



ACTIVECELL-SAR



Airborne High Power Cellular System containing ActiveCell-SAR unit, antennas and ICD. This system allows Search and Rescue (SAR) capabilities, including detection, monitoring and location capabilities over 2G (GSM), 3G (UMTS), 4G (LTE) and 5G Non-Standalone (NSA) network technologies.

SPECIFICATIONS

USE CASE

- Search and Rescue

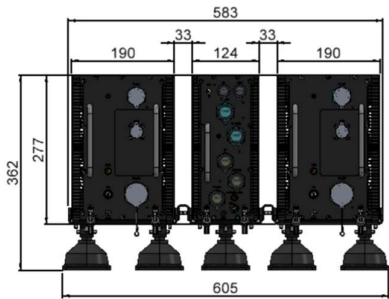
KEY FEATURES

- Designed for installation in manned or unmanned aerial platforms
- Easy to use
- Up to 8 high power base stations for simultaneous transmission across all available networks

COMPONENTS

- Payload
- Directional antennas
- Optional airborne qualified Batteries

ActiveCell-A System	L mm	W mm	H mm	W kg
Main Unit	568	124	270	14.5
PA Unit 1	568	190	270	20.9
PA Unit 2	568	190	270	20.9
Total				56.3



Platform Dependent Equipment	L mm	W mm	H mm	W kg (Approx.)
Rack	495.5	503.95	193.5	10
Antenna TX	676	307	177	5.5
Antenna RX - Scanner	676	307	177	5.5
Antenna Brackets				Platform Dependent
Lithium Battery Packs each (x4)	298	300	270	42.5 each
Cables, Connectors				Platform Dependent

SPECIFICATIONS^①

Hardware	
Operating Band ¹	GSM: 1900(B2), 1800(B3), 850(B5), 900(B8) UMTS: 2100(B1), 1800(B3), 850(B5), 900(B8), 1900(B2), 1700(B4) LTE: 2100(B1), 1900(B2), 1800(B3), 1700(B4), 850(B5), 2600(B7), 900(B8), 800(B20), 850+(B26), 700(B28B), 2600 (B38), 2300 (B40), TD 2600+ (B41), 1700/2100(B66) 5G NSA
ConOps	Aerial platform at 5,000 -15,000 ft in circular motions around the Area Of Interest (AOI), up to 30Km from the aircraft
Number of BTS	Up to 8 BTS
BTS Supported Technology	GSM, UMTS, LTE (FDD & TDD), 5G NSA
Power Amplifiers	Up to 6x50W CW
Antennas	1 TX directional and 1 RX directional + accessories antennas
Functionality	Software defined radio – smooth transition between technologies.
Scanning	High end scanner supporting 2G/3G/4G/5G
Display	Laptop GUI, display also shows GPS location and map
Command and Control	Local or remote through 3rd party airlink
Safety	Alarms for high power, VSWR and temperature
Environmental ²	Designed for DO-160e
Power Consumption	< 4 KW
Software	
Remote Control Unit (RCU)	Graphical User Interface (GUI) application.
System Scanning	Power/GSM/UMTS/LTE/5GNSA
Mode of Operation	Identification, location
Display System Location	Via GPS reading
Location Capabilities	Heatmap based on triangulation algorithm
Database	Query, filter, import/export database
Health Monitor	System status (Initializing, standby, transmitting) and alarms

DEPENDENCIES

- Aerial platform to be provided by the client
 - ActiveCell-SAR is currently designed for integration with Cessna Caravan with a “Belly pod”. Any other aerial platform will require specific design and modifications not included.

^① All specifications provided herein are indicative values and figures, and there may be reasonable deviation from the same.

¹ Each ActiveCell system will be configured with a subset of the supported bands as per customer / country requirements. Not all supported bands will be available in one system.

² The environmental conditions stated above apply only to the ActiveCell-SAR system components and sub-components and do not include any peripherals.