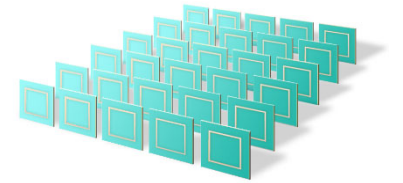


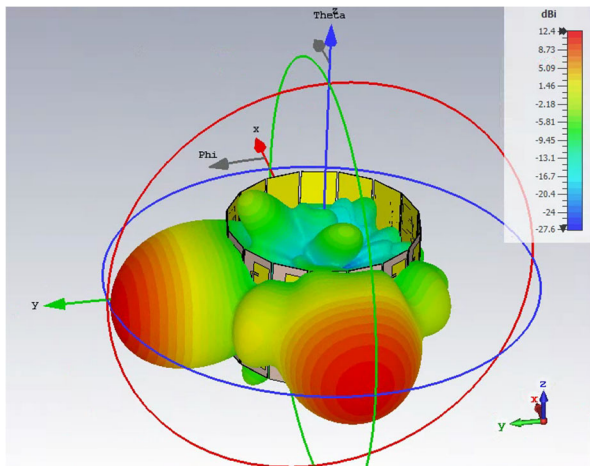
## Actively Electronically Steered Arrays

JEM develops active electronically steered arrays (AESA) for fixed-site, vehicular, and airborne applications. Employing patented, proprietary, and SBIR technologies, these arrays offer many features not available with other arrays, including:

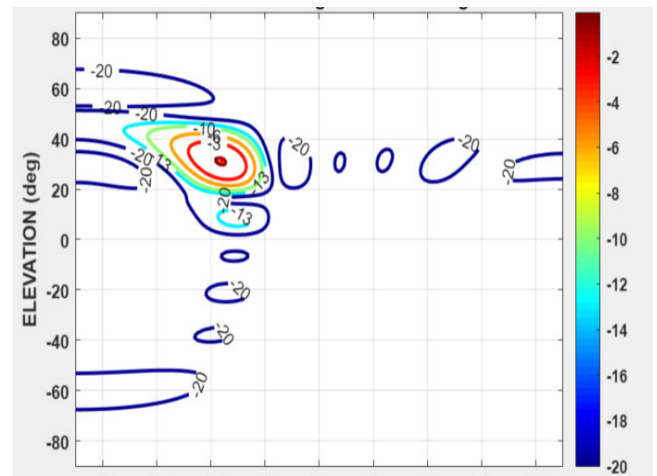


Planar Array

- Ultra-wideband – up to 4:1 frequency range of operation
- 1-D or 2-D (azimuth and elevation) beam steering, up to  $\pm 60^\circ$
- True-time-delay beam steering – maintains beam pointing angle over multi-octave bandwidth.
- Linear or circular polarization, including dual-polarized arrays with switched or simultaneous outputs.
- Receive-only or Transmit/Receive arrays, with or without integrated T/R modules
- Half-duplex and full-duplex Transmit/Receive arrays
- Single-beam or multiple simultaneous beams
- Optional array tapering for low sidelobe levels
- Optional temporal/spatial null forming/steering
- Environmental qualification programs for airborne and vehicular applications
- Integrated radome designs for conformal airborne applications

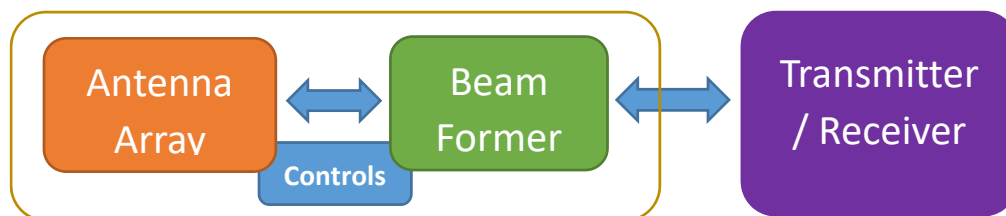


Circular array with multiple simultaneous beams



2D Planar Steered Beam Pattern

## AESA

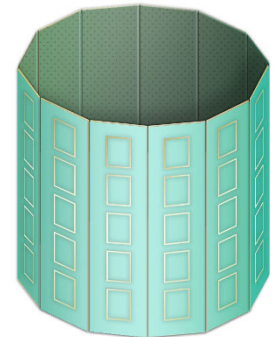


## Actively Electronically Steered Arrays

### Controller & Software

Each AESA includes a computerized control system. The controller can be integrated with the antenna or mounted remotely depending on your requirements. The controller can interface with an external system computer, or with an ARINC 429 or 1553 avionics data bus. The controller is capable of handling multiple arrays (e.g., port and starboard sides of an aircraft).

If desired, JEM will design a software GUI interface to meet your needs. The GUI can be run on the controller or your device.



Circular Array

### Electro-Mechanical Beam Steering

JEM designs electro-mechanical beamformers which are RF passive devices for high-power handling capabilities.

