

SNC[®]

Antenna Panel Assembly (APA)



Precision DF Interferometer Antenna Array

The Sierra Nevada Corporation (SNC) APA and APA – Extended (APA-X) phase interferometer antenna arrays provide precision direction finding (DF) in a small form factor designed for installation on a wide range of airborne platforms.

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APA OVERVIEW

The APA and APA-X precision DF interferometer antenna arrays support the SNC AE-4500 Auto ESM system with four channels. With a mature Technology Readiness Levels (TRL) 9, APA and APA-X offer a modular, low size, weight and power (SWaP) solution that allows mounting within UAVs, wingtips, pods, turbo prop aircraft and business jets. The antenna arrays cover the UHF through K/Ka frequency bands and provide instantaneous coverage over a wide azimuth of 120 degrees to support precision geolocation determination within the SNC AE-4500 System.

APA ENVIRONMENTAL & EMI QUALIFICATIONS

Both variants of the APA are designed and tested to meet rigorous MIL-SPEC and commercial standards, ensuring reliable operation in uncontrolled temperature and pressure environments. The APA is qualified for the military and commercial standards below:

- MIL-STD-810G: Explosive atmosphere, humidity, blowing sand & dust, salt fog, blowing rain & drip
- RTCA DO-160G: Operating temp (-55C to +71C), high altitude (55,000 FT), robust vibration, operational shock (20g) & sustained acceleration (18g)
- MIL-STD-461F: Conducted emissions, radiated emissions, conducted susceptibility, radiated susceptibility, static discharge & ground plane interference susceptibility

APA SPECIFICATION

- Frequency coverage from 0.5 to 18 GHz
- 120-degree instantaneous azimuth coverage
- Size – 8.00" (H) x 22.50" (W) x 2.5" (D)
- Weight - 5.3 pounds



RELATED EQUIPMENT

- APA – 0.5 to 18 GHz Antenna Panel Assembly
- APA-X – 0.5 to 40 GHz Antenna Panel Assembly
- REA – RF Electronics Assembly
- REA-X – RF Electronics Assembly with Frequency Extension
- RPA – Receiver Processor Assembly
- ILA – In-Line Amplifier (Optional)



APA-X SPECIFICATION

- Frequency coverage from 0.5 to 18 GHz
- 120-degree instantaneous azimuth coverage
- Size – 8.00" (H) x 22.50" (W) x 2.5" (D)
- Weight - 5.3 pounds



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