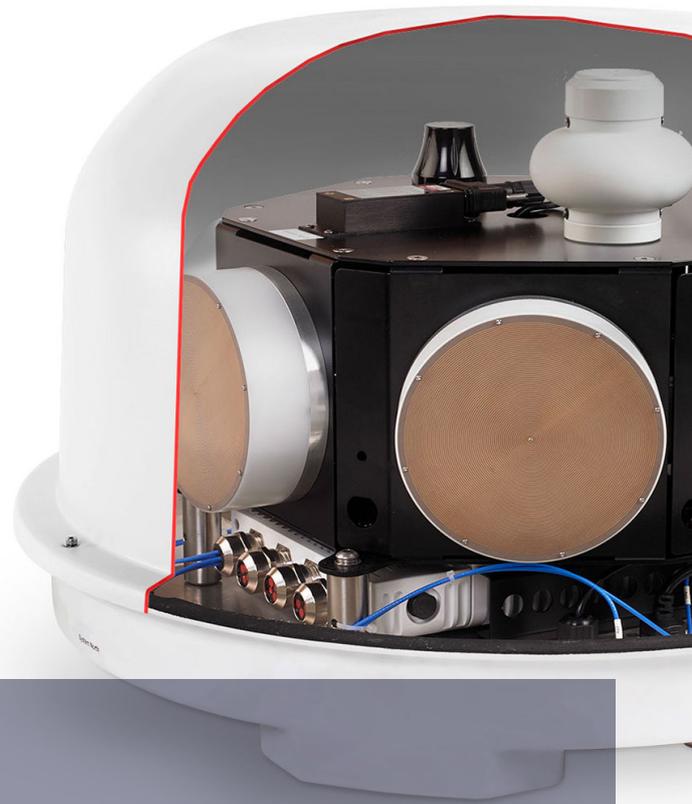


RFeyeArray

Array 100

DF and Spectrum Monitoring System



Transportable direction finding system combining broadband monitoring and DF on wideband signals to 8 GHz.

The RFeye Array 100 is a portable system designed for vehicle mounted, transportable or ground-fixed installations. It is a fully integrated plug-and-play system containing a high performance RFeye Node 50-8 (50MHz IBW, 8GHz 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 near-simultaneous 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.

RFeyeArray

Array 100 Specifications

Receiver

Channels	
Single	1 x Node 50-8
Frequency	
Range	9 kHz to 8 GHz
Sweep speed	
Sweep	151 GHz/s @ 2 MHz RBW
Noise figures at maximum sensitivity	
9 kHz to 0.1 GHz	10 dB typical
0.1 GHz to 2.4 GHz	6 dB typical
2.4 GHz to 6 GHz	7 dB typical
6 GHz to 8GHz	8 dB typical
Signal analysis	
Instantaneous bandwidth	50 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&Q)
Rate	62.5 MS/s I&Q
DF and Geolocation	
Direction finding method	
Angle of Arrival (AOA)	6-way switched array
Geolocation frequency range	
AOA DF	500 MHz - 8 GHz
Time Difference of Arrival (TDOA)	9 kHz - 8 GHz (optional omni antenna)
Power on Arrival (POA)	9 kHz - 8 GHz (optional omni antenna)
DF coverage and accuracy	
Polarization sensitivity	All linear (circular polarized Rx antennas)
Azimuth coverage	360°

Array 100 System

I/O	
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 PoE
USB	1 x USB 3.0, 1 x USB 2.0
GPS antenna input	1 x SMA passive or active (+3.3 VDC)
Location	Internal GPS module & antenna (standard)
Heading	Internal digital compass (option)
Data storage	
External SSD	via external USB interfaces
Internal SSD inside radome	512 GB SSD
Size, weight and power	
Dimensions (∅, h)	650 mm x 420 mm (25.59 x 16.53 in)
Weight	28 kg (61.7 lbs)
DC power or PoE	10 to 48 VDC
Power consumption	
Typical	30 W
Maximum	50 W
Environmental	
Operating temperature	-30 to +55°C (-22 to 131°F)
Storage temperature	-40 to +71°C (-40 to 160°F)
Ingress protection	IP55 Nominal



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