

# SNC<sup>®</sup>

## Excalibur ESM System



The SNC Excalibur System is a digitally channelized High Probability of Intercept (HPOI) Electronic Support (ES) receiver that provides radar detection, Mono-Pulse Precision Direction Finding (PDF), geolocation capabilities, and continuous full 16 GHz bandwidth starting ranging from 0.5-18GHz frequency coverage with multiple narrow band drop channels.

# Excalibur ESM System



The Excalibur Integrated Processor Assembly (IPA) can interface with an RF Electronics Assembly (REA) and up to four 4-element Antenna Panel Assembly (APA) arrays, each providing 120 degrees Field of View (FOV) to support precision geolocation. The IPA can be easily interfaced with existing or other arrays.

## EXCALIBUR DATA PRODUCTS

### Pulse Descriptor Words (PDWs) w/ PDF:

2GHz IF bandwidth is digitally channelized using polyphase filterbank for detection. Each detected pulse is digitally center tuned and processed as a Burst Digitized IF (BDIF).

### CDIF Streaming:

8x 100G Ethernet I/O links are provided for streaming CDIF data in VITA 49 format. Multiple Virtual Tuners with variable frequency and bandwidth.

### Low Probability of Intercept (LPI) w/ DF:

A 500MHz DDC output is optionally available to process LPI FMCW signals and produce segment descriptor words (SDWs) and Time / Frequency (TF) display data.

### Emitter Reports:

Identification with geolocation and accuracy supporting long-range targeting.

### Manual Analysis:

Displays include PDW Sparkle Plot, Running PDW Time Plots, DF Polar Plot, Oscop, and IF Pan.

## STANDARDS COMPLIANT

- CDIF VITA 49.1 / 49.2
- AMS / Government Reference Architecture (GRA)
- DOD PDW / SDW format

## APA SPECIFICATIONS

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

## GRAPHICAL USER INTERFACE



Operates with the entire SNC Merlin Software Suite: Merlin, remoting, playback and map

## APA OVERVIEW

The REA and APA precision DF interferometer antenna arrays support the SNC Excalibur ESM system with four channels. APA offers 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 provide instantaneous coverage over a wide azimuth of 120 degrees to support precision geolocation determination within the SNC Excalibur System.



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