






Wideband Recording RF Sensors

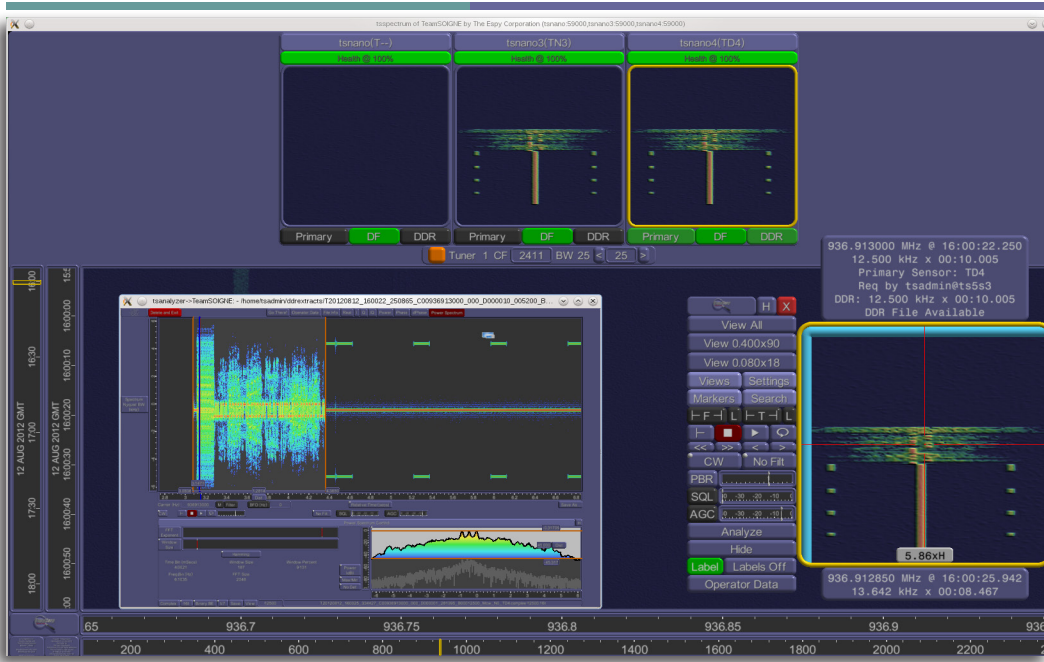


teamSENTINEL[®] Gen2

Integrated teamSENTINEL[®] sensor and teamSOIGNE[®] client workstation for V/UHF man-portable applications

TeamSENTINELnano Gen2 incorporates a TNG-node compliant RF module with Espy's teamSENTINEL server and client functions into a highly transportable V/UHF sensor and analysis system. High-performance SSD storage (1.92 TB or 3.84 TB) ensures that the same level of interactive operator performance is maintained as a stand-alone teamSOIGNE workstation, even as the system is collecting digital RF data in real-time. TeamSENTINELnano Gen2 runs the same advanced version of teamSENTINEL software as the rest of the Espy product line. To complete the package, Espy's planer wideband fractal antenna is integrated into the transit case lid for instant setup and RF monitoring from 150-6,000 MHz. A user can set up this sensor in 10 minutes or less.

-  **Single hardware platform for signal collection & analysis, providing the ultimate in versatility and transportability**
-  **Record up to 17 hours of digital RF at 22.5 MHz acquisition bandwidth, with coverage from 20 to 6,000 MHz**
-  **Real-time and retroactive signal processing, Theater Net-Centric Geolocation (TNG), and signal-mining analysis, all while actively recording digital RF**
-  **TNG-compliant time and frequency operations**
-  **Small, hand-carried, transit case with an integrated wideband (150-6000 MHz) fractal omni antenna standard with each unit**



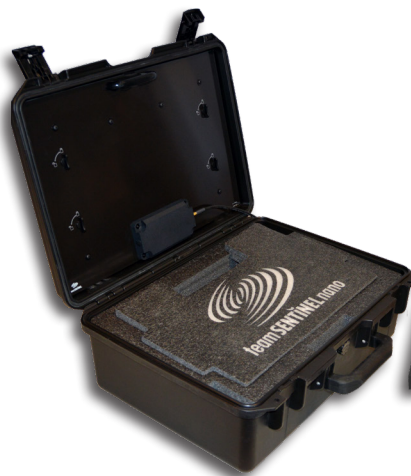
Three sensor teamVIEW depicted with at least two SENTINEL or TNG-enabled sensors hearing the same emitter. Teams can be formed heterogeneously from all SENTINEL-family product types (teamSENTINEL, teamSENTINELmini[®], and teamSENTINELnano).

TeamSENTINELnano Gen2 Capabilities include:

- Collect and record 22.5 MHz bandwidth (25 Msps) of V/UHF wideband spectrum while simultaneously performing signal-mining and analysis on the same workstation.
- Interactively mine the entire recorded power spectrum (22.5 MHz x 9- or 17-hours), by panning and zooming in on signals of interest.
- Use the espyGLASS[®] to examine in detail the external characteristics of signals of interest.
- Listen to energy signals of interest (SOIs) directly in tsSpectrum or in tsAnalyzer.
- Extract SOIs as DDRs (digital drop recording) for detailed analysis in tsAnalyzer.
- Manipulate DDRs by listening to, visualizing, demodulating, measuring, and converting to a variety of industry-standard file types.
- Easily and rapidly search, view and access SOI metadata results and DDR cuts from a web-based browser interface.
- Wide range of industry-standard intermediate file (IF) formats supported including Midas BLUE.
- TNG-node compliant

SYSTEM SPECIFICATIONS

Recorded Sample Rate	25 Msps
Usable Stare Bandwidth	22.5 MHz
Maximum Sensor Recording Options	9 or 17 hours
DDR Narrowband Extract Storage	~200 GB
Max DDR Extract Duration	Hours
Max DDR Extraction Sample Rate	25 Msps
Typical SFDR (single tone)	~70 dB
Supports additional teamSOIGNE clients	Yes
Supports TeamVIEW with other SENTINELs	Yes
Base Frequency Tuning Coverage (MHz)	20-6,000
Fractal Omni Antenna Coverage (MHz)	150-6000
TFNG-Node Compliant with Integrated GPS	Standard
JICD4.2 software interfaces (TNG)	Optional
Operating System	CentOS



teamSENTINEL

Corporate Headquarters

13033 Trautwein Road
Austin, Texas 78737
P: (512) 261-1016
F: (877) 570-6250
www.espy.com
sales@espy.com



The Espy Corporation

"Helping discover the way"

Wideband Recording RF Sensors



teamSENTINELnano[®] Gen2

TeamSENTINELnano Gen2 Sensor



A Dell M6800 Precision laptop secures to an Espy teamSENTINELnano RF Conditioner module for easy transport and setup.

TeamSENTINELnano Gen2 sensors are TNG-node (Time, Frequency, Navigation and Geodesy) fine-tuned prior to shipment from the factory (JICD4.2-node compliant).

The LED panel on the front of the RF Conditioner provides easy access to the current GPS time, location and status through a simple cycle button interface.

TeamSENTINELnano Gen2 sensors are TNG calibrated prior to shipment from the factory for exceptional TDOA/FDOA performance. Site calibration is typically limited to defining external characteristics such as the cable length to the reference and GPS antennas.

These sensors, like other Espy V/UHF teamSENTINEL sensors can,

- Operate as a standalone (untethered from a network),
- Be network-attached to other TNG-enabled teamSENTINELs,
- Function as a TNG-node in a heterogeneous network of JICD4.2-compliant sensors,
- In real-time, or retroactively from the recorded delay, provide pre-detection data in response to Theater Net-centric Geolocation (TNG),
- Provide interfaces to a variety of TNG-compliant, tasking mechanisms and user interfaces.

TeamSENTINELnano Gen2 sensors operate on the same version of teamSENTINEL server software and teamSOIGNE client software as the rest of the Espy teamSENTINEL and teamSOIGNE product family, ensuring maximum interoperability and ease of use.

TeamSENTINELnano Gen2 1RU RF-Conditioner Module



The RF-Conditioner module provides a single point of access for all power, network and RF connections necessary to configure and operate the teamSENTINELnano.

The RF Conditioner module provides:

- Built-in V/UHF receiver module (20-6,000 MHz tuner range coverage and 22.5 MHz stare bandwidth),
- Built-in TNG-node compliant GPS time and frequency unit,
- RF, network and power distribution connections,
- Support for external input of reference time and frequency sources,
- 90/264 VAC, 50/60 Hz autosensing power supply to drive both the Dell Precision M6800 laptop and RF-Conditioner,
- Optional rackmount ears for easy installation into any standard 19" equipment rack.

PACKAGING SPECIFICATIONS

One small hand-carried case holds everything

Case dimensions: ~ 21.2" x 16" x 8.75"

Weight, including case: ~40 lbs (18 kg)

MAX Power: 240 Watts

Power: 90/264 VAC, 50/60 Hz autosensing

Watertight transit case, Padlock Hasps

Set up in 10 minutes or less

Integrated Wideband Fractal Antenna

The Espy Corporation is a closely held S Corporation based in Austin, Texas, with offices in Florida and Maryland. Espy provides products and engineering services to clients engaged in advanced research and scientific analytic processing. TeamSENTINEL, teamSOIGNE, teamVIEW and espyGLASS are registered trademarks of The Espy Corporation. All other trademarks and copyrights referred to are the property of their respective owners. Information in this document is subject to change without notice and does not represent a commitment on the part of Espy. Espy assumes no responsibility for errors or omissions or for damages resulting from the information contained herein. ITEMS AND TECHNICAL DATA ARE SUBJECT TO THE ITAR. Copyright © 2012-2019 The Espy Corporation