



# Antenna Line Configurator (ALC)

Type no. 86010158

Manual

Document version: 3.5

# Table of contents

1	Safety Instructions	4
1.1	Explanation of terms	4
1.2	General instructions	5
1.3	Scope of Delivery	5
2	Introduction	6
2.1	Acronyms and Terms	6
2.2	Symbols for Operation	7
3	Prerequisites	9
4	Controls and Connections	10
5	Perform the Initial Setup	11
5.1	First Start-Up	11
6	Operate the ALC	12
6.1	Power settings	12
6.2	Charging the battery	13
6.3	Connect a PC to the ALC	15
6.4	Install Microsoft RNDIS Driver for Windows 7, 8, and 10	16
7	Graphical User Interface	18
7.1	Introduction	18
7.1.1	Navigate within a Submenu	19
7.1.2	Enter Values	19
7.2	Main Menu	20
8	ALD Setup	21
8.1	Introduction	21
8.2	AISG Bus (Current, Voltage)	22
8.3	Mechanical Level	23
8.3.1	Calibrate the Mechanical Adjustment	23
8.4	Network Configuration	24
8.4.1	Turn on the Wi-Fi	24
8.4.2	Turn off the Wi-Fi	24
8.4.3	Change the IP Address	25
8.4.4	Change the Password	25
8.4.5	Change the SSID	26
8.4.6	Select a Wi-Fi Channel	26
8.5	System Information	27
8.6	Change System Configuration	27
8.6.1	Change Date and Time	28
8.6.2	Update the ALC Firmware	29
8.6.3	Reset the ALC to Factory Settings	30
8.6.4	Manage ALD Files	31
8.6.4.1	Import/Export/Delete ALD Files	32
8.6.4.2	Import an ALD File	33
8.6.4.3	Delete an ALD File	33
8.6.4.4	Importing/Exporting Files from or onto a PC	34
8.7	Change User Configuration	34
8.8	Perform Service	35
8.9	Export the Manual	38
8.10	Export Licenses text	38
9	Operate the ALC in the Devices Mode (AISG 2)	39
9.1	Search for an ALD	39
9.1.1	Select the AISG Protocol Scanning Options	41
9.2	Connect to an ALD	42
9.3	Select the Report Type	43

# Table of contents

9.4 Operate the Ericsson FlexRET .....	44
9.4.1 Change the FlexRET Settings.....	45
9.4.1.1 Change the FlexRET Protocol Mode .....	46
9.4.1.2 Update the Antenna Config File / Firmware File.....	46
9.4.2 Configure the FlexRET Subunits .....	47
9.4.2.1 Add the Subunit Properties .....	48
9.5 Operate the RET .....	49
9.5.1 Change the RET Settings .....	50
9.5.2 Change the RET Subunits Settings .....	51
9.5.2.1 Update the Antenna Config File.....	52
9.5.2.2 Add the Antenna Properties.....	52
9.6 Operate the TMA.....	53
9.6.1 Change the TMA Settings.....	54
9.6.2 Show Properties of the TMA Subunits .....	55
9.6.2.1 Change the TMA Subunit Settings.....	55
9.7 Operate the RAE.....	56
9.7.1 Overview RAE Details.....	57
9.7.2 Overview RAE Subunit Settings.....	58
9.7.2.1 Operating with Weighting Factor Files.....	59
9.7.2.2 Edit RAE Subunit Details.....	60
9.8 Operate the ASD.....	61
9.8.1 ASD Main Device .....	62
9.8.2 ASD Autoset Target / Delete Thresholds.....	63
9.8.3 ASD Subunit.....	63
9.9 Operate the GLS.....	64
9.9.1 GLS Main Device.....	65
9.9.2 GLS Subunit.....	65
10 Operate the ALC in the Site Sharing Mode .....	66
10.1 Search for a Site Sharing Adapter .....	66
10.2 Create a Site Sharing Report.....	68
10.3 Configure the Site Sharing Adapter Settings.....	69
10.3.1 Operate the Password Options .....	70
10.3.1.1 Set a Password.....	71
10.3.1.2 Delete a Password.....	73
10.3.1.3 Change a Password .....	73
11 Export ALD and Site Sharing Reports .....	74
11.1 Open the Reports Submenu .....	75
11.1.1 Manage ALD Reports .....	76
11.1.2 Manage the Site Sharing Reports .....	77
12 Alarms / Warnings / Errors .....	78
13 Disposal.....	79
14 End User Licence Agreement (EULA).....	80
14.1 FCC Statements .....	84
14.2 IC Statements .....	85
15 Addresses.....	86

# 1 Safety Instructions

## 1.1 Explanation of terms

### Note

These instructions contain all the information necessary to install and operate the Antenna Line Configurator (ALC).

Keep these instructions for reference. If the unit is given to another owner, give them to the new owner.

The target group of these instructions is experts, that is individuals who, for example:

- Are professionally trained as electricians, technicians, and so on
- Have knowledge of all the applicable terms and skills that are related to the installation and operation of mobile communication systems
- Are familiar with the applicable national safety regulations

### Warning

#### Risk of electric shock!

- Make sure that the mains cable (power supply cable) for the device (ALC) is not damaged. Replace a damaged mains cable immediately.
- Do not use the device with a damaged mains cable.
- Use only the supplied power supply unit to supply the device with power.
- Connect the power supply unit only to the voltages specified on the type label/data sheet.
- Do no work on the installation in stormy conditions. In particular, do not connect cables and do not disconnect cable connections.
- Make sure that the plug connection between the device and the installation can always be accessed.
- There are voltages of up to 30 V at the device outputs.
- Be familiar with the methods of accident prevention required during the installation of antennas.

### Warning

#### Risk of damage or destruction of devices!

- Read the ALC product documentation<sup>1)</sup> in full before you connect the system to the power supply.
- Keep the ALC product documentation<sup>1)</sup> and give it to the next owner

### Note

See data supplied in the ALC memory. To show the data on a PC, connect the ALC to the PC through a USB or Wi-Fi and export the data.

## 1.2 General instructions



### Warning

Possible risk of death or serious physical injury

Possible risk of slight or moderately severe physical injury



### Note

Information related to the operation or the use of the instructions



### Danger

General risk of physical injury

Risk of physical injury from electric voltage

## 1.3 Scope of Delivery

- 1 x ALC with cover for the connections
- 1 x 24 V / 3 A charger, can also be used as external power supply
- 1 x display guard
- 1 x transport case
- 1 x USB cable, 1 m, to connect a PC/notebook
- 1 x Remote Electrical Tilt (RET) cable, 1 m, order number 86010007, to connect to the components to be configured
- 1 x HF cable SMB/7-16, 1.8 m

## 2 Introduction

The ALC must be used only to configure the RET system.

- The ALC has the following functions:
- Configuration of AISG-compatible antennas (Antenna Line Devices (ALDs)), such as RET and Tower Mounted Amplifier (TMA)
- First installation and service
- First installation of Ericsson ALDs using the installation wizard
- Configuration of the Ericsson site sharing adapter

Other features of the ALC:

- Battery operated (standalone)
- Touch-screen graphical display
- Sturdy aluminum housing
- Not necessary to install software on a laptop or PC
- Generate and save report files
- Wi-Fi interface for control using a laptop, tablet PC, or smartphone through a web browser
- Parallel operation of display and web browser
- Inclination sensor for mechanical alignment of the antenna
- Show power and voltage on the AISG bus

### 2.1 Acronyms and Terms

**3GPP** 3rd Generation Partnership Project

**ADB** Antenna Data Base

**ALC** Antenna Line Configurator

**ALD** Antenna Line Device

**AISG** Antenna Interface Standards Group; RET systems are controlled using the AISG protocol

**ASD** ALD Sensor

**FlexRET** Ericsson integrated RET

**GLS** Geographic Location Sensor

**GUI** Graphical User Interface

**HDLC** High-Level Data Link Control

**MALD** Multi-primary ALD

**RAE** Remote e-Antenna Extension

**RET** Remote Electrical Tilt: System to control the electrical tilt of an antenna remotely

**RFID** Radio Frequency Identification: system for automatic and contactless identification and localization using radio waves

**RCU** Remote Control Unit







































**RNDIS** Remote Network Driver Interface Specification


































**SALD** Single Primary ALD

**SSID** Service Set Identifier

**TMA** Tower Mounted Amplifier

## 2.2 Symbols for Operation

 Devices button; to detect and configure ALDs	 Action was successful or checkbox selection
 Sharing button; site sharing adapter functionalities	 Scan button; to start or restarts a scan
 Reports button; to manage reports and files	 Connect button; to connect to ALDs
 Save button	 Calendar button; to change the date
 Export button; to export a file from the ALC onto a USB stick or a PC	 Time button; to change the time
 Delete button; to delete files on the ALC	 Change button; to change the ALC mode from Devices to Sharing and vice versa
 Battery icon; shows the battery status	 Back button; to go back one page
 WI-FI icon; appears if the WI-FI is turned on	 Next button to go to the next page
 Loading battery icon; appears if the ALC is connected to the current	 Scan options button; to show the scan options
 Settings button; to open the setup menu	 Import button; imports a file from a USB Stick or PC onto the ALC
 Cancels a given action or closes a page	 Password option button; to manages the password options of a Site Sharing Adapter
 Report button; to generate a report	 Alarm icon; shows alarms, warnings or errors
 RET Device icon	 TMA icon; tower mounted amplifier
 MultiRET icon	 ASD icon; alignment sensor device
 FlexRET single mode icon	 GLS icon; geographic location sensor
 FlexRET multi mode icon	 RAE icon; remote eAntenna extension
 SALD icon; single-primary ALD (AISG 3)	 AISG-Bus button; to show AISG-Bus information
 MALD icon; multi-primary ALD (AISG 3)	 Mechanical level button; to check the mechanical level
 ADB icon; antenna database (AISG 3)	 Network button; to configure network settings level

-  System information button
-  System configuration button; to configure the ALC
-  User configuration button; to set e.g. installer id, language
-  Service button; to create HDLC-log
-  Factory Reset button
-  Firmware Update button
-  File management button
-  ALD-Reports button; to manage ALD Reports
-  Sharing-Reports button; to manage Sharing Reports
-  Folder button; to show a folder on the USB Stick
-  BIN file icon
-  CSV file icon
-  HDLC log file icon
-  Other File type icon
-  PDF file icon
-  TXT file icon
-  XML file icon
-  Provenence icon automatic (AISG 3)
-  Provenence icon factory (AISG 3)
-  Provenence icon manually (AISG 3)
-  Provenence icon not-set (AISG 3)
-  Provenence icon production (AISG 3)
-  Provenence icon unknown (AISG 3)
-  Port Information button (AISG 3); to show port information
-  Array button (AISG 3); to manage array numbers
-  Collapse button; to collapse the subunits
-  Expands button; to expand the subunits
-  Sharing status button: to have read only
-  Sharing status button: to read and write access
-  Sharing status button: to have no access
-  Password change button; to change the site sharing adapter password
-  Unlock password button; to delete the current site sharing adapter password
-  Lock password button; to set a new site sharing adapter password



# 3 Prerequisites

- Make sure that the Remote Control Unit (RCUs) and ALDs that are configured with the ALC are correctly installed and connected to the AISG bus.
- Make sure that each RCU is calibrated before the initial configuration of the inclination angle, after each manual adjustment to the inclination angle, and each time the RCU is removed.

If the above instructions are not followed, this can result in an imprecise configuration of the inclination angle.

- Correct calibration requires that the RCU is installed at the provided antenna interface.
- Make sure that the USB stick has  $\geq 512$  MB of storage space.

## Note

ALCs with the new Ericsson display only work with firmware version 3.5 or higher.

# 4 Controls and Connections

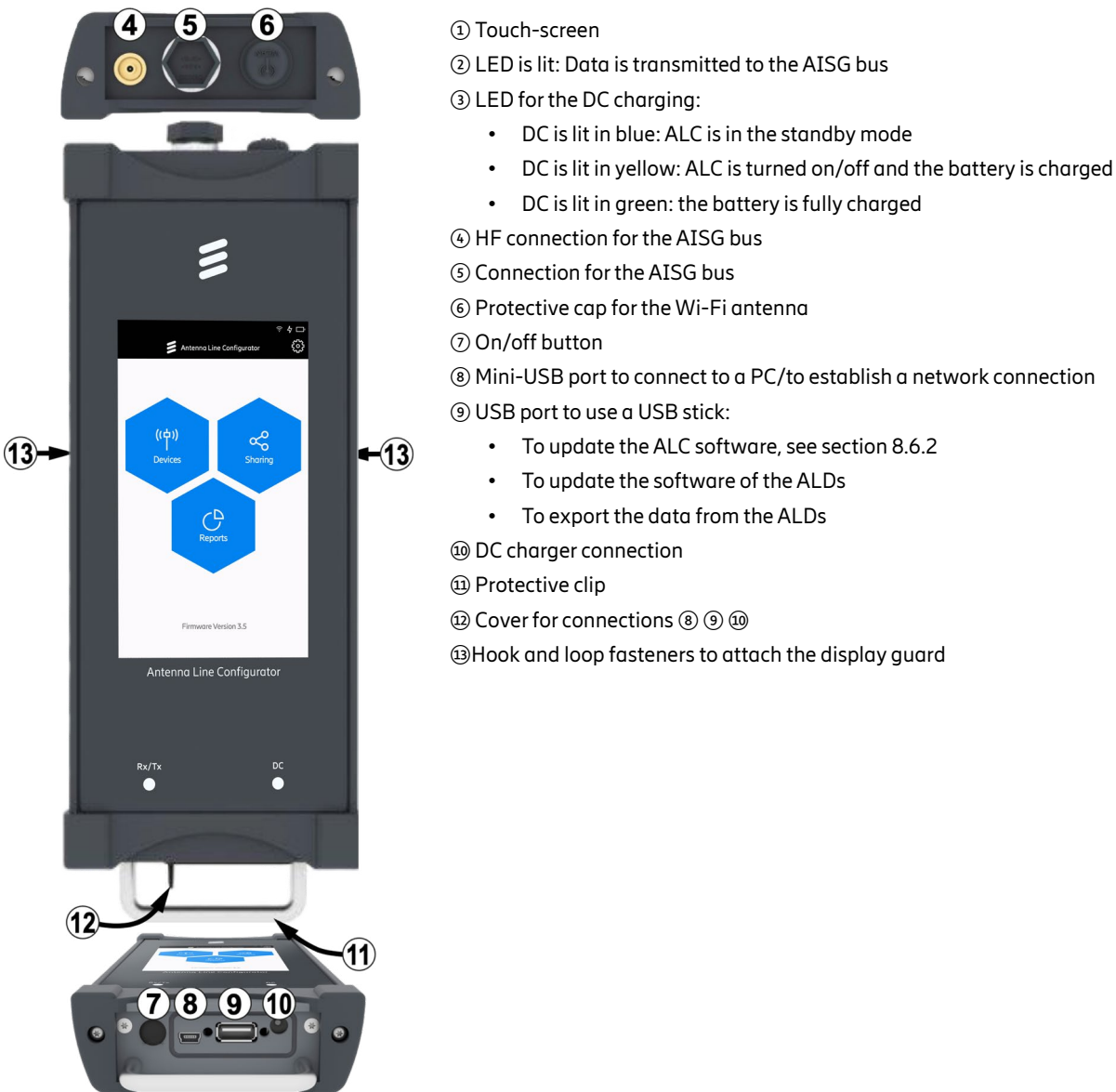


Fig. 1: Structure of the ALC

## Note

If the ALC is not detected when its connected with the mini-USB to your Windows<sup>(R)</sup> PC, it is necessary to install a Windows<sup>(R)</sup> driver, see section 6.4

# 5 Perform the Initial Setup

## 5.1 First Start-Up

When the ALC is switched on for the first time, this is shown:

The screenshot shows the 'First Start Up' screen with the following fields and callouts:

- Date: 07.10.2021 (Callout 1)
- Time: 10:57 (Callout 2)
- Installer ID (Callout 3)
- Installation Company (Callout 4)
- Language: English (Callout 5)
- Save button (Callout 6)

Fig.2: First Startup Screen

- ① and ② Adjust the Date and Time as required.
- ③ and ④ Enter Installer ID and Installation Company (optional).
- ⑤ Change the language.
- ⑥ Tap Save to confirm the settings. The settings are saved and the ALC can be used immediately.

# 6 Operate the ALC

## 6.1 Power settings

### 1. Turn on the ALC

Push the on/off button. Change from symbol to step 1  
The ALC turns on and the startup screen is shown:

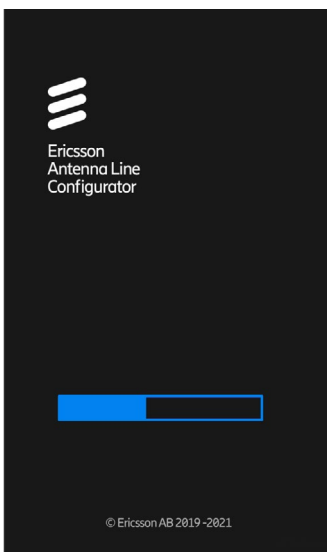


Fig.3: Startup Screen

### 2. Turn off the ALC

Push and hold the on/off button for 3 seconds. Change to step 1  
The ALC turns off.

### 3. Put the ALC into the Standby Mode

Prerequisite: The ALC is on.

To put the ALC into the standby mode, push the on/off button.

The ALC screen turns off and the LED for the DC charging is blue.

To turn on the ALC from the standby mode:

Push the on/off button.

The ALC screen turns on and the latest open menu is shown.

### 4. Force a Hard Shutdown of the ALC

Prerequisite: The ALC is on.

Push and hold the on/off button for 30 seconds.

The ALC shuts down.

## 6.2 Charging the battery

### Warning

#### Risk of malfunction!

Low battery charge (< 15%) can affect the functions of the device. The battery symbol (4 in Fig. 8) is lit red.

- Charge the battery immediately.
- To save the battery, turn off the ALC when it is not used for a longer time.

Prerequisite: The ALC is on.

1. Push and hold the on/off button for 3 seconds to turn off the device. Change to step 1

The ALC shuts down.

The battery is integrated in the ALC. To get optimum battery performance and battery life:

- Fully charge the battery before the device is used for the first time.
- If the battery is fully charged, disconnect the device from the mains.
- It is recommended to charge the battery in due time. The charging process can be interrupted.
- Frequent recharging improves the battery performance and life.
- Depending on the application of the device, it is recommended to store the device with the battery charge at 80% and to regularly recharge it up to 80%. The correct storage is a decisive part in the battery life.
- When the battery is charged, the LED for the DC charging (3 in Fig. 1) is lit yellow.
- When the battery is fully charged, the LED is lit green.
- If the battery charge is < 15%, the following warning message is shown:

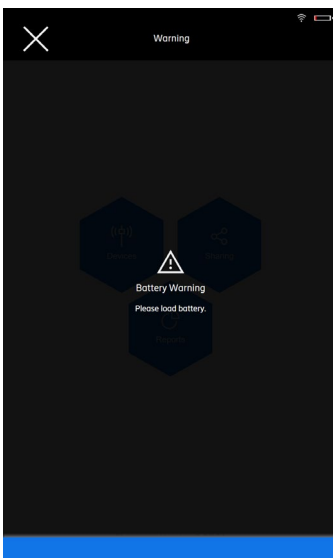


Fig. 4: Battery Warning

- If there is too much load connected to the ALC, the following warning message is shown:

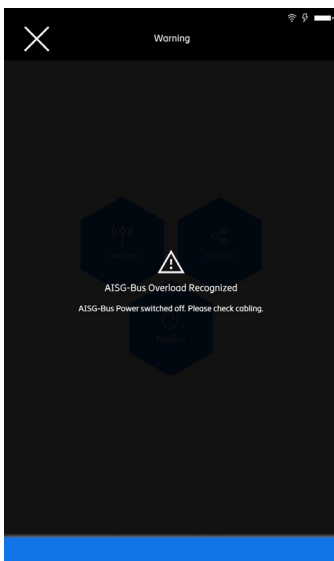


Fig. 5: AISG Bus Overload Warning Message

- If a short circuit occurs, the following warning message is shown:

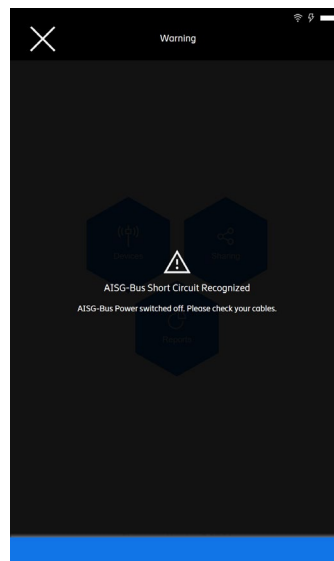


Fig. 6: Short Circuit Warning Message

## 6.3 Connect a PC to the ALC

### Note

Various devices can be connected with a Wi-Fi module to the ALC using Wi-Fi, for example a PC, laptop, tablet, phone, and so on. Also, the ALC can be connected to a PC or laptop with a micro-USB cable.

The word PC is used throughout this document, but it can be any device that can be connected to the ALC.

#### Prerequisites

- The PC is on.
- The ALC is on and the Wi-Fi is activated, see section 8.4.1

1. Go to the Wi-Fi settings of the PC you want to connect the ALC to.
2. If your PC is connected to a Wi-Fi, disconnect the PC from the Wi-Fi.
3. Find the Wi-Fi alc.

4. Click connect. A window is shown where a password is required.
5. Enter the default password **ericssonalc**.
6. Open a browser on your PC.
7. Enter 192.168.0.1 or **alc.ericsson** for Windows operating systems. For other operating systems, enter only 192.168.0.1.  
The ALC user interface is shown in the browser.

### Note

The ALC user interface in the browser is almost the same to that on the ALC, for example a Save button in the browser can contain more text, and so on.

The screenshots used in this manual are the screenshots from the ALC device and not the browser.

The ALC can be operated using both the ALC or through a browser.

If the connection to the ALC is lost, the following message is shown:

1. Make sure that the Wi-Fi on the ALC is active.
2. Make sure that the PC is connected to the ALC Wi-Fi hotspot.

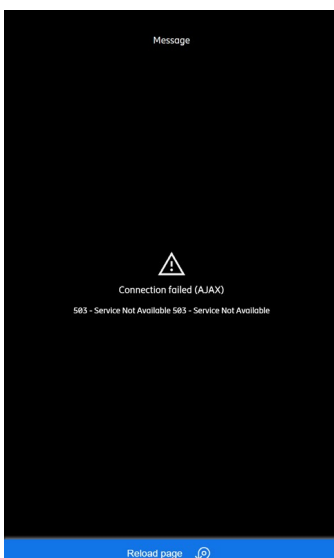


Fig. 7: Connection to the ALC is Interrupted

## 6.4 Install Microsoft RNDIS Driver for Windows 7, 8, and 10

A Remote Network Driver Interface Specification (RNDIS) is a Microsoft(R) proprietary protocol. Devices that use a USB connection to download and debug an OS image from Platform Builder use this driver to emulate a network connection. RNDIS driver is required for this purpose.

An RNDIS driver is a part of the Windows operating system, if the OS cannot detect it automatically, please follow the RNDIS driver installation:

### To install the RNDIS driver

1. Connect the ALC to a device with the mini-USB cable.

The operating system automatically searches for the RNDIS driver. When the system does not find the driver, the following message is shown:

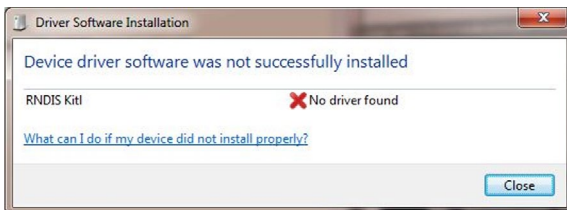


Fig. 8: Driver not recognized.

2. Click Close.

3. On the PC, click Start.

4. Right-click Computer.

5. Select Manage.

6. Below System Tools, select Device Manager.

A list of the devices currently connected to the PC is shown.

7. Open Other Devices.

Another list is shown. In the list, RNDIS Kitl is shown with an exclamation mark, which means that the driver has not been installed yet:

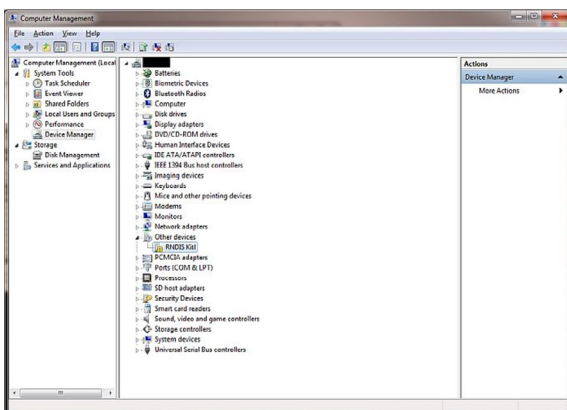


Fig. 9: Device Manager RND not recognized.

8. Right-click RNDIS Kitl.

9. Select Update Driver software.

10. When prompted to: select how to search for the device driver software. Select Browse my computer for driver software.

Browse for driver software on your computer is shown.

11. Select Let me pick from a list of device drivers on my computer.

A window is shown and asks for the device type.



12. Select Network adapters, as the RNDIS emulator a network connection:

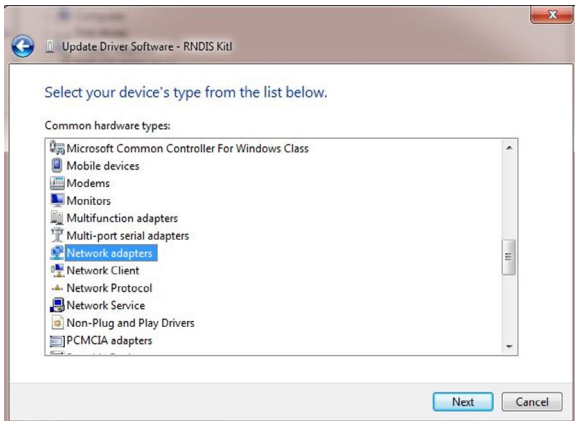


Fig. 10: Update Driver Select Network Adapter

13. Click Next. The following window is shown:

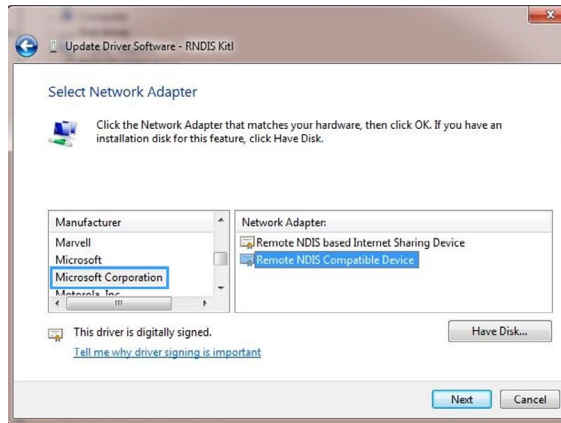


Fig. 11: Update Driver Select Microsoft RNDIS

- 14. Select Microsoft Corporation from the Manufacturer list.
- 15. Select Remote NDIS Compatible Device below Network Adapter.
- 16. Click Next.  
A warning message is shown.
- 17. Click Yes.

The following window is shown:

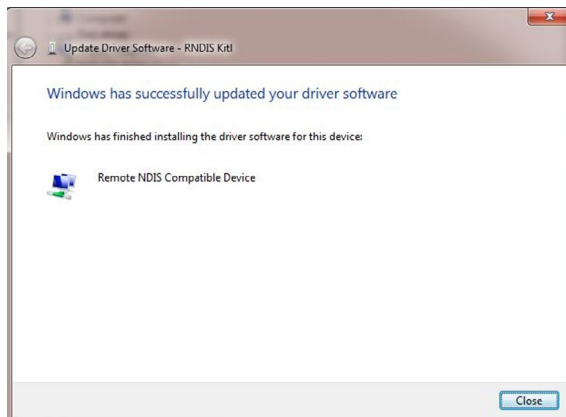


Fig. 12: Successful installation

The RNDIS Kitl device is now installed and is ready to be used.

18. Click Close to complete the installation.

# 7 Graphical User Interface

## 7.1 Introduction

The Graphical User Interface (GUI) of the ALC has the following properties:

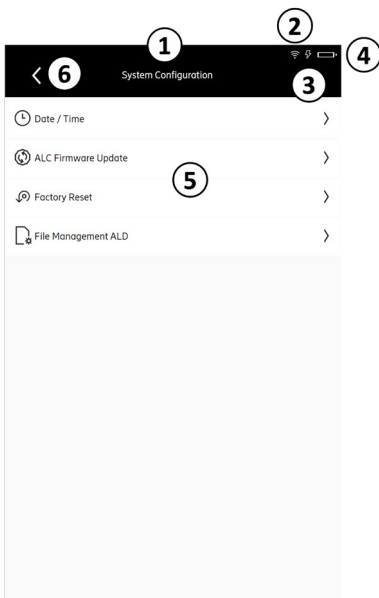
- The GUI is operated through the ALC touch-screen.
- All GUI content can be accessed from the main menu. Section 7.3 provides an overview of the GUI menu structure and contains cross-references to the corresponding sections in these instructions.
- Example descriptions of the displays and controls of the GUI are given below.

### Note

Various devices with a Wi-Fi module can be connected to the ALC using Wi-Fi, for example a PC, laptop, tablet, phone, and so on. Also, the ALC can be connected to a PC or laptop with a micro-USB cable.

The word PC is used in this document, but it can be any device that can be connected to the ALC.

## 7.1.1 Navigate within a Submenu



- ① Title of the page
- ② Shows if Wi-Fi is connected or not (on/off)
- ③ Shows if the DC charger is connected or not
- ④ Charge status of the ALC rechargeable battery
- ⑤ Push buttons to open submenus
- ⑥ Switches to the last page

Fig. 13: Navigating within a Submenu

## 7.1.2 Enter Values

It is sometimes necessary to enter numbers or a combination of the letters and numbers. When you tap the corresponding field, a numerical or an alphanumerical keyboard is shown.



Fig. 14: Numerical Keypad to Enter a Number

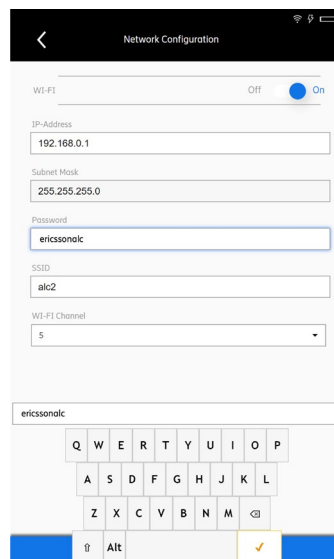


Fig. 15: Alphanumerical Keypad to Enter a Number or Letter

## 7.2 Main Menu

When the device is switched on, the main menu is shown.  
All functions of the ALC can be accessed from here.

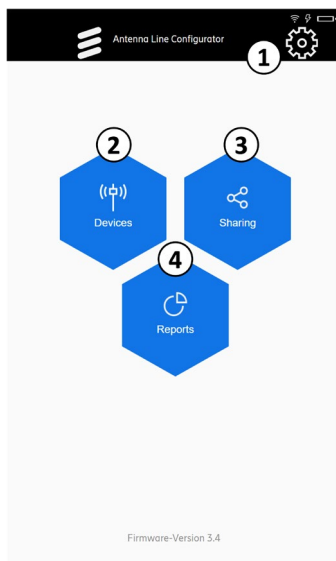


Fig. 16: Main menu

- ① Opens the menu for the general ALC settings, see section 7.3
- ② Configures individual ALDs, see section 9 Operating the ALC in the Devices Mode
- ③ Configures the site sharing adapter, see section 10 Operate the ALC in the Site Sharing Mode
- ④ Opens the menu for ALD and site sharing reports, see section 11, export ALD and Site Sharing Reports

# 8 ALD Setup

## 8.1 Introduction

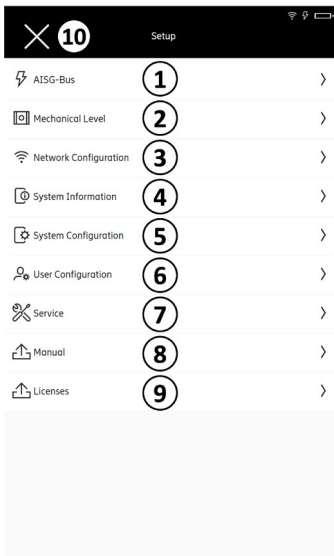
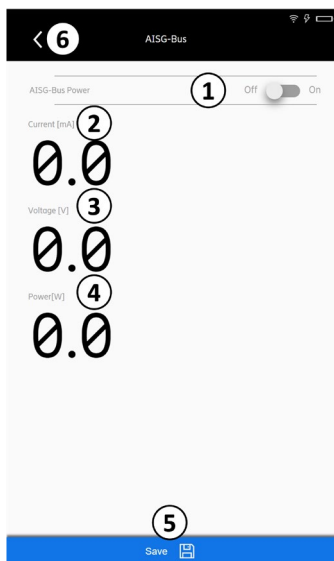


Fig. 17: Setup

- ① Shows the voltage, current, and power of the feeder cable and the AISG bus, see section 8.2
- ② Measures the mechanical adjustment of an antenna, see section 8.3
- ③ Changes the network configuration, see section 8.4
- ④ Shows system information, see section 8.5
- ⑤ Changes system configuration, see section 8.6
- ⑥ Changes user configuration, see section 8.7
- ⑦ Performs service, see section 8.8
- ⑧ Exports the manual on a USB stick / Or opens the manual on the ALC. See section 8.9  
opens the manual as a PDF file in a browser if opened on the PC
- ⑨ Exports the license on a USB stick / Or opens the license on the ALC. See section 8.9  
opens the license as a PDF file in a browser if opened on the PC
- ⑩ Closes the submenu and returns to the previous menu

## 8.2 AISG Bus (Current, Voltage)

The submenu AISG Bus shows how much current, voltage, and power the device connected to the ALD consumes.



- ① Enables/disables the AISG Bus Power
- ② Shows the current of the connected ALD
- ③ Shows the voltage of the connected ALD
- ④ Shows the power of the connected ALD
- ⑤ Press save to save the AISG Bus Power state
- ⑥ Go back

Fig. 18: AISG Bus (Current, voltage)

## 8.3 Mechanical Level

In the Mechanical submenu you can measure the mechanical adjustment of an antenna.



- ① Shows the measured value of the mechanical adjustment in degrees
- ② Calibrates the internal inclination sensor of the ALC
- ③ Closes the submenu and returns to the previous menu

Fig. 19: Mechanical Level

### 8.3.1 Calibrate the Mechanical Adjustment

Prerequisite:

- The ALC lies with its rear panel against an ALD, its level, vertical surface.

1. Tilt the ALC until the required adjustment is achieved.
2. Tap Save to calibrate the internal inclination sensor of the ALC.

## 8.4 Network Configuration

In the Network Configuration submenu you can change the settings of the network configuration.

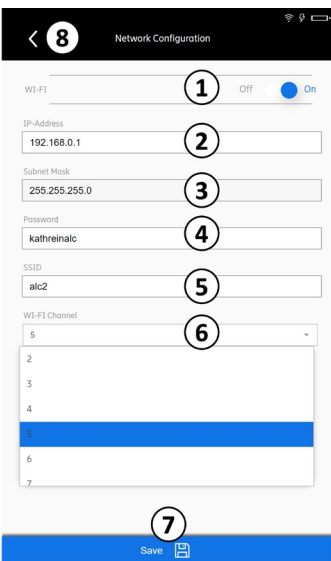


Fig. 20: Network configuration

- ① Turns the Wi-Fi on and off, see section 8.4.1
- ② Changes the IP address, see section 8.4.3
- ③ Shows the subnet mask
- ④ Changes the password, see section 8.4.4
- ⑤ Changes the SSID, see section 8.4.5
- ⑥ Selects a Wi-Fi channel from the values 2 –11, see section 8.4.6
- ⑦ Saves the changes done in ① – ⑥
- ⑧ Closes the submenu and returns to the previous menu

### 8.4.1 Turn on the Wi-Fi

- ① Move the Wi-Fi control (① in Fig. 20) to the right.

### 8.4.2 Turn off the Wi-Fi

- ① Move the Wi-Fi control (① in Fig. 20) to the left.



### 8.4.3 Change the IP Address



Fig. 21: Network configuration: Changing the IP address

- 1 Tap the IP address value field

The numerical keyboard to enter numbers (2) is shown:

- 2 Type the new IP address or enter it with the numerical keyboard.
- 3 Tap Accept
- 4 At the end of all the changes done in the Numerical Configuration submenu, tap Save to save the changes (7 in Fig. 20).

### 8.4.4 Change the Password

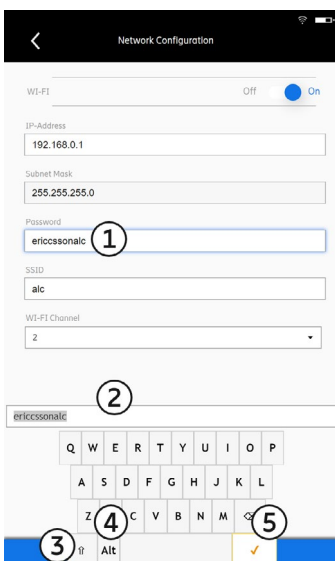


Fig. 22: Network configuration: Changing the password

- 1 Tap the Password value field.

The alphanumeric keyboard to enter a new password (2) in Fig. 22) is shown:

- 2 Type the new password or enter it with the numerical keyboard.
- 3 Tap to change the keyboard to caps lock, if required.
- 4 Tap to to change the keyboard to special characters, if required.
- 5 Tap Accept (shown here as a tick).
- 6 At the end of all the changes done in the Numerical Configuration submenu, tap Save to save the changes (7 in Fig. 20).

## 8.4.5 Change the SSID

1. Tap the SSID value field (⑤ in Fig. 20).  
The keyboard to enter a new SSID (② in Fig. 22) is shown.
2. Do steps in section 8.4.4.

## 8.4.6 Select a Wi-Fi Channel

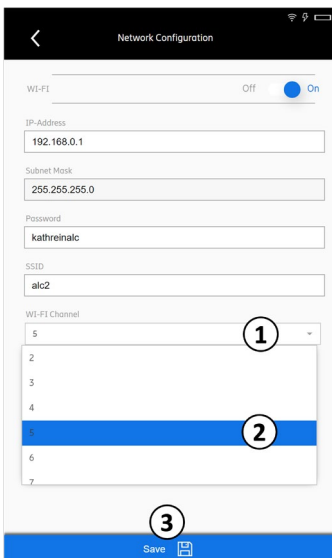


Fig. 23: Network configuration: Selecting a Wi-Fi channel

- ① Tap the Wi-Fi Channel field.  
The drop-down menu with channels from values between the values 2–11 are shown:
- ② Select a Wi-Fi channel from the drop-down menu.
- ③ Tap Save to save the changes.

## 8.5 System Information

The System Information submenu shows all ALC key system information.

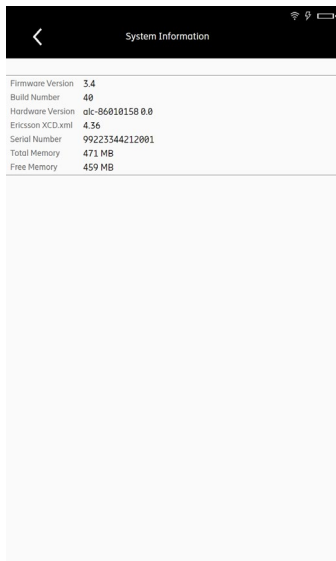
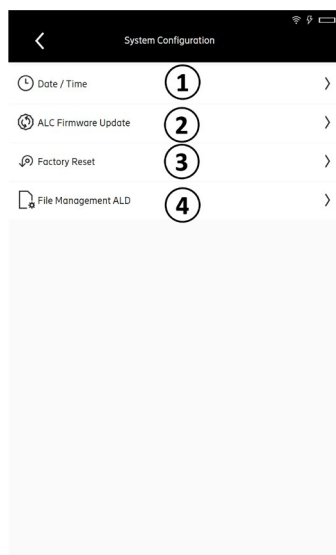


Fig. 24: System information

## 8.6 Change System Configuration

In the Charging System Configuration submenu you can change key system settings.



- ① Changes date and time, see section 8.6.1
- ② Updates the ALC firmware, see section 8.6.2
- ③ Resets the ALC to factory settings, see section 8.6.3
- ④ Manages the ALD files, see section 8.6.4

Fig. 25: System configuration

## 8.6.1 Change Date and Time

1. Tap the Date/Time submenu (① in Fig. 25).  
The following submenu opens:

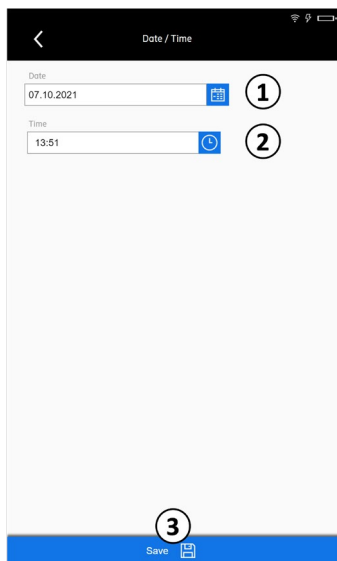


Fig. 26: System configuration: Changing the date and time

2. Tap the Date value field.  
The calendar opens:

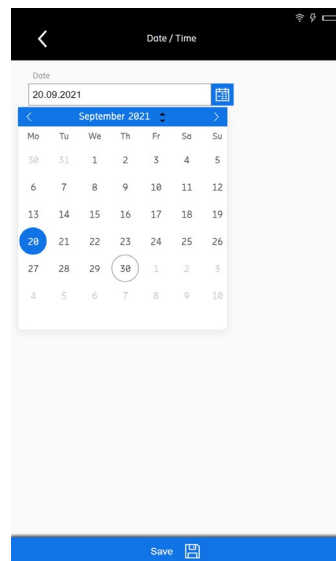


Fig. 27: Changing the date

3. Select a date in the calendar.
4. Tap the Time value field.  
The following window is shown:

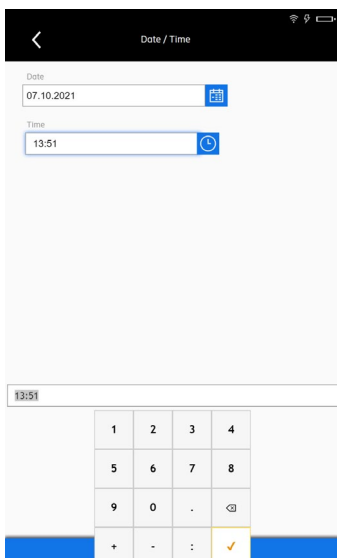


Fig. 28: Changing the time

5. Change the time (hours and minutes): tap the down or up arrow.
6. At the end of all the changes done in the Date/Time submenu, tap Save to save the changes (③ in Fig. 26).

## 8.6.2 Update the ALC Firmware

### Note

Before you update the ALC firmware, make sure to load the firmware update onto the USB stick. It is recommended that the firmware file is stored in the /alc-update directory of the USB stick for easier handling.

#### Prerequisites:

- A USB stick is plugged into the USB port on the ALC.
- An update file in the \*.swu format is loaded in the /alc-update directory.
- The charger cable is connected to the ALC during the full update process.

1. Tap the Software update submenu (② in Fig. 25).  
The following message is shown:

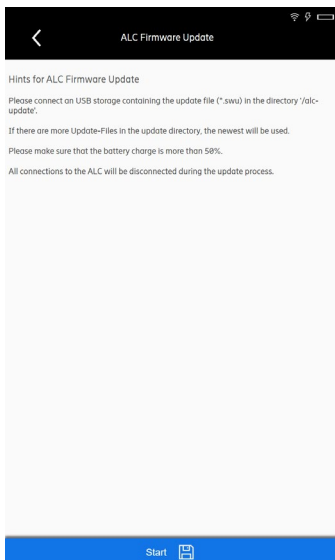


Fig. 29: System configuration: Software update

2. Tap Save to continue with the firmware update. The following message is shown:

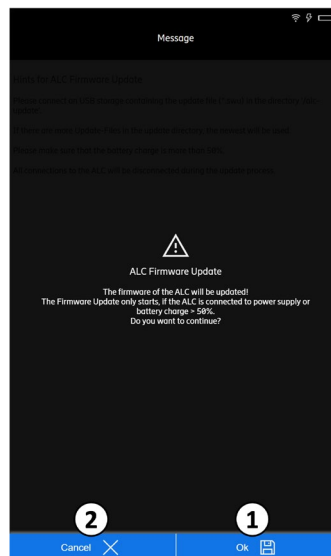


Fig. 30: Firmware update: warning message

3. Tap OK (① in Fig. 30) to continue with the firmware update.

4. Tap Cancel (② in Fig. 30) to cancel the update.

5. If you have tapped OK, the ALC it automatically searches the USB and selects the firmware update file.

6. During the update, the ALC turns off.

7. If more than one update file exists in the update directory, the ALC will use the latest one.

8. All connections to the ALC are lost during the update process.

9. After the update process, the ALC turns on automatically.

## 8.6.3 Reset the ALC to Factory Settings

It is necessary to reset the ALC to factory settings if:

- You forgot Wi-Fi settings, for example password.
- The ALC must be reset to factory settings.

### Note

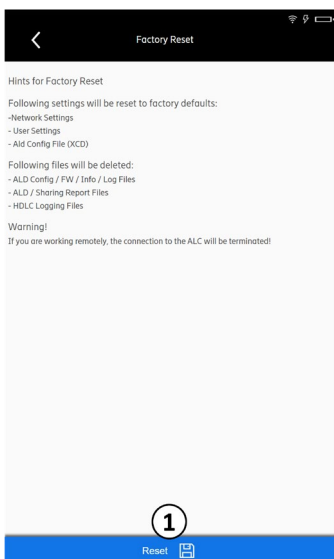
Before you set the ALC to the factory settings, be aware that the following settings will be reset to the factory default settings:

- Network settings
- User settings
- ALD configuration file (XCD)

Be aware that the following files will be deleted:

- ALD Config/FW/Info/Log Files
- ALD/Site sharing report files
- AISG Bus logging files

1. Tap the Factory Reset submenu (③ in Fig. 25).  
The following submenu opens



2. Tap Save to reset the ALC to the factory settings.  
The ALC turns off.  
The connection to the ALC is terminated.  
The ALC restarts automatically when it is reset to factory settings.

Fig. 31: System configuration: Factory reset

## 8.6.4 Manage ALD Files

### Note

Before you import or export ALD files onto/from a USB stick, make sure to connect a USB stick with the corresponding files to the ALC or use the PC with the browser.

Tap the File Management ALD submenu (④ in Fig. 25). The following submenu opens: vTo open the list, delete the existing entry:

To open the list, delete the existing entry:

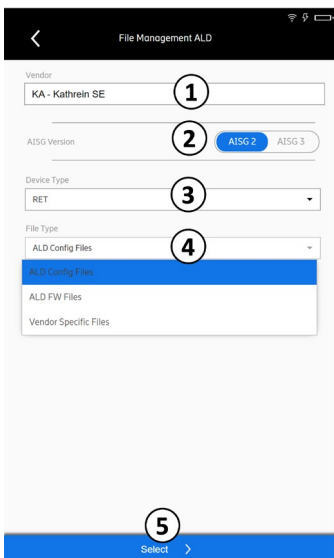


Fig. 32: System configuration: File management ALD

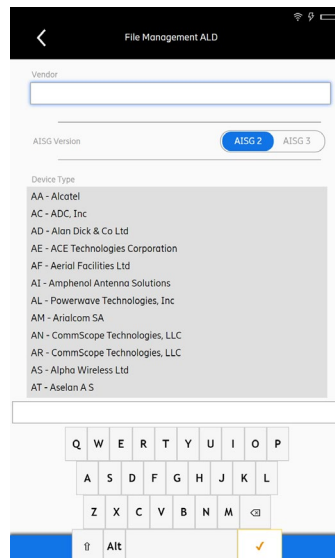


Fig. 33: System configuration: Change the AISG Vendor

- ① Selects the vendor from the list
- ② Selects the AISG protocol between AISG 2 and AISG 3
- ③ Selects the device type from the drop-down menu
  - Between ALD Sensor (ASD), Geographic Location Sensor (GLS), RET, TMA, FlexRET for the AISG 2 protocol.
  - Between Single Primary ALD (SALD) and Multi-primary ALD (MALD) for the AISG 3 protocol.
- ④ Selects the file type from the drop-down menu between ALD Config Files, ALD FW Files and Vendor Specific Files.
- ⑤ Goes to the selected file type to do more actions, see section Import/Export/Delete ALD Files. Section: 8.6.4.1

## 8.6.4.1 Import/Export/Delete ALD Files

To import/export new files, make sure that a USB stick is inserted into the ALC or you use the PC with the Browser.

1. After all the selections in 8.6.4 are done, tap ⑤ in Fig. 34.  
The following page is shown (on the example of the AISG 2 protocol, RET antenna, and ALD Config Files):

2. To select all files, set a tick at "Select All Files"  
To select one or more files, tick the boxes next to the corresponding files.  
The file/files is/are selected and the buttons Import, Export, and Delete are active:

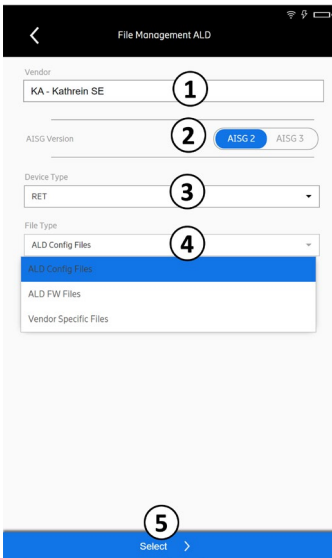


Fig. 34: System configuration: File Management ALD, ALD Config Files

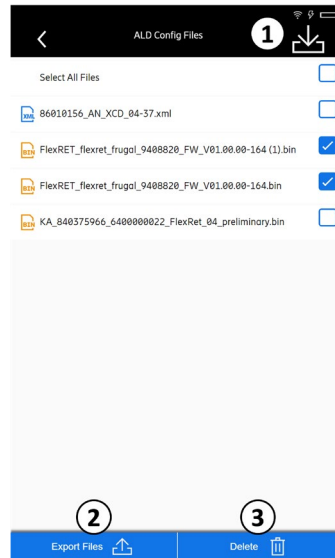


Fig. 35: System configuration: File Management ALD, ALD Config Files



## 8.6.4.2 Import an ALD File

### Prerequisite:

- ALD files are selected on the ALC, see section Import/Export/Deleting ALD Files..

1. Tap Import (① in Fig. 35) to import an ALD Config File from the USB stick onto the ALC.

If no USB stick is connected, the following warning message or if a USB stick is connected, the folders on the connected USB stick are shown:

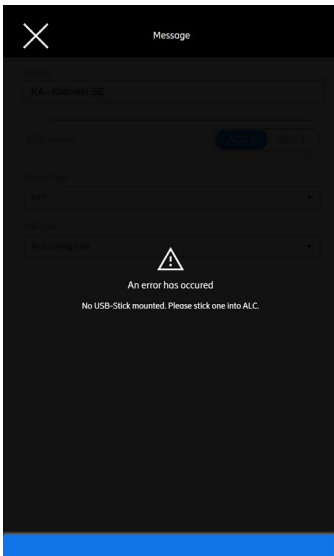


Fig. 36: No USB connected message

2. Select a folder in which an ALD file is stored.

3. Select an ALD file/files in a folder.

4. Tap Import.

The selected file is imported onto the ALC from the USB stick.

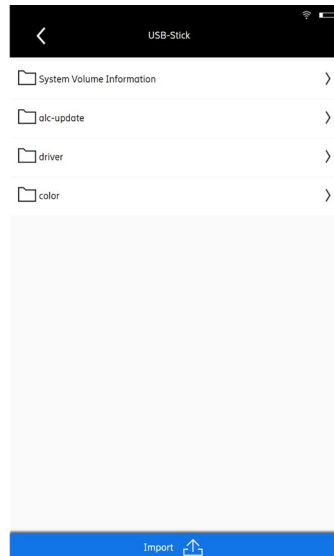


Fig. 37: Import an ALD file: Folders

## 8.6.4.3 Delete an ALD File

### Prerequisite:

- ALD files are selected on the ALC, see section Importing/Exporting/Deleting ALD Files

1. Tap Delete to delete the selected file from the ALC.

The selected file is deleted from the ALC.

## 8.6.4.4 Importing/Exporting Files from or onto a PC

### Note

If the ALC is connected to a PC through Wi-Fi, you can import/export files from/onto the PC directly.

## 8.7 Change User Configuration

In the Changing User Configuration submenu you can change the user settings.



The screenshot shows the 'User Configuration' screen. At the top left, there is a back arrow and a circled '5'. The screen contains three input fields: 'Installer ID' with a circled '1', 'Installation Company' with a circled '2', and 'Language' with a dropdown menu showing 'English' and a circled '3'. At the bottom, there is a blue bar with a 'Save' button and a document icon, with a circled '4' above it.

- ① Enters the installer ID with the alphanumeric keyboard.
- ② Enters the installation company with the alphanumeric keyboard.
- ③ Selects the language.
- ④ Saves changes done.
- ⑤ Returns to the previous menu.

Fig. 38: User configuration

## 8.8 Perform Service

**Note**

The submenu Service is password-protected for security reasons. To get the password, contact Ericsson.

In the Performing Service submenu you can access the HDLC logging.

**Note**

Logging can only be done with an AISG-Y cable.

- ① Enters the password to access the service through the numerical keyboard.
- ② Confirms the entered password.

- 1. Click on the Password field (① in Fig. 39). The numerical keyboard is shown.
- 2. Enter the password.
- 3. Confirm the password: tap the tick on the numerical keyboard:

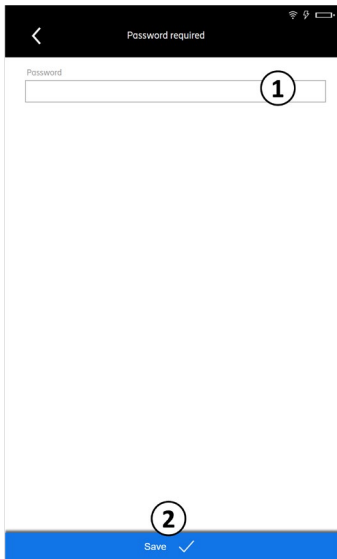


Fig. 39: Service: Enter password

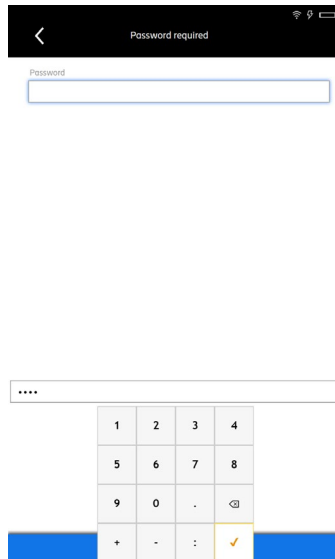


Fig.40: Service: Numerical keyboard

4. The following page is shown:

5. Tap Save ① to confirm the entered password



Fig. 41: Service: Confirm password

The following page is shown:

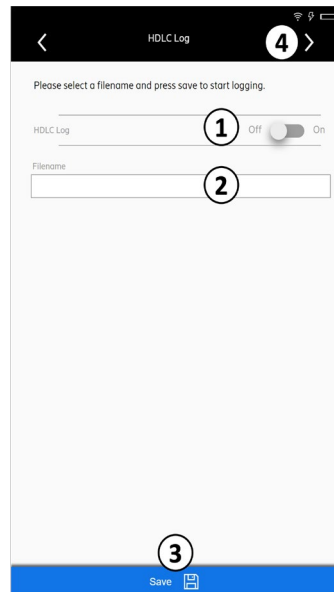


Fig. 42: Service: HDLC logging

- ① Turns HDLC logging on and off.
- ② Enters a filename with the alphanumerical keyboard. You can enter a filename only if the logging has been turned on.
- ③ Saves the changes done in ① and ②
- ④ Shows the log files.

6. Tap the Filename field.

7. Enter a filename with the alphanumerical keyboard.

8. Confirm the filename: tap Save on the alphanumerical keyboard.

The HDLC logging starts automatically. All activities done on the AISG bus are saved in a file.

9. Tap ④ in Fig. 42 to show the log files.  
The following page is shown:

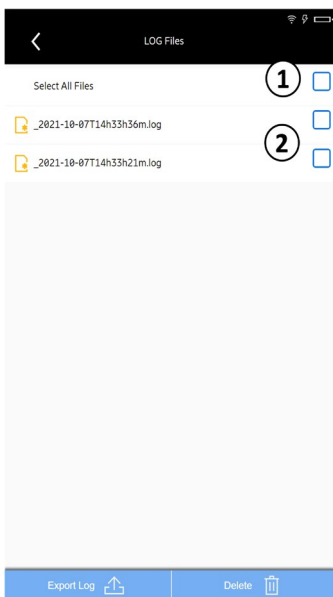


Fig. 43: Service: HDLC logging – selecting log files

- ① Selects all files
- ② Selects one or more files

10. Select the log files.  
The following page is shown:

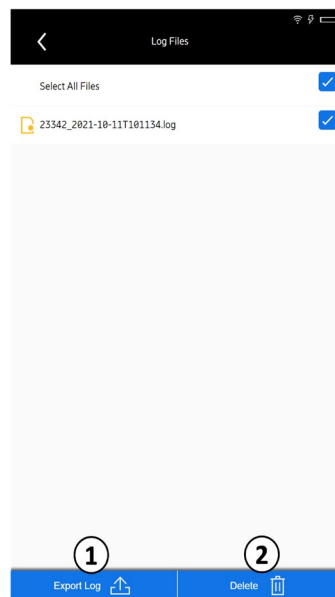


Fig. 44: Service: HDLC logging – export or delete log files

- ① Exports the selected file/files onto a USB stick
- ② Deletes the selected file/files

11. To export the selected log files, tap Export Log. (① in Fig. 46). The folders on the connected USB stick are shown.

12. Continue as described in Export Log an ALD File.

13. To delete the selected log files, tap Delete (② in Fig. 46).

## 8.9 Export the Manual

### Prerequisite:

- A USB stick is plugged into the USB port on the ALC.

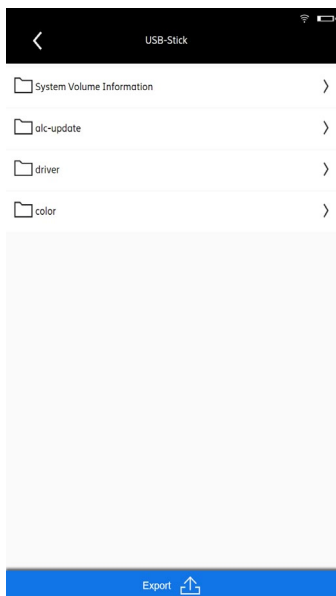


Fig. 45: Export manual: Folders

1. Tap export Manual (⑧ in Section 8.1)  
The folders on the connected USB stick are shown:

2. Tap Export (① in Fig. 39).  
The manual is exported onto the USB stick.

① Exports the file onto the USB stick

## 8.10 Export Licenses text

To export the licenses onto a USB stick is done as described in Export Manual, Section 8.9.

### Note

The manual and licences are shown immediately when the ALC is used through the PC/smartphone interface.

# 9 Operate the ALC in the Devices Mode (AISG 2)

## 9.1 Search for an ALD

Prerequisite:

- An ALD is connected to the ALC through the AISG port connector (HF or RS 485).

1. Tap Devices in the main menu, see section 7.2 in Fig. 16  
The following page is shown (on the example of the AISG 2 protocol):

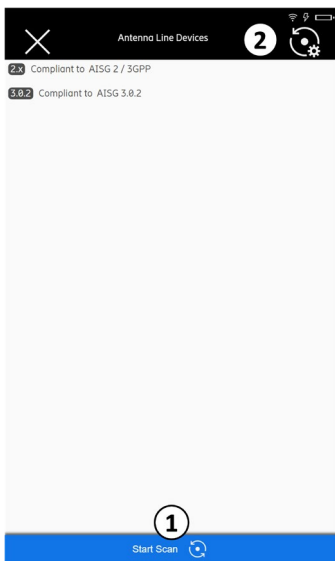


Fig. 46: Devices: Initial screen

2. Tap Scan (① in Fig. 46) to start scanning for ALDs.  
The scanning process starts:

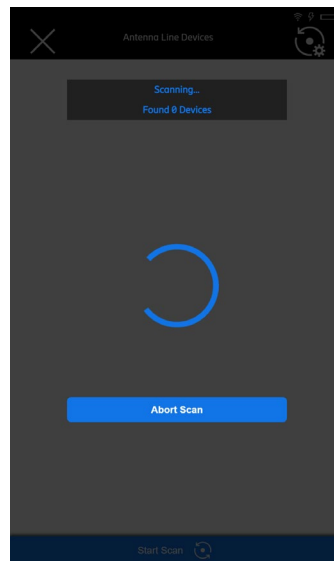


Fig. 47: Devices: Scanning

- ① starts a scan
- ② changes scan protocol settings

If one or more ALDs are found in the scanning process, the page is shown as follows:

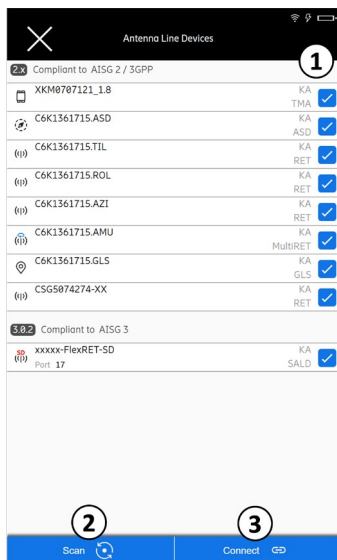


Fig. 48: Devices: ALD found

If the connection is not possible, the following warning message is shown:

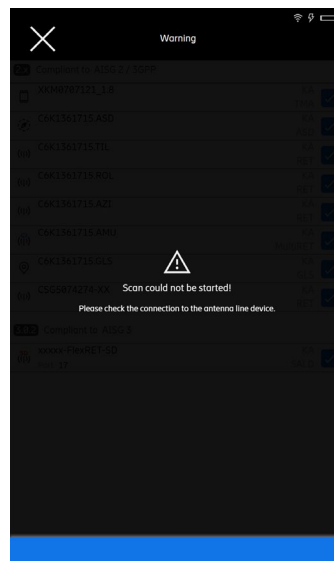


Fig. 49: Devices: Warning message "Scan could not be started"

- ① Selects or deselects an ALD
- ② Selects the AISG protocol scanning options, see section 9.1.1
- ③ Connects to the selected ALD

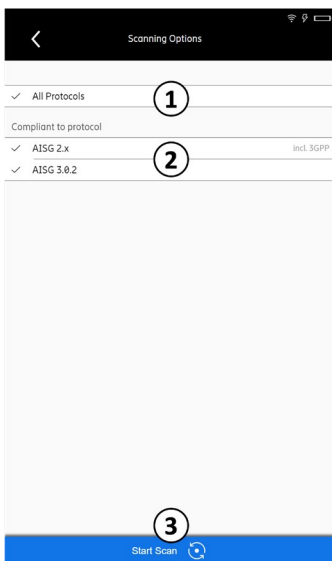
**Note**

If no ALD is found when scanning the AISG bus, ① fig 48 is not available.



## 9.1.1 Select the AISG Protocol Scanning Options

1. Tap ② in Fig. 48 to open the AISG protocol scanning options.  
The following page is shown:



- ① Selects or deselects all scanning options
- ② Selects or deselects individual scanning options
- ③ Saves the protocol selection and starts the scan

Fig. 50: Devices: Scanning options

## 9.2 Connect to an ALD

1. After pressing Connect in figure 48, section 9.1

The following page is shown:

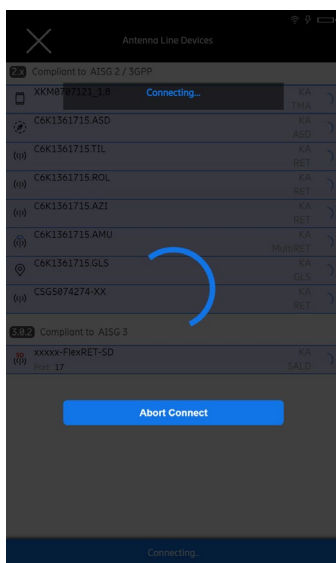


Fig. 51: Devices: Connecting to an ALD

2. After the ALC has established a connection to the ALD, the Connect button is gray and you can view the ALD properties and change some settings.

The following page is shown:



Fig. 52: Devices: Connected to an ALD

- ① Shows the ALD icon
- ② Shows the ALD serial number
- ③ Shows the vendor code and the device type
- ④ Opens the AISG protocol scanning options, see section 9.1.1
- ⑤ Generates an ALD report

## 9.3 Select the Report Type

ALD reports are where the device data for the ALDs connected to the AISG bus is saved as report files in the ALC internal memory.

The screenshot shows the 'Select Report Type' interface. It includes a 'Remarks' field (1), a 'Filename' field (2), and a 'Report Types' section (3) with four options: XML, PDF, CSV (only Aisg 2.x), and TXT (only Aisg 2.x), each with a checked checkbox. At the bottom is a 'Generate Report' button (4).

1. Tap ④ in Fig. 53. The following page is shown:

- ① Enters remarks
- ② Enters a filename
- ③ Selects between report types, CSV, TXT, XML or PDF
- ④ Saves the changes

Fig. 53: Select the Report type

## 9.4 Operate the Ericsson FlexRET

Antennas with Ericsson FlexRET are factory-installed with a Radio Frequency Identification (RFID) tag. The tag contains key configuration data for the antenna. The configuration details exported by the FlexRET and is read by the ALC when scanning the AISG bus when connected to a FlexRET.

Prerequisites:

- The ALC has found the ALD.
- The ALD is connected to the ALC, see section 9.1 and 9.2

1. Tap ① in Fig. 54 to open the list with the individual subunits. The following page is shown:

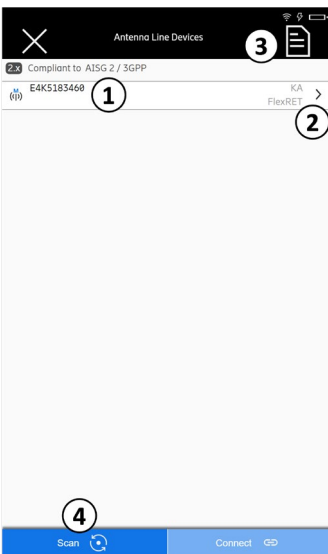


Fig. 54: Devices: Connected to a FlexRET

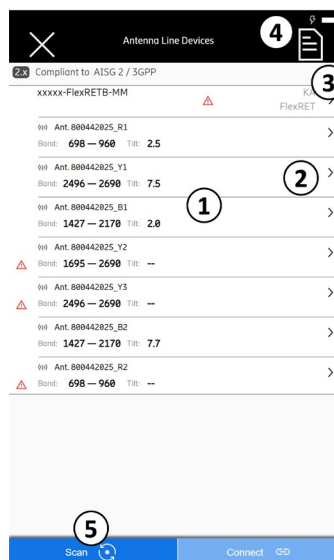


Fig. 55: Devices: Configuring the individual FlexRET subunits

- ① Opens the list with the individual subunits, see section 9.4.2
- ② Opens the FlexRET properties, see section 9.4.1
- ③ Generates ALD reports, see section 9.3
- ④ Selects the AISG protocol scanning options, see section 9.1.1

- ① Shows the list of the individual subunits
- ② Opens the properties of the selected subunit, see section 9.4.2
- ③ Opens the FlexRET properties, see section 9.4.1
- ④ Generates ALD reports, see section 9.3
- ⑤ Selects the AISG protocol scanning options, see section 9.1.1

## 9.4.1 Change the FlexRET Settings

1. Tap ① in Fig. 55 section 9.4 to show the FlexRET properties. The following page is shown:

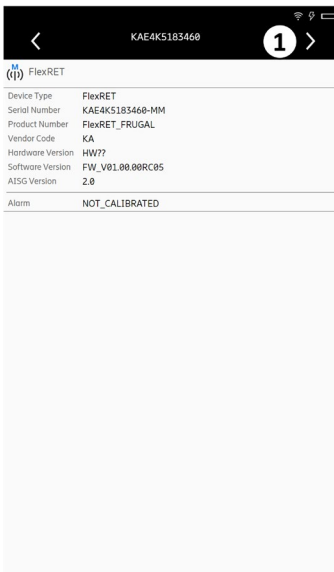


Fig. 56: Devices: FlexRET properties

2. Tap ① in the previous figure. The following page is shown:

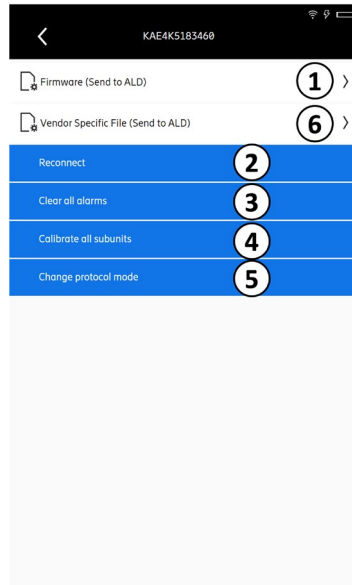


Fig. 57: Devices: Changing FlexRET properties

① Opens the submenu to change the FlexRET properties.

① Opens the page to update the FlexRET firmware.

② Reconnects to the FlexRET.

③ Clears all alarms.

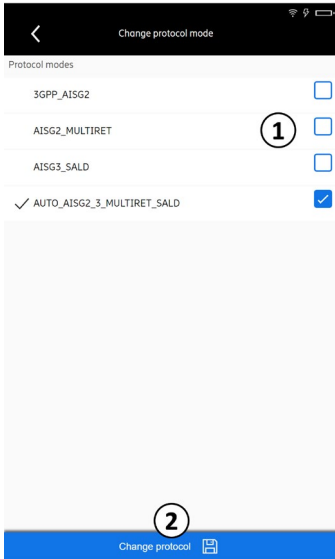
④ Calibrates all subunits, compare 3 section 9.4.1.1

⑤ Opens the submenu to change the protocol mode, see section 9.3.2.1

⑥ Opens the page with the vendor-specific files.

### 9.4.1.1 Change the FlexRET Protocol Mode

1. Tap ① in Fig. 57 to change the FlexRET protocol mode. Depending on the FlexRET you may have more or less possible protocol modes. The following page is shown:

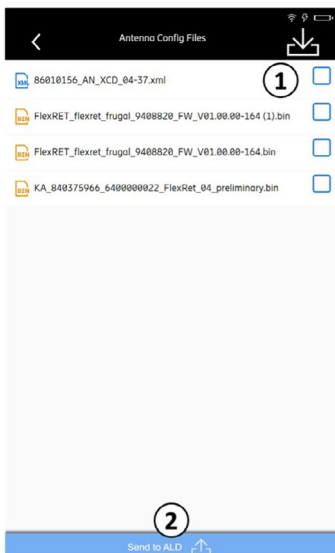


- ① Selects or deselects the protocol mode between
- 3GPP\_AISG: AISG 2.0 and 3GPP protocol (for single antenna/SingleRET mode) and;
  - AISG20\_MULTIRET: 3GPP protocol (for antenna/MultiRET mode)  
In MultiRET mode, the serial number of the FlexRET module has the extension MM.
- ② Saves the settings

Fig. 58: Devices: FlexRET: Changing the FlexRET protocol mode

### 9.4.1.2 Update the Antenna Config File / Firmware File

1. Tap ① in Fig. 62 to update the antenna Config file. The following page is shown:



- ① Selects the file.
- ② Exports the file from the ALC onto the subunit is active (the panel and the icon change from gray to red) only if a file has been selected in ①

Fig. 59: Devices: Updating the Antenna Config File

## 9.4.2 Configure the FlexRET Subunits

1. Tap ② in the figure below to open the properties of the selected subunits. The following page is shown:

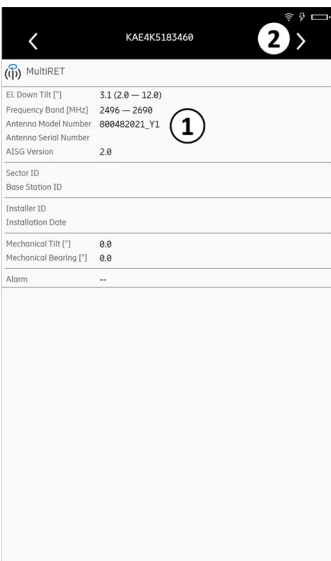


Fig. 60: Devices: Properties of the selected

① Shows the subunit properties.

The values of the following fields are shown and cannot be changed:

- Tilt Range
- Frequency Band
- Antenna Model Number
- Antenna Serial Number
- Protocol Version

② Opens the settings of the selected subunit, see Fig 61.

1. Tap ① in Fig. 54 Section 9.4 to open the list with the individual subunits.

The following page is shown:

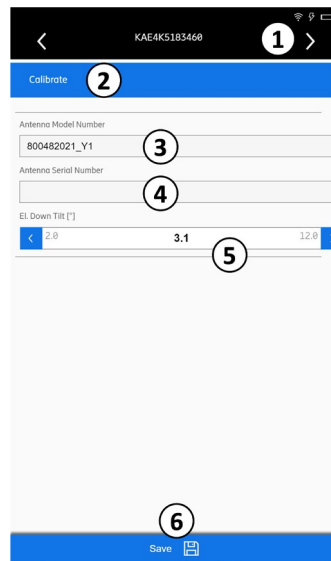


Fig. 61: Devices: Changing settings of the selected subunit

① Opens the submenu to enter the values for the selected subunit, see section 9.4.2.1

② Calibrates the subunit.

To calibrate the subunit, tap Calibrate. The calibration process is done.

③ Selects the antenna model number to which the ALD is configured for from the list; the list is valid only for Ericsson RETs.

To open the list, delete almost all the characters in the current antenna model number.

The list with antenna model numbers is opened.

### Note

For preconfigured RETs and FlexRETs, this option is deactivated.

④ Shows the antenna serial number; you can change the antenna serial number for RETs without an RFID tag or manufacturers other than Ericsson

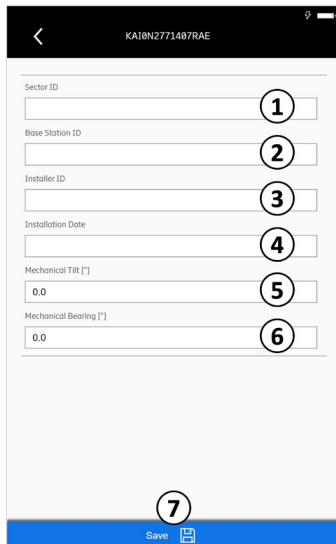
⑤ Changes the electrical downtilt

⑥ Saves the changes

## 9.4.2.1 Add the Subunit Properties

1. Tap ① in the previous figure to open the list with the individual subunits.

The following page is shown:



The screenshot shows a mobile application interface for adding subunit properties. At the top, there is a header bar with a back arrow, the identifier 'KA18N2771487RAE', and a signal strength indicator. Below the header, the form consists of several input fields, each with a circled number indicating a step: 1 for Sector ID, 2 for Base Station ID, 3 for Installer ID, 4 for Installation Date, 5 for Mechanical Tilt (with a value of 0.0), and 6 for Mechanical Bearing (with a value of 0.0). At the bottom of the form, there is a blue 'Save' button with a document icon and the number 7.

- ① Enters the sector ID
- ② Enters the base station ID
- ③ Enters the installer ID
- ④ Enters the installation date
- ⑤ Enters the value for the mechanical tilt
- ⑥ Enters the value for the mechanical bearing
- ⑦ Saves the changes

Fig. 62: Devices: Adding subunit properties



## 9.5 Operate the RET

### Prerequisites:

- The ALC has found the ALD.
- The ALD is connected to the ALC, see section 9.1, and 9.2

The following is shown:

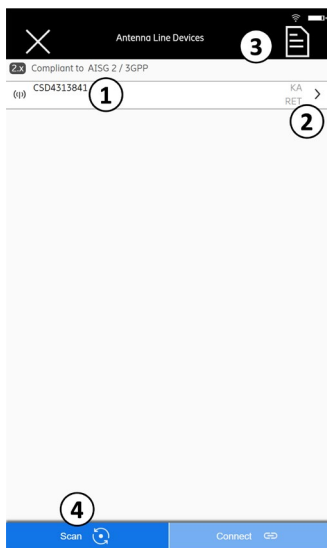


Fig. 63: Devices: Connected to a RET

1. Tap ① in Fig. 63 to open the list with the subunits.  
The following page is shown:

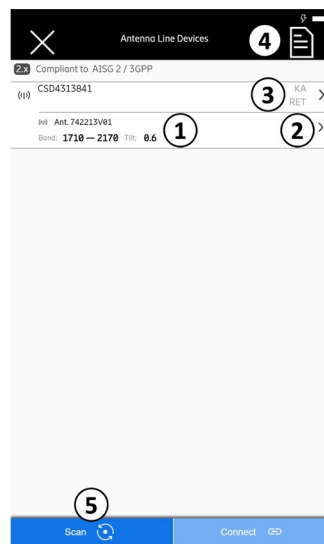


Fig. 64: Devices: Configuring the RET antenna

- ① Opens the list with the individual subunits, see section 9.5.2
- ② Opens the RET properties, see section 9.5.1
- ③ Generates ALD reports, see section 9.3
- ④ Selects the AISG protocol options for reports, see section 9.1.1

- ① Shows the list of the subunits
- ② Opens the subunit setting, see section 9.5.2
- ③ Opens the RET settings, see section 9.3.1
- ④ Selects report types and generates reports, see section 9.3
- ⑤ Selects the AISG protocol options for reports, see section 9.1.1

## 9.5.1 Change the RET Settings

1. Tap ② in Fig. 63 to show the RET properties.

The following page appears:



Fig. 65: Devices: RET properties

2. Tap ① in Fig. 65.

The following page appears:

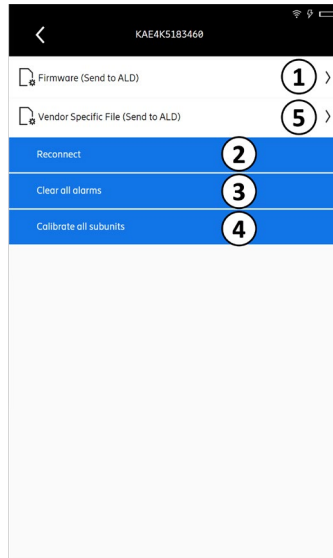


Fig. 66: Devices: Changing RET properties

① Opens the submenu to change the RET

① Opens the page to update the RET firmware

② Calibrates all subunits

③ Clears all alarms

④ Reconnects to the RET

⑤ Opens the page with the vendor specific files

## 9.5.2 Change the RET Subunits Settings

1. Tap ② in the figure below to open the properties of the selected subunits. The following page is shown:

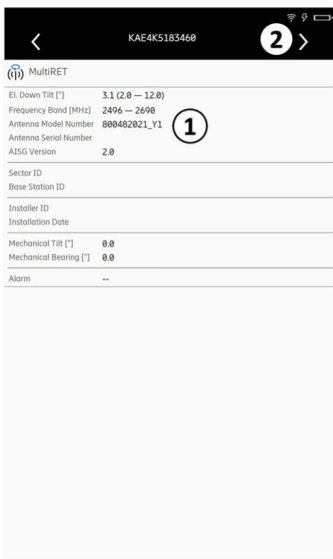


Fig. 67: Devices: Properties of the selected subunit

① Shows the subunit properties

The values of the following fields are shown and cannot be changed:

- Tilt Range
- Frequency Band
- Antenna Model Number
- Antenna Serial Number
- Protocol Version

② Opens the settings of the selected subunit

1. Tap ① in Fig. 67 to open the list with the individual subunits. The following page is shown:



Fig. 68: Devices: Changing settings of the selected subunit

① Opens the submenu to enter the values for the selected subunit, see section 9.5.2.2

② Updates the antenna Config file, see section 9.5.2.1

③ Calibrates the subunit.

To calibrate the subunit, tap Calibrate. The calibration process is done.

④ Selects the antenna model number to which the ALD is configured for from the list; the list is valid only for Ericsson RETs.

To open the list, delete almost all the characters in the current antenna model number.

The list with antenna model numbers is opened.

### Note

For preconfigured RETs and FlexRETs, this option is deactivated.

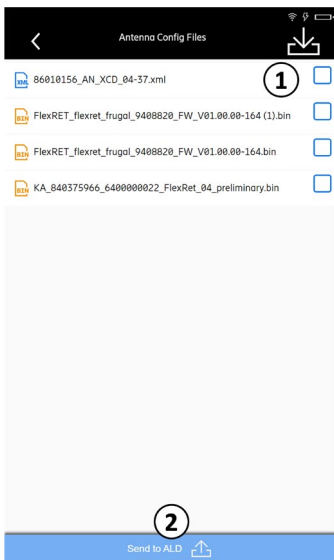
⑤ Shows the antenna serial number; you can change the antenna serial number for RETs without an RFID tag or manufacturers other than Ericsson

⑥ Changes the electrical downtilt

⑦ Saves the changes

## 9.5.2.1 Update the Antenna Config

1. Tap 2 in Fig. 68 to update the antenna Config file.  
The following page is shown:

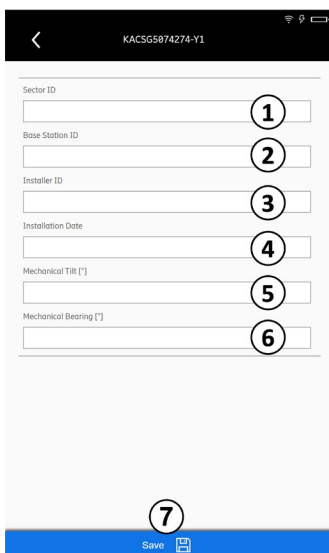


- ① Selects the file
- ② Exports the file from the ALC onto the subunit is active (the panel and the icon change from gray to red) only if a file has been selected in ①

Fig. 69: Devices: Updating the Antenna Config File

## 9.5.2.2 Add the Antenna Properties

Tap ① in Fig. 68 to open the list with the individual subunits. The following page appears:



- ① Enters the sector ID
- ② Enters the base station ID
- ③ Enters the installer ID
- ④ Enters the installation date
- ⑤ Enters the value for the mechanical tilt
- ⑥ Enters the value for the mechanical bearing
- ⑦ Saves the changes

Fig. 70: Devices: Adding antenna properties

## 9.6 Operate the TMA

- The ALC has found the ALD and the ALD has been connected to the ALC, see 9.1 and 9.2
- The following is displayed:

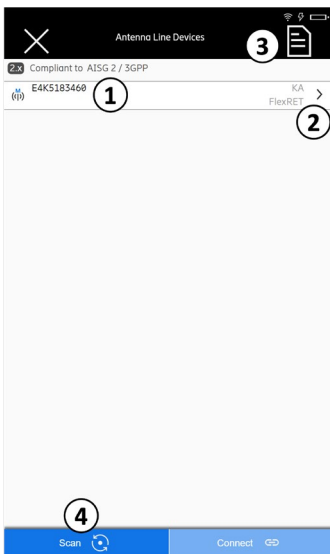


Fig. 71: Devices: Connected to a TMA

1. Tap ① in Fig. 71 to open the list with the subunits.

The following page appears:

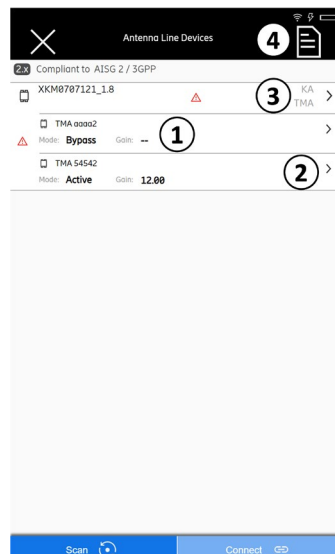


Fig. 72: Devices: Configuring the TMA

- ① Opens the list with the individual subunits, see 9.6.2
- ② Opens the TMA properties, see 9.6.1
- ③ Generates ALD reports, see 9.3
- ④ Selects the AISG protocol scanning options

- ① Shows the list of the subunits
- ② Opens the subunit properties
- ③ Opens the TMA properties
- ④ Selects report types and generates reports, see 9.3

## 9.6.1 Change the TMA Settings

1. Tap ③ in Fig. 72 to show the TMA properties.  
The following page is shown:

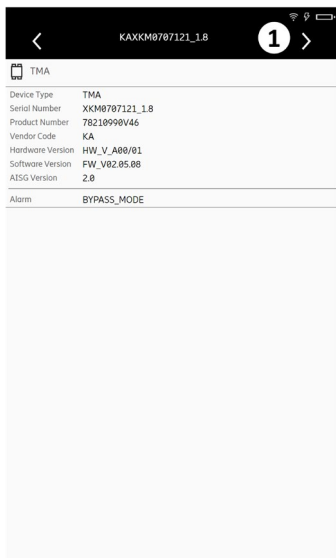


Fig. 73: Devices: TMA properties

2. Tap ① in Fig. 73.  
The following page is shown:

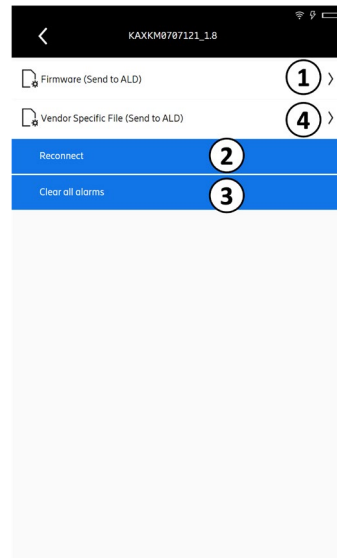


Fig. 74: Devices: Changing TMA properties

① Opens the submenu to change the TMA properties

① Opens the page to update the RET firmware

② Reconnects to the TMA

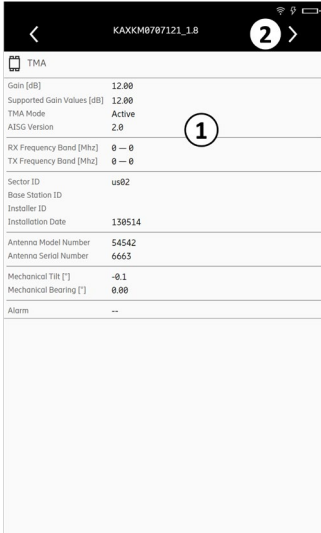
③ Clears all alarms

④ Opens the page with the vendor-specific files

## 9.6.2 Show Properties of the TMA Subunits

1. Tap ② in Fig. 72 to open the subunit properties.

The following page is shown:



① shows the subunit properties

The values of the following fields are shown and cannot be changed:

- RX Frequency Band
- TX Frequency Band
- Change the TMA Subunit Settings

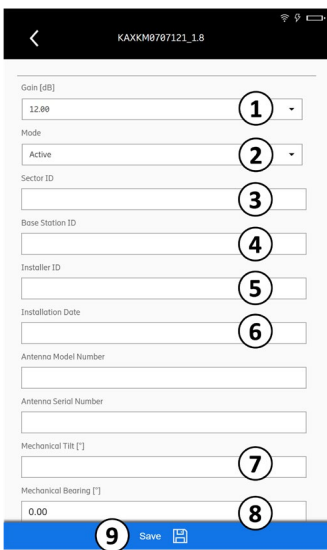
② opens the settings of the subunit, see section 9.6.2.1

Fig. 75: Devices: Properties of the TMA subunit

### 9.6.2.1 Change the TMA Subunit Settings

1. Tap ② in Fig. 75 to open the settings of the subunit.

The following page is shown:



① Changes the gain

**Note**

The gain on a fixed gain TMA cannot be changed.

② Changing the mode between Active and Bypass

**Note**

Bypass can be changed only if supported by a TMA.

③ Enters the sector ID

④ Enters the base station ID

⑤ Enters the installer ID

⑥ Enters the installation date

⑦ Enters the mechanical tilt

⑧ Enters the mechanical bearing

⑨ Saves the changes done in ① - ⑧

Fig. 76: Devices: Changing the TMA subunit settings

## 9.7 Operate the RAE

The ALC has found the ALD and the ALD has been connected to the ALC, see 9.1 and 9.2

The following is displayed:

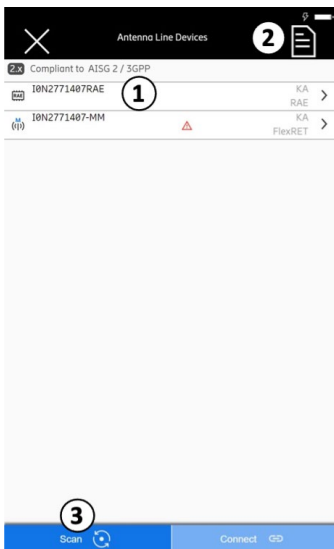


Fig. 77: Devices: Connected to a RAE

- ① Opens the list with the individual subunits
- ② Generates ALD reports, see 9.3
- ③ Selects the AISG protocol scanning options

1. Tap ④ in Fig. 77. The following page is shown:

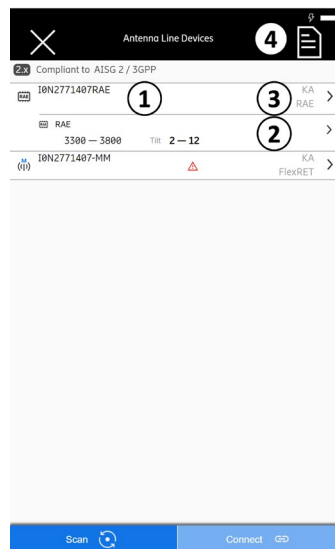


Fig. 78: Devices: Configuring the RAE

- ① Shows the list of the subunits
- ② Opens the subunit properties, see Showing Properties of the RAE Subunits see 9.6.2
- ③ Opens the RAE properties, see 9.6.1
- ④ Selects report types and generates reports, see 9.3



## 9.7.1 Overview RAE Details

Tap ③ in Fig. 78.

The following page is shown:

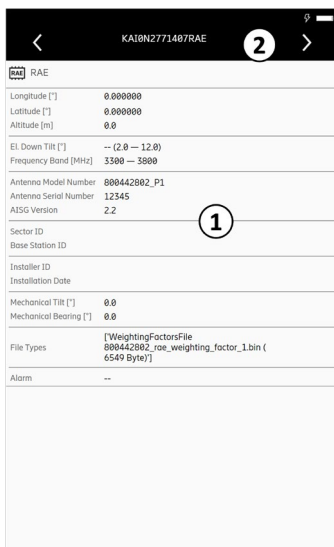


Fig. 79: Devices: RAE details

- ① Enters the actions of the RAE main device
- ② Shows the details of the RAE

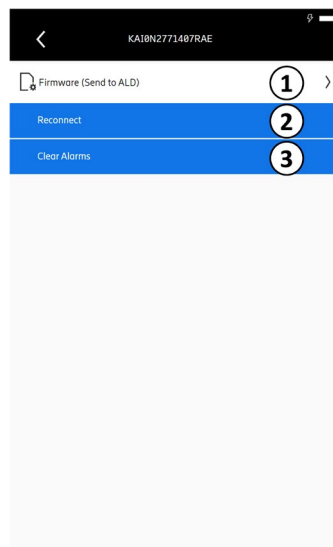


Fig. 80: Devices: RAE actions

- ① Update the firmware file, see section 9.4.1.2
- ② Reconnect the ALD
- ③ Clears the alarms

## 9.7.2 Overview RAE Subunit Settings

1. Tap ② in Fig. 78 to open the subunit properties. The following page is shown:

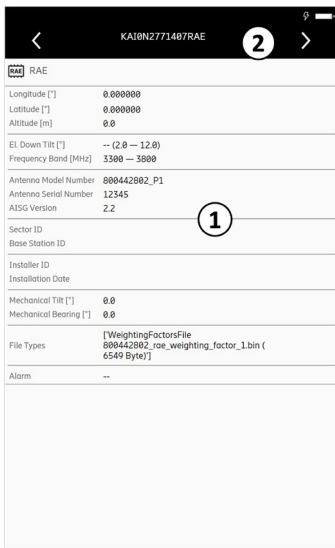


Fig. 81: Devices: Properties of the RAE subunit

① Shows the subunit properties The values of the following fields are shown and cannot be changed:

- RX Frequency Band
- TX Frequency Band

② Opens the settings of the subunit, see Fig 82.

1. Tap ② in Fig. 81 to open the subunit properties. The following page is shown:

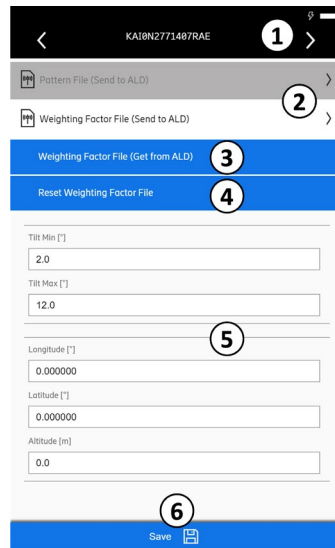


Fig. 82: Devices: Changing the RAE subunit

① Opens the settings of the subunit, see 9.7.2.2

② Sends a Weighting Factor File or Pattern File to the RAE see section 9.7.2.1

③ Gets a Weighting Factor File from an RAE see section 9.7.2.1

④ Resets the Weighting Factor File on the RAE

⑤ Changes Location and Tilt Data of the RAE

⑥ Save changes

## 9.7.2.1 Operating with Weighting Factor Files

Tap ③ in Fig. 82. The following page is shown:



Fig. 83: Devices: Send Weighting Factor file

- ① Opens the USB-Stick / PC to let you import a file to the ALC 2 select a file ③ send it to the RAE
- ② Select a file
- ③ Send it to the RAE

Tap ② in Fig. 82. The following page is shown:

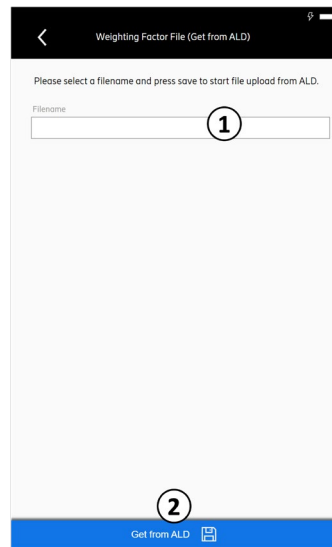


Fig. 84: Devices: Get the Weighting Factor File

- ① Select a filename to store the file
- ② Tap Get from ALD to get the file from the RAE Device it's stored in the folder of the Weighting Factor Files Folder in the File Management. You can also see it by tapping ②

## 9.7.2.2 Edit RAE Subunit Details

Tap ① in Fig. 82. The following page is shown:

The screenshot shows a mobile application interface for editing RAE subunit details. The title bar at the top displays a back arrow, the identifier 'KA10N2771407RAE', and a signal strength indicator. The form consists of the following fields:

- Sector ID: Input field with a circled '1' to its right.
- Base Station ID: Input field with a circled '2' to its right.
- Installer ID: Input field with a circled '3' to its right.
- Installation Date: Input field with a circled '4' to its right.
- Mechanical Tilt [°]: Input field with the value '0.0' and a circled '5' to its right.
- Mechanical Bearing [°]: Input field with the value '0.0' and a circled '6' to its right.
- At the bottom, there is a blue bar with a circled '7' above the text 'Save' and a save icon.

- ① Enters the sector ID
- ② Enters the base station ID
- ③ Enters the installer ID
- ④ Enters the installation date
- ⑤ Enters the value for the mechanical tilt
- ⑥ Enters the value for the mechanical bearing
- ⑦ Saves the changes

Fig. 85: Devices: Adding RAE properties

## 9.8 Operate the ASD

The ALC has found the ALD and the ALD has been connected to the ALC, see 9.1 and 9.2

- The following is displayed:

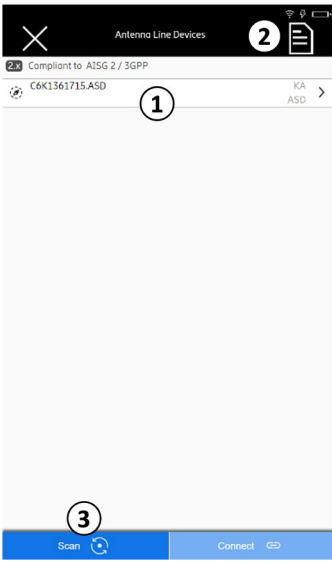


Fig. 86: Devices: ASD connected

- Tap ① in Fig. 86 to open the list with the subunits.

The following page appears:



Fig. 87: Devices: ASD connected with subunit

- ① Opens the list with the individual subunit. See next Fig.
- ② Generates ALD reports, see 9.3
- ③ Selects the AISG protocol scanning options

- ① Shows the list of the subunits
- ② Opens the subunit properties, see Showing Properties of the ASD Subunits, see 9.8.2
- ③ Opens the ASD properties, see 9.8.1
- ④ Selects report types and generates reports, see 9.3
- ⑤ Selects the AISG scanning options, see 9.1.1

## 9.8.1 ASD Main Device

Tap ③ in Fig. 87 the following image is shown:

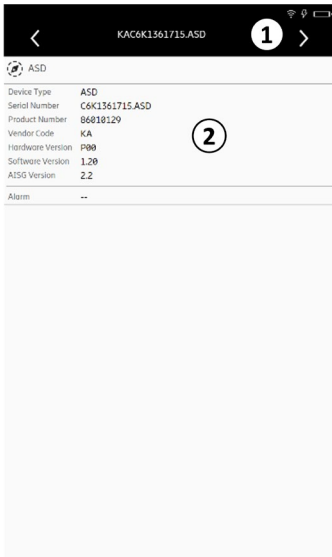


Fig. 88: Devices: ASD connected

- ① Opens the actions of the ASD Main Device
- ② Shows the ASD Main Device values

Tap ① in the previous Fig, the following image is shown:

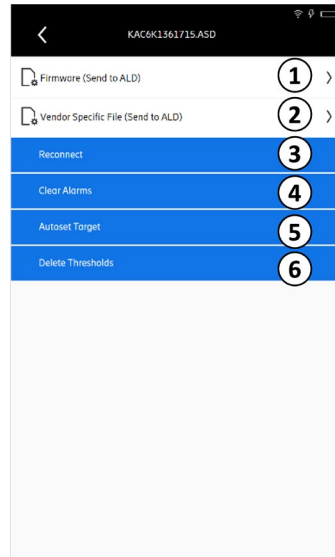


Fig. 89: Devices: ASD connected with subunit

- ① Opens the firmware update directory see 9.4.1.2
- ② Opens the vendor specific file update directory see 9.4.1.2, only available with Ericsson devices.
- ③ Reconnects the ASD
- ④ Clears the Alarms
- ⑤ Opens the Autoset Target page see section 9.8.2
- ⑥ Opens the delete thresholds page see section 9.8.2

## 9.8.2 ASD Autoset Target / Delete Thresholds

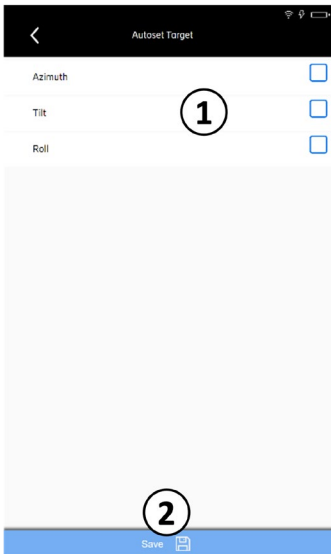


Fig. 90: Devices: ASD Autoset Target

- ① Select the Target values that should be set automatically
- ② Save changes

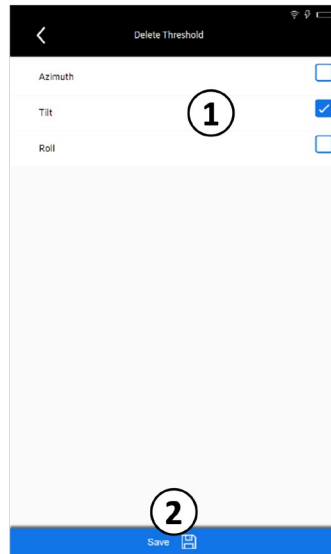


Fig. 91: Devices: ASD Delete Thresholds

- ① Select the Thresholds to be deleted
- ② Save changes

## 9.8.3 ASD Subunit

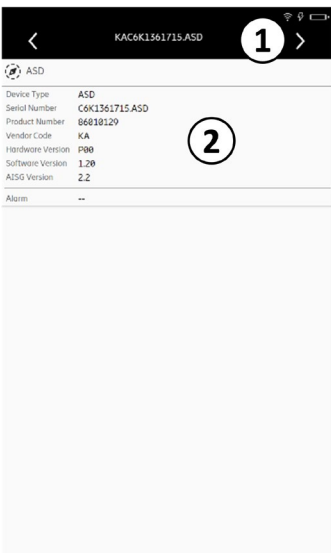


Fig. 92: Devices: ASD subunit overview

- ① Opens the editable fields of the ASD Subunit
- ② Shows the ASD values

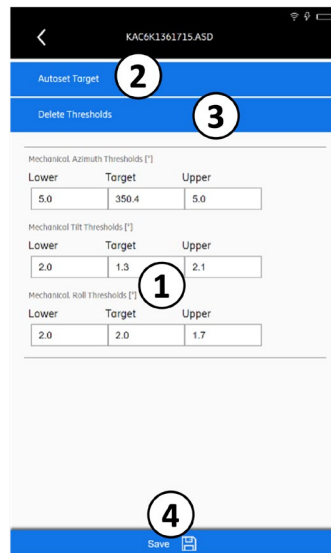


Fig. 93: Devices: subunit ASD edit

- ① Write the Thresholds and Target Values directly and save the changes
- ② Opens the ASD Autoset Target page see 9.8.2
- ③ Opens the ASD Delete Thresholds, see 9.8.2
- ④ Save changes

## 9.9 Operate the GLS

The ALC has found the ALD and the ALD has been connected to the ALC, see 9.1 and 9.2

- The following is displayed:

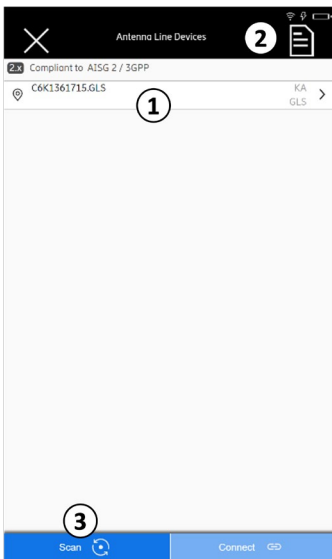


Fig. 94: Devices: GLS connected

- ① Opens the list with the individual subunits, see fig 95
- ② Generates ALD reports, see 9.3
- ③ Selects the AISG protocol scanning options, see 9.1.1

- Tap ① in Fig.94 to open the list with the subunits.

The following page appears:



Fig. 95: Devices: GLS connected with subunit

- ① Shows the list of the subunits
- ② Opens the subunit properties, see Showing Properties of the GLS Subunits, see 9.9.2
- ③ Opens the GLS properties, see 9.9.1
- ④ Selects report types and generates reports, see 9.3
- ⑤ Selects the AISG scanning options.



## 9.9.1 GLS Main Device

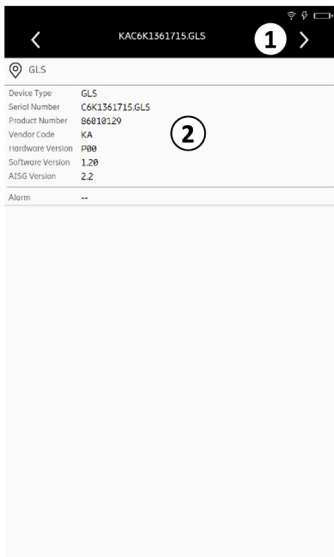


Fig. 96: Devices: GLS connected

- ① Opens the actions of the GLS Main Device
- ② Shows the GLS Main Device values

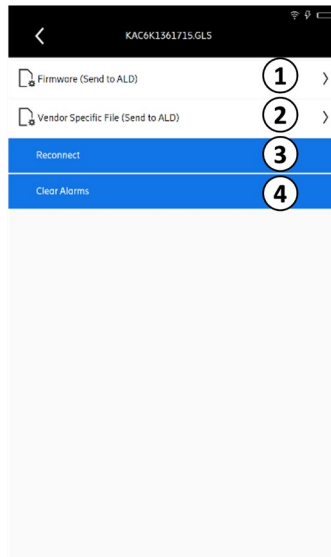


Fig. 97: Devices: GLS connected with subunit

- ① Opens the firmware update directory see 9.4.1.2
- ② Opens the vendor specific file update directory see 9.4.1.2, only available with Ericssons devices.
- ③ Reconnects the GLS
- ④ Clears the Alarms

## 9.9.2 GLS Subunit

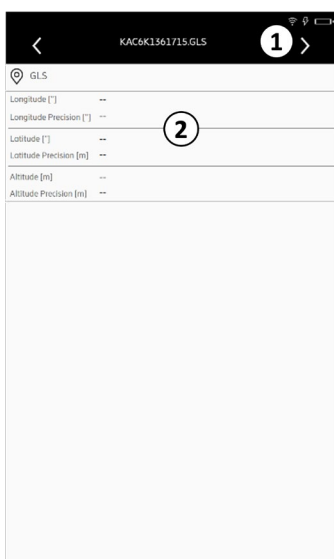


Fig. 98: Devices: GLS subunit overview

- ① Opens the editable fields of the GLS Subunit
- ② Shows the GLS Location values

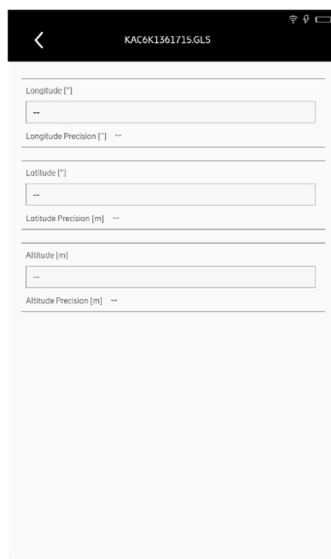


Fig. 99: Devices: GLS subunit edit

If the values are editable, the input-fields are activated and there is a save option. Some GLS Devices do not support to edit the fields, than they are disabled.

# 10 Operate the ALC in the Site Sharing Mode

In the Operating the ALC in the Site Sharing Mode menu, you can access and operate the site sharing adapter connected to the ALC.

## 10.1 Search for a Site Sharing Adapter

Prerequisite:

- A site-sharing adapter is connected to the ALC.

1. Tap Sharing in the main menu, see ③ in Fig. 11.

The following page with a warning message is shown:

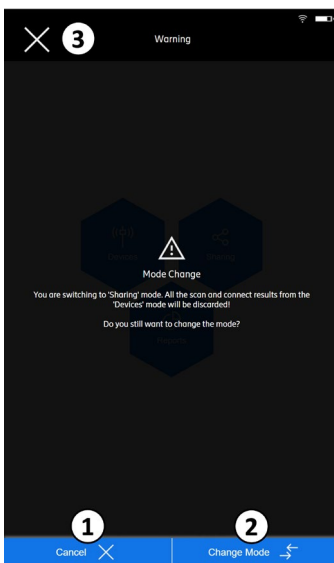


Fig. 100: Sharing: Warning message

2. Tap Mode Change (② in Fig. 72) to change the ALC mode.

The following information is shown:

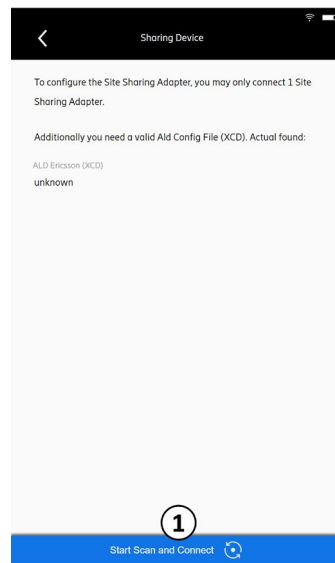


Fig. 101: Sharing: Site sharing adapter configuration information

① Cancels the mode change and returns to the main menu

② Changes the ALC mode to the Sharing mode

③ Closes the warning message and returns to the main menu

① Changes the ALC mode to the Sharing mode

### 3. Tap Connect (① in Fig. 101).

The scanning process starts. When a site sharing adapter is found, the following page is shown:

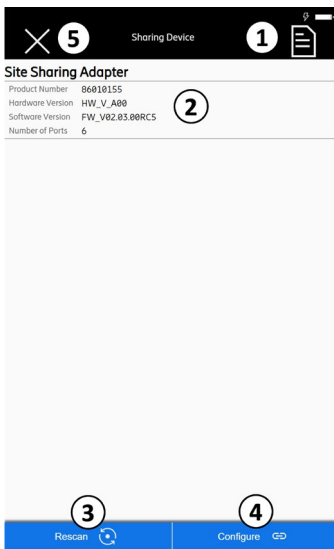


Fig. 102: Sharing: Site sharing adapter information

The following error message is shown if no data exists for the connected ALD:

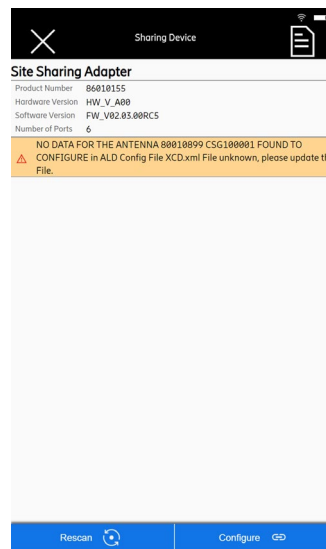


Fig. 103: Sharing: Site sharing adapter information – error

- ① Selects a report type, see section 10.2
- ② Shows the site sharing adapter information
- ③ Rescans the site sharing adapter
- ④ Opens the site sharing adapter settings menu, see section 10.3
- ⑤ Closes the page and returns to the main menu

- 4. Contact Ericsson to receive a new ALD Configuration Data (XCD) file.

## 10.2 Create a Site Sharing Report

1. Tap ① in Fig. 102.

The following page is shown:

The screenshot shows a mobile application interface for generating a PDF report. The header is black with a back arrow on the left, a circled '4' in the center, and the text 'PDF Report' on the right. Below the header, there are three input fields: 'Remarks' (with a circled '1'), 'Filename' (with a circled '2'), and 'Report Types' (with a circled '3'). The 'Report Types' section shows a 'PDF' option selected with a blue checkmark. At the bottom is a blue bar with the text 'Generate Report' and a document icon.

- ① Enters remarks
- ② Enters a filename; the date and the installer ID is added to the filename automatically if the installer ID has been added in User Configuration/Installer ID; see section 8.7
- ③ Saves the changes
- ④ Closes the page

Fig. 104: Sharing: Selecting a report type

## 10.3 Configure the Site Sharing Adapter Settings

1. Tap ④ in Fig. 102 to open the site sharing adapter settings.

The following page is shown:

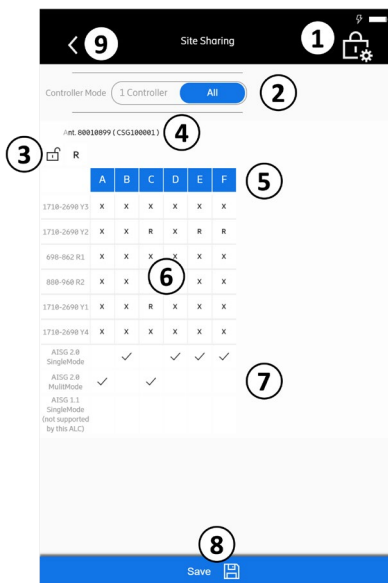


Fig. 105: Sharing: Operating the site sharing adapter settings

① Opens the Password Options, see section 10.3.1

② Changes the controller mode between one controller and all controllers

③ Shows if the password has been activated in the Password Options

- The lock is open if no password has been set.

- The lock is closed if a password has been set.

④ Shows the model number of the connected FlexRET

⑤ List of base stations; the number of base stations depends on the type of site sharing adapter

⑥ Selects the antenna array

Tap a box to change the antenna array setting:

- X = array is selected (full access)

- R = read only (shows only the array; no changes can be done)

- <blank> = array is not selected (no access)

⑦ Selects the AISG protocol

Tap a box to change the AISG protocol and between MultiMode and SingleMode.

⑧ Saves changes

⑨ Closes the Controller Mode and returns to the previous page

## 10.3.1 Operate the Password Options

1. Tap ① in Fig. 105 to open the Password Options.  
The following page is shown:

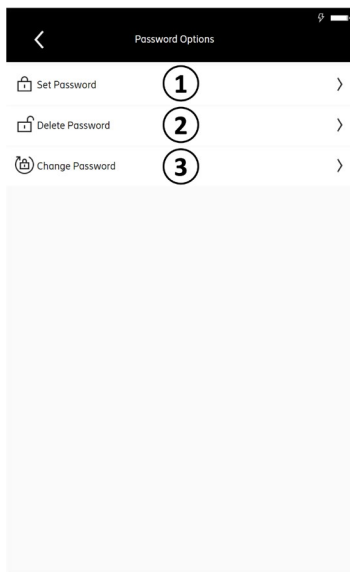


Fig. 106: Sharing: Password options

- ① Sets a password, see section 10.3.1.1
- ② Deletes the password, see section 10.3.1.2
- ③ Changes the password, see section 10.3.1.3  
shows if the password has been activated in the Password Options
  - The lock is open if no password has been set
  - The lock is closed if a password has been set

### 10.3.1.1 Set a Password

#### 1. Tap ① in Fig. 106

The following page is shown:



Fig. 107: Sharing: Password options – setting a new password

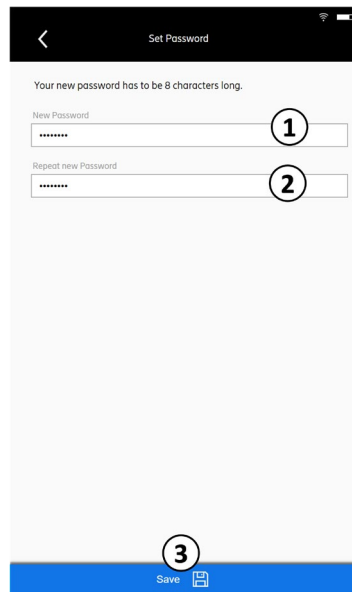


Fig. 108: Sharing: Password options – saving a new password

- ① Enter a new password
- ② Repeat the new password
- ③ confirms the password

- ④ Shows that a new password has been entered
- ⑤ Shows that a new password has been reentered
- ⑥ Saves the password

3. Enter the password with the alphanumeric keyboard.

4. Confirm the password: tap the tick (③ in Fig. 79).

5. Tap the Repeat New Password field.

6. Enter the password again with the alphanumeric keyboard.

7. Confirm the password: tap the tick (③ in Fig. 79).

The page is shown as follows:

8. Tap Save to save the entered password.  
The lock on the page with the site sharing adapter settings is locked to show that a password has been set:

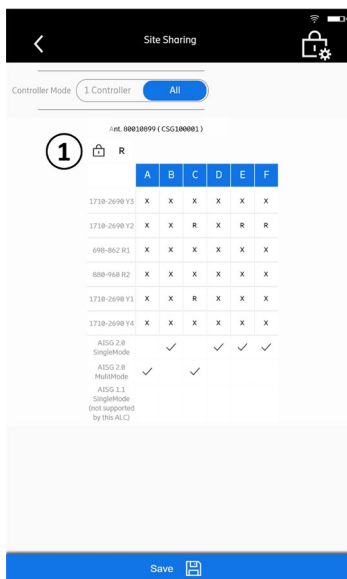


Fig. 109: Sharing: Password options – a new password has been set

- ① Shows that a password has been set

To make changes, you must now enter the password:

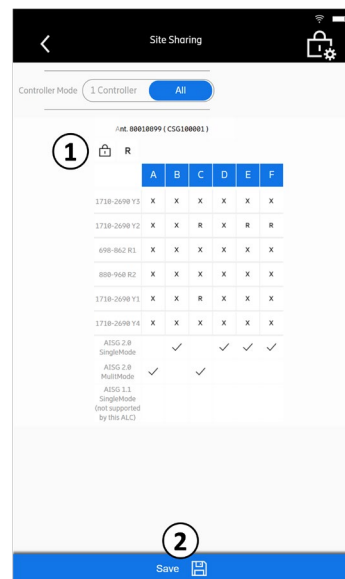


Fig. 110: Sharing: Password options – a new password has been set

- ① Enters the password  
② Confirms that the password has been entered correctly



## 10.3.1.2 Delete a Password

1. Tap ② in Fig. 106. The following page is shown:



1. Tap the Password field.
2. Enter the current password with the alphanumeric keyboard.
3. Confirm the password: tap the tick (② in Fig. 111).
4. Tap Save to delete the password.

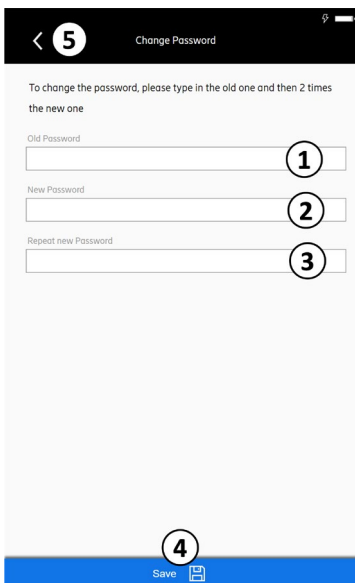
- ① Enters the current password
- ② Confirms that the password has been entered correctly

Fig. 111: Sharing: Password options – setting a new password

## 10.3.1.3 Change a Password

1. Tap ③ in Fig. 106.

The following page is shown:



1. Enter the old password.
2. Enter the new password.
3. Reenter the new password.
4. Tap Save to save the password change.

- ① Enters the old password
- ② Enters the new password
- ③ Reenters the new password
- ④ Confirms that the password has been entered correctly
- ⑤ Confirms that the password has been entered correctly

Fig. 112: Sharing: Password options - setting a new password

# 11 Export ALD and Site Sharing Reports

In the Export ALD and Site Sharing Reports menu, you can access and export the ALD and site sharing reports. The filing structure for the report files is as follows:

Folder	Subfolder	File
reports	ald_reports	ALD report
	sharing_reports	Site Sharing Configuration Report
	File management	File Management Menu

- The filename uses the following format: <Filename>\_yyyy-mm-ddThhmmss.<suffix>, for example TEST\_2015-10-14T083023.txt.
- The date and time at which the report has been created are determined automatically by the ALC.
- The filename is part of the ALD report. The filename can have up to 56 characters.
- If the installer ID has been set in Setup > User Configuration > Installer ID, it is set as a filename
- You can select the format of the report file.
- For security reasons, the files have the following properties:

Printing:	Allowed
Copying/editing contents:	Not allowed
Commenting:	Not allowed

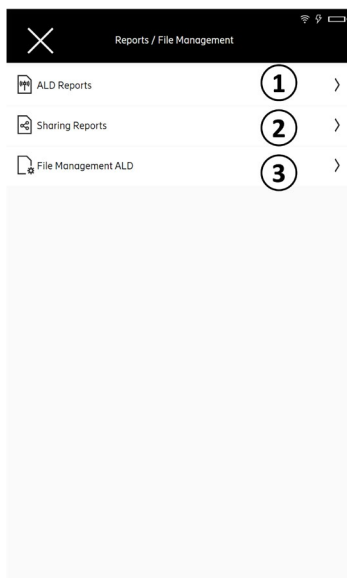
## 11.1 Open the Reports Submenu

### Prerequisite:

- The options for the reports are selected in the Select Report Type submenu for the corresponding ALDs.

1. Tap Reports in the main menu, see ④ in Fig. 11.

The following page is shown:



- ① Opens options for ALD Reports, see section 11.1.1
- ② Opens options for Site Sharing Reports, see section 11.1.2
- ③ Opens the file management, see 8.6.4

Fig. 113: Reports

## 11.1.1 Manage ALD Reports

### Note

The filenames of the report files show the installer ID if it has been set before in Setup > User Configuration > Installer ID. In the example below, the installer ID has been set to ALD.

If the installer ID has been entered, the reports files have the following name structure: Installer ID\_Type of the report (ALD or Sitesharing)\_Date\_Timestamp.

The filenames of the report files show the filename if it has been set before in Devices > Select Report Types or Sharing > Select Report Types. In the example below, the filename has been set to flexret site sharing.

If the Filename has been entered, the reports files have the following name structure: Filename\_Type of the report (ALD or Sitesharing)\_Date\_Timestamp.

If neither an installer ID or a filename have been set before, the report files have the following structure: \_Type of the report (ALD or Sitesharing)\_Date\_Timestamp.

1. Tap ALD Reports (③ in Fig. 85) to open ALD reports.  
A list with the reports is shown:

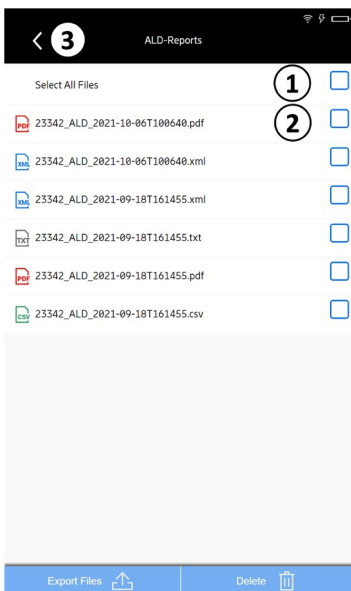


Fig. 114: Reports: ALD reports

- ① Selects all files
- ② Selects one or more files
- ③ Closes the page and returns to the previous menu

2. Select the required files.  
The Export and Delete button are activated:

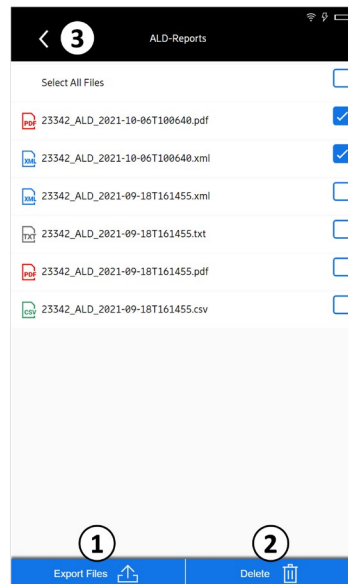


Fig. 115: Reports: ALD reports

- ① Exports the selected files onto a USB stick/PC/other device
- ② Deletes the selected files
- ③ Closes the page and returns to the previous menu

## 11.1.2 Manage the Site Sharing Reports

1. Tap Site Sharing Reports (② in Fig. 85) to open ALD reports.

A list with the reports is shown:

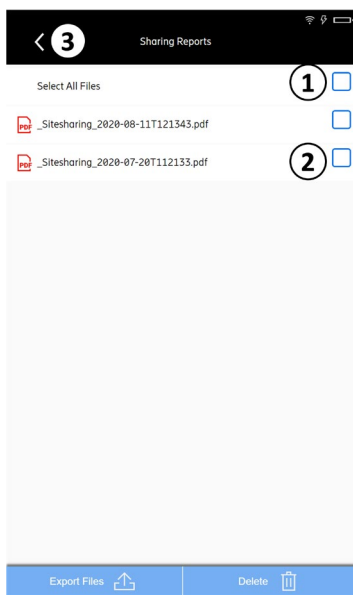


Fig. 116: Reports: Site sharing reports

2. Select the required files.

The Export and Delete button are activated:

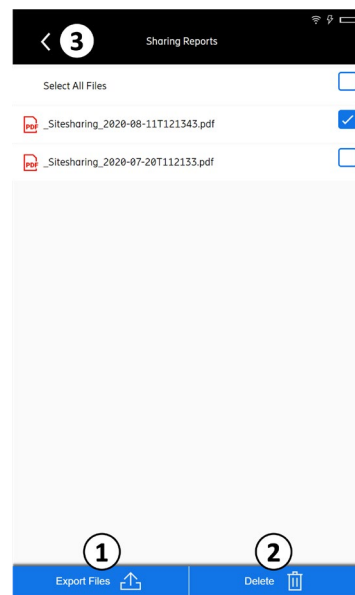


Fig. 117: Reports: Site sharing reports

- ① Selects all files
- ② Selects one or more files
- ③ Returns to the previous menu

- ① Exports the selected files onto a USB stick
- ② Deletes the selected files
- ③ Returns to the previous menu

# 12 Alarms / Warnings / Errors

Caused by	Reason	Type	Example / Solution
ALD	Feedback from ALD via ErrorCodes	AISG-/VSC-/Other Error (due to AISGSpec, other Error if there is something wrong recognized)	After e.g. Calibrate Black screen with info "AISG Error – MOTOR_JAM"
ALD	Feedback from ALD via Alarms	Alarm all Alarms are displayed here: AISG-Alarms + internal ALC Alarms	Alarm: MOTOR_JAM
ALC Internal Alarms	Feedback from ALC via Alarms	INCOMPATIBLE_STANDARD_VERSION	Unsupported AISG Protocol Version
ALC Internal Alarms	Feedback from ALC via Alarms	CONNECTION_PROBLEMS	ALD does not respond to poll frames <= still connected?
ALC Internal Alarms	Feedback from ALC via Alarms	COLLECT_DATA_WARNING	ALD delivers wrong/uncomplete data at collect-datarequest
ALC	Crash internal Apps	Endless Spinner	Enter power save mode, see section 6.1
ALC	Crash internal Apps	Heavy Error – Restart ALC	Black screen with info Heavy Error Restart ALC
ALC	Crash internal Apps	Connection failed AIAX Error 501 Reload page	Black screen with info Connection failed AIAX Error 501 Reload page. Enter power save mode, see section 6.1
ALC	Display Touch is not working		Restart ALC

# 13 Disposal

Dispose of this product in accordance with all national legislation and regulations.

Electronic equipment is not domestic waste – in accordance with directive 2002/96/EC OF THE EUROPEAN PARLIAMENT AND THE COUNCIL dated 27 January 2003 on waste electrical and electronic equipment – and it must be disposed of properly.

At the end of its service life, take this unit for disposal at a designated public collection point.

# 14 End User Licence Agreement (EULA)

Ericsson AB agrees to grant to Customer, and Customer accepts, a license to the identified Licensed Software to the terms and conditions of this End User License Agreement ("EULA"). This EULA supplements and defines the "General Terms and Conditions for Ericsson Products and Services", chapter 8 SOFTWARE LICENSES from Ericsson (hereinafter referred to as "T&C's") as regards the licensing of software. If any inconsistencies, this EULA shall prevail.

Ericsson develops and manufactures Remote Electric Tilt antennas and systems including Mast Head Amplifiers for Mobile Communication Networks. For control and management of RET antennas and systems, Ericsson has developed the software Antenna Line Configurator (ALC).

## 1. LICENSE GRANT

1.1 "Licensed Software" means all computer programs, including any changes, updates, or additions as Ericsson, in its sole discretion, may supply to Customer from time to time, in object code or other executable form in any medium, such as CDs, DVDs, or other optical or electronic media, or electronically made available for download; and related materials such as flow charts, logic diagrams, manuals, and other documentation provided to Customer by Ericsson. Ericsson is not obliged to provide the source code of the computer programs.

1.2 Subject to the payment of fees elsewhere specified and subject to the terms and conditions of this EULA, Ericsson grants to Customer a perpetual, non-exclusive license to use Licensed Software.

1.3 Customer may make one (1) copy of Licensed Software for archival purposes only and shall reproduce and attach all copyright and proprietary notices. Customer shall not otherwise copy or allow to be copied Licensed Software except to install Licensed Software. Customer agrees that Ericsson shall have the right to have an independent accounting firm conduct an audit at Customer's premises during normal business hours upon not less than thirty (30) days before written notice to verify the number of copies of Licensed Software in use by Customer. If Customer's use of Licensed Software exceeds the use permitted by this EULA, then Customer shall pay the cost of the audit. Any fees and charges applicable to Customer's use of the Licensed Software in excess of Customer's license rights remain unaffected hereof.

1.4 Customer shall not make any changes to Licensed Software or remove any proprietary notices of Ericsson or third parties found in or on the Licensed Software. Customer shall not translate, reverse engineer, decompile, disassemble, or reverse assemble Licensed Software or try, directly or indirectly, to get or create source code of the Licensed Software except to the extent that such prohibition can be unenforceable under applicable law. In particular, Customer may only reverse engineer, decompile, disassemble, or otherwise try to derive the source code for the Licensed Software to the extent that these actions are indispensable to get information necessary to create the interoperability of an independently created computer program with the Licensed Software provided that such information has not been made accessibly by Ericsson within a reasonable time despite having requested in writing; any information received through actions in accordance with this section 1.4 may under no circumstances be used for any purposes other than for the creation of interoperability of the independently created program and shall be kept confidential. Customer may only translate, change, adapt, or create derivative works from the Licensed Software to the extent necessary for the use of the Licensed Software in accordance with contractual purposes or for troubleshooting if, despite a written request by Customer, Ericsson has not offered to rectify the defect within a reasonable period of time and on reasonable terms, or, if Customer has accepted a corresponding offer by Ericsson, Ericsson has not begun to rectify the default within a reasonable period of time and after a deadline set by Customer.

1.5 Licensed Software is and shall remain the exclusive property of Ericsson. No license other than that specifically stated herein is granted to Customer, and Customer shall have no right to sublicense, rent, or lease,



all or part of Licensed Software. Customer shall have no right to use any patent, trademark, copyright, trade secret, or other intellectual property of Ericsson other than that granted by this EULA.

1.6 Customer may sell or otherwise transfer Licensed Software to any third party only in full and only where (i) Customer will completely and irrevocably cease any further own use of Licensed Software and (ii) Ericsson has given its written approval. Ericsson will give its approval, if (i) Customer affirms in writing that Customer has completely transferred original Licensed Software to the specified third party and deleted any and all remaining copies and documentation, and (ii) the third party has given its written consent towards Ericsson to comply with the terms and conditions of this EULA.

1.7 The Software may contain third-party technology, including open source software ("Third-Party Technology"). Third-Party Technology may be licensed to Customer under separate license terms if specified in the documentation, "read me", or similar files. If any applicable third-party license requires Ericsson to provide source code to the Third-Party Technology, Ericsson will provide it upon written request.

## 2. PROTECTION AND SECURITY

2.1 Customer agrees not to disclose, release, or make available in any form any portion of Licensed Software to any person other than Customer's own employees or contractors.

Customer agrees to make sure that its employees and contractors that have access to Licensed Software are or will be party to written agreements acknowledging a duty to protect Customer's confidential materials, including the Licensed Software.

2.2 Customer agrees to keep Licensed Software (including archival copies, if any), in a secure environment and shall take all steps reasonably necessary to protect Licensed Software or any part thereof from unauthorized disclosure or release. Customer may not export or reexport the Licensed Software in any form except in compliance with all applicable laws and regulations.

2.3 Customer agrees that a breach of this EULA will cause irreparable harm to Ericsson and that Ericsson shall have the right to get injunctive relief against any unauthorized use, disclosure, copying, or transfer of any part of Licensed Software. Licensed Software may contain software from third parties who are intended to be third-party beneficiaries of this EULA.

## 3. WARRANTY AND LIABILITY

3.1 Licensed Software, as provided, shall at the date of transfer of risk substantially conform to the specifications provided by Ericsson. The warranty period shall be one (1) year starting at the date of delivery of Licensed Software ("warranty period"). Ericsson shall at its option and within a reasonable time after receiving notification from Customer of defects detected in the Licensed Software use commercially reasonable efforts to:

(i) correct defects detected in the Licensed Software; (ii) replace the defective Licensed Software with another software offering substantially similar functionality; or (iii) reveal adequate and reasonable ways to work around the effects of the defect. If such efforts fail, Customer shall have the right to rescind the agreement or to request a reasonable reduction of the license fee.

Warranty claims are excluded if one of the following applies:

- a) Expiry of the one (1) year warranty period
- b) An insignificant deviation of Licensed Software from its specification unless Customer claims a reasonable reduction of the license fee
- c) The defect is not reproducible
- d) Any unauthorized change is made to Licensed Software by Customer, unless Customer can prove that the detected defects do not result from such changes
- e) For defects or restrictions of use originating from improper installation, operation, usage, handling, maintenance, or disregard of the operation manual or any other documentation by Customer
- f) Customer does not give written notification of defects at the latest within one (1) week of delivery of the Licensed Software, and in the event of not recognizable defects at the latest within one (1) week of their discovery

3.2 ANY FURTHER WARRANTY CLAIMS WHATSOEVER SHALL BE EXCLUDED WITHOUT PREJUDICE TO ANY CLAIMS FOR DAMAGES AND IN CASE OF INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS PURSUANT TO SECTIONS 4 AND 5. IN PARTICULAR ERICSSON MAKES NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, WITH RESPECT TO LICENSED SOFTWARE AND ANY OTHER PRODUCTS OR SERVICES PROVIDED UNDER THIS EULA INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ERICSSON DOES NOT WARRANT THAT THE FUNCTIONS CONTAINED IN LICENSED SOFTWARE WILL MEET THE CUSTOMER'S REQUIREMENTS.

3.3 Customer acknowledges its responsibility to use all reasonable methods to thoroughly test the operation of and output from Licensed Software before its use in Customer's operations.

3.4 Unless otherwise provided in writing under Ericsson's Software Maintenance and Update Agreement, and subject only to the warranty of this section 3, Ericsson is under no obligation to provide Customer with any changes, updates, upgrades, additions, or revisions to Licensed Software, nor to maintain or provide technical support for the Licensed Software in any manner.

#### 4. INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS AND INDEMNIFICATION

4.1 Subject to the conditions and limitations set forth in this section 4, Ericsson shall pay all costs and damages finally awarded against Customer or its employees to the extent based upon a claim that Licensed Software, as supplied, infringes a patent, copyright or any other intellectual property right of a third party (except infringement occurring as a direct result of incorporating features, operations or algorithms that are specifically required by Customer), provided that Ericsson is notified promptly in writing of any allegation of such infringement and given full cooperation, information, and authority to settle such claim and to defend or control the defense of any suit, action, or proceeding based upon such claim.

4.2 If, as a result of an infringement claim as specified in section 4.1 above, Customer becomes enjoined or is likely to become enjoined from using Licensed Software, Ericsson may, at its option and expense, procure for Customer the right to continue to use Licensed Software; or, change Licensed Software to make it non-infringing but functionally equivalent; or, substitute other software of similar capabilities. If Ericsson determines that none of these alternatives is reasonably available, Customer shall, upon written request from Ericsson, return the Licensed Software that is the subject of the infringement claim, and Ericsson shall refund to Customer the license fee paid by Customer therefore. The license fee shall be reduced by twenty percent (20%) for each elapsed year or portion thereof since the date of delivery of the Licensed Software. However, Ericsson has no obligation of indemnity for any claim of infringement arising from Customer's change of the Licensed Software, data, or its combination, operation, or use with any software, data, or equipment not specified by Ericsson, or use of a superseded or altered release of the Licensed Software. Without prejudice to any claims for damages pursuant to section 5, this section 4 states Ericsson's entire obligation and Customer's exclusive remedy with respect to any claim of infringement of any third-party intellectual property rights, including but not limited to any patent rights, copy rights, utility models, design patents,

trademarks, trade names, trade secrets, know-how, and any other similar rights or intangible assets recognized under any law.

4.3. With the exception of claims based on grounds listed in section 5.6, any claims of Customer in section 4.1 and 4.2 shall become statute barred within one (1) year of delivery of the Licensed Software.

#### 5. LIMITATION OF LIABILITY

5.1 Ericsson shall be liable without limitation in the event of intent and gross negligence, for injury to life, limb, or health, in accordance with the provisions of the German Product Liability Act (Produkthaftungsgesetz) and to the extent of a guarantee assumed by Ericsson.

5.2 In the event of a slightly negligent breach of an obligation that is essential to achieve the purpose of the contract (cardinal obligation), Ericsson's liability shall be limited to damages that are typical and foreseeable for the transaction in question.

5.3 Ericsson shall not be liable for any further claims.

5.4 The above limitation of liability shall also apply to the personal liability of Ericsson's employees, representatives and executive bodies.

5.5 Customer will take adequate precautionary measures against the loss or damage of data and programs, in particular by making, at least once daily, backup copies of all programs and data in machine-readable form. To the extent that the loss or damage of data and programs would have been avoidable by adherence to this obligation Ericsson's liability shall be limited to the costs necessary to restore the data if data had been protected in an adequate manner by Customer. Any further liability on Ericsson's part for loss and damage of data shall be subject to the limitations of this section 5.

5.6 The limitation period for warranty claims based on defects shall be one (1) year after the date of delivery according to section 3.1.

5.7 This section 5 shall apply to all claims for damages, irrespective of their legal cause, including claims based on tort.

5.8 This section 5 shall survive any termination or expiration of this EULA.

## 6. TERMINATION OF RIGHT TO USE LICENSED SOFTWARE

In case of termination of Customer's right to use Licensed Software (for example by rescission or replacement of Licensed Software according to section 3.1), Customer will cease use of Licensed Software, delete all parts of Licensed Software from its hardware and deliver any and all copies and changes of Licensed Software to Ericsson and, if requested, provide Ericsson with its written certification that no copies have been kept.

## 7. TAXES

Except for taxes based on Ericsson's income, Ericsson shall not be responsible for any federal, state, or local taxes based upon Customer's purchase, possession, or use of Licensed Software or upon any charges payable or services done hereunder.

## 8. APPLICABLE LAW, INTEGRATION, AND CHANGE

8.1 This EULA shall be governed, interpreted, and enforced according to the laws of the Federal Republic of Germany, not including any conflict of law provisions thereof and not including the CISG (UNConvention on the International Sale of Good/ UNKaufrecht).

Exclusive place of jurisdiction shall be Munich, Germany.

8.2 This EULA comprises the full and final understanding between Ericsson and Customer, and merges and supersedes any and all other agreements, understandings, or representations, written or oral, with respect to the subject matter hereof. It may not be changed except in writing, signed by authorized representatives of both Ericsson and Customer, and referring specifically to this EULA. The same applies to any provision by which the written form obligation is contracted out.

8.3 A waiver by any party of any breach of a provision of this EULA by the other party shall not be construed as a continuing waiver of such provision or waiver of any other breach of any other provision of this EULA.

### 8.4 Severability

If any provision of this EULA is invalid or unenforceable under any applicable law or regarded as invalid or unenforceable by any applicable court decision, the parties agree that such invalidity or unenforceability shall not affect the validity or enforceability of the remaining provisions.

Copyright (c) 2021 ERICSSON AB.

All rights reserved.

## 14.1 FCC Statements

### Warning Statements FCC § 15.21

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

### Statement FCC § 15.19

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.

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.

### Simplified declaration of Conformity for ALC Redesign 86010158

We, the Ericsson Antenna Technology Germany GmbH, declare that the product „Antenna Line Configurator Redesign 86010158“ is in compliance with Directive 2014/53/EU.

- The full text of the EU declaration of conformity is available, please write an email to: mobilcom.eag@ericsson.com

### Declaration of operation in the EU

• We, the Ericsson Antenna Technology Germany GmbH, declare that the product „Antenna Line Configurator Redesign 86010158“ (ALC Redesign 86010158) was designed with respect to the radio spectrum regulations according to the RED 2014/53/EU applicable in all member states of the EU. Therefore it may be used in the member states of the EU without infringing the national radio frequency regulations.

### Additional technical information for the WLAN application

- The WLAN transmits with a frequency of 2.4GHz (2417MHz-2462MHz).
- The measured output power of the module is 1.73dBm.
- The supported data rates are: 1Mbps, 2Mbps, 5.5Mbps, 11Mbps, 6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps,

## 14.2 IC Statements

### Canada CNR-Gen Section 7.1.3

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

# 15 Addresses

For questions about marketing, contact:

E-mail: [mobilcom.eag@ericsson.com](mailto:mobilcom.eag@ericsson.com)

RET hotline for technical information:

E-mail: [customer.service.eag@ericsson.com](mailto:customer.service.eag@ericsson.com)

Ericsson enables communications service providers to capture the full value of connectivity. The company's portfolio spans Networks, Digital Services, Managed Services, and Emerging Business and is designed to help our customers go digital, increase efficiency and find new revenue streams. Ericsson's investments in innovation have delivered the benefits of telephony and mobile broadband to billions of people around the world. The Ericsson stock is listed on Nasdaq Stockholm and on Nasdaq New York.