Theia 16A

AVEILLANT
A Thales company

Holographic Radar™
Target-centric surveillance

Holographic Radar. Clutter-Free Surveillance.

> *The world's first 3D Holographic Radar system. Fully scalable, highly robust, and able to intelligently distinguish between aircraft and wind turbines.*

For fifty years air surveillance has had to rely on spinning radars that are 'on- target' once every revolution of between 4 to 10 seconds, leaving aircraft undetected during the intervening period. Holographic radar surveys the airspace and never loses sight of targets or their true position. This enables Aveillant's Theia range of Holographic Radars to provide truly continuous situational awareness to Air Traffic Control operators.

Theia provides volumetric, continuous 3D surveillance with the capability to recognise target types including aircraft, wind turbines, birds and even cloud formations. This allows a clutter-free picture to be formed.

Holographic Radar is based on a static, modular solid state array enabling Aveillant to build products which can be configured for a range of surveillance requirements. This also reduces the cost (both upfront and through life) as compared to conventional rotating radars.

18-21 Evolution Business Park
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www.aveillant.com

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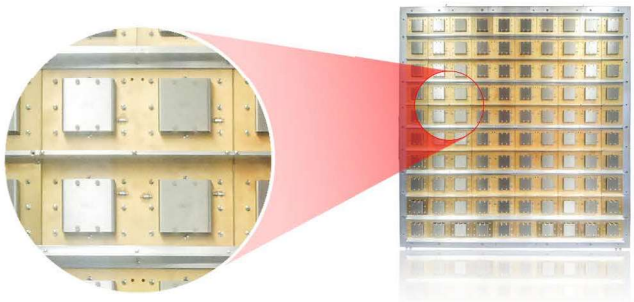
Specification	
Instrumented Range	0.3 - 5 Nautical Miles
Update Rate	1 second
Output Format	ASTERIX CAT34/48
Probability of Detection	>97%
Spectrum Occupancy	2MHz
Frequency	L-Band
Azimuth Coverage	90°
Elevation	90°
Maintenance	Online system monitoring Remote/local diagnostics
Performance	ESASSP

Features

- Intelligent characterisation and identification of target returns
- Clutter free surveillance with an extremely high probability of detection (PD)
- 100% time on target
- Provides real-time 3D target position therefore no slant range error
- Seamless integration into both plot extracted and digital RDS
- High reliability output
- Provides ASTERIX output in CAT034/048 format
- Update rate is configurable to as low as 1 second
- 19 inch rack mounted processing units
- No moving parts and minimal maintenance
- Vandal proof
- Mains or self powered (30 day fuel supply)

Holographic Radar™

Holographic Radar™ operates in a fundamentally different way to traditional rotating radar. Instead of sweeping a narrow beam around 360 degrees and multiplexing the transmit and receive functions of the antenna (which means very little time is spent with the beam on the target), Holographic Radar™ utilises Aveillant's patented technology, a static, staring array to continuously and simultaneously monitor all the airspace it can see.



Benefits

- Spectrum efficient L-Band
- Multiple applications from one solution (remote surveillance, wind farm mitigation)
- Low cost of through-life ownership
- Easily transportable and rapid deployment
- Unaffected by weather
- Mitigates unwanted clutter from ATC display (wind turbines, sea clutter, vehicles etc.)

Applications

- Wind farm mitigation
- Remote surveillance

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