



# GenesisRDR YOUR CONFIGURABLE AND SCALABLE RADAR SOLUTION

GenesisRDR is an advanced radar module that enables the simulation of physically accurate and fully correlated radar applications.

## Physics Based

GenesisRDR, based on JRM Technologies' Sensor SDK and Diamond Visionics' GenesisRTX technology, synthesizes physics-based signatures on the fly (OTF) from a single material- property encoded 3D database of terrain, cultural features, atmosphere, and targets.

## Fully Correlated

Since GenesisRDR runs on the same spectral, material-property- encoded terrain and target database as is used for EO/IR wavelengths, the results are automatically fully correlated with other sensor modes (e.g. NVG, MWIR, LWIR) and GenesisIG.

## Available Modes

Base Radar Imaging Mode - Consists of SAR (strip map, spotlight, and scan) and ISAR.

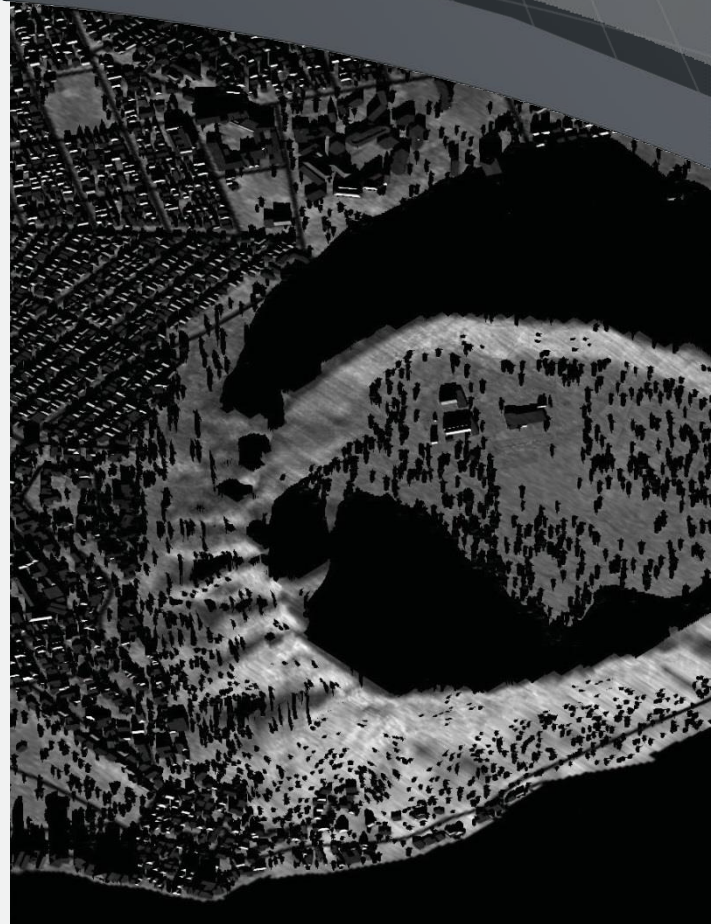
Base RBGM Scan Radar Modes - Consists of a scanning PPI and includes RBGM, DBS, DBS medium resolution SART, GMTI, MTI, Terrain Avoidance, and SSS.

Air-to-Air Modes (requires Base RBGM Scan Radar) - Includes RWS, TWS, VS, SST, Silent, Gun Director, RAM, WACQ, VACQ, GACQ, and BACQ

Terrain areal RCS parameters are stored in the same material data files as are used in EO/IR modeling. RF propagation is based on RADTRAN calculations, using the same atmospheric profile specification as for MODTRAN.

## Scalable Fidelity and Performance

All GenesisRDR modes use 32-bit floating point GPU processing for signatures and atmospheric, with frame rate performance ranging from about 1 Hz for full-spectral rendering, to 60 Hz or better with a standard 8-24 bit integer frame buffer. GenesisRDR also includes a flexible API for integration into any visual system.



Diamond Visionics® RTX  
**GENESIS** RDR  
Physics Based Radar

## Export

The Commodity Jurisdiction determination for Diamond Visionics Genesis family of software products, including Genesis IG, RTX, SDK, SN, RDR are Non-ITAR and classified as EAR99.

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