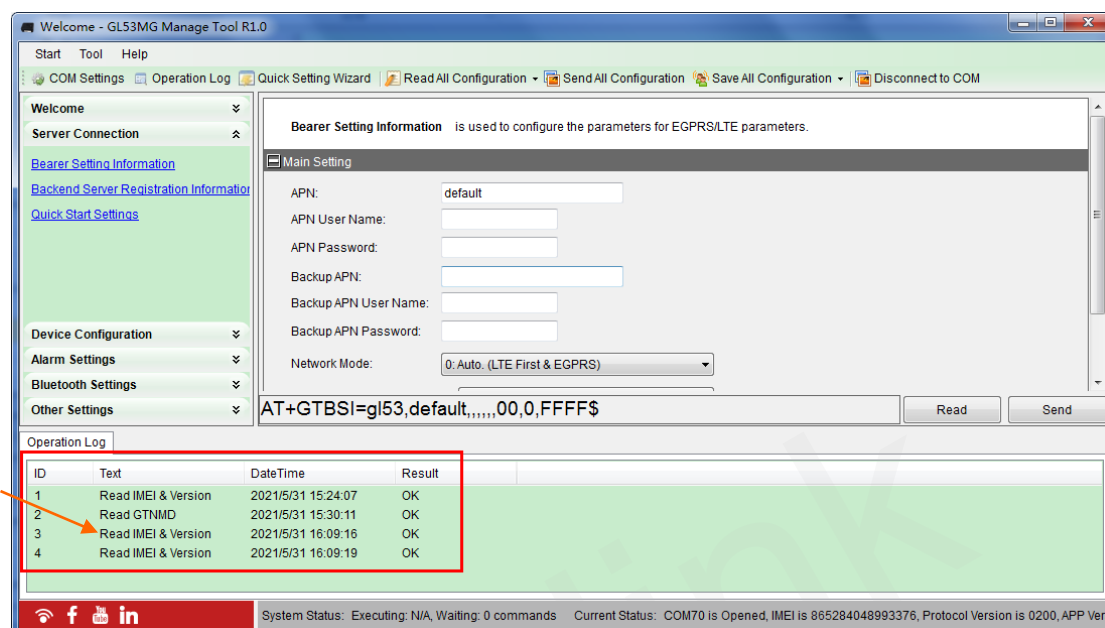
[COM Setting]: It is used to set the COM information and password. For setting details, please refer to Chapter 1.2.

1.4.2.2 Tool Menu

It includes "Quick Setting Wizard", "Operation Log", and "Options" settings.

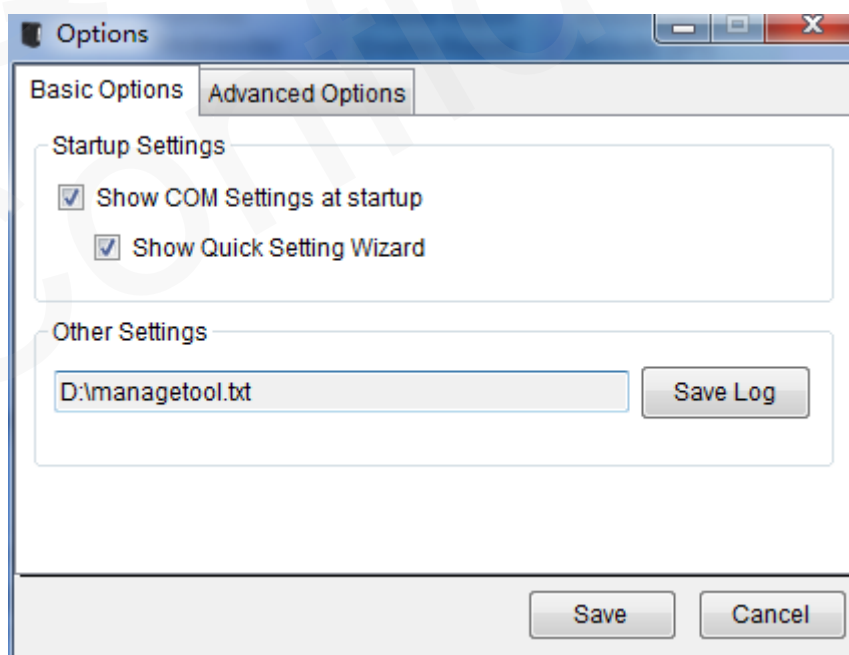
[Quick Setting Wizard]: It is used to open Quick Setting Wizard directly. Please refer to Chapter 2.1 for details.

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



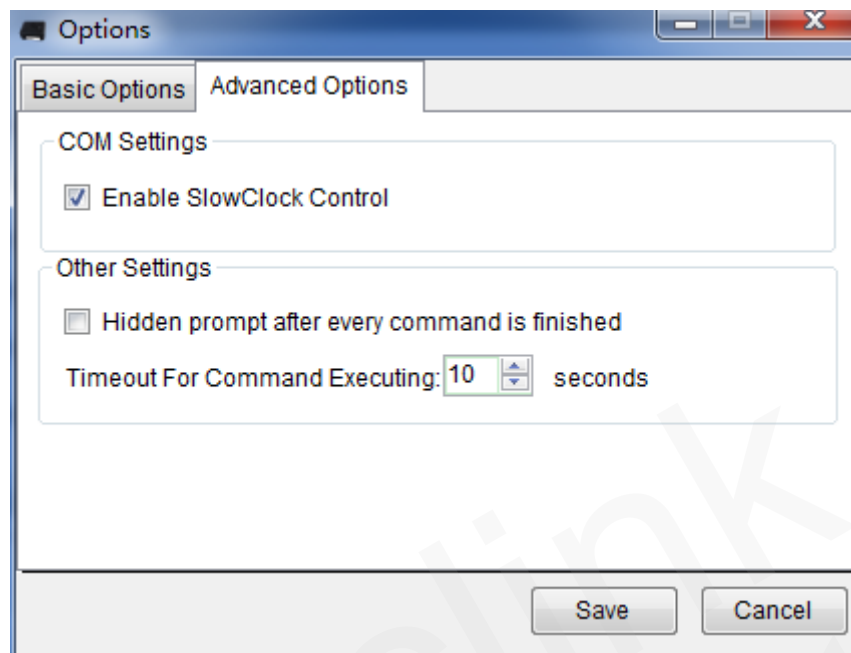
[Options]: It is used to configure the basic settings of the Manage Tool, which includes “Basic Options” and “Advanced Options”.

“**Basic Options**” includes “Startup Setting” and “Other Settings”. “Startup Setting” can configure whether to show COM Settings at startup. “Other Settings” can select the address where you want to save the file.



“**Advanced Options**” includes “COM Settings” and “Other Settings”. “COM Settings” can

configure COM settings. We recommend to use default settings for these settings. “Other Settings” can configure the Timeout For Command Executing.



1.4.2.3 Help Menu

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



“*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.

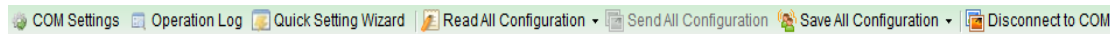
“*Mcu Version*” indicates the MCU version of the device which connects to the PC.

“*Hw Version*” indicates the hardware version of the device which connects to the PC.

“Mac Address” indicates the MAC Address of the device which connects to the PC.

1.4.3 Toolbar

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

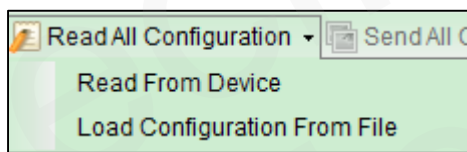


[COM Setting]: It is used to set the COM information and password. For setting details, please refer to Chapter 1.2.

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

[Quick Setting Wizard]: It is used to open 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 the **AT+GTABC**, **AT+GTRTO** and **AT+GTFVR** commands) from the device which connects to PC. “Load Configuration From File” is used to load configuration file to the Manage Tool.



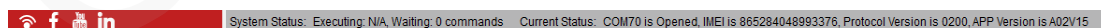
[Send All Configuration]: It is used to send all configurations (except the **AT+GTQSS**, **AT+GTABC**, **AT+GTRTO**, **AT+GTFVR** and **AT+GTUPC** commands) in Command Operation Space.

[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”.



[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.

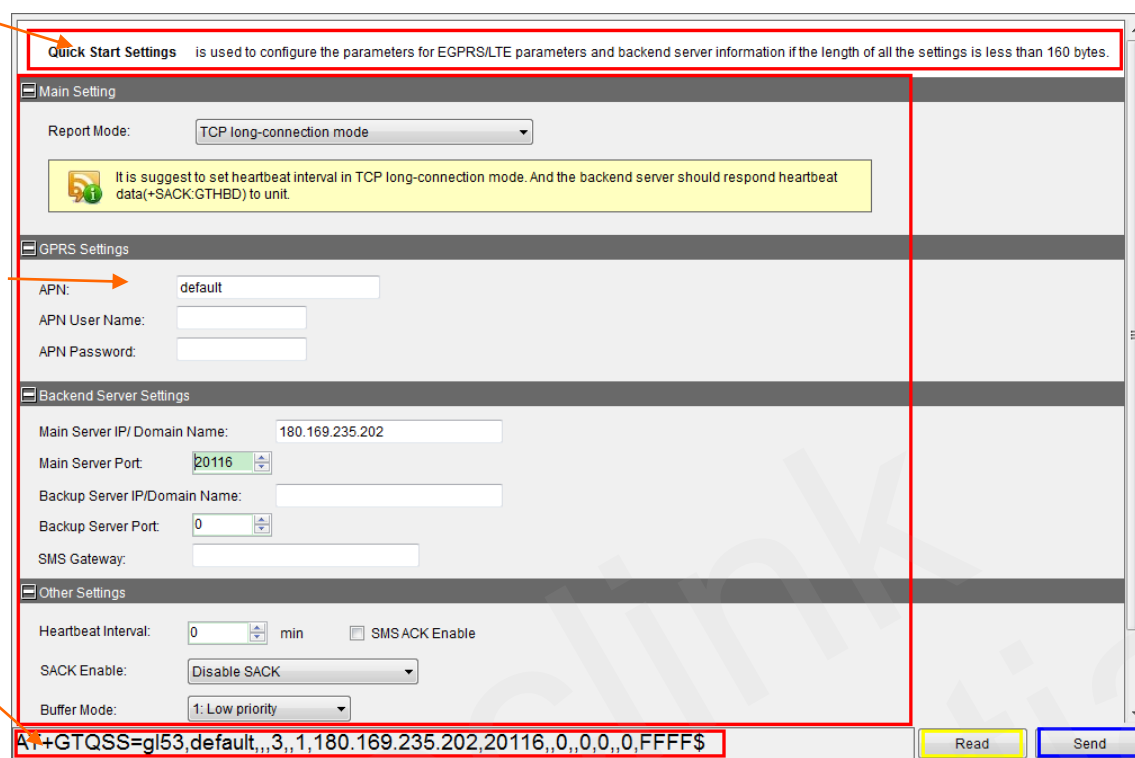
Command Browser	Function Description	Related Command
Server Connection	Bearer Setting Information	AT+GTBSI
	Backend Server Registration Information	AT+GTSRI
	Quick Start Setting	AT+GTQSS
	Network Operator Selection	AT+GTNTS
Device Configuration	Global Configuration	AT+GTCFG
	Auto Unlock PIN	AT+GTPIN
	Protocol Watchdog	AT+GTDog
	Time Adjustment	AT+GTTMA
	Non-movement Detection	AT+GTNMD
	Settings for Preserving Device's Specified Logic States	AT+GTPDS
	Abbreviation Command	AT+GTABC
Alarm Settings	Circular Geo-Fence Information	AT+GTGEO
Bluetooth Settings	Stolen Vehicle Recovery	AT+GTSVR
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

1.4.5.2 Command Operation Space

Command
Description

Parameters
Area

Command
Display



Quick Start Settings is used to configure the parameters for EGPRS/LTE parameters and backend server information if the length of all the settings is less than 160 bytes.

Main Setting

Report Mode: TCP long-connection mode

It is suggest to set heartbeat interval in TCP long-connection mode. And the backend server should respond heartbeat data(+SACK:GTHBD) to unit.

GPRS Settings

APN: default

APN User Name:

APN Password:

Backend Server Settings

Main Server IP/ Domain Name: 180.169.235.202

Main Server Port: 20116

Backup Server IP/Domain Name:

Backup Server Port: 0

SMS Gateway:

Other Settings

Heartbeat Interval: 0 min ☐ SMSACK Enable

SACK Enable: Disable SACK

Buffer Mode: 1: Low priority

Command Display: AT+GTQSS=gl53,default,,3,,1,180.169.235.202,20116,,0,,0,,0,FFFF\$

Read Send

[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.

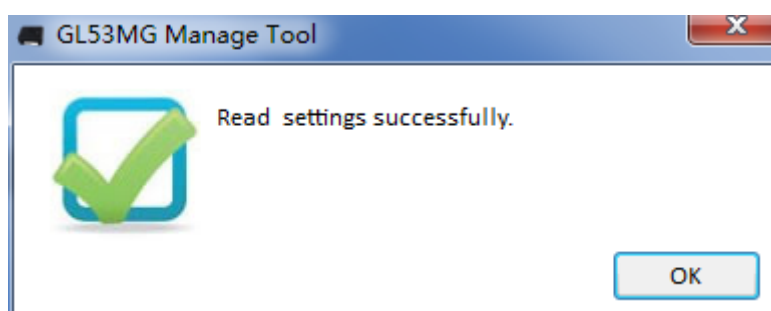
[Read]: It is a button to read the related command from the device.

[Send]: It is a button to send the related command to the device.

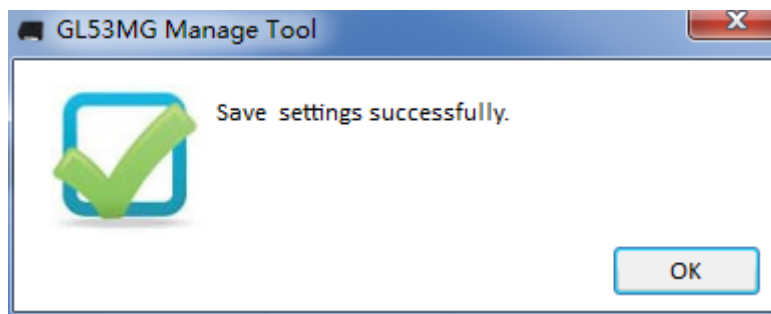
1.5. Operation Result Interface

1.5.1 Operation Successful Interface

The following shows that the command is read successfully.

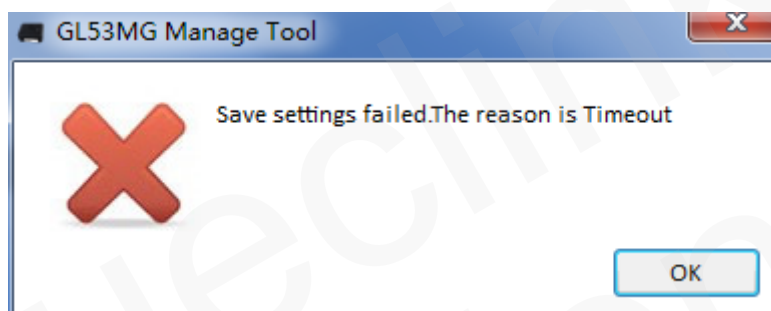


The following shows that the command is sent successfully.

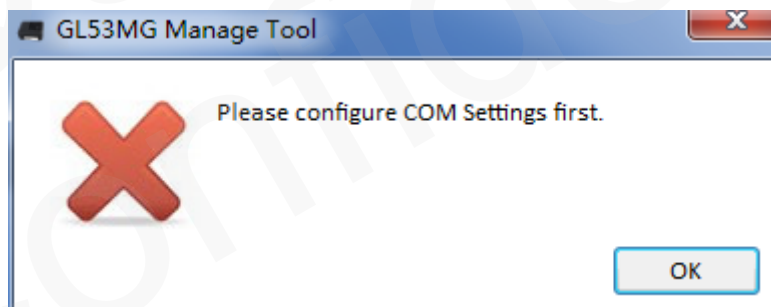


1.5.2 Operation Failed Interface

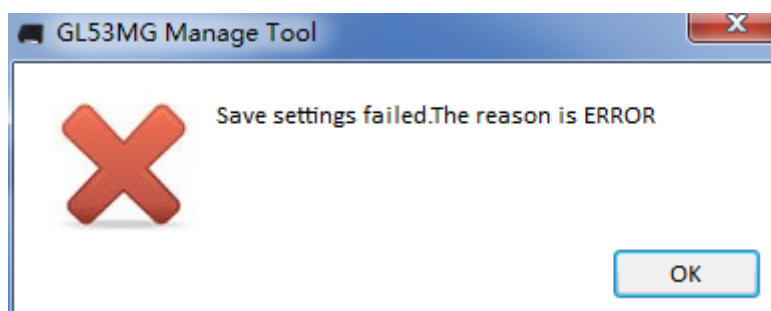
There should be something wrong with COM port connection if the failure reason is timeout.



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



Please enter the correct device password if Password Error occurs.



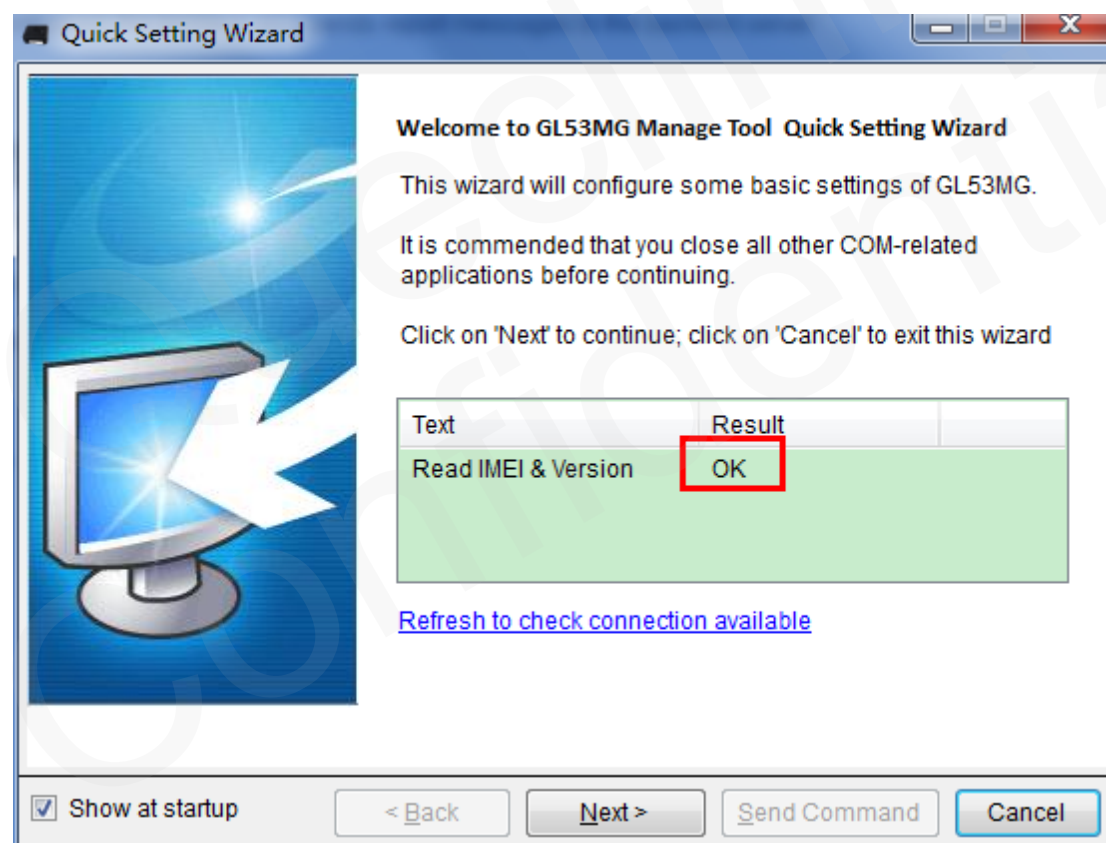
2. Operation Instructions

The Manage Tool is developed based on the @Track Air Interface Protocol. Please refer to [GL53MG\(Plus\) @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.



Welcome to Quick Setting Wizard

2.1.2 Network Setting

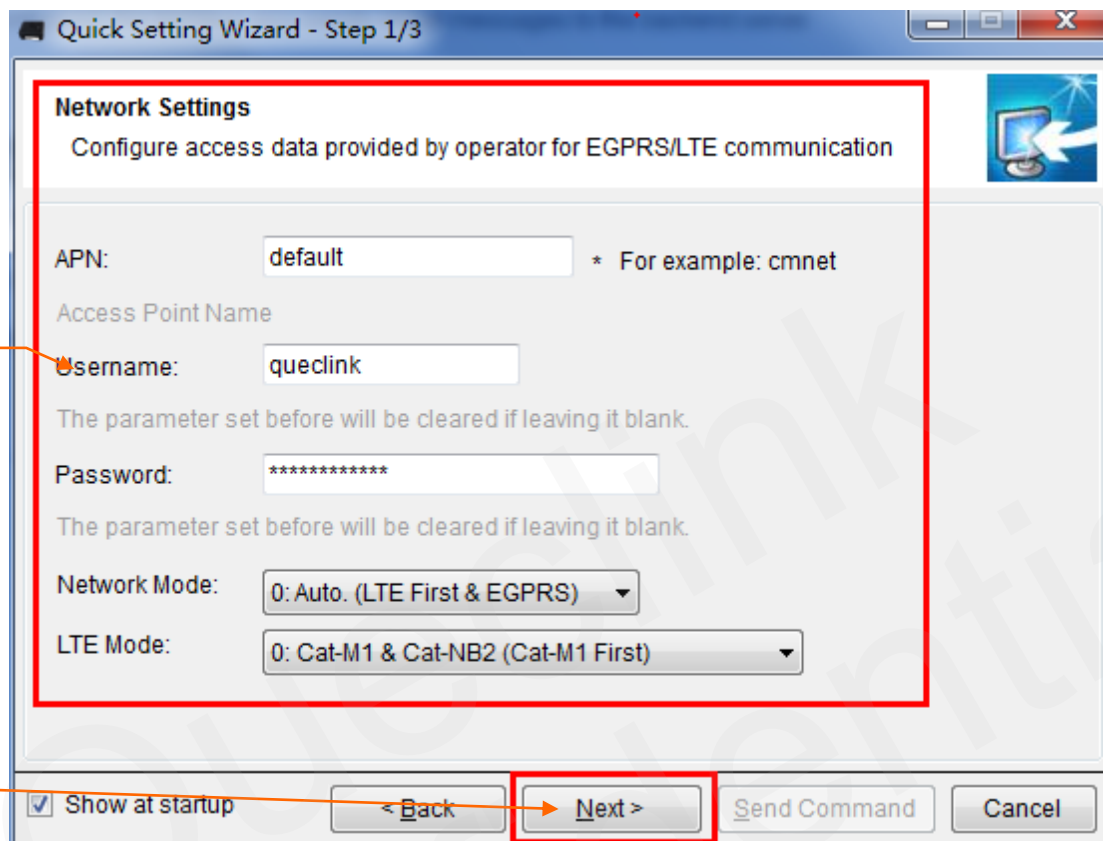
Step 1

Enter the APN, the username, the password, and select the network mode and LTE mode in this window. Please refer to [GL53MG\(Plus\) @Track Air Interface Protocol](#) to set these

parameters.

Step 2

Click **Next**.



Quick Setting Wizard - Step 1/3

Network Settings
Configure access data provided by operator for EGPRS/LTE communication

APN: default * For example: cmnet

Access Point Name

Username: queclink

The parameter set before will be cleared if leaving it blank.

Password: *****

The parameter set before will be cleared if leaving it blank.

Network Mode: 0: Auto. (LTE First & EGPRS)

LTE Mode: 0: Cat-M1 & Cat-NB2 (Cat-M1 First)

☒ Show at startup

< Back Next > Send Command Cancel

2.1.3 Main Server Setting

Step 1

Set the report mode, enter the main server IP/ domain name, the main server port, and the SMS gateway in this window. Please refer to [GL53MG\(Plus\) @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 can't get report from the backend server if there is a backend server connection problem.

Step 3

Click **Next**.

Quick Setting Wizard - Step 2/3

Main Server Settings
Configure main backend server info and transmission mode for protocol messages.

Report Mode: TCP long-connection mode
This defines the transmission mode between backend server and GL53MG.

Main Server IP/ Domain Name: queclink.3322.org
The IP address or domain name of main backend server.

Main Server Port: 20101 The port of main backend server.

SMS Gateway: 13100225689 National code starting with "+" is supported.

Heartbeat Interval: 15 minutes

Check if main backend server is available

☒ Show at startup

< Back Next > Send Command Cancel

Step_1 points to the Main Server IP/ Domain Name field.

Step_2 points to the Check if main backend server is available button.

Step_3 points to the Next > button.

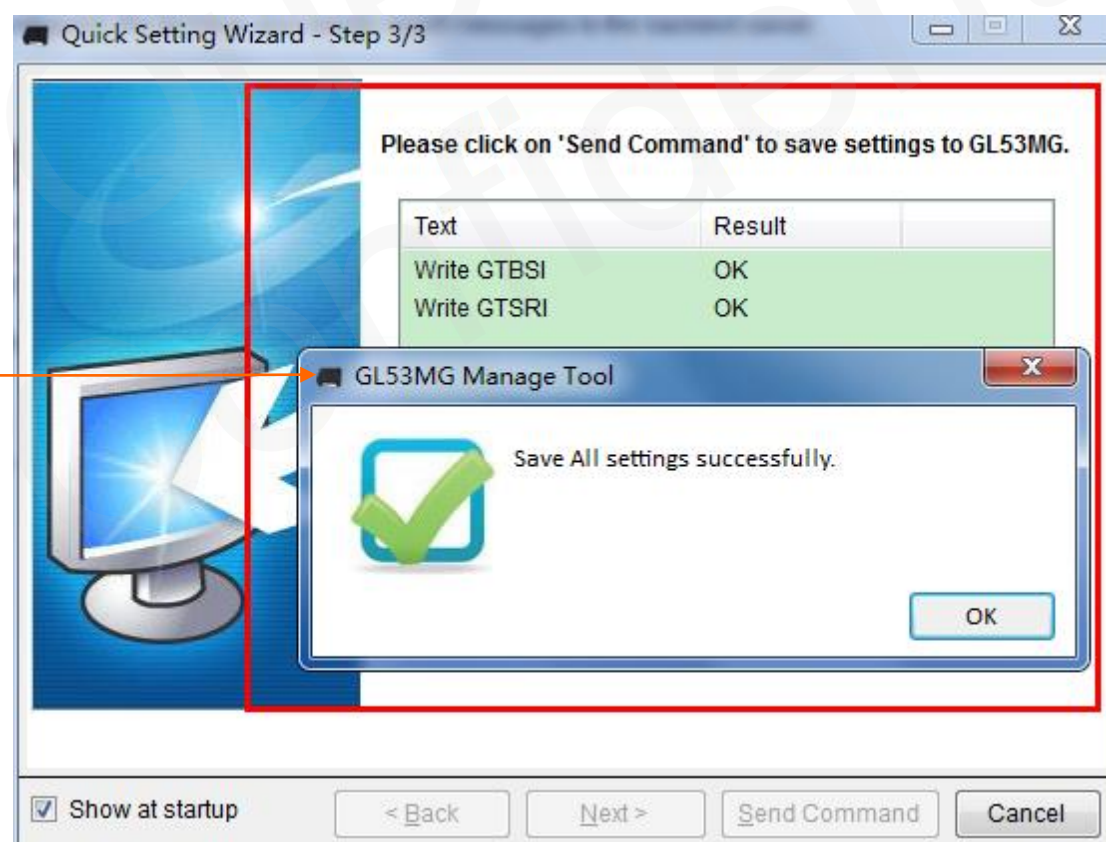
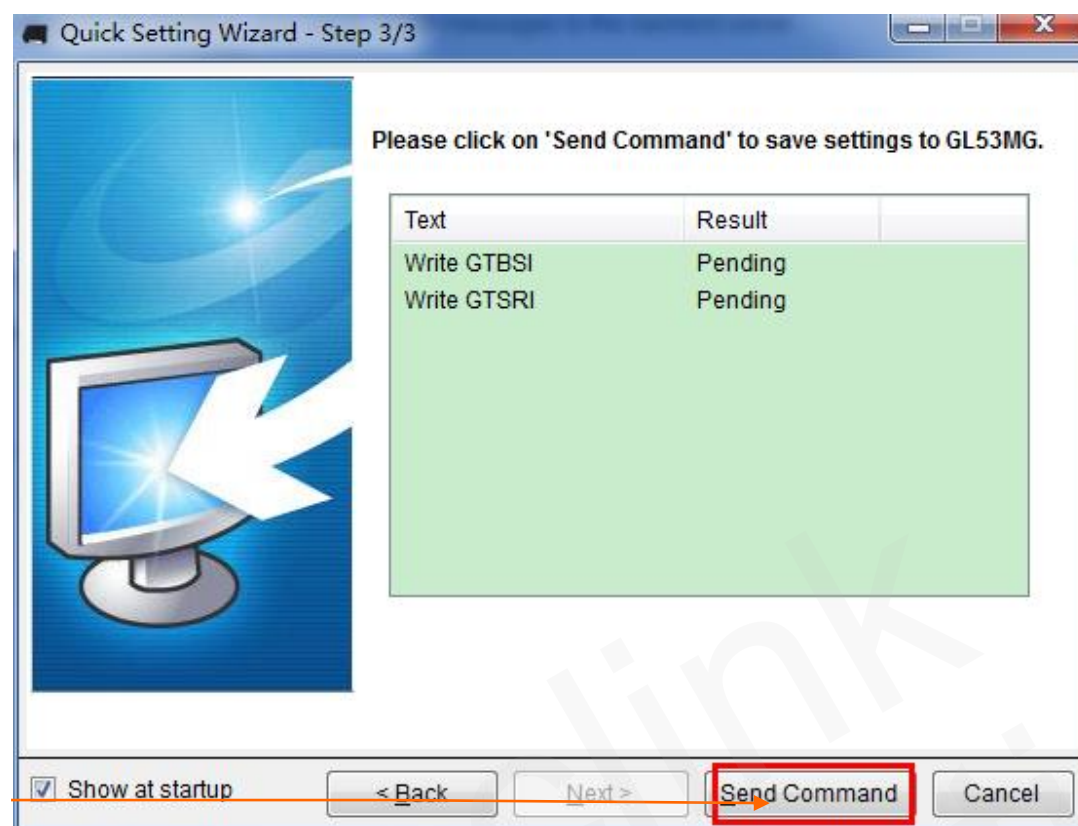
2.1.4 Sending Command to Device

Step 1

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

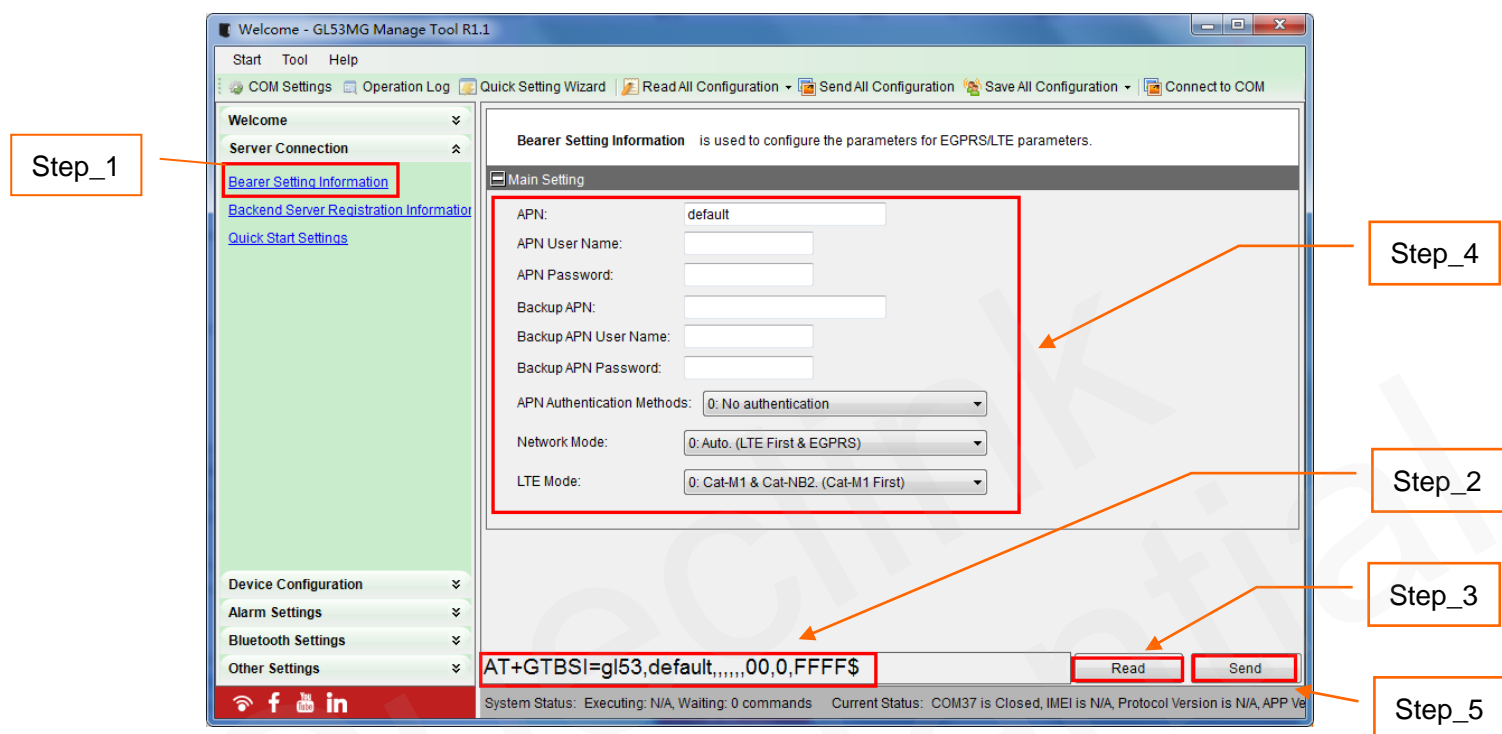
Step 2

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



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.



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 the device will be generated based on input and 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 configure settings.

Step 4

Set **Main Settings**. Please refer to [GL53MG\(Plus\) @Track Air Interface Protocol](#) to set these parameters.

Step 5

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

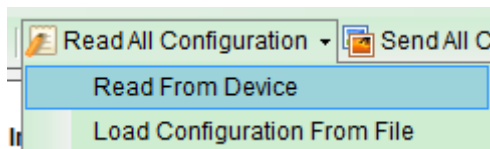
Note: The parameters of the **AT+GTSRI** and **AT+GTBSI** commands will be changed

when the parameters of the **AT+GTQSS** command change.

2.3. Read/Save All Configurations

Step 1

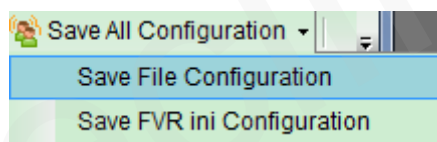
We recommend to read all configurations from the device before saving the configurations to file. Select **Read All Configuration>Read From Device**.



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

Step 2

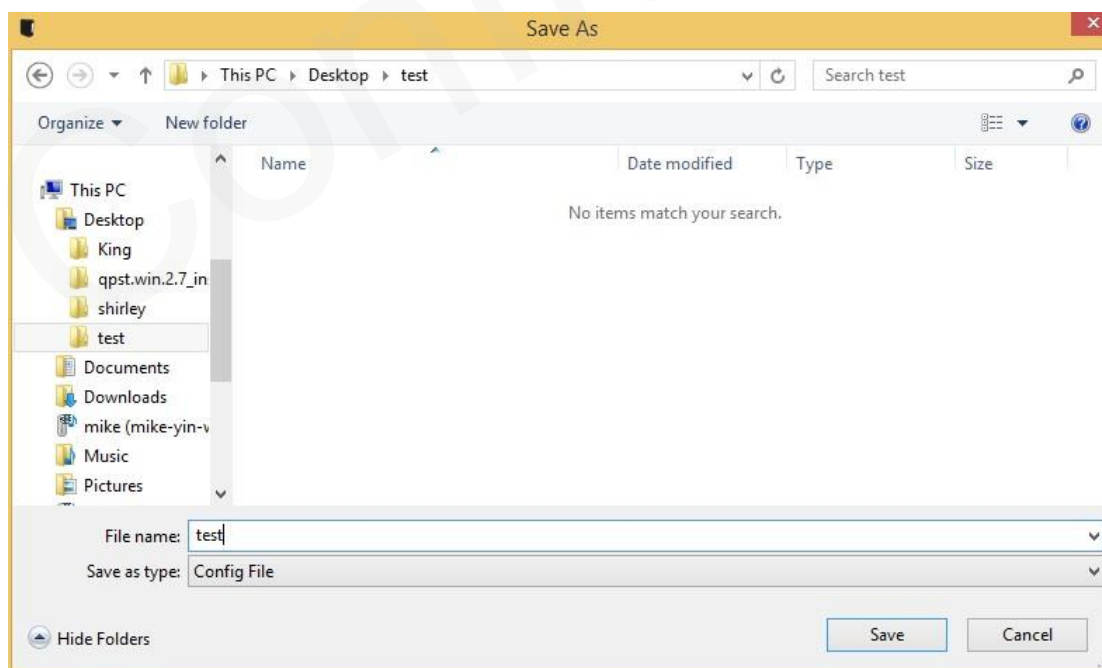
After reading successfully, select **Save All Configuration>Save File Configuration**.



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

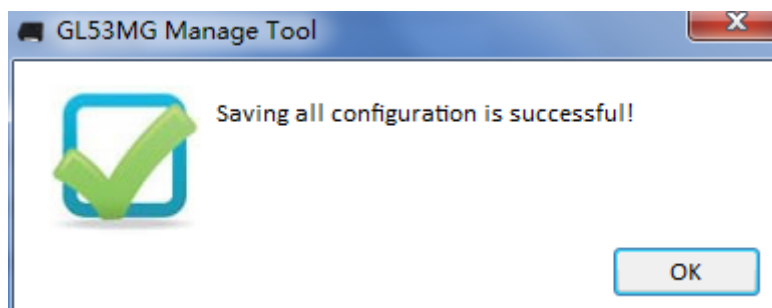
Step 3

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



Step 4

Saving 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+GTABC**, **AT+GTUPC** and **AT+GTFVR** commands). The name of the .ini file is composed of configuration file name and "_at".

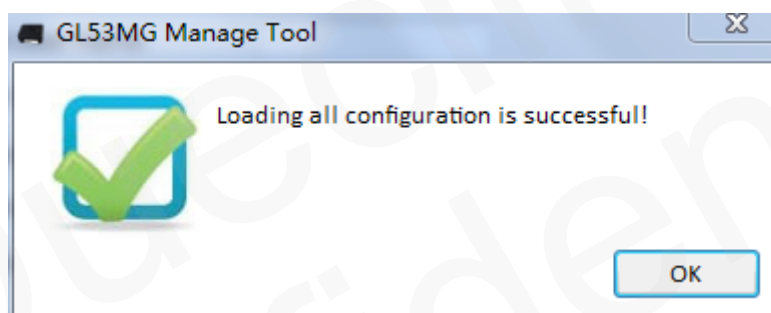
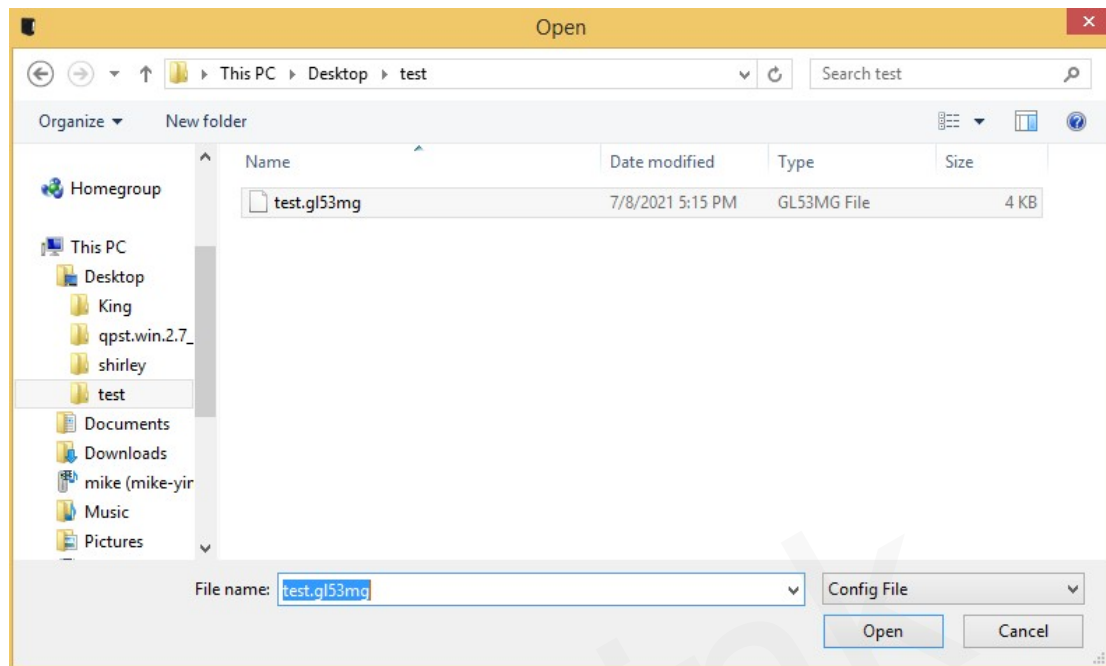
For example, if you click **Save All Configuration** and type in the name of configuration file with "test", it will generate a "test.GL53MG" configuration file and a "test_at" .ini file.

We recommend to save all configurations before sending commands, especially the **AT+GTCFG** command, 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.



Step 2

You can set the parameters in commands based on the configuration file, and then click

Send All Configuration  **Send All Configuration** in toolbar.

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

Step 3

The Manage Tool will send all commands to the device.