COMMSCOPE®

Instruction Sheet

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Antenna Sharing Configuration Builder Tool

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1 Overview

1.1 Introduction

The antenna sharing features allows the assigning of frequency bands to the different AISG input ports on the antenna. The latest CommScope antennas support this ability. This tool can be used to generate antenna sharing configuration data, which then can be applied to the antenna device through RET Controller systems like ATC Lite software or RETMaster mobile device application or Base Station systems. Following sections highlight the features to use for the creation of antenna sharing data files on a PC.

1.2 Acronyms & abbreviations

3GPP	Third Generation Partnership Project
AISG	Antenna Interface Standards Group
ALD	Antenna Line Device
API	Application Programming Interface
cRET	CommScope RET
IOT	Interoperability Test
RET	Remote Electrical Tilt
Single-RET	Single-Antenna Remote Electrical Tilt Actuator
Multi-RET	Multiple-Antenna Remote Electrical Tilt Actuator
ATC Lite	Antenna Tilt Controller Lite software
	User Interface

2 Antenna Sharing Configuration Builder Tool on PC

NOTE: Antenna specific support files are required to create antenna sharing configuration using this tool. The support files are available as a part of the ATC Lite or RET Master applications. To add the support files other than the bundled ones, follow the instructions provided in the user guide document for antenna sharing configuration for RET Control systems.

The Antenna Share Configuration Builder Tool can be launched through ATC Lite software in the following two ways as described below:

2.1 Launching the tool with a connected antenna device (online)

1. From the ATC Lite program, after the antenna devices are found select the device from the display list. Use the menu "Tools" à "Antenna Sharing Configuration" à "Open Antenna Sharing Configuration Builder…" as shown in the Figure 2-1. This launches the Antenna Share Configuration Builder tool loaded with the image and showing the selected antenna's current antenna sharing configuration mapping with the colored shapes as shown in the Figure 2-2.

🤤 Antenna Tilt Co	ontroller Lite	8.4.1 (USB)							- 🗆 X
File Communication	Tools Help								
Device Status and	Antenna File Switch Proto	s col Mode	•		Auto-Discover	y			
Get Device Info	Addressing Calibrate		arms	Self Test	Number of devices	Unknown 💌	Vendor type	Comms	cope 🔿 All
	Actuator Fac	tory Reset			Find Devi	ces		0	lancel
Device Information	Tower Mount	ed Amplifier (TMA)	•						
ID	Antenna Sha	ring Configuration	Change	Selected Antenna's Config	guration	Sector	AISG	ETilt	Gain
CP000ETRN 1650	9049MM.1 1.	1 MultiRET	View Sel	ected Antenna's Configura	ation		2.0	7.5	
CP000ETRN 1650	9049MM.2 1.	2 MultiRET	Open An	itenna Sharing Configurat	ion Builder		2.0	7.5	
CP000ETRN 1650	9049MM.3 1.	3 MultiRET	ОК				2.0	7.5	
CP000ETRN 1650	9049MM.4 1.	4 MultiRET	OK				2.0	7.5	
CP000ETRN 1650	9049MM.5 1.	5 MultiRET	OK	\sim			2.0	7.5	
CP000ETRN 1650	9049MM.6 1	6 MultRET	OK				2.0	7.5	



Figure 2-1 Launch builder tool based on a selected device.

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Figure 2-2 Builder tool with current antenna sharing loaded.

2.2 Launching the tool without any connected devices (offline)

1. The Builder tool can also be launched through ATC Lite program without being connected to any devices. Launch the ATC Lite program, then use the menu "Tools" à "Antenna Sharing Configuration" à "Open Antenna Sharing configuration Builder..." as shown in the Figure 2-3. This launches the Antenna Share Configuration Builder tool with startup view as shown in the Figure 2-4.

🤤 Antenna Tilt C	ontroller Lite 8.4.1 (USB)	- 🗆 🗙
File Communication	Tools Help	
Device Status and	Antenna Files Switch Protocol Mode	Auto-Discovery
Get Device Info	Addressing Calibrate	Self Test Number of devices Unknown Vendor type: Commscope C All
Device Information	Tower Mounted Amplifier (TMA)	Find Devices Cancel
ID		View Selected Antenna's Configuration Open Antenna Sharing Configuration Builder 2. Select to Launch the Antenna Sharing Configuration Builder Tool
	Show All Devices	Move Sector Move Selected Edit Selected



Figure 2-3 Launching builder tool without any connected devices.

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CRET V2 Antenna Share - Config	uration Tool			—
Open Save Open Export	Select All Image: Associate All to AISG 1 Image: Associate All to AISG 2 Image: All Image: Associate All to AISG 2 Image: Associate All Image: Associate All	Image Contrast	About	
File Configuration	Connections	Tools H	elp	v Antonno Choro Manning

2.3 Using the Antenna Share Configuration Tool

If the given antenna model annotation is already loaded with configuration go the section "Building Antenna Share Mapping" for instructions to modify the configuration.

2.3.1 Opening Antenna Annotation for Antenna Sharing

1. Click on the "Open" toolbar button to display the window titled "Open Annotated File" as shown in the figure 2-5.

2. Select the Antenna model from the list.

3. Click on open to load the selected antenna model annotation data.

CRET V2 Antenna Share - Configuration Tool	8
Open Save Open Export Image Contrast Help Image Contrast Help Image Contrast Image Contrast	-
Antenna Model:	Antenna Share Mapping
1. Click on the Save button Open Annotated File Image: Comparison of the comp	



Figure 2-5 Opening antenna annotation file.

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4. The annotation data includes the endcap image with shapes indicating the frequency bands and the AISG input ports are shown as in the figure 2-6. Tips popup window displays the instructions to do the antenna sharing. Click on the close to dismiss the popup window.



Figure 2-6 Loaded antenna annotation for antenna sharing.

2.3.2 Building Antenna Share Mapping

Antenna Share mapping can be built in the following ways:

1. Selecting shapes.

1a. Select a band shape by clicking. The shape gets highlighted with thick border.

1b. Select a AISG shape, the band shape changes color showing the mapping between the band and AISG. This can be seen in the "Antenna Share Mapping" list on the right-side.

Note: User can either start with band shape or AISG shape.

2. Using right click menus.

2a. Right click on the AISG shape.

2b. In the menu select the "Connect to" menu and select the relevant band name from the popup menu list. Once band name is selected, the band shape changes color to the right clicked AISG shape finalizing the mapping.

Note: User can either start the right click on a band shape or AISG shape.

3. Changing AISG modes.

Click on the drop down list on the AISG shape, and select the relevant AISG mode (SRET or MRET). The changes can be seen in the "Antenna Share Mapping" list on the right-side.

The other features that can be used in the tool are described in the figure 2-7.



Figure 2-7 Features to build antenna sharing.

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2.3.3 Saving Antenna Share Configuration Data

- 1. Click on the "Save" button on the toolbar under group "Configuration".
- 2. In the "Save Antenna Share Configuration" window use the provided file name or enter the file name of your choice.

3. Click on the "Save" button to store the Antenna configuration to the given file name as shown in the figure 2-8. If the file name does not have extension name, ".dat" is added during the saving.





Figure 2-8 Saving antenna sharing data to file.

2.3.4 Opening Antenna Share Configuration Data

- 1. Click on the "Open" button on the toolbar under the group "Configuration".
- 2. In the "Open Antenna Share Configuration" window, select the antenna share configuration file name to load.
- 3. Click on the "Open" button to load the Antenna configuration to the tool as shown in the figure 2-9.

CRET V2 Antenna Share - Configuration Tool	23
Open Save Open Export Delete Select Associate All Associate All Image Contrast Help About File Configuration Connections Tools Help Help	
Antenna Model: COMMRET2_IOT_6	Antenna Share Mapping
RET3 - Y1 RET4 - Y2 Open Antenna Share Configuration Select Antenna Share Configuration File from list below: COMMRET2_IOT_6_AIM_RIR2Y1Y2Y3Y4_20170411-dat OUT Open Cancel AISG 2 Set OCEN Set ODEN Set ODEN Set ODEN Set ODEN Set ODEN Set ODEN Set ODEN Set ODEN Set ODEN Set ODEN Set ODEN Set ODEN Set ODEN Set ODEN Set ODEN Set ODEN Set ODEN Set ODEN Set Set Set Set Set Set Set Set	2. Select the Antenna Sharing Configuration file from the list.

Figure 2-9 Opening antenna sharing configuration data

NOTE: The Antenna Sharing Configuration file (.dat) file contains the binary data that will be sent by the RET Controllers or Base Station systems to configure antenna sharing on target antenna.

Saved configurations will immediately be available from the ATC Lite software's "Change Selected Antenna's Configuration" menu option, if appropriate for the selected antenna model.

IMPORTANT

The Antenna Sharing Configuration data (in .dat file) can be sent to an antenna using the AISG 2.0 'Send Configuration Data' or through AISG 2.0 download commands. The entire contents of the .dat file are sent as the payload of these commands.

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