

Features

- Simultaneously formed Σ , Δ_{Az} , and Δ_{El} beams
- Integrated guard channel for sidelobe blanking
- Wide field-of-regard with exceptional roll-off
- Fully configurable transmit and receive tapers
- Integrated loopback paths for monopulse correction and downstream calibration
- Integrated RF built-in test (BIT) network for insitu element characterization and correction
- Ruggedized electrical and mechanical interfaces

Applications

- Collision avoidance
- Weather detection
- Synthetic Aperture Radar (SAR)
- Ground Moving Target Indicator (GMTI)

Performance Summary

Size	6.5" × 26.0" × 3.9"
Weight	22 lbs
Power	800 W
Frequency	8.0 - 11.0 GHz
Directivity	29 dBi
Scan Volume	±65° Az. / ±45° El.
Polarization	V-pol
Rad. Power	640 W
Noise Figure	4.5 dB
Cooling	Forced Air

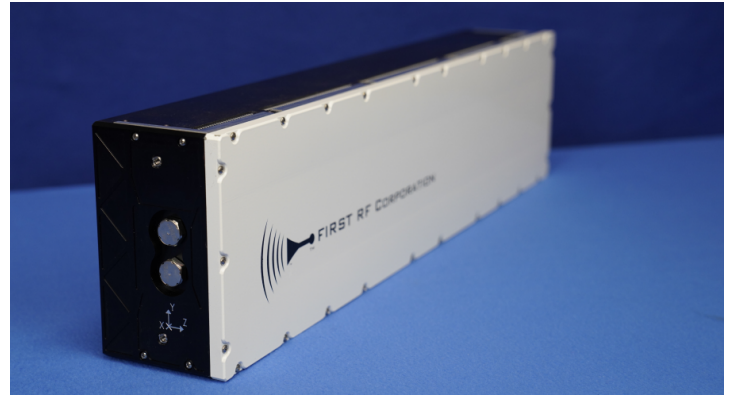


Figure 1. FRF-275 Multi-Mode AESA

General Description

Designed to support multi-function radar operations at X-band, the FRF-275 is a complete modernization of the legacy FRF-240 utilizing the latest in GaN and SiGe semiconductor technology. The FRF-275 builds upon FIRST RF's reputation for affordable, high-performance AESAs by reducing the overall size and weight while improving the overall performance. Built using a modular architecture, different form factors and receive path configurations are available upon request.

This AESA has been ruggedized to meet common DO-160 and MIL-STD requirements for airborne AESAs and can be easily tailored to similar environments. Detailed information is available upon request.

While optimized for pulse-doppler operations, the FRF-275 can be used for high duty-cycle and continuous-wave applications with the appropriate settings. Please contact inquiries@firstrf.com for more details.