

SIGN4L

SKYSHIELD



State of the art counter UAV solution, designed for fixed deployment in a compact, environmental cabinet. It is a high-power RF and GNSS jamming system designed to jam drone frequencies.

SPECIFICATIONS

KEY FEATURES

- Detect and follow UAVs, enabling threat identification and tracking
- Jams full range of GNSS spectrum & Jams drone's command & control channels
- Spoofs commercial GNSS spectrum to protect a specified area of interest
- Combination of jamming and spoofing capability for maximum coverage range
- Typical jamming range for unprotected GNSS platform up to 10 km. ①
- Typical jamming performance for command-and-control channels is 2:1 from drone's remote control
- Standalone air-conditioned cabinet

COMPONENTS

- Jammer & Spoofer
- Directional Finder
- System fitted into customized, standalone, air-conditioned racks (shared)
- Radar ②
- Camera ③



① Depending OEM Sensor performance.

② Provided by end user

③ Provided by end user

Cabinet				
Equipment	L mm	W mm	H mm	W kg
Cabinet	1370	1110	1720	600
Battery	710	440	130	78
Spoofing Unit	-	-	-	-
UPS	710	440	130	55.7
SDRs	300	490	45	3.9
C2 Server	800	470	45	13.5
Network Switch	360	485	45	4
Power Supply Unit	580	480	135	12.5
PA Block	600	480	170	35.5
DF (DAQ + BSU)	-	-	-	<35

Directional Finder Antenna System				
Equipment	L mm	W mm	H mm	W kg
DF Antenna	800	1500	-	
Tripod	-	-	-	

Jammer and Spoofer Antenna System				
Equipment	L mm	W mm	H mm	W kg
GNSS Antenna (Option)	-	94	57	1.0
Directional antenna (Qty 2)	-	106	332	2.3
Directional antenna	-	450	770	3.7

SPECIFICATIONS^①

Hardware	
RF Jamming Frequency	400 to 6000 MHz
GNSS Spoofing Frequency	GPS L1C/A, L2C, Glonass L1OF, L2OF
Total PA output power	Up to 350W CW
RF Jamming and Spoofing Distribution	Jamming: up to 100W from 400-1000MHz Jamming/Spoofing: up to 100W from 1000-2000MHz Jamming: up to 100W from 2000-3000MHz Jamming: up to 50W from 3000-6000MHz
Jamming Signal Source	Field programmable gate array (FPGA)
Jammer Type	Active Jammer
Jammer Total power control step size	2dB
DF Frequency Range	100 to 6000 MHz
DF Receiver Channel Topology	7 channels
DF Algorithm	Correlative Interferometric
DF Instantaneous Bandwidth (MHz)	Up to 160 MHz
DF Minimum Resolution BW	25 kHz

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

DF Effective DF Scan Rate (MHz/s)	≤ 500GHz/s @ 80MHz BW, 25kHz resolution
DF Bearings per second	≥ 20,000,000/s
EO/IR Camera	As per OEM specifications
Radar	As per OEM specifications
Power Consumption (Peak)	< 5KW excludes any third-party equipment
Connectivity to Command & Control	Ethernet interface
Jamming Range	Up to 10km, jamming ratios apply
Spoofing Range	Up to 10km
Safety	Alarms for VSWR and temperature
Environmental[Ⓢ]	Design to meet MIL-STD 810G
Software	
Remote Control Unit	C-UAS C2 application
Exciter controller	Ability to activate/deactivate specific frequency bands
Jammer Power mute per bands	GUI allows the user to mute specific bands before activation
Jammer Power mute for all bands together	GUI allows the user to mute all bands instantaneously
Safety measures	Alarm for VSWR and temperature
Health monitor	System status (Initializing, standby, transmitting)
Selectable jamming threats	400 MHz - 6 GHz
Ephemeris data	Live update obtained from current location
Update desired spoof location	User defined spoof location

DEPENDENCIES

- Antennas must have clear line of sight to the jammed/spoofed target
- Cable length between cabinet and antenna is assumed to be no more than 30 metres (for performance purposes)
- The spoofer requires fresh ephemeris data to properly work
- C2 must interface closely with the radar system supplied by the end user
- For best result, accurate position of the target must be provided by the radar to the spoofer (within 300-meter accuracy).
- C2 integration with new 3rd party radar or other sensors, will be costed separately on time & material basis

[Ⓢ]The environmental conditions stated above apply only to the Skyshield Point Protection systems' main components.