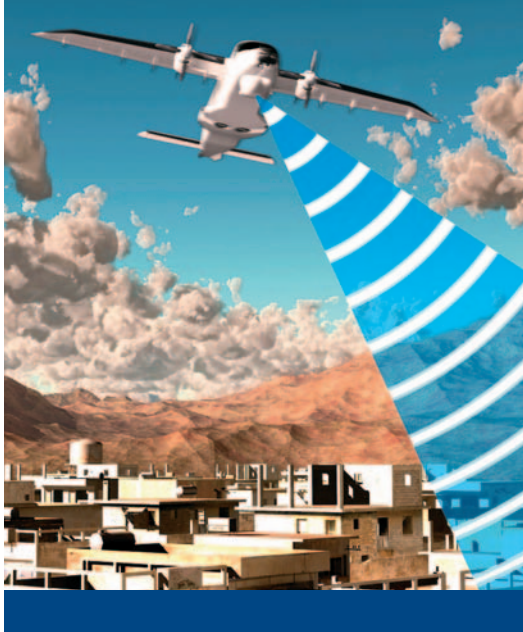


Defence Systems



Brahan-SAR

Compact low frequency airborne radar system for difficult targets

overview

SEA has an extensive heritage in the development of sensors for use against difficult targets having developed its expertise working on a variety of military programmes focussed on the use of ultra-wide band penetrating radar. This includes remote minefield detection systems, counter mine technology studies and, most recently, Bright Sapphire. This high resolution synthetic aperture radar has been designed for the detection of difficult targets including improvised explosive devices (IEDs), flush and shallow buried landmines, unexploded ordnance and vehicles under foliage.

SEA offers system integrators a straightforward route to creating powerful multi-sensor solutions for airborne platforms, including UAVs, rotorcraft and small fixed wing aircraft in permanent or role-fit configurations. Because of its unique characteristics, low frequency radar provides a data source that is complementary to other, more conventional, sensors such as visible cameras, thermal imagers, high frequency radars, lidars, ground-moving target indicator radars. The system can provide processed data in a number of formats that can be fed into a data fusion engine for combination with other data sources.

Brahan-SAR



Remote detection of surface, flush and buried mines



CREATING SOLUTIONS THAT WORK



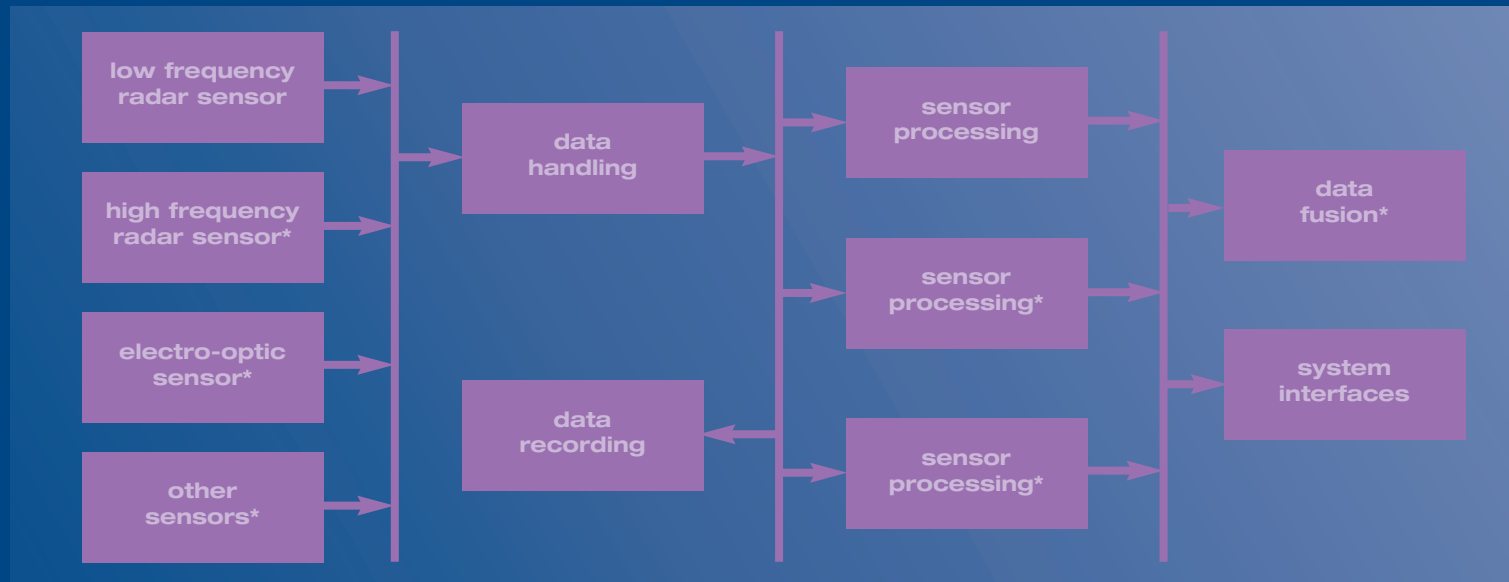
Baseline System

The baseline system comprises:

- a low frequency wideband synthetic aperture radar
- a high throughput high integrity data handling, recording and processing infrastructure
- real time processing software to generate high resolution imagery
- standard interfaces to the host platform systems

System Features

- full VHF-UHF coverage (50 to 1350 MHz)
- high resolution performance derived from wide bandwidth
- good foliage and vegetation penetration performance derived from low centre frequency
- high power broadband power amplifiers to allow stand off operation up to 10 km
- fully flexible transmit waveforms for all imaging geometries and modes
- programmable transmit notches for spectrum management
- Fully polarimetric operation for target signature exploitation
- on-board image formation for target cueing and data fusion
- full motion compensation
- on-board data recording and replay
- simple PC based instrument control and monitoring
- open interfaces and processing platform for use by other sensors



Typical multi-sensor system configuration (* denotes items supplied by system integrator or third parties)

Brahan-SAR Compact Low Frequency Airborne Radar System for Difficult Targets

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