Sensor Positioning And Readback System (SPARS) Sensor Buffer Plus++

Standard Key capabilities

- Standalone system generating all internal clocks and triggers from GPS signals – generates own IRIG-B
- Accepts four (4) serial streams (+5VDC to +28 VDC) for azimuth angle position, elevation angle position, range, and auxiliary data
- Provides one serial range acquisition data
- Outputs 40 Hz read pulse, 29 shift pulse streams with a programmable period, and two-programmable pulse streams
- Provides three (3) analog signals to drive the azimuth and elevation servos and ranger
- Provides 24-bit digital input/output signals for general purpose
- Provides eight (8) channels of optically isolated relay input and eight (8) of electromechanical relay output
- Sends asynchronous serial stream of antenna pedestal azimuth and elevation data, range and auxiliary data to the Source Integration Server (SIS)
- Receives asynchronous serial stream of azimuth, elevation and range designation data from the SIS
- All parts are Commercial Of The Shelf (COTS)
- DISA STIGs and Nessus Scan Compliant

Added++ capabilities

- Provides 8-channels of analog to digital converters for the strip-chart display and recorder – digitally record strip-chart
- Reads mis-level amplitude while commanding 360 deg antenna rotation
- Antenna growler pitch and amplitude of the sound is dependent on the speed of the antenna motion
- Send and receive PMRF iNet Message 37 data to/from the SIS with optional Cisco firewall
- Voice status warning synthesized voice generated to warn operators of critical warning

Plus++ features

- Autodiagnostic software self-diagnostic software that automatically isolates hardware failure to board level
- Sun tracker points to the sun for solar calibration
- Satellite propagation reads three/two-line element (TLE) and propagates the ephemeris for antenna pointing
- Pre-flight nominal load ballistic and non-ballistic pre-flight nominals in RAE and XYZ format and use it as internal designation source
- Save State-vectors cut state vectors from its track and use it as position designation
- Polar antenna display antenna pedestal position plot in polar coordinate
- Graphical plot of vector comparison compare multiple designation sources with pedestal position

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SPARS Sensor Buffer, Strip-Chart Recorder, Serial Stream Data Recorder in One !



DISA-STIG & Nessus Scan Compliant COTS, RHEL7 OS, Modern Technology



System Block Diagram, SPARS Sensor Buffer Plus++ Model 201

Optional capabilities

- Video capture to display and digitally record antenna mounted camera
- Full/all range display of emitters in pulse-shape and waterfall scrolling intensity plot
- Data capture and recording of the Sum/Az/El receive channels with pulse-shape and Range-Time-Intensity plot

On-site support & warranty

- On-site installation and testing
- 1-year warranty on hardware parts
- Monthly operating system and software updates to meet cybersecurity compliance for 1-year

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