SPACE GUARD

Space Surveillance & Tracking (SST) Radar

ELM-2097

SPACE GUARD

Space Surveillance & Tracking (SST) Radar

Space Guard is a long range, S-band radar system, which detects and tracks space objects in Low Earth Orbit (LEO). For over the past half century, an abundance of space rockets and satellites were launched into space. As they became out of service, they turn into uncontrolled space debris endangering and colliding into new and active space platforms. By performing detection, tracking, identification, and cataloging of space objects, as well as supporting Space Traffic Management, Space Guard provides effective Space Situational Awareness (SSA) to ensure the ongoing safety of space operations.

The radar incorporates Active Electronically Scanning Array (AESA) technology based on Gallium Nitride (GaN) RF modules combined with advanced algorithms and signal processing capabilities to effectively discriminate space debris and catalogue it for further investigation. The radar employs digital beamforming and wide beam coverage to monitor a large volume of space while simultaneously tracking multiple objects. The system supports seamless interface with a customer's database and command and control system as well as external global sources. The radar is interoperable with other space sensors (i.e. cameras, legacy sensors). Space Guard is based on ELTA's field-proven Ballistic Missile Defense (BMD) radars.

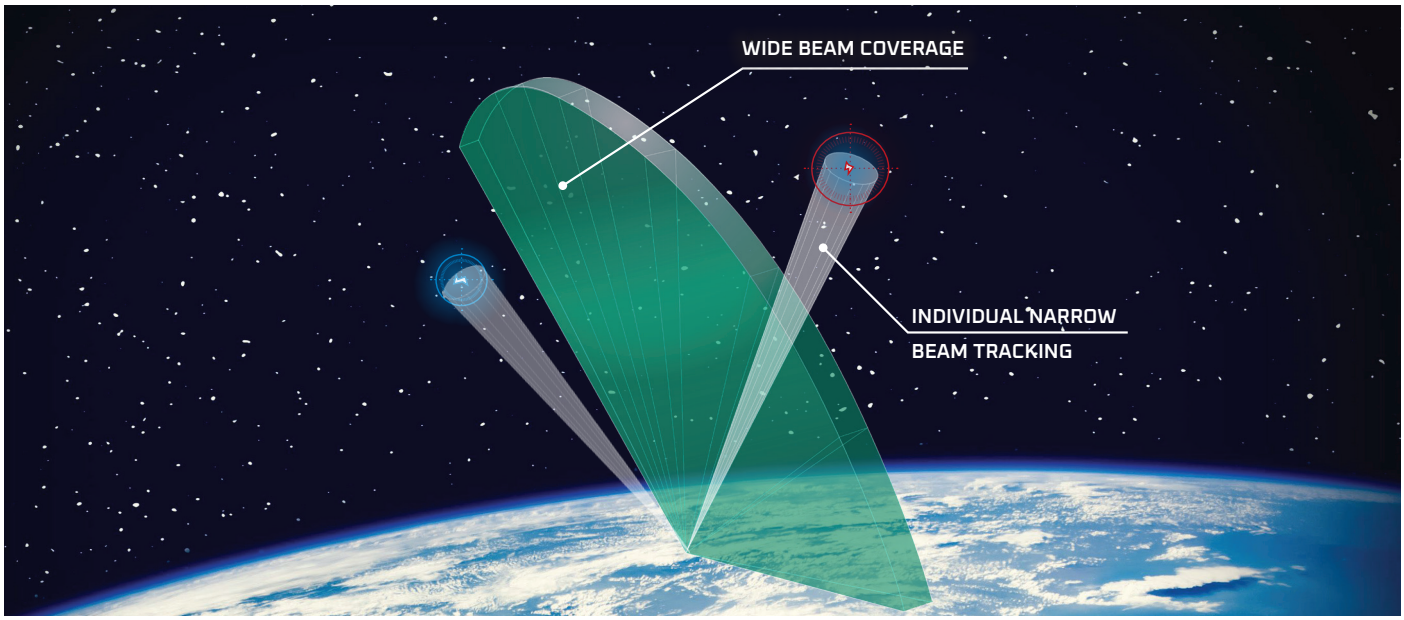
HIGHLIGHTS

Space Situational Awareness:

- Autonomous detection surveillance, tracking, and cataloging of all space objects
- Track satellites: potential collisions,maneuvers, breakups etc.
- Tracks - more than 1000 objects
- ±60° azimuth on each axis

Support for Space Traffic Management:

- Orbit propagation, predictions,analysis and assessment for all objects
- Space objects' collision assessment
- Alerts operators of inevitable collision allowing ample time to maneuver the satellite onto a safe path



04/21

IAI – ELTA GROUP
WWW.IAI.CO.IL
MARKET@ELTA.CO.IL