

## 38 Flexi Remote Radio Head 2TX 2100 (FRGY)

FRGY technical specifications.

### Functional description

Table 300 FRGY functional specification

Property	Value
Output power	2x60 W
MIMO	yes, 2TX
Outdoor installation	yes
SW supported technology	WCDMA
TX frequency range	2110-2170 MHz
RX frequency range	1920-1980 MHz
DL instantaneous bandwidth	60 MHz
UL instantaneous bandwidth	60 MHz
DL filter bandwidth	60 MHz
UL filter bandwidth	60 MHz

### Interfaces

Figure 68 FRGY interfaces

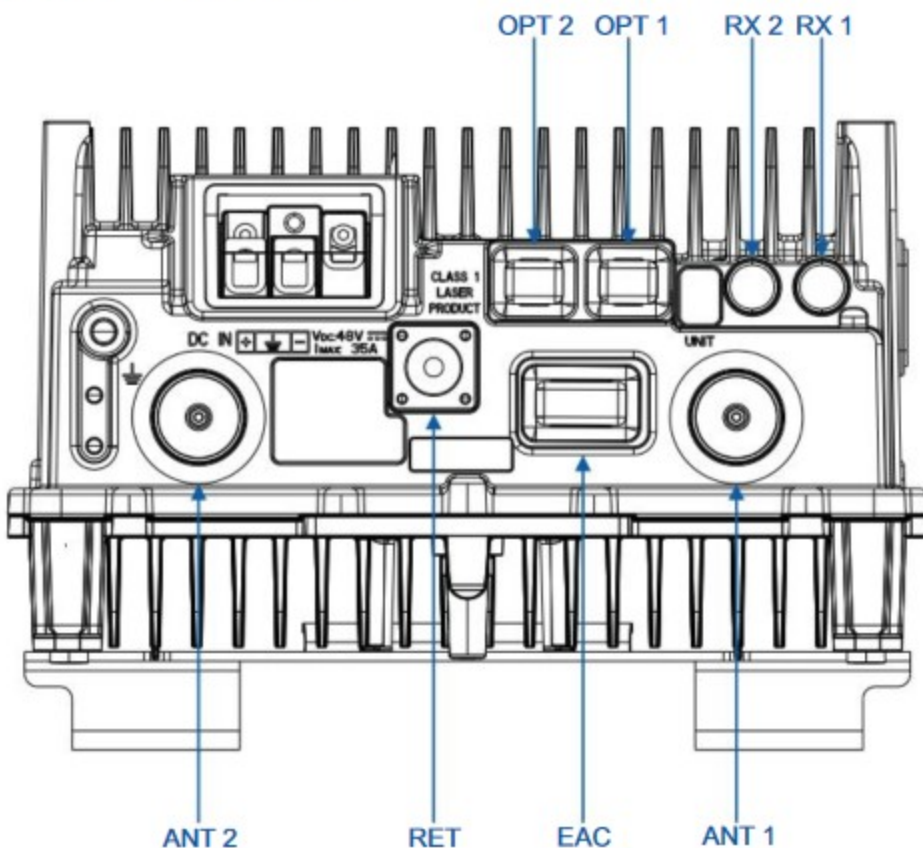


Table 301 FRGY interfaces

Interface	Label on the HW	Number of interfaces	Connector type	Additional info
Power connector	DC IN	1	3-pole screw terminal	
Antenna connector	ANT	2	7/16	
RF external connector	Rx EXT	2	QMA	
Remote Electrical Tilt	RET	1	8-pin circular	
External Alarm Connection	EAC	1	D-sub MDR14	
Optical interface	OPT	2	SFP	6 Gbps, OBSAI

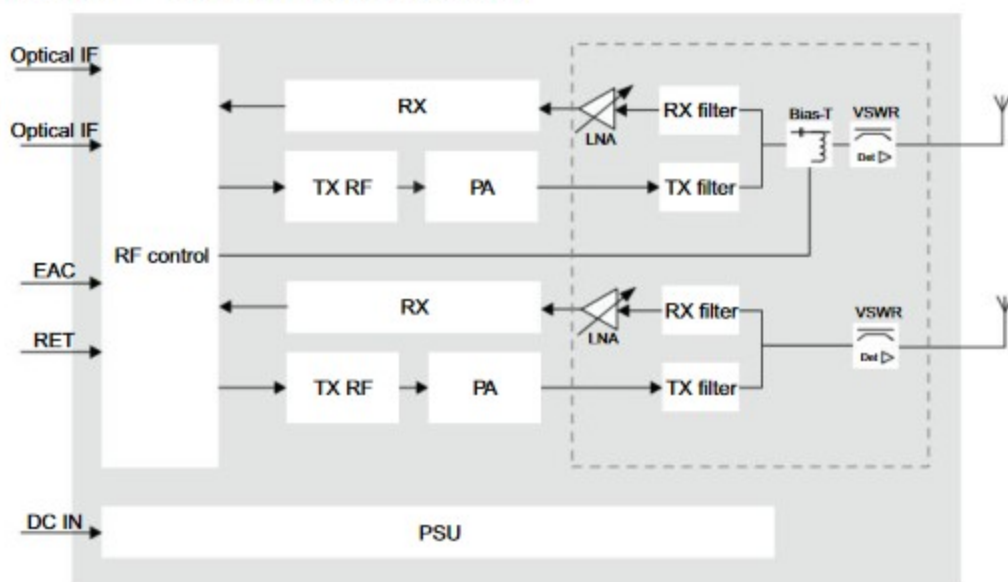
## Antenna Line Devices (ALDs) support

Table 302 FRGY ALD support

ALD support via antenna ports	Value
AISG	2.0 Main only
Legacy Siemens equipment	No
CWA (for non-AISG installations)	No
Voltage	14.5 V
Power per port	30 W

## Functional block diagram

Figure 69 FRGY functional block diagram



## Electrical specifications

Table 303 FRGY electrical specifications

Property	Value
Nominal supply voltage	-48.0 V DC
Nominal input voltage range	-40.5 V DC to -57.0 V DC
Extended input voltage range	-36.0 V DC to -40.5 V DC -57.0 V DC to -60.0 V DC

## Power consumption

Table 304 FRGY power consumption

Number of TXs	RF output power per TX [W]	Estimated power consumption [W] at 48 VDC input at 23°C. Non-committed estimated values depend on the final product HW and SW optimization with +/- 10% margin.	
		50% RF Load	100% RF Load
2	60	330	522
	40	262	383
	30	217	309
	20	178	240

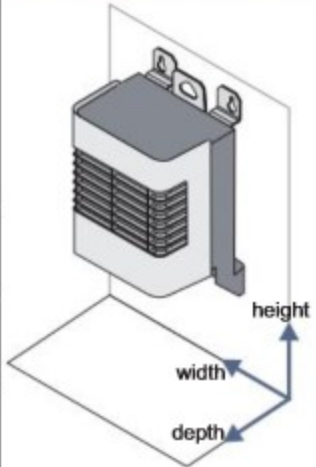
## Installation and mechanical specifications

Table 305 FRGY installation and mechanical specifications

Property	Value
Installation options	<ul style="list-style-type: none"> <li>pole/wall installation</li> <li>directly on the wall installation</li> </ul>
IP rating	IP65
Related optional items	<ul style="list-style-type: none"> <li>Flexi Pole Mounting Kit (FPKA/C)</li> <li>Pole Mounting Kit (VMPB)</li> </ul>

## Dimensions and weight

Table 306 FRGY dimensions and weight

Property	Value	Dimensions orientation
Height	With lower bracket: 702 mm (27.6 in.) Without lower bracket: 437 mm (17.2 in.) Module only: 366 mm (14.4 in.)	 <p>The diagram shows a 3D perspective view of the FRGY module. A vertical arrow on the right indicates the height. A horizontal arrow pointing to the right indicates the width. A horizontal arrow pointing downwards and to the left indicates the depth.</p>
Depth	206 mm (8.1 in.)	
Width	302 mm (11.9 in.)	
Weight	15 kg (33.1 lbs)	

## Environmental specifications

Table 307 FRGY environmental specifications

Property	Value
Maximum operational outdoor temperature in the shade (at constant high ambient temperature maximum output power might be limited)	+55°C (131°F)
Maximum operational outdoor temperature in the sun (according to GR-487-Core specification)	+50°C (122°F)
Maximum indoor temperature (this is valid for fanless products)	+45°C (129.2°F)
Minimum operational temperature (including cold start)	-40°C (-40°F)

## LEDs

Table 308 FRGY LEDs

LED color	Description	Alarm
Red, stable	Critical alarm affecting the whole RF module or all antenna carriers	Fault
Red, blinking	Operation degraded <ul style="list-style-type: none"> <li>Major alarm affecting the whole RF Module</li> </ul>	Major/critical alarm

Table 308 FRGY LEDs (Cont.)

LED color	Description	Alarm
	<ul style="list-style-type: none"> <li>Critical alarm affecting fans</li> <li>Major/Critical alarm affecting a module subcomponent or antenna carrier</li> </ul>	
Yellow, stable	<ul style="list-style-type: none"> <li>Until software download begins</li> <li>The carriers are blocked from BTS</li> <li>There is no connection to any System Module</li> </ul>	No alarm
Yellow, blinking	<ul style="list-style-type: none"> <li>Software download in progress</li> <li>Configuration in progress: RF resources are being setup, but not yet activated</li> </ul>	No alarm
Green, stable	<ul style="list-style-type: none"> <li>Software configuration is complete or supervisory: RF resources activated and transmission is possible</li> <li>Working normally, no alarm on the RF Module</li> </ul>	No alarm
Green, blinking	Software downloading and updating	No alarm
Stable Red for less than 5 seconds and changes to Stable Yellow	Switched ON, but the next conditions are not reached yet	No alarm
Stable Red for less than 5 seconds	The module is in the process of resetting	No alarm
Periodic Red and Green	Antenna line device faulty/degraded	No alarm
Blinking Colors (Red, Yellow, and Green), each color stable for 0.5 second	Module highlighting (Flexi BTS SM functionality that can help identifying faulty module)	No alarm

### Warnings, cautions or notes related to the product



**NOTICE:** The RRH should always be mounted in a vertical orientation with connectors on the bottom side to ensure convection cooling.



The minimum startup voltage is 40.5 V DC. If the input voltage is below/beyond extended limits, unit might shut down.