

## DATA SHEET

## RFEYE ARRAY 150 DF & SPECTRUM MONITORING SYSTEM

Transportable direction finding system combining broadband monitoring and DF on wideband signals to 18 GHz.

The RFeye Array 150 is a portable system designed for vehicle mounted, transportable or ground-fixed installations. It is a fully integrated plugand-play system containing a high performance RFeye Node 100-18 (100MHz IBW, 18GHz frequency range), spiral antenna modules and high speed switch within an IP55 radome. It is also available with a mounting kit. The RFeye receiver commutates at very high speed around the antennas to make nearsimultaneous AOA measurements in multiple directions.

In addition, timing and synchronization features allow correlation of data between multiple Arrays or between Arrays and Nodes for accurate geolocation of target signals using combined AOA, TDOA and POA techniques. Measurements can be overlaid onto a wide variety of maps, satellite images and 2D / 3D GIS datasets, to give a unique positional display showing source geolocation probabilities. All signal types in the range can be mapped, irrespective of signal power, bandwidth or frequency.

CR-001165-DS-14

## ARRAY 150 SPECIFICATIONS

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DF and Geolocation	
Direction finding method	
Angle of Arrival (AOA)	6-way switched array
Geolocation frequency range	
AOA DF	500 MHz - 18 GHz
Time Difference of Arrival (TDOA)	9 kHz - 18 GHz
	(optional omni antenna)
Power on Arrival (POA)	9 kHz - 18 GHz
	(optional omni antenna)
DF coverage and accuracy	
Polarization sensitivity	All linear (circular
	polarized RX antennas)
Azimuth coverage	360°
Array 150 System	
1/0	
Auxiliary RF inputs	2 x N-type
Omni antennas (option)	2 x external and/or
	1 x internal (factory
	option)
Network	1 x 1 GigE, with POnE
USB	1 x USB 3.0, 1 x USB 2.0
GPS antenna input	1 x SMA passive or active
·	(+3.3 VDC)
Data storage	
External SSD	via external USB
Internal SSD inside radome	512 GB SSD
Size, weight and power (excl. rac	lome)
Dimensions (Ø, h)	650 mm x 420 mm
	(25.59 x 16.53 in)
Weight	28 kg (61.7 lbs)
DC power:	12V DC (limit
	+30V DC max
POnE	56v
Power consumption	
Typical	40 W
Maximum	55 W
Environmental	
Operating temperature	-30 to +50° C (-22 to 122° F)
Storage temperature	-40 to +71°C (-40 to 160°F)
Ingress protection	IP55 Nominal
U . r	

Receiver	
Channels	
Single	1 x Node 100-18
Frequency	
Range	9 kHz to 18 GHz
Sweep speed	
Sweep	390 GHz/s @ 2 MHz RBW
	320 GHz/s @ 61 kHz RBW
Noise figures at maximum se	nsitivity
9 kHz to 83 MHz	11 dB typical
83 MHz to 1 GHz	9 dB typical
1 GHz to 2.9 GHz	8 dB typical
2.9 GHz to 5.9 GHz	7 dB typical
5.9 GHz to 10 GHz	9.5 dB typical
10 GHz to 15 GHz	12 dB typical
15 GHz to 16 GHz	13 dB typical
16 GHz to 17 GHz	18 dB typical
17 GHz to 18 GHz	21 dB typical
Signal analysis	
Instantaneous bandwidth	100 MHz
Tuning resolution	1 Hz
Internal frequency reference	
Initial accuracy @20°C	±0.1 ppm typ.
Stability over temperature	±0.3 ppm
Ageing over 1 day	±0.04 ppm
Sampling	
Resolution	16 bits per channel (I&O)
Rate	125 MS/s I&Q



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