

SAILOR XTR Ka

GX-R2 to Ka Conversion Manual

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Table of Contents

Table of Contents	ii
1. Scope and Purpose	1
1.1. Abbreviations.....	1
2. Equipment.....	2
2.1. Tools needed	2
3. Stepwise procedure – Software Setup	3
3.1. Checking for current software version	3
3.2. Updating to newest software	3
4. Stepwise procedure – Hardware	5
4.1. Removing GX-R2 hardware.....	5
5. Stepwise procedure – Software.....	6
5.1. Antenna type configuration.....	6
5.2. Tx Calibration	7
5.3. One Touch Calibration – Only for iDirect Modems	8
6. Verification of installation	10
6.1. Verification	10

1. Scope and Purpose

This document is for converting any SAILOR XTR GX-R2 antenna to a SAILOR XTR Ka.

The process is required to follow the numerical order from section 3 through section 0. The conversion of the antenna system might not function properly if the steps are not followed in the correct order.

1.1. Abbreviations

ADU	Above Deck Unit
BDU	Below Deck Unit
BUC	Block Up Converter
GMU	GX modem unit
GNSS	Global Navigation Satellite System
GPS	Global Positioning System
GX	Global Xpress (Inmarsat)
HW	Hardware
KDM	Key and Display Module
LAN	Local Area Network
LED	Light Emitting Diode
LNB	Low Noise Block
POL	Polarisation
RF	Radio Frequency
SW	Software
TBC	To Be Confirmed
TBD	To Be Defined
VSAT	Very Small Aperture Terminal

2. Equipment

This section defines the equipment necessary for the conversion procedure.

2.1. Tools needed

<p>Laptop with:</p> <ul style="list-style-type: none">- Browser- SSH/PuTTY	
<p>Ethernet cable</p>	

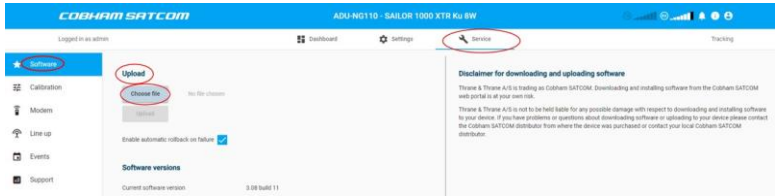
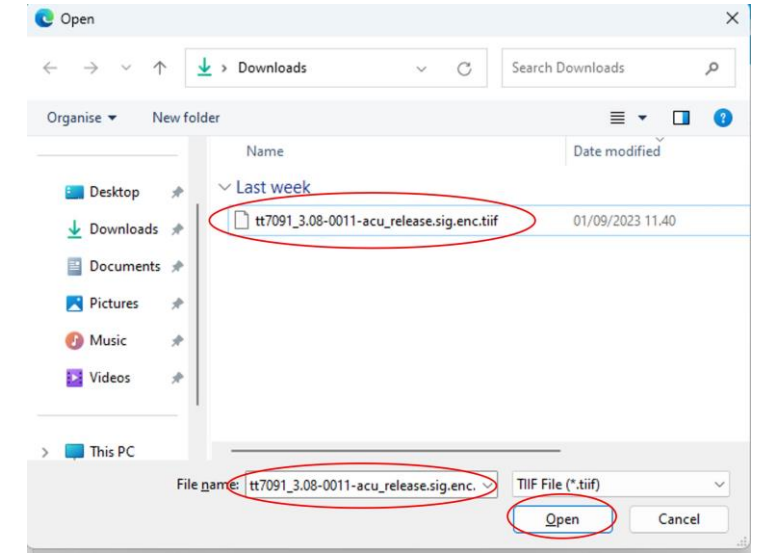
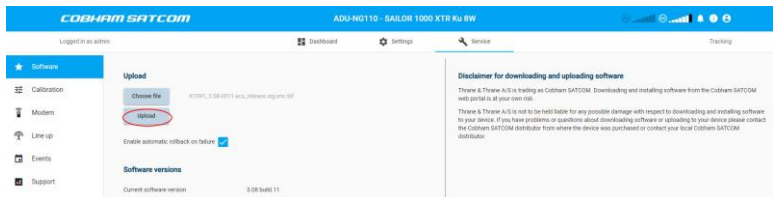
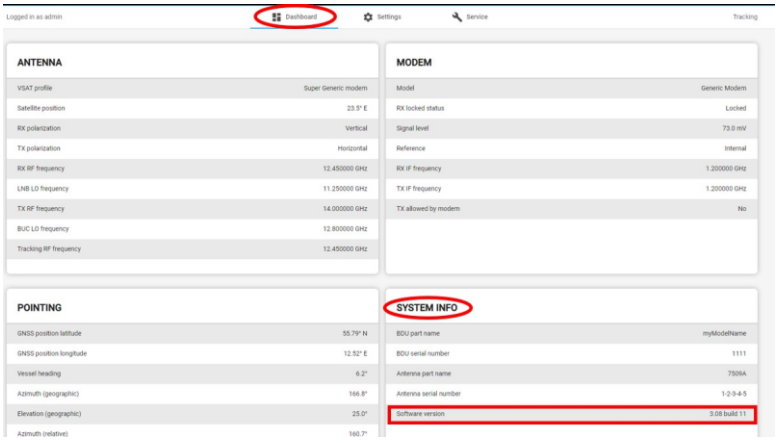
3. Stepwise procedure – Software Setup

3.1. Checking for current software version

Step	Description	Graphical illustration
1.	Login as admin on antenna web-interface https://192.168.0.1/	
2.	Navigate to “Dashboard” in the top bar and then scroll down to “System info” and the current software version can be seen next to “Software version” .	
3.	If the software version installed is not the newest version, proceed to follow the software update procedure.	



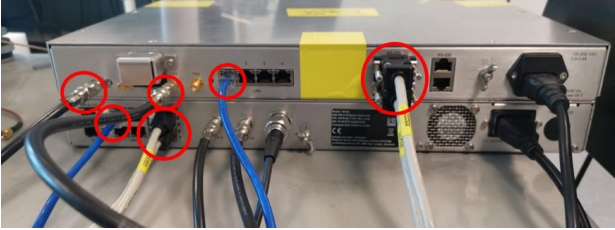
3.2. Updating to newest software

Step	Description	Graphical illustration
1.	Download newest software from Sync/Partner Portal.	

<p>2.</p>	<p>Navigate to “Service” in the top bar, then “Software” in the side bar, then under “Upload” click “Choose file”.</p>	
<p>3.</p>	<p>In the newly opened window select the new software file “tt7091_x.xx-xxxx-acu_release.sig.enc.tif” and click “Open”</p>	
<p>4.</p>	<p>Click “Upload”. The antenna system will upload the new software and reboot.</p>	
<p>5.</p>	<p>After the system becomes available again navigate to “Dashboard” in the top bar and then scroll down to “System info” and verify that the new software version can be seen next to “Software version”.</p>	


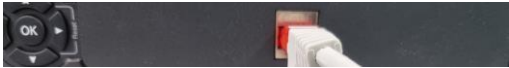
4. Stepwise procedure – Hardware

4.1. Removing GX-R2 hardware

Step	Description	Graphical illustration
1.	Turn off power to the antenna system	
2.	Turn off XTR GMU	
3.	Disconnect XTR GMU (TOP) from antenna system (bottom) Connect new VSAT Ka modem See SAILOR XTR Ka Installation Manual for details on how to do this.	

5. Stepwise procedure – Software

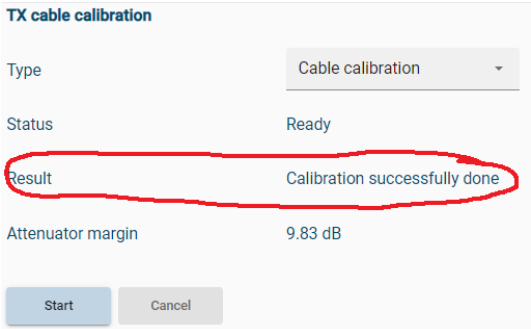
5.1. Antenna type configuration

Step	Description	Graphical illustration
1.	Turn on power to the antenna system <i>Antenna will start up. Wait until the system has completed the startup process</i>	
2.	Connect Laptop to front ethernet port on BDU	
3.	Login via SSH/PuTTY as admin <i>Admin password is set during the initial installation of the antenna. See SAILOR XTR Ka Installation Manual for details on how to reset this.</i>	<pre>ssh admin@192.168.0.1</pre>
4.	Read out antenna sub type <i>The sub type can be either '0' or '1'</i>	<pre>antenna_data type</pre> <i>Example output:</i> <pre>System: 7509C Type: 1 Oem: 1 sub type: 0 lnb type: 1 buc type: 3</pre>
5.	Change antenna type in UCLI <i>The <subtype> part of the command should be substituted with the subtype read out from step 4 above.</i>	For S600 4.5W transceiver: <pre>antenna_data type 7506B <subtype></pre> For S600 9W transceiver: <pre>antenna_data type 7506E <subtype></pre> For S1000 4.5W transceiver: <pre>antenna_data type 7509F <subtype></pre> For S1000 9W transceiver: <pre>antenna_data type 7509G <subtype></pre>
6.	Press 'y'. <i>UCLI output shown to the right:</i>	<pre>Warning! Changing the antenna type may render the system useless unless the correct conversion kit is mounted on the system. Press 'y' within 10 seconds to confirm or any other key to cancel</pre> <pre>- Changes are only applied after reboot!</pre>
7.	Reboot antenna and wait until it has rebooted twice	<pre>system restart</pre>

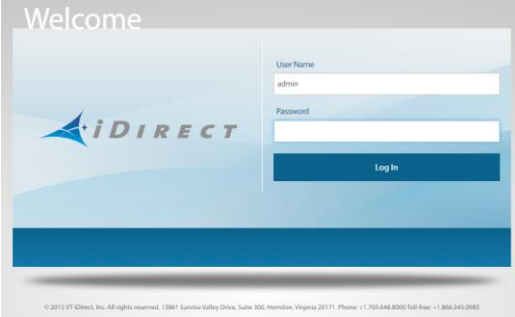
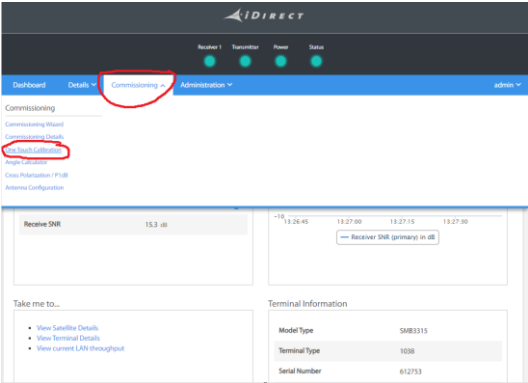
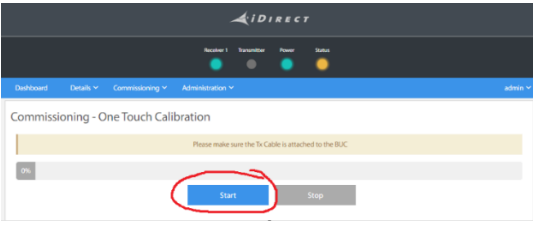
<p>8.</p>	<p>Connect the Ka modem to the BDU and create a VSAT Ka profile via the antenna web-interface.</p> <p><i>Delete the old GX-R2 profile under Settings > VSAT Profiles in the web-interface</i></p> <p><i>See SAILOR XTR Ka Installation Manual for details on how to do this. The manual can be downloaded from https://partnerportal.cobhamsatcom.com</i></p>	<p style="text-align: right;">Chapter 4</p> <h3 style="text-align: center;">Setup of the antenna</h3> <p>This chapter has the following sections:</p> <ul style="list-style-type: none"> • Introduction to the web interface • Settings • Service • Keypad and menus of the BDU • Startup sequence <p>Important The SAILOR XTR Ka system is not designed to be connected directly to the</p>
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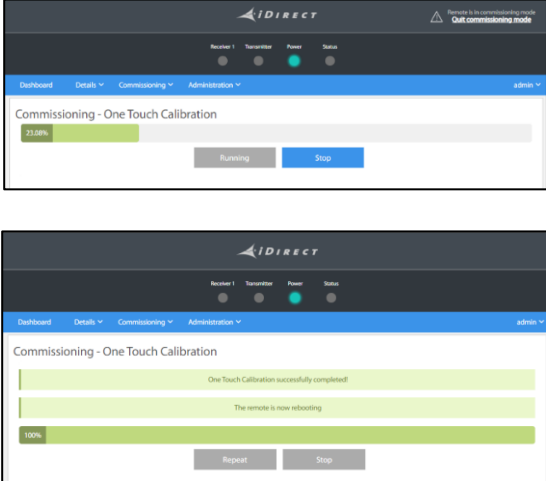
5.2. Tx Calibration

Step	Description	Graphical illustration
<p>1.</p>	<p>Login as admin on antenna web-interface</p> <p>https://192.168.0.1/</p>	
<p>2.</p>	<p>Navigate to “Service” in the top bar, then “Calibration” in the side bar, then scroll down to “TX cable calibration” and press “Start”.</p>	
<p>3.</p>	<p>Wait for calibration to finish</p>	

<p>4.</p>	<p>Calibration is finished when “Result” shows: <i>Calibration successfully done</i></p>	
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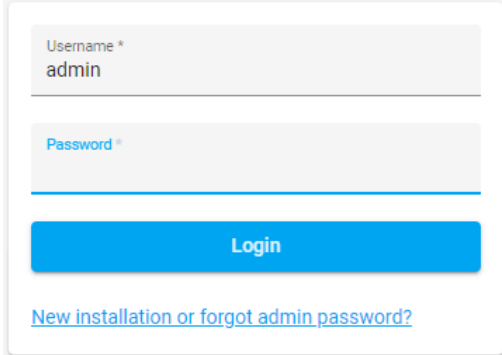
5.3. One Touch Calibration – Only for iDirect Modems

Step	Description	Graphical illustration
<p>1.</p>	<p>Login as admin on modem web-interface https://192.168.0.1:8443/</p>	
<p>2.</p>	<p>Navigate to “Commissioning”, → “One Touch Calibration”.</p>	
<p>3.</p>	<p>Press “Start” / “Repeat”.</p>	

<p>4.</p>	<p>Wait until OTC has finished.</p> <p>Modem will reboot automatically</p>	 <p>The image contains two screenshots of the iDIRECT web interface. The top screenshot shows the 'Commissioning - One Touch Calibration' progress bar at 23.08%. Below the progress bar are 'Running' and 'Stop' buttons. The bottom screenshot shows the progress bar at 100%. Above the progress bar, it says 'One Touch Calibration successfully completed!' and 'The remote is now rebooting'. Below the progress bar are 'Repeat' and 'Stop' buttons.</p>
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6. Verification of installation

6.1. Verification

Step	Description	Graphical illustration
1.	Login as admin on antenna web-interface https://192.168.0.1/	
2.	Verify that the antenna goes into “Ready”, “Acquiring”, or “Tracking”, and that there are no errors, warnings, or event messages.	