



User Manual

ZONESCANA[®]INSTA[®]



Version: 1.1.0

Language: English

*For any questions relating to this product, please write to:
support@gutermann-water.com*

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1 Safety Instructions

It is essential to read the operating instructions carefully and completely before using the equipment and software for the first time. They contain important information on safety, installation, and use. Keep these instructions in a safe place.

1.1 Symbols

	Warning of dangerous situations that can cause injury and damage to the devices.
	Warning of non-ionizing electromagnetic radiation.
	Important notes and tips are provided. Follow these guidelines.
	Never put in your household waste bin.

1.2 General Safety



The operating and maintenance personnel must read the instructions carefully before using the equipment. Knowing all the information contained therein - in particular the warning and safety instructions - is needed for the safe operation of the equipment, and to protect yourself and others against potential dangers. Ignoring the warning, safety, and operating instructions can cause injury, damage, or a considerable shortening of the equipment lifetime. Do not make any changes or alterations to our products.

When using the software or the equipment, make sure you adhere to any applicable regulations, in particular traffic regulations.

In case of any questions, ask your Gutermann representative.

1.3 Intended Use

ZONESCAN products, hardware, software, and accessories are exclusively intended for industrial use and exclusively intended for leak detection on water pipes of the public water supply. In particular, these products are not intended to be used on wastewater and gas pipes. Gutermann is not liable for any damage caused by misuse, improper operation, and as a result of non-compliance with safety instructions and warnings.

2 Overview

2.1 Introduction

ZONESCAN INSTALL is Gutermaann's latest installation app for professional water leak detection systems. In the past, ZONESCAN ALPHA systems were set up using ZONESCAN mobile on a Windows Mobile PDA. This will be replaced by ZONESCAN INSTALL, running on Android phones or tablets. This Android mobile app handles device setup, maintenance, and firmware updates.



2.2 Features

ZONESCAN INSTALL has the following features:

- Set up of Zonescan devices
- Firmware update of the devices
- Project maintenance of these devices
- Online or downloadable hi-res offline vector maps (for latter no mobile network and SIM card is required)
- Overview of all the connected devices are shown on the map
- Edit, delete, replace or merge devices based on the selected device type
- Upload device settings of the complete project to ZSNet

3 First Steps

3.1 Charging

To charge the Communication Link, always use the included battery charger and cable. While charging, the red LED blinks. When the Link is fully charged, the LED switches off.

3.2 Android Device Requirements

The ZONESCAN INSTALL App works on devices with the following requirements:

Minimum: Tablet computer (or smartphone) with

- Android OS 5.0.0 or higher
- GPS

Recommended:

- Rear camera with > 3 M pixel and autofocus
- Screen size > 5"
- Quad-core processor
- 3GB of RAM
- 16 or 32GB internal storage

3.3 Installation ZONESCAN INSTALL Software

To install ZONESCAN INSTALL from playstore proceed as follows:

- Go to the playstore app on your device and search for zonescan install
- Alternatively, click on the below link
- <https://play.google.com/store/apps/details?id=eu.gutermann.zonescan.install>

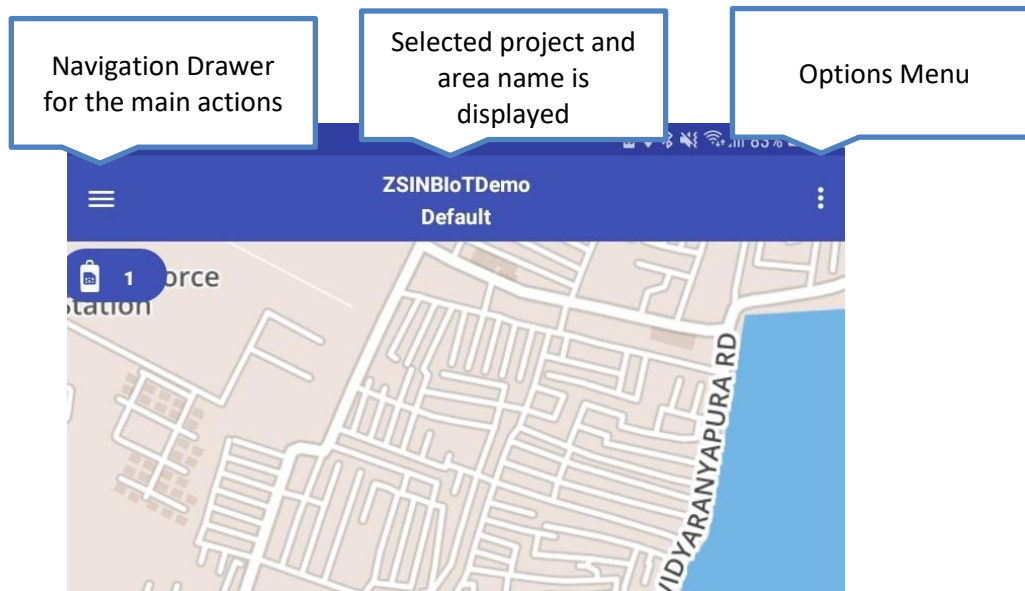
After the installation, you can start ZONESCAN INSTALL with the icon on the home screen:



3.4 Action Bar

The Action Bar, located at the top of each screen, controls app navigation and basic functions. How it looks depends on the screen you are on. On the main screen, the Action Bar contains the following items:

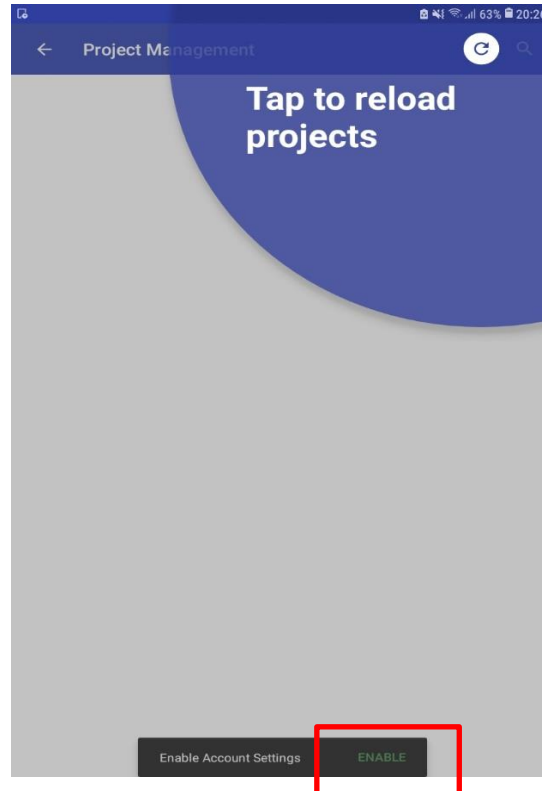
- Navigation drawer for the main actions in the app
- View to show selected project and area on the action bar
- Options menu for additional menu items.



3.5 App setup wizard

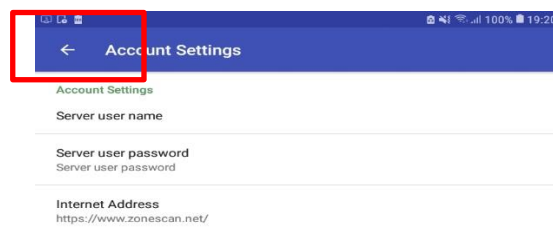
Install the app from the play-store, launch the app, and grant the necessary permissions required for the app. Accept the license conditions to continue with the setup process. When ZONESCAN INSTALL is launched guided tutorials are provided all through the app to help you with the working of the app.

Once the license agreement is accepted, the 'Company Name' screen is shown where you need to enter your company name and select 'continue' to go to the 'Project Management' screen. Here you will find a message asking to enter the account details, select the 'Enable' button to complete the account settings process.



Note: The Account Settings step cannot be skipped. You must enter the details to proceed further.

Once the account details are correctly entered, press the back button in the 'Account Settings' screen as shown in the figure below. Then select the 'Reload' option to download the associated projects from the ZSNet.



4 NB-IoT Wizard

4.1 NB-IoT setup

This section explains the complete setup of NB-IoT loggers: from downloading an NB-IoT project from ZSNet to deploying the logger to uploading the changed configuration to ZS-Net cloud.

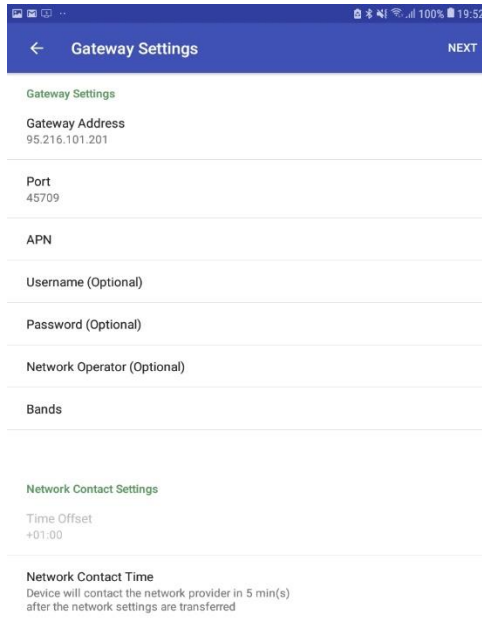
Select an NB-IoT project and click on 'Download' from the list of downloaded projects to load an NB-IoT project. Then select the downloaded project to configure the gateway settings.

4.1.1 Configuring Gateway Settings

Configure the gateway settings to establish contact with the Gutermaann gateway.

You need to fill in the following details on the Gateway Settings screen:

- Gateway Address: Default address is set to '95.217.68.86'.
- Port: Default port number is set to '45709'. In the unlikely event that your network provider has blocked port 45709, you can use port 8472 as an alternative.
- APN: APN of your network provider must be set.
- Username (Optional), Password (Optional), Network Operator (Optional): Leave empty unless explicitly required by your network provider.
- Bands: Select all the bands that your network provider supports.
- Time offset: It is automatically set, and it is the same as the time offset set in ZSNet.
- Network contact time: This is the delay before the NB-IoT Logger will try to register itself at the gateway. The default time is set to 5 min.



For successful registration, the NB-IoT Logger will have to be known to ZONESCAN NET. So, you have to upload the project from ZONESCAN INSTALL to ZONESCAN NET before Network contact time is up.

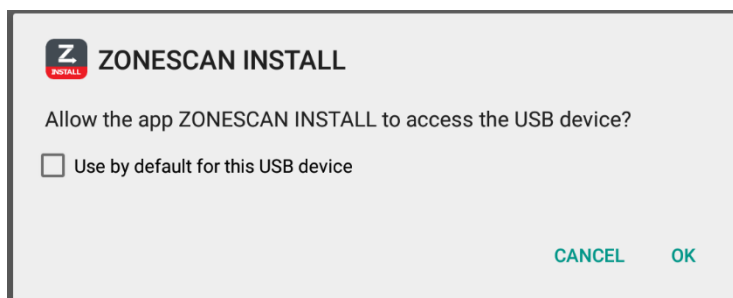
4.1.2 Configure NB-IoT Logger

You need to configure the NB-IoT Logger before you deploy it. Refer to the photo below for correct cable connections and follow these steps:

- Remove the external antenna from the NB-IoT Logger.
- Attach the JIG Cable to the NB-IoT Logger.
- Plug a Micro USB Cable into the JIG Cable box.
- Connect the OTG adapter cable with the USB-A connector of the Micro USB Cable (see picture below for clarification).
- Plug the OTG adapter cable directly into your Android device.



- Confirm the Android dialog asking you to allow ZONESCAN INSTALL to access the USB device to proceed.



- Confirm the dialog asking if you want to synchronize the network settings.

4.1.3 NBloT Navigation Drawer options

Once the project is downloaded you will land on the main map screen of the NB-LoT project. Once the Navigation Drawer is selected you will find the below-mentioned options.

The navigation drawer has three sections:

The top section contains all the viewing options.

- 1) Map: View the data on the map. Here you will find the deployed NBloT loggers and the count of them. On the long tap of the deployed logger on the map, you will find the following options Navigate to location, Move device, and Maintenance.

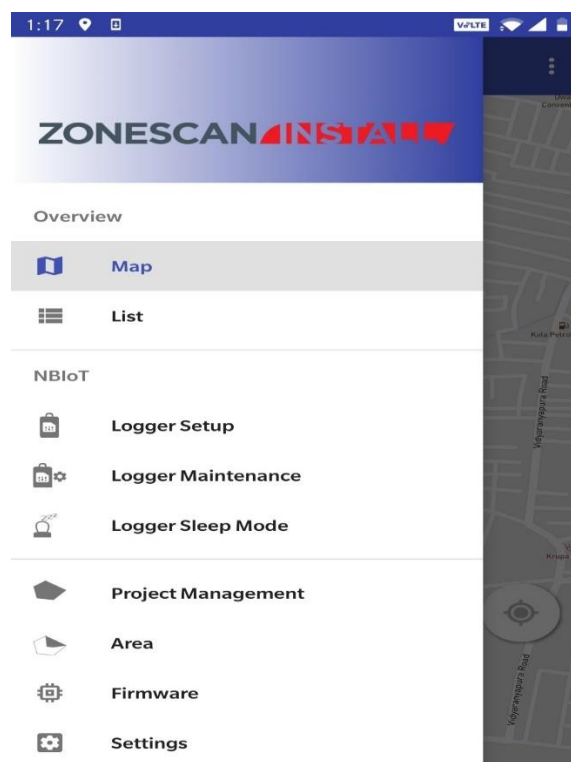
- 2) List: View all the loggers in the project and their respective ECL, Band, Signal Power, Reachability, and RSSI values. To update the list view swipe down to refresh.

The middle section contains logger setup and maintenance options

- 1) Logger Setup: Deploy loggers and upload the data to ZSNet.
- 2) Logger Maintenance: Check the device state, config, and log of the logger. In-detail explanation is in section [4.2](#).
- 3) Logger Sleep Mode: Logger is put to sleep mode to save the battery life of the logger.

The bottom section contains options to import the project, change general and account settings, and a help section to share feedback to the user.

- 1) Project Management: Import the latest configuration of the project.
- 2) Area: Change add a new area or change to another area within the project.
- 3) Firmware: Update to different NBloT logger firmware version.
- 4) Settings: Change general settings, display settings, and account settings.
 - a) General Settings: Here you will be able to change Link Serial Number, Company Name and enable or disable the Tutorials.
 - b) Display Settings: Display settings can be set based on Reachability or RSSI value. Based on these values the color of the logger is set to green, yellow, or red.
 - c) Account Settings: Update the server username and password.

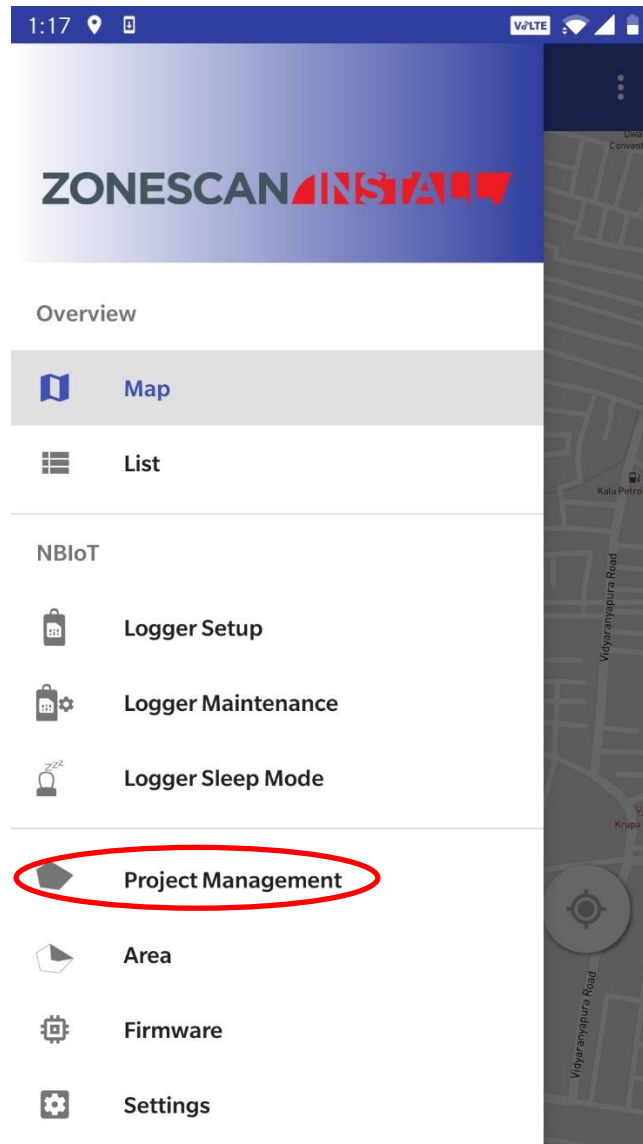


4.1.4 Import NBIoT project

In ZONESCAN INSTALL go to 'Project Management', search for your project, and download it.

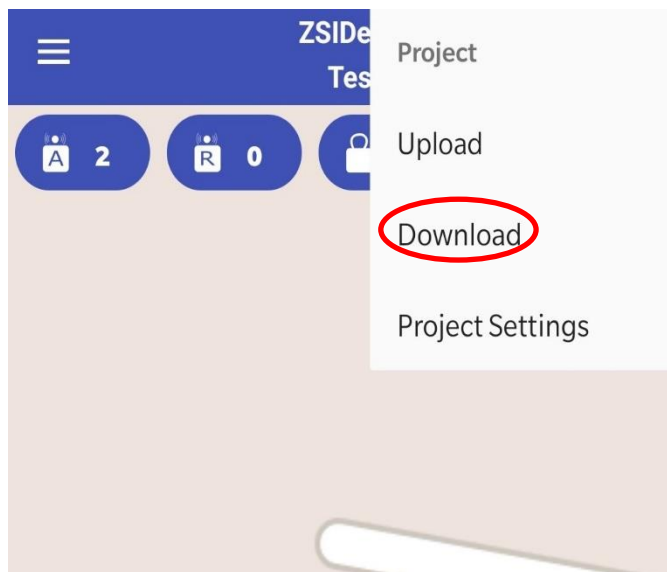


This step is most important because it makes sure that you work with the most recent configuration. If there were any changes (e.g., exchanged loggers) this step would update your local copy of the project so there are no more data inconsistencies.



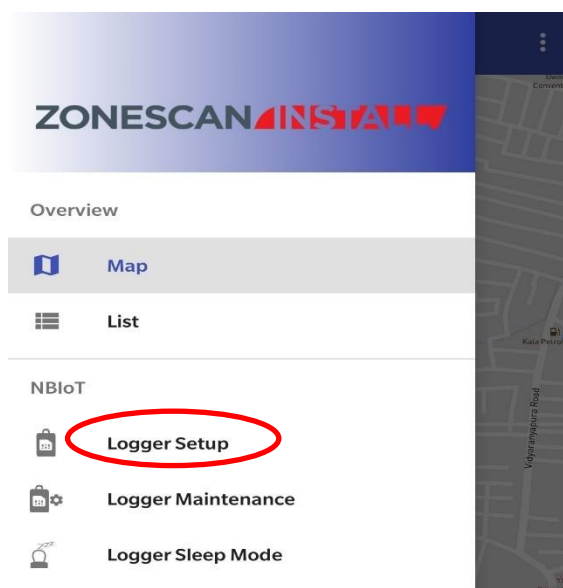
After downloading, you are able to change settings, but everything should be pre-filled already. Select 'Next' and the project is downloaded.

Alternatively, you can also download the latest project configuration by selecting the options menu in the top right corner in the map screen, selecting 'Project' and clicking on 'Download'.



4.1.5 Adding NBloT Logger

Check section [4.1.2](#) for how to configure the NBloT Logger and then select 'Logger Setup' in the navigation drawer

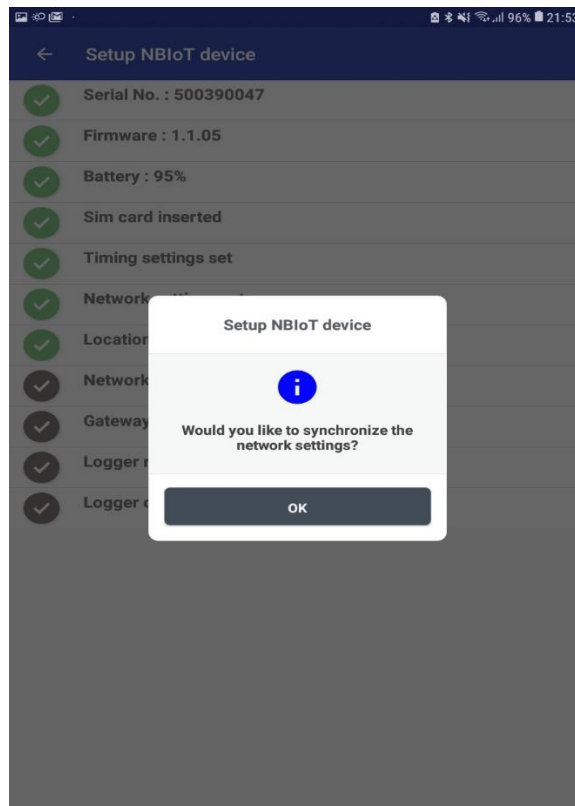


Once 'Logger Setup' is selected it goes to the 'Setup NB-IoT device' screen. If the OTG cable is connected data is read from the NB-IoT logger and you can view the serial number, firmware version, and other details of the logger.

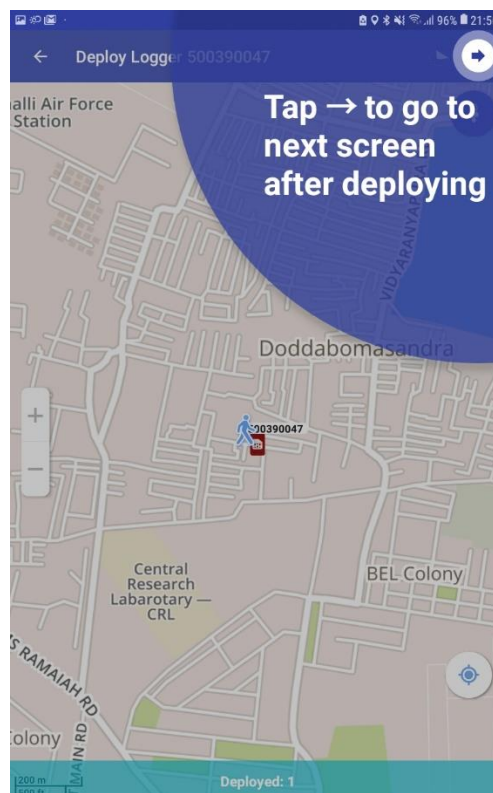


Make sure that the Logger serial number is in the range of '500 000 000' to '516 777 215'. If the logger serial number is not within this range, the logger firmware needs to be updated to v1105 or above. If not updated, you will not be able to deploy the logger.

Once the data is read, you will see a dialog 'Would you like to synchronize the network settings' here. Select 'OK'



Once the network settings are read, the basic NB-IoT device setup is finished. Then you'll be directed to the deploy screen.

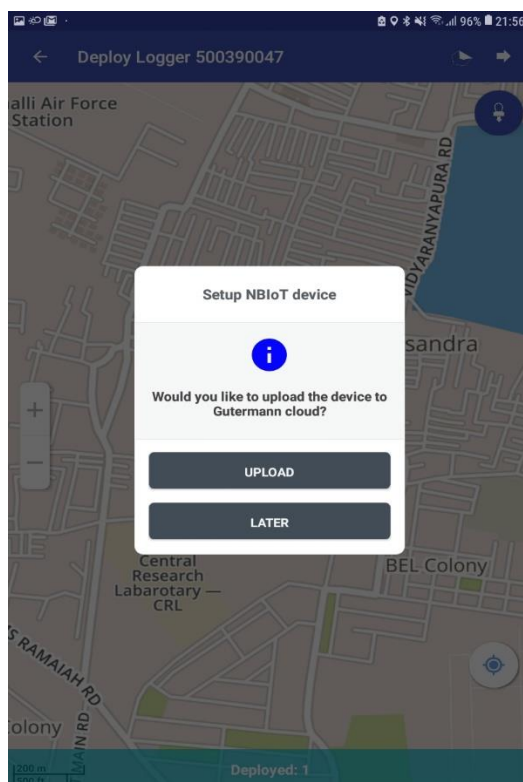


The next step is to deploy the NB-IoT logger on the map. This can be done via GPS position or manually by moving the position on the map.

4.1.6 Finalize the changes

Once the logger is deployed you will see a tutorial: 'Tap on the next screen after deploying'. Select this button to upload to ZSNet.

In the dialog, which is now shown on the screen, select 'Upload' to upload the data to ZSNet. If 'Later' is selected, the data should be uploaded within the 'Network contact time' set in the Gateway settings to avoid data loss.

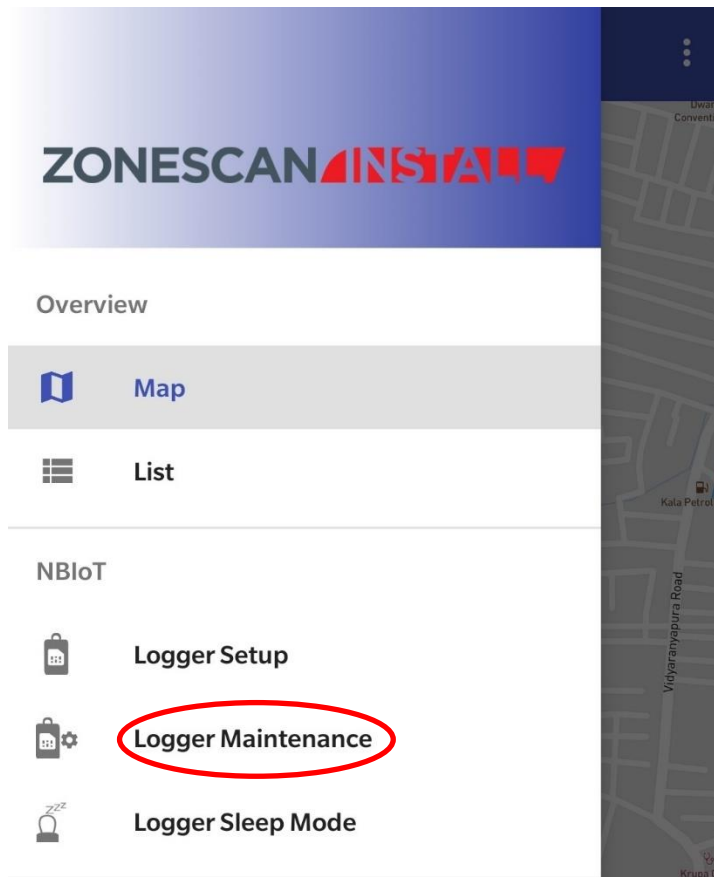


4.2 NB-IoT Maintenance

This section is divided into three sub-sections:

Read Device Config, State, and Log

To read each of the parameters select NBloT maintenance in the navigation drawer item. Then, connect the OTG cable to the mobile device.



Under the logger Maintenance section, you will be able to read 'Device Config', 'Device State', and 'Device Log'.

Device Config

This option is provided to check if the gateway settings of the NB-IoT logger are correctly configured. To check the configuration status of the device, select 'Device Config' in the bottom navigation item. On selection, communication with the logger is started. Network contact settings and gateway settings are read and displayed.

Device State

Select Device State in the bottom navigation item. Logger state informs the user of the current and next task of the logger and specifies if there are any errors. If you find any errors, you can read the device log and send the log to the support team. Instructions on how to send the device log are mentioned below.

Device Log

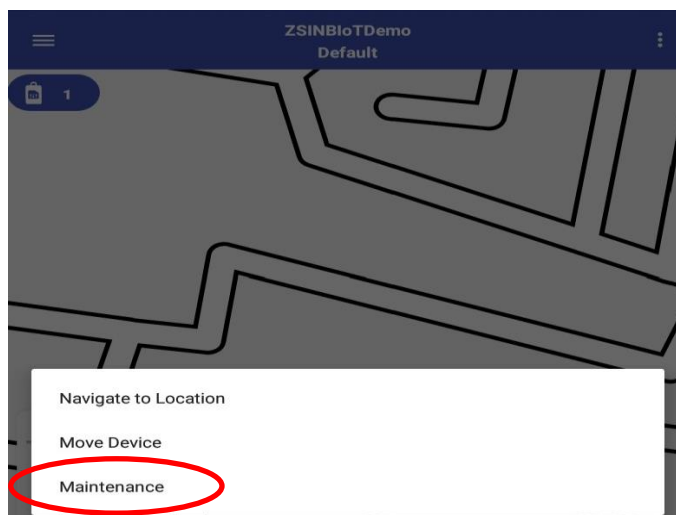
Select 'Device Log' in the bottom navigation item. Once selected communication with the logger is made and in case of any trouble with the NB-IoT device communication, you can send the NB-IoT log file to the support team by selecting the 'share' option.



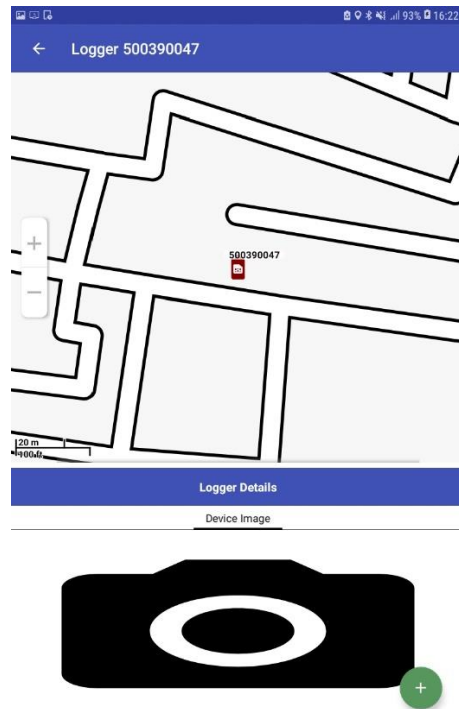
Module	Time	Message
System	22.51.40 03.05.20	Internal Flash written
RTC	22.51.38 03.05.20	Setting Time Deviation 10960 32k/s Current ppm: 0
System	22.51.38 03.05.20	Internal Flash written
RTC	22.51.37 03.05.20	New Time set Adjusted deviation 10960 32k/s New ppm: 0
NBI...	22.37.17 03.05.20	Interrupt on VDetect line. Shut-off modem.
NBIOT	22.37.14 03.05.20	Modem powered on. Connecting to NBloT network registration status: 00000100...
NBI...	22.00.00 03.05.20	NBloT Workerthread already running Intended typ: 2...
NBIOT	21.57.12 03.05.20	NBloT modem powered off. Modem failures: 578
NBI...	21.57.06 03.05.20	NBloT could not connect to network Try 2 Out of 3
NBI...	21.56.54 03.05.20	Interrupt on VDetect line. Shut-off modem.

Upload the Device Image

On the map, long click on the deployed logger to go to the maintenance screen. Alternatively, select 'List' in the navigation drawer and click on the logger you want to upload the device image.



In maintenance view, select device details to upload a device image.



Edit or Delete logger

Follow the steps as mentioned in 'Upload the Device Image' section to go the maintenance screen and then select 'Logger' in the maintenance view to edit or delete the logger.

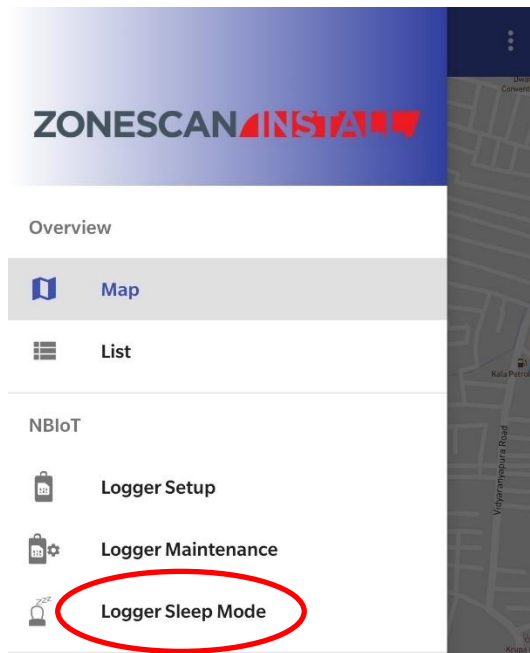
Note: After editing the logger the changes need to be uploaded to ZSNet. On the deletion of the logger, all the associated deployments and measurements of the device will be deleted in ZONESCAN INSTALL only but not on ZSNet.

4.3 NBloT Sleep mode

If the loggers are not used for a long time, you can put them to sleep mode to save the battery life of the loggers.

- Go to Navigation drawer > Logger Sleep Mode.
- Connect NBloT logger to Android device.
- Loggers are then programmed to be in sleep mode.

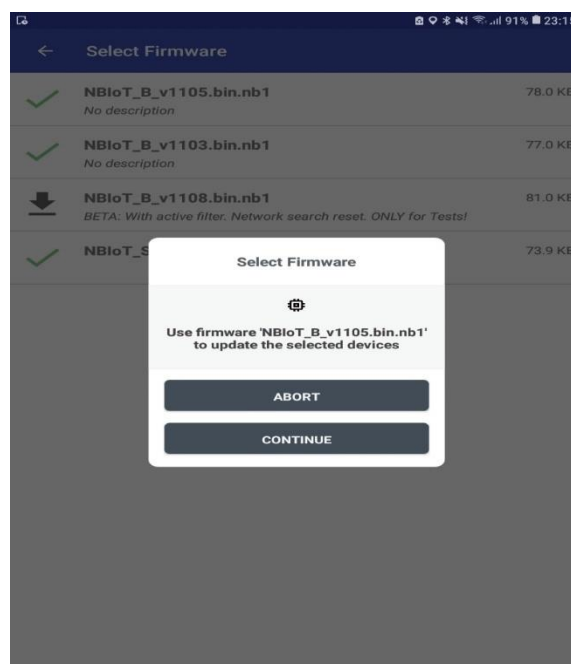
To wake up the loggers from sleep mode go through the setup process again.



4.4 NBloT firmware update

For firmware updates make sure the OTG cable is connected. After that, follow the steps below:

- In the left-hand menu (navigation item) select 'Firmware'.
- You will get a list of available firmware files on the server.
- Select the version number you want to update.
- If it is already downloaded to your device, you will be asked to confirm the selection.
- If not, a download is offered.
- Choose the required version and select 'Continue'.



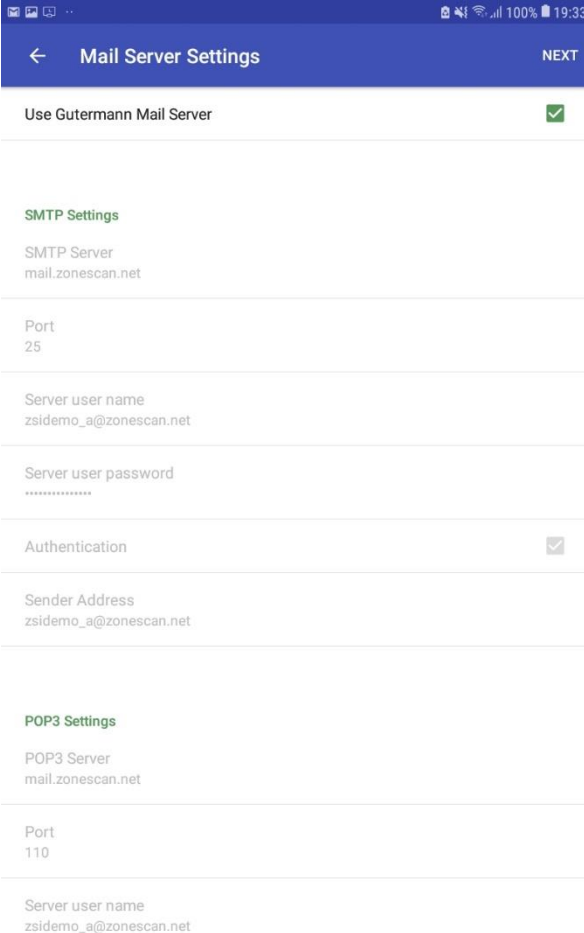
5 Alpha Wizard

5.1 Alpha Setup

This procedure will cover each step necessary to set up a new ALPHA project from scratch. For each device, there is a guided workflow implemented in the ZONESCAN install. You can switch off the tutorial notes in the 'General' section of the settings found in the left-hand menu bar when you no longer need them.

5.1.1 Configuring Mail Server Settings

From the project list choose the Alpha project you want to download and click 'Download'. After selecting the project, you'll be able to change mail server settings. Mail server settings are set to the Default Gutermann settings but changes can be made if needed. After, select 'Next'.



← Mail Server Settings NEXT

Use Gutermann Mail Server ☒

SMTP Settings

SMTP Server
mail.zonescan.net

Port
25

Server user name
zsidemo_a@zonescan.net

Server user password

Authentication ☒

Sender Address
zsidemo_a@zonescan.net

POP3 Settings

POP3 Server
mail.zonescan.net

Port
110

Server user name
zsidemo_a@zonescan.net

5.1.2 Alpha Navigation Drawer options

Once the project is downloaded, you will land on the main map screen of the NB-IoT project. Once the Navigation Drawer is selected, you will find the options below.

The navigation drawer has three sections:

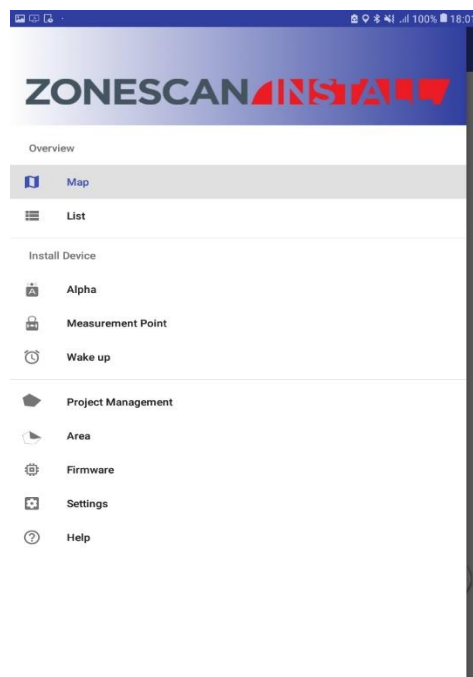
The top section contains all the viewing options:

- 1) Map: to view the data on the map. Here you will find the deployed devices and the count of them. Select any of the overlay items on the map to view the devices on the screen.
- 2) List: all the devices are sorted by default in ascending order. Select 'Sort' to sort according to your preference. Also on refresh, you can check the status of the alpha test mail.

The middle section contains device alpha and measurement point setup which is explained in detail in section [5.1.5](#) and [5.1.6](#)

The bottom section contains options to import the project, change general and account settings, and a help section to share feedback to the user.

- 5) Project Management: To import the latest configuration of the project. Refer to section [5.1.3](#)
- 6) Area: To change or add a new area or change to another area within the project.
- 7) Firmware: To update the firmware of different devices. For a more detailed explanation refer to section [7](#)
- 8) Settings: To change general settings, display settings and account settings.
 - d) General Settings: Change Link Serial Number, Company Name and enable or disable the Tutorials.
 - e) Display Settings: Display settings can be set based on Reachability or RSSI value. Based on these values the color of the logger is set to green, yellow, or red.
 - f) Account Settings: Update the server username and password.

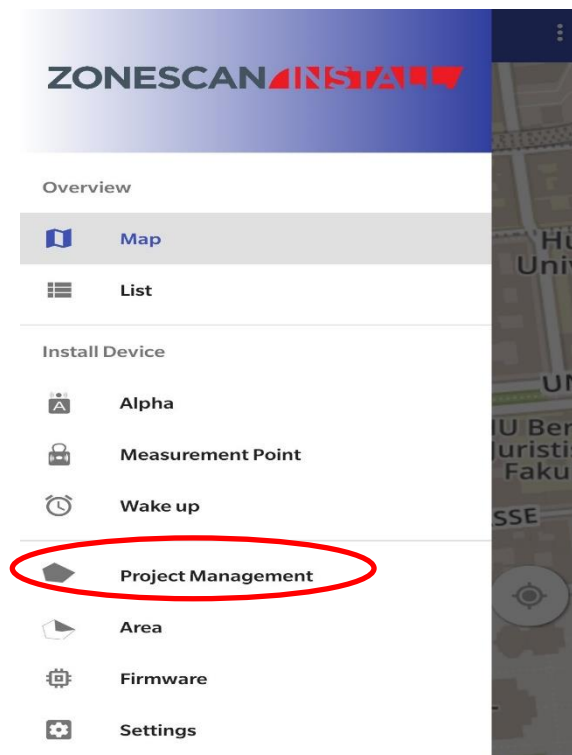


5.1.3 Import Alpha project

In ZONESCAN INSTALL, go to Project Management, search for your project, and download it.

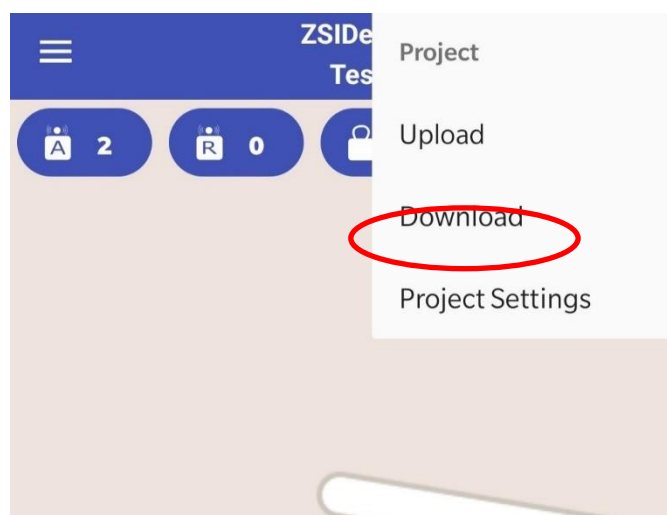


It is vital to eliminate data inconsistencies, and make sure the most recent version of the project is downloaded into the app, before starting work each day. Any changes made on ZS.Net, or by another INSTALL user (i.e., exchanged loggers) will not be visible on your local copy of the project until this step is complete.



After downloading, you can change settings, but everything should be pre-filled already. Select 'Next' and the project is downloaded.

Alternatively, you can also download the latest project configuration by selecting the options menu in the top right corner in the map screen select 'Project' and click on 'Download'.



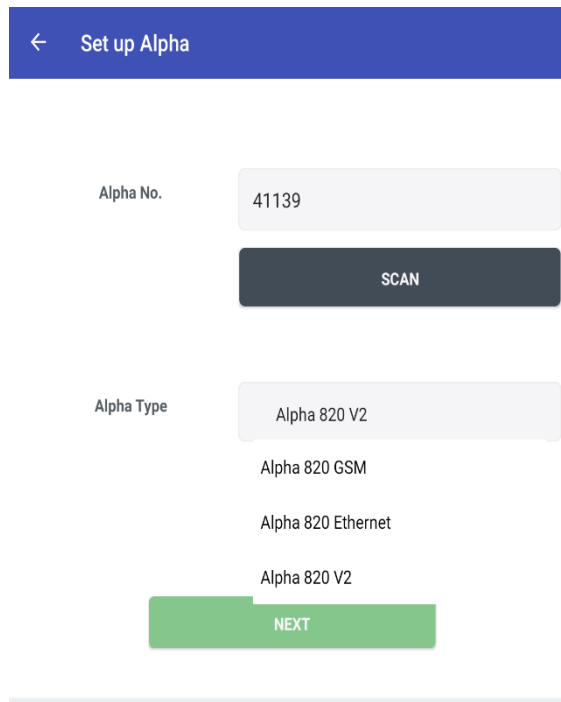
5.1.4 Wake up devices

All new devices are in sleep mode before deployment and thus hard to reach via radio. At the beginning of the day, or before installing new devices, select the 'Wake-Up' option from the left-hand menu. This step speeds up connection tests, and saves valuable time throughout the workday.

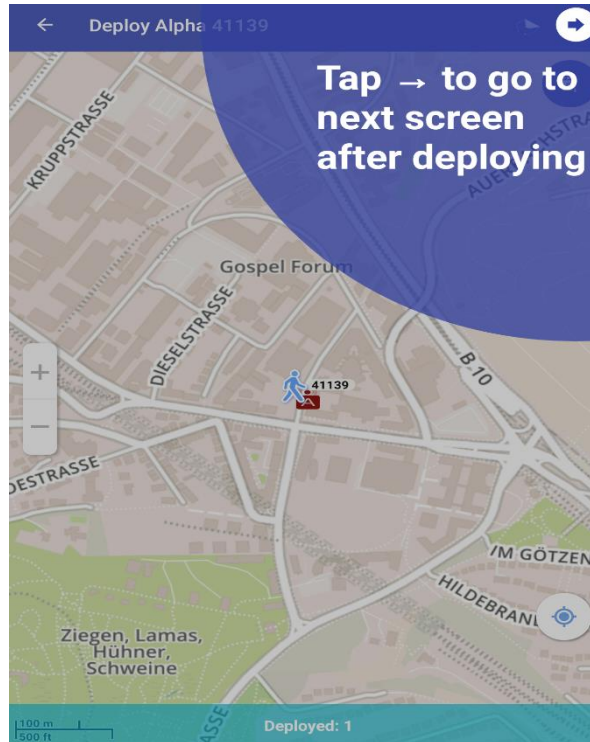
5.1.5 Adding Alpha

With new projects, it is strongly recommended to set up the ALPHA(s) first so that when adding Repeaters, you can already work with the real radio connection and choose the position of Repeaters accordingly.

Open the left-hand menu bar, in the section 'Install Device' tap on 'Alpha'. Enter the serial number and select the correct ALPHA type (this influences some options later).



The next step is to deploy the ALPHA on the map. This can be done via GPS position or manually moving the position on the map.



After, you will be asked if you already have a SIM card. If you have, you can insert it now and set up an internet connection. If not, you can skip this part.


Alpha APN Settings	
APN	internet.telekom
User Id	t-mobile
Password	**
Pin	7002



It is recommended to insert the SIM card and to set up and test the internet connection while in the office or hotel before your actual appointed day of installation. This will save valuable time on the installation day.

5.1.6 Adding Measurement Point

A measurement point usually consists of a Repeater and a Logger. The workflow supports both ways – installing the logger first, or installing the repeater first and will adapt automatically depending on which device is first scanned.

 **Set up Measurement point**

Device No.

1409826

SCAN

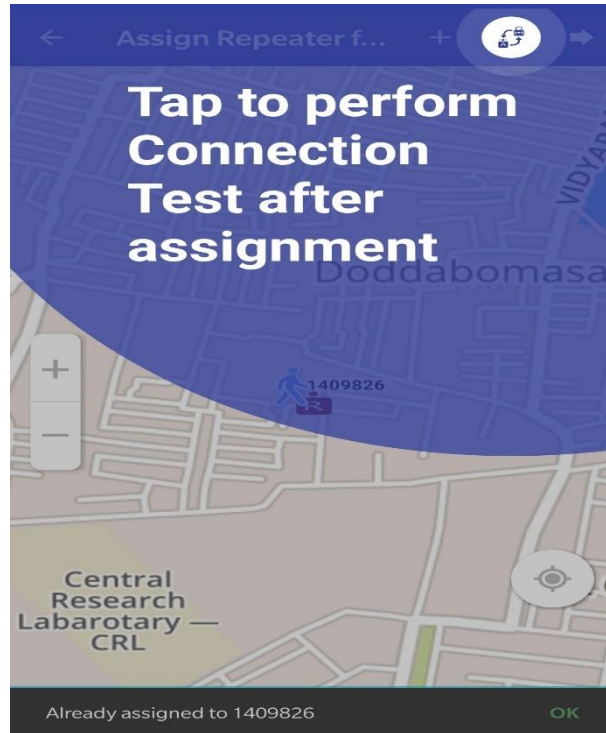
Device Type

ZS820

Also adding multiple Loggers to one Repeater is supported, though it should be carefully checked, as this option might result in weak radio communication links, which would lead to loss of data. When in doubt, add another Repeater.

5.1.7 Connection Test

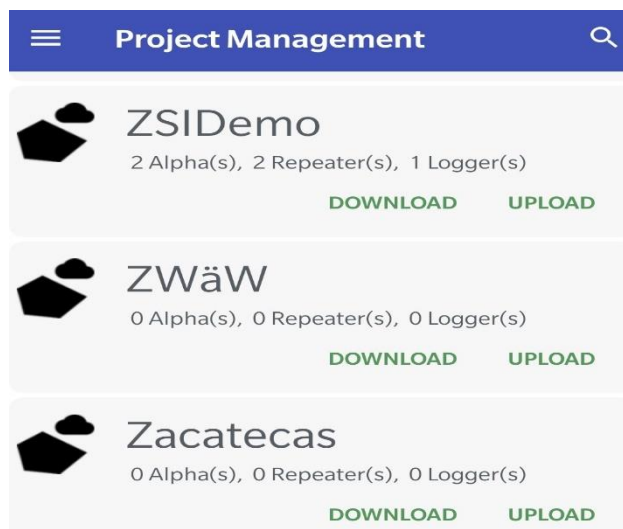
The most important part of the adding measurement point workflow is the connection test – make sure you get the best possible radio connection for your devices. This will influence reliability as well as battery life.



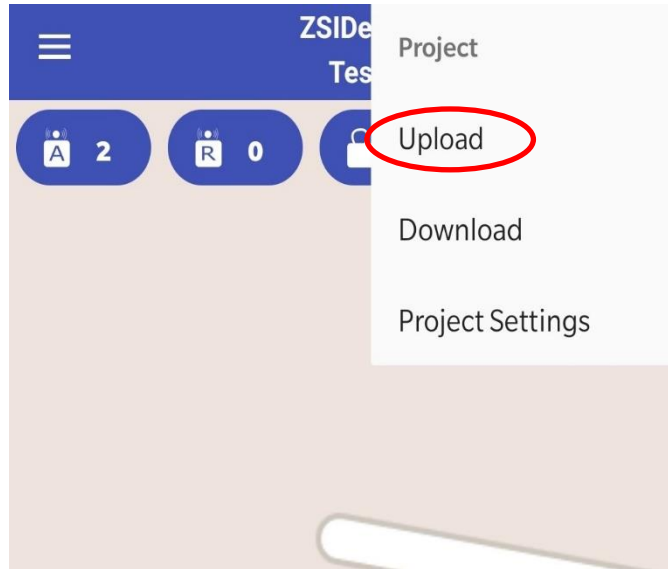
Connection tests will indicate the radio signal strength (RSSI value) between any two devices. This value is always negative, and will generally range from -50 to -120, with -50 to -70 being excellent, -70 to -90 being good, and any value above being a poor connection. An RSSI value between -90 and -99 may work if necessary, but -100 and above should be avoided if possible. RSSI values worse than -100 are unreliable and may not transmit data if minor weather conditions - such as fog – occur.

5.1.8 Finalize the changes

When you are done, you need to upload the changes you made to the ZONESCAN net for them to become effective. Go to 'Project Management' and tap 'upload' on your project.



Alternatively, go to the map on the top right corner where you will find the options menu. Click on 'Project' and select 'Upload'.



When you log in to ZONESCAN net, you will see all the installed devices. You can calculate the radio window settings and then transfer the settings to the ALPHAs – only then will they start working.

6 Device Maintenance

This section is further divided into three sub-sections.

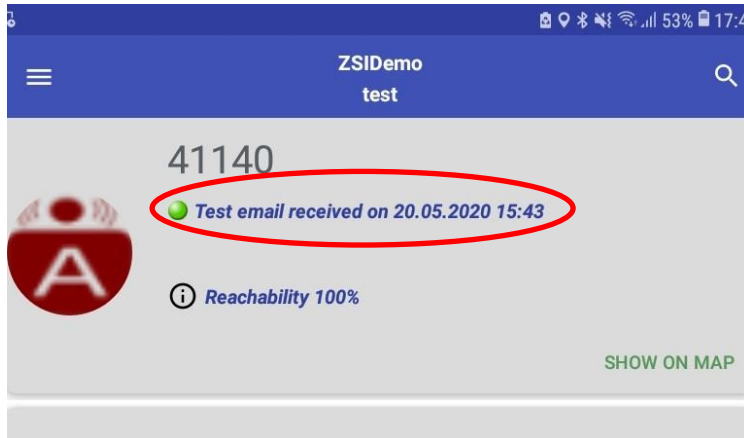
6.1 Alpha Maintenance

For Alpha maintenance go to 'List' and select the alpha required. Alternatively, long press on the alpha on the map. Once selected you will find three options. They are: Alpha Details, Alpha Radio, and Alpha.

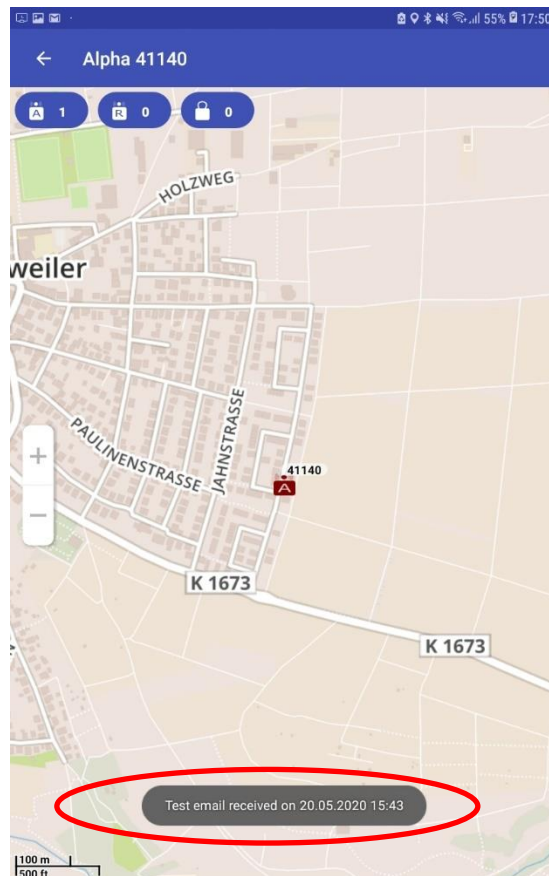
Alpha Details

Under alpha details you have the following options:

- 1) Alpha Details: Under this section, you can upload the device image. Select 'Alpha Details' and click on the '+' button to add the required image. You can check if the Alpha's settings are configured correctly i.e., SMTP settings and server username and password. Under POP3 Settings you can check for the port number and under Alpha Settings if the APN and other details of the network provider are read correctly.
- 2) Alpha Settings: Here you can change the APN settings and other details needed for the network registration. Alpha time settings are set to configure the time at which the alpha will additionally read the settings email.
- 3) Send Test Email Request: To request alpha to send a test email. To successfully send an email. Under 'Alpha settings' APN and other details needed should be correctly entered. Check with the network provider for these details. To verify that the email was sent successfully, select the 'Check Test Email' option or go to 'List' and swipe down to refresh. If the email is received a message is shown 'Test email received on.'.



- 4) Check Test Mail: Once a request is made to send a test email you can check if the mail is received by selecting this option. If contact is made to the mail server and if the test email is received, the message is shown as below:



Alpha Radio

Under Alpha Radio you have following options

- 1) Alpha State: To test communication with an alpha, choose "Alpha State". Make sure the commlink is switched on and paired with the Android device. Then, enter the alpha number and select the 'Connect' button to initiate the communication.

When the alpha is contacted, its settings will be displayed and the alpha time in the status bar is updated every second.

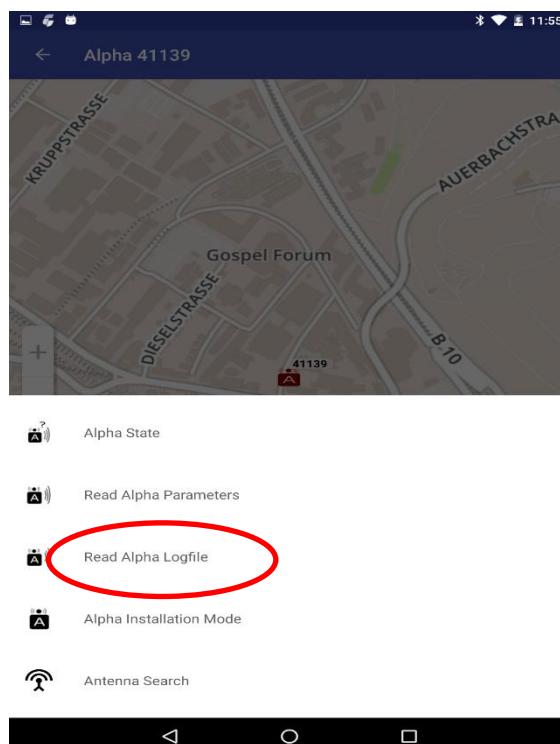
- 2) Read Alpha Parameters: Alpha parameters consist of SMTP settings, POP3 settings, Alpha settings, and Alpha communication settings. SMTP settings or POP3 settings are required to establish a connection to the email server. Alpha settings or APN settings are for sim card registration with the network provider. Communication settings are to know when to read the info of the devices connected to the Alpha.
- 3) Alpha Installation Mode: This option is not available for ethernet alpha. This puts the Alpha into Installation Mode for the selected duration. In Installation Mode, the Alpha will listen to all antennas internal or external for any requests received. So now if connection test is invoked with repeater or logger the alpha will respond no matter which antenna is receiving the incoming connection test request. The antenna used will be reported in the connection test result.


Note: Installation Mode will increase the Alpha's power consumption. It is automatically switched off after the selected duration.

- 4) Antenna Search: This option is available only for V2 Alpha. When put into antenna search mode, the Alpha will attempt to reach all known devices (repeaters and loggers) via the internal as well as any connected external antennas. For each device, it will select and remember the antenna that provided the best signal.

Note: The antenna search, once initiated, will take some time to complete, depending on the number of devices assigned to the Alpha. During this time, the Alpha may be unresponsive to connection attempts from the commlink.

- 5) Read Alpha Log: This option is available only for V2 alpha. In case of any trouble with Alpha communication, you can send the Alpha log file to support team by selecting 'Read Alpha Logfile'.





Module	Time	Message
CommTask	09.04.2019 11:53	Total modem wakeup time up time 64087 ms
System	09.04.2019 11:53	Internal Flash written
CommTask	09.04.2019 11:53	Signal quality strength in dBm dBm -61
CommTask	09.04.2019 11:53	POP3 Server logged in Mail count to read: 0
CommTask	09.04.2019 11:53	Testmail sent transfer ratio 725 Bytes/s result: 0
CommTask	09.04.2019 11:53	DNS address restored from cache 4E2F4ESE
CommTask	09.04.2019 11:53	SMTP Server sent log in capabilities SMTP Message: 250 Message length: 186
CommTask	09.04.2019 11:53	SMTP Server sent greeting SMTP Message: 220 Length: 61
CommTask	09.04.2019 11:53	Time until logged in Time used: 35009 ms
CommTask	09.04.2019 11:53	Activation of PDP context cid: 101 activated: 1
CommTask	09.04.2019 11:53	DNS address restored from cache 4E2F4ESE
CommTask	09.04.2019 11:53	Modem booked in Reg: 1
Radio	09.04.2019 11:53	Alpha / Logger config written Error Alpha: 0 Errors Loggers: 0

- 6) Alpha GPS: This option is available only for V2 alpha. This feature is needed to find a good placement for the Alpha, so it has good GPS connection. From the GPS the Alpha gets the precise time which is needed for precise leak detection (do pinpoint measurements).

← Alpha 41347			
PPS Time	:	Thu Jan 08 00:39:27 GMT+05:30 1970	
PPS Count	:	6216	
Latitude	:	13.0601796	
Longitude	:	77.55577579999999	
PRN: 2	SNR: 0	Elev: 36	AZ: 12
PRN: 6	SNR: 9	Elev: 10	AZ: 39
PRN: 15	SNR: 1	Elev: 11	AZ: 189
PRN: 194	SNR: 22	Elev: 12	AZ: 139
PRN: 28	SNR: 4	Elev: 5	AZ: 144
PRN: 5	SNR: 9	Elev: 73	AZ: 171
PRN: 12	SNR: 10	Elev: 66	AZ: 322
Alpha GPS State requested			

On the selection of Alpha GPS, the GPS service starts here:

PPS Time: Indicates received time if GPS fix is working.

PPS Count: Indicates that the satellite is giving precise time pulses. PPS count initially is set to 0. An increment of PPS count every second indicate that you are getting time pulses from the satellite receiver.

A row in the Alpha GPS is highlighted in green if this satellite is used for the fix (Works only if Alpha firmware version is 2.21 or greater) . When three or more rows are highlighted it indicates that we have good GPS positioning. In this position, the PPS count shall start incrementing after some time, since PPS count starts incrementing only when there is a 3D fix (5 satellites).

Latitude and Longitude: Provides the position of the Alpha.

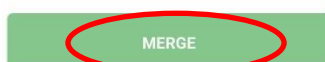
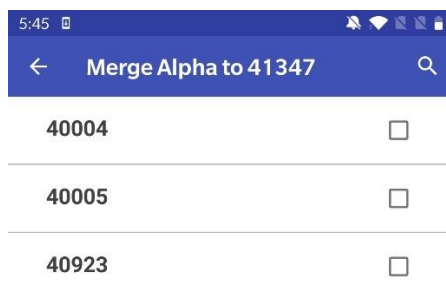
PRN: Pseudorandom Noise code assignment.

SNR: Signal to noise ratio of the signal received from the satellite.

Elev and AZ: Elevation and Azimuth value suggests the angle at which the satellite is positioned.

Edit /Replace/Delete/Merge Alpha

The 'Merge alpha' option is only applicable to V2 alpha. Once the merge option is selected, you are provided with a list of alphas to merge to the v2 alpha. On selection of the 'Merge' button, all the devices connected to the previous alpha are transferred to the new V2 alpha.



On 'delete alpha', all the associated deployments and measurements of the device will be deleted. 'Edit alpha' can be selected if you have to change the type of alpha or redeploy the alpha in a different position or area. Choose 'replace alpha' if you have to replace an old alpha with a new alpha.



On the selection of any of these functions, changes need to be uploaded to ZSNet.

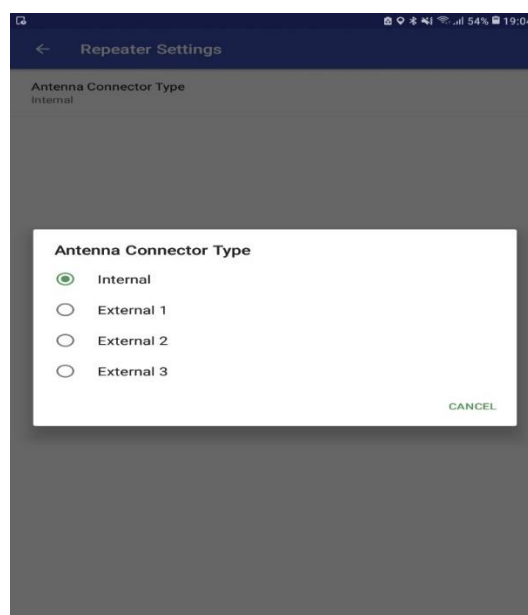
6.2 Repeater Maintenance

For Repeater maintenance go to 'List' and select the required repeater or long-press on the repeater on the map. Once selected, you will find three options: Repeater Details, Repeater Radio, and Repeater.

Repeater Details

Under 'Repeater Details' you have the following options:

- 1) Repeater Details: Under this section, you can upload the device image. Select 'Repeater Details' and click on the '+' button to add the required image.
- 2) Repeater Settings: If you have performed a connection test, either during deployment or with the Alpha's Antenna Search function explained above, the Alpha has already selected the antenna that provides the best connection between Alpha and repeater. With this option, you could manually override this selection by choosing a different antenna. Use this with care, as you may lose connection with the repeater when picking the wrong antenna. Since the repeater cannot send the antenna change to the Alpha directly, upload the project to the Gutermann Cloud afterwards. Then in ZONESCAN NET, go to Administration > Radio Windows and send the current configuration again, so that the Alpha can pick up the change. There is no need to recalculate the Radio Windows.



Repeater Radio

Under 'Repeater Radio' you have following options

- 1) Repeater State: Make sure the commlink is switched on and paired with the Android device. Then, enter the repeater number and select the 'Connect' button to initiate the communication.
When the repeater is contacted, its settings will be displayed and the repeater time in the status bar is updated every second.
- 2) Connection Test: To do a connection test with the devices connected to the repeater. For more details refer to section [5.1.6](#)

Edit /Replace/Delete Repeater

Similar to edit, replace, and delete function of the alpha. When any changes are made the new information must be uploaded to ZSNet.

6.3 Logger Maintenance

For Logger maintenance, go to 'List' and select the required logger or long-press on the logger on the map. Once selected you will find three options: they are Logger Details, Logger Radio and Logger.

Logger Details

Under 'Logger Details' you have the following options:

- 1) Logger Details: Under this section, you can upload the device image. Select 'Logger Details' and click on the '+' button to add the required image.
- 2) Logger Settings: By default, antenna connector type is set to 'Internal'

Logger Radio

Under 'Logger Radio', you have the option to check the state of the logger

Contact Logger/Logger State: Make sure the commlink is switched on and paired with the Android device. Then, enter the logger number and select the "tick" mark to initiate the communication.

When the logger is contacted, its settings will be displayed and the logger time in the status bar is updated every second. Contacting the logger may take a long time. To avoid the delay, wake up the logger once before contacting.

Edit /Replace/Delete Logger

Similar to edit, replace, and delete function of the alpha. When any changes are made, the new information must be uploaded to ZSNet

6.4 Project Maintenance

When something is not working right, some loggers are not giving data or worse. ZONESCAN INSTALL helps you in the field to identify and repair the problem.

- Go to 'Project Management' and re-import the project. Only then you do have the latest configuration of the project on your mobile device.
- Either via the map or in the 'list' select the device which is not working correctly.
- You can use ZONESCAN INSTALL to navigate there.
- Once on the spot, try to get radio connection with the device. If it answers, try to find better spots for the Logger and/or Repeater to get better radio connection.
- If you cannot reach it, check if it is physically still there.
- If it is, it is likely damaged or the battery is empty. Either replace the device or send it in for repairs.



If any device has been exchanged, the connection has been altered (e.g., connected to a different ALPHA) or a setting has been changed (e.g., a different antenna), you need to upload the project as per [5.1.8](#).

7 Firmware Update

Firmware update of a logger, commlink, alpha, and a repeater can be done. Follow the steps mentioned below to update the firmware of the needed device

- In the left-hand menu select 'Firmware'
- Select what kind of device you want to update
- Select the device type
- You will get a list of available firmware files on the server
- Select the one you want to use
- If it is already downloaded to your device, you will be asked to confirm the selection
- If not, a download is offered
- After that, you get a list of devices to choose from.

Firmware Update

Device

Alpha

Device Type

Alpha 820 GSM

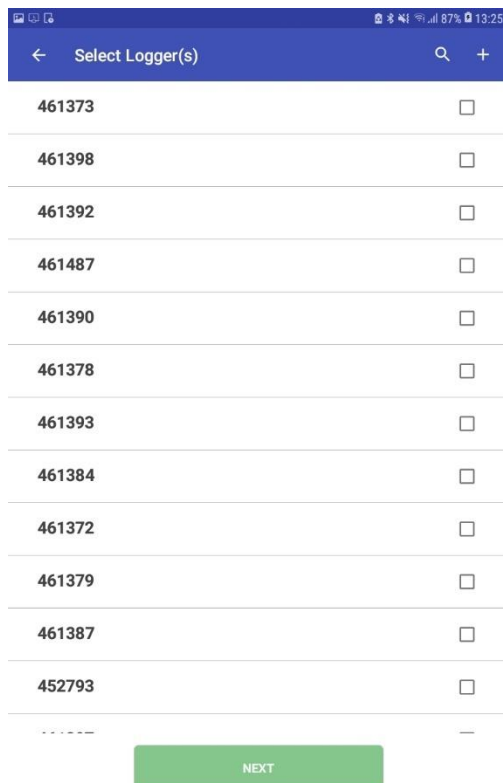
Alpha 820 GSM

Alpha 820 Ethernet

Alpha 820 V2

NEXT

- Multiple selections is possible (for example to update a ZONESCAN smart set)



Logger ID	Select
461373	<input type="checkbox"/>
461398	<input type="checkbox"/>
461392	<input type="checkbox"/>
461487	<input type="checkbox"/>
461390	<input type="checkbox"/>
461378	<input type="checkbox"/>
461393	<input type="checkbox"/>
461384	<input type="checkbox"/>
461372	<input type="checkbox"/>
461379	<input type="checkbox"/>
461387	<input type="checkbox"/>
452793	<input type="checkbox"/>

NEXT

8 Offline Maps

By default, ZONESCAN INSTALL uses online Open Street Maps. However, this requires internet access. Also, the map server can be slow which causes grey tiles on the map.

Therefore, it is better to use offline maps. To download an offline map, you need a fast internet connection. Then choose "Options Menu > Map > Download Map". After the download, select the new map with "Map > Select Map".

Below Android 10 the downloaded maps would be stored in the folder "Download/Gutermann-offline-maps" on our Android devices.

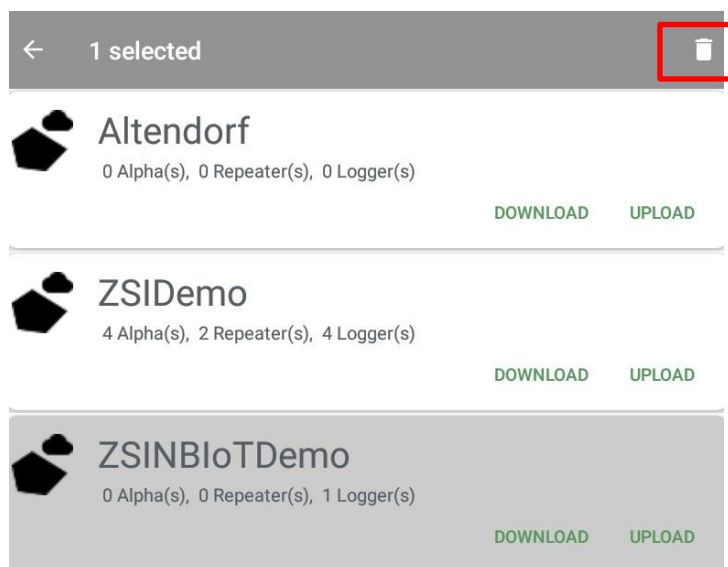
From Android versions 10 and above, the developers will not have direct access to the Downloads folder: therefore, only with user intervention files will be stored in downloads directory.

Detailed usage of how to download maps is provided in the SAF User Manual please refer to it for further details.

9 Further Hints

9.1 Delete project local data

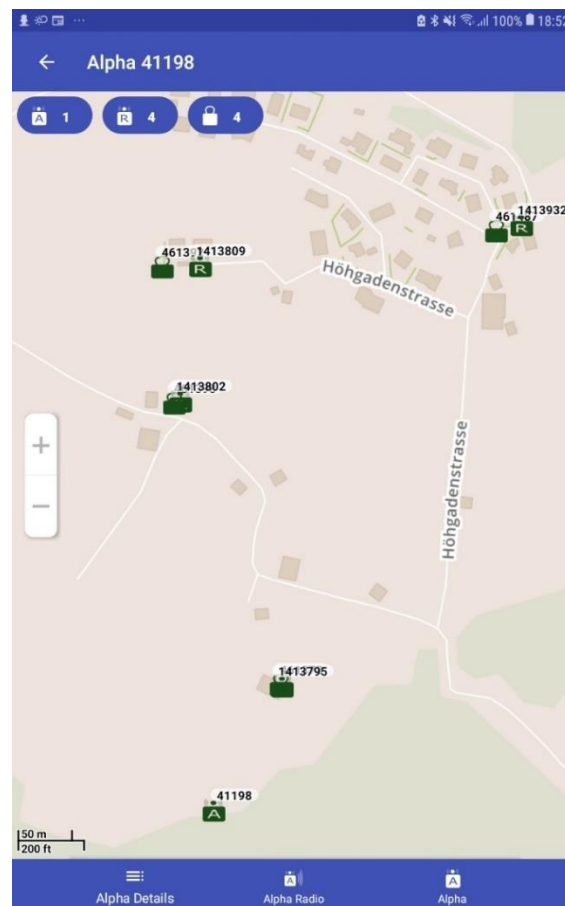
If you want to delete all the local data of the project and re-import only that project, then go to 'project management' and long tap on the project you want to delete.



9.2 Overview of connected devices

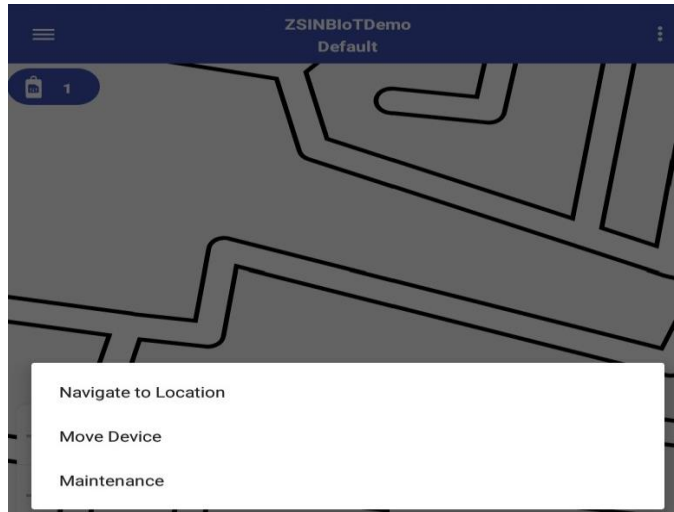
Select 'List' in the navigation drawer and select the device for which you want to view the connected devices and click on the "Show ON Map" button in the list view. For example, in the below figure only devices connected to alpha 41198 are shown on the map.

Toggle between the overlay items to view only the selected devices on the screen.

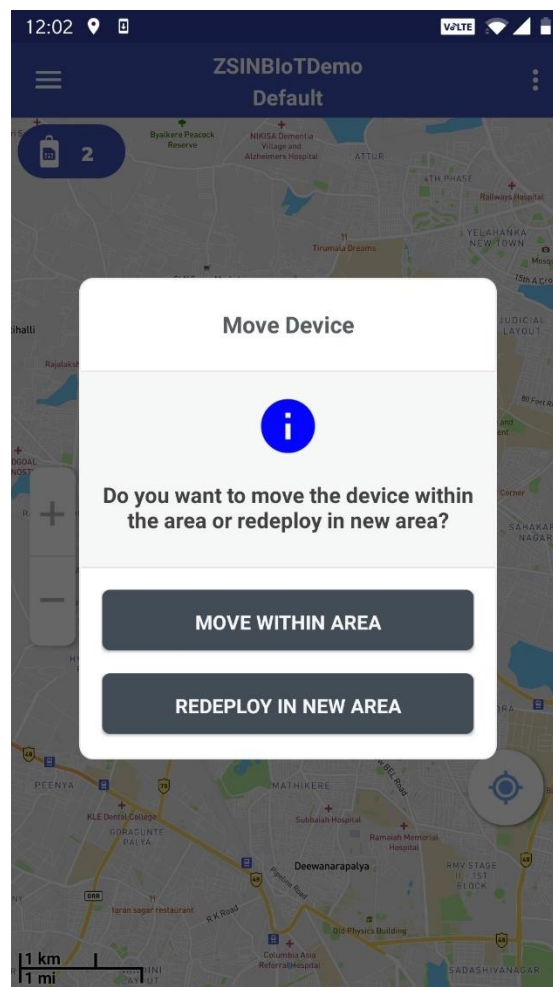


9.3 Navigation, Moving and Redeploying devices, and Maintenance

These functions are available in the context menu on long touch on a device.



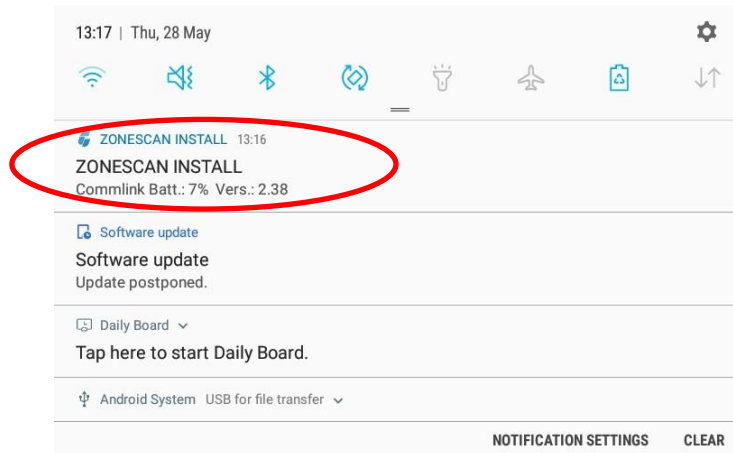
Move Device: gives an option to move the device within an area or redeploy in a new area.



If "Move Within Area" is selected, device is to be moved within an area in 10sec. If "Redeploy In New Area" is selected, you'll be directed to the deploy screen. Here you can choose a new area, deploy the device, and then press next to go to the main screen.

9.4 Check Commlink Battery

When the Commlink is connected, you will see a little “G” icon in the status bar in the top left of your Android device. Open that status message to see the commlink battery percentage and firmware version.



9.5 Warning on more devices connected to GSM Alpha

The maximum number of devices that can be connected to a GSM alpha cannot be more than 64. If you try to assign more than 64, a warning is displayed as in “Assignment cannot be performed on this GSM alpha. The number of connected devices to this alpha exceeds 64”.

10 FAQ

10.1 How do I change from always to just once on Android?

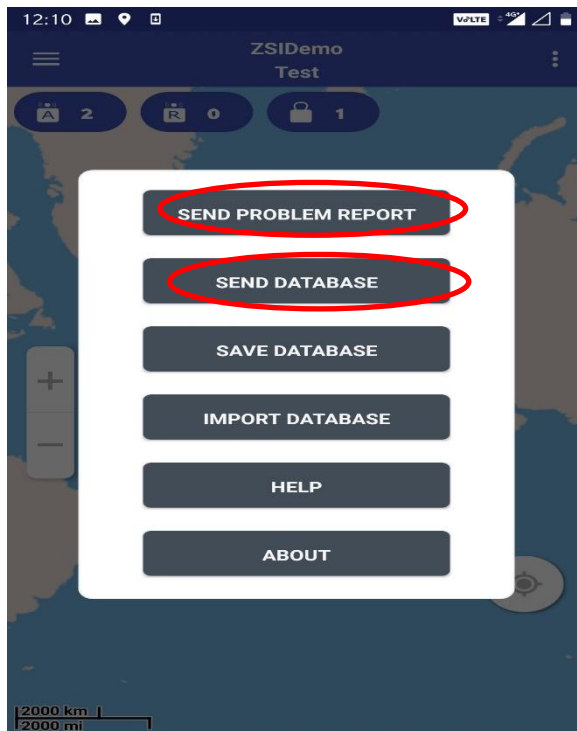
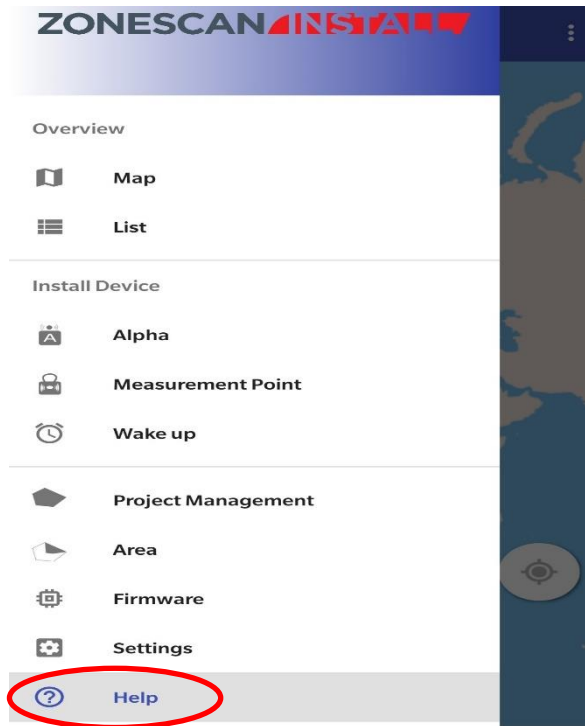
- Search for Settings in the App Drawer.
- Once there, select ‘Apps’ and choose the app you want to reset.
- Once selected, go to ‘Open by default’ from within the App info page.
- Tap ‘Clear Defaults’.

10.2 How do I clear app cache on Android?

- Open the Settings of your phone.
- Tap the ‘Storage’ heading to open its settings page.
- Tap the ‘Other Apps’ heading to see a list of your installed apps.
- Find the application for which you want to clear the cache and tap its listing.
- Tap the ‘Clear cache’ button.

11 Support

In case of any problems with the app, a problem report and database can be sent to the support team to resolve the issue. To send a problem report, click on 'Navigation item Help'. Here you will find options to send the problem report and database.



12 Disposal



Never put electrical appliances in a household waste bin. Always collect them separately and perform environmentally friendly recycling. When disposing of electrical appliances always comply with national and regional waste disposal regulations. If the orderly disposal of our products is not possible, send the unit to Gutermann at the address below in the Imprint. Gutermann ensures its products are disposed of in an environmentally friendly way.

13 Imprint

Manufacturer:

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Subject to changes