SUCCESS STORY

Active Antenna Array Unit (AAAU) for AESA Radar

Modular, Scalable Solutions For Next Generation Radar Systems

An Active Electronically Scanned Array (AESA) Radar is a type of phased array antenna in which the beam of radio waves can be electronically steered to point in different directions without moving the antenna.

Following extensive research and development, Spectrum Control has combined RF and Microwave technologies with advanced digital control techniques to enable the realization of active electronically steerable front ends for a range of applications and frequencies.

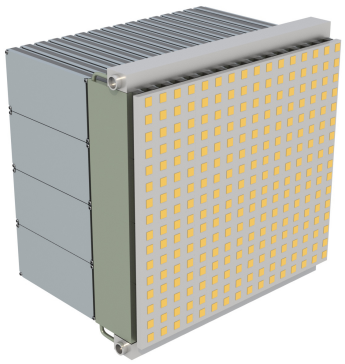
Common Building Blocks for AAAU Sub-Array

The system comprises multiple Quad Transmit/Receive Modules, or QTRM assemblies, packaged in removable planks that form the AAAU sub-array.

"Spectrum Control's AAAU solves the problems of system integration, first line repair and cost of ownership."

The X-Band QTRMs are ready to use straight out of the box. All that is necessary is the upload of system calibration data, which then propagates through the system, reducing set-up time.

Each QTRM includes full RF, DC, control functionality, calibration and BITE status for each module.



Spectrum Control's AAAU with modules inserted

Both the unit's compact size and scalability allow for use across multiple defence and commercial aerospace programs without the need for costly development for different configurations.

The AAAU has been designed with the ability to stack together for larger Radar requirements.

Active Array Applications

Spectrum Control's scalable Active Array lends itself to multiple platform applications, including:

- Military Vehicles
- Naval Surveillance and Tracking
- UAV Tactical Data Links
- Ground Stations
- Airborne Radar Systems