

# GPS Timing Integration for Small Form Factor PDRS



## Challenge

- GPS (SAASM) integration into a small form factor passive detection and reporting system
- Rugged, low SWaP for ground, shipboard and airborne applications

## Solution

- Spectracom's customization-to-COTS approach
- Adapting existing GPS timing system's bus-level architecture into VPX circuit card assembly
- No NRE, quick project turn-around

## Results

- Reduced cost of development and improved time-to-market
- Versatile features
- Ease of maintenance
- Small system size: 9.91" x 7.20" x 9.65" (30 lb)

Telephonics, an innovator of identification Friend or Foe (IFF) Interrogators, developed a small, rugged, Passive Detection and Reporting System (PDRS) using VITA compliant COTS and custom VPX based circuit card assemblies. For embedded GPS functionality, it identified Spectracom's TSync bus-level timing platform to receive GPS, discipline an onboard rugged ovenized crystal oscillator and generate high precision time and frequency signals for system synchronization. It also delivers GPS coordinates for the system.

To simplify the integration for Telephonics, Spectracom customization-to-COTS approach adapted the platform into a standard VPX-based card without the need for non-recurring engineering charges. It offered the necessary ruggedization, small size, and low weight and power consumption to meet the goals of system portability, and is available with secure SAASM GPS.

Adaptable technology, such as the Spectracom TSync bus-level timing platform, allows Telephonics to offer increased situational awareness coverage for general aviation, and the security needed for military applications.



Telephonics  
Small Form  
Factor PDRS