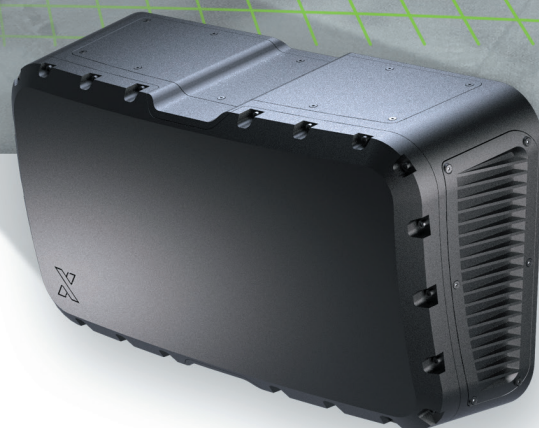


Xplore™

Airborne Imaging RADAR

DVE Terrain and Obstacles Mapping



Xplore

Airborne Imaging RADAR
DVE Terrain and Obstacles Mapping

Suitable for a wide range of platforms:



Carry out your mission safely in all visibility conditions

Xplore is a low cost, low SWaP software-defined millimeter-wave (MMW) radar, designed for terrain 3D mapping and obstacles detection.

Xplore, developed by Elbit Systems, leverages Commercial Off-The-Shelf (COTS) technology to provide a high resolution, high-frame rate, multi-mode, 4D imaging solution, which improves pilotage capabilities in all Degraded Visual Environment (DVE) conditions (fog, dust, smoke, clouds, etc.).

Augmenting the standard NVG or FLIR image with terrain and obstacles 3D symbology, Xplore improves situational awareness and flight safety. Operational missions can now be performed under any visibility condition.

Improve your mission success probability with high-fidelity terrain imaging and obstacles data, fused with Synthetic Vision System (SVS) and 3D conformal color symbology.

Fly, Anywhere, Anytime.

Operational Benefits

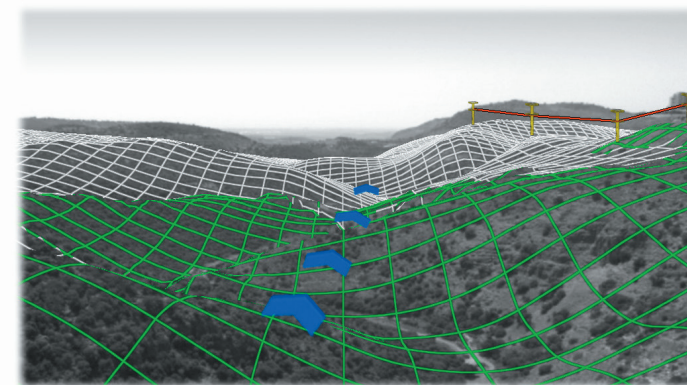
- Allows the pilot to perform Nap-Of-the-Earth mission in full degraded-visibility environments (DVE)
- Dramatically improves mission success probability and flight safety
- Intuitive piloting with advanced and intuitive augmented-symbology and imagery
- Eliminates vertigo situations in all mission phases
- Supports navigation in GPS denied areas

Xplore prototype flight test



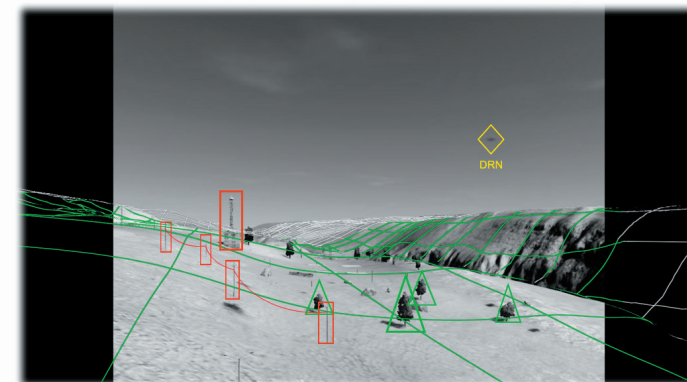
Operational Modes

The Xplore radar updates the terrain 3D map database to create a high-fidelity terrain map (white and green grid respectively in the images below)



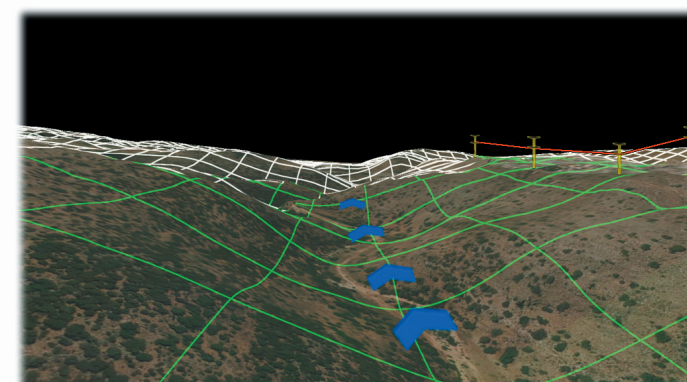
See-through Mode

In case of partial visibility, the Xplore terrain grid, obstacles and mission data are overlaid on the external scenery using see-through Helmet Mounted Display (Augmented Reality mode)



Augmented Night Vision Mode

In case of useful night vision (NV) imagery (FLIR/NVG), the Xplore terrain grid, obstacles and mission data are overlaid on the NV imagery providing far better SA and flight safety



Satellite Image Mode

In case of zero visibility conditions, the Xplore overlay a satellite imagery on the RADAR generated terrain model. Combined with terrain grid, obstacles and mission data, Xplore enables intuitive, day like, pilotage

Xplore

Airborne Imaging RADAR DVE Terrain and Obstacles Mapping

Key Features

- K-Band 2D array
- Range of 1 NM
- Wide FOV (100° x 50°, H x V)
- Enables terrain following applications
- Penetrates DVE (fog, dust, smoke, clouds etc.)
- Moving targets detection
- Supports mid-air collision avoidance

System Advantages

- No mechanical scanning
- Seamless integration with DVE systems
- Compatible with the world's leading HMDS
- Full scalability and upgradability
- Low SWaP, low maintenance



Elbit Systems Ltd.

Advanced Technology Center, P.O.B. 539, Haifa 3100401, Israel
E-mail: aerospace@elbitsystems.com www.elbitsystems.com

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