SIGN4L

ACTIVECELL-SAR

Airbone Cellular Search And Rescue

SIGN4L has developed an aircraft-mounted cellular system for search and rescue operations using a fully software-defined radio. This system can locate targets over 2G (GSM), 3G (UMTS), 4G (LTE) and 5G (NSA) networks.

USE CASE: SEARCH AND RESCUE

ACTIVECELL-SAR, mounted on either a manned or unmanned aircraft, enables search and rescue teams to scan large areas to find lost, missing, or injured individuals by identifying signals emitted from their mobile devices.

KEY FEATURES

Diverse operating band	Locates targets on 2G/3G/4G/5G NSA networks
Mobile operation	Compact design facilitates installation on manned or unmanned aircraft
UI and UX	Pre-programmed missions are possible with the easy-to-operate system
Monitoring modes	Options for complete network or targeted, predefined or manual monitoring
Robust	Up to 8 high-power base stations for simultaneous transmission across all available networks

HARDWARE SUBSYSTEM

Operating Band	**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 10,000 -15,000ft in circular motions; target within 5km up to 30km radius of area of limitations (AOL)
Number of BTS	Up to 8 BTS
BTS Supported Technology	GSM, UMTS, LTE (FDD & TDD), 5G NSA
BTS Dynamic Range	>75 dB
Power Amplifiers	6x50W CW
Antennas	2 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	Designed for DO-160e
Power Consumption	< 4 KW