DYNAMIC NANO SPECTRUM SOLUTION (DNSS)

Small form factor spectrum dominance solution enabling operations on unmanned systems

Features:
- MOD Payload 4.0 compliant chassis optimized for unmanned applications
- Xilinx RFSoC based transceiver
- Swappable RF conditioning modules for customized applications
- Up to 20 GHz instantaneous receive and transmit capability
- Software upgradable in the field
- Field programmable
- Applications
  - Enable effective deployment of 5G wireless networks
  - Resolve propagation issues in highly contested environments
  - Group 1 Unmanned Aerial System (UAS), Unmanned Surface Vessel (USV), unattended, and dismount operation
  - Software Defined Radio receiver and transmitter
  - Electronic Warfare and spectrum monitoring
  - Analog data recording and playback
  - Multimode data acquisition

Mission Capabilities:
- Passive RF collection
- Counter C2 and communications
- Deception
- Decoy
- Electronic attack
- Cyber electronic attack
- Electronic protection
- Electronic support

Specifications:
- Input Power: 9V – 36V
- Size: 6.3” x 4.3” x 1.5”
- Weight: 1.9 lbs
- Interfaces:
  - USB 3.0
  - Gigabit Ethernet
- Environmental
  - Operating temperature: -40 C – 60 C
  - Cooling: conduction
  - Designed to meet MIL-STD-810G

System Memory
- Processing System: 4GB 2133 MHz LPDDR4
- Programmable Logic: 4GB 2400 MHz DDR4

Non-Volatile Memory
- 2TB NVMe Solid State Drive
- 64GB eMMC
- 2Gb QSPI

Environmental
- Operating temperature: -40 C – 60 C
- Cooling: conduction
- Designed to meet MIL-STD-810G

Field Programmable Gate Array
- Standard: Xilinx Zynq UltraScale+ RFSoC XCZU27DR
  - Analog Inputs
    - Quantity: 8
    - Sampling rate: 4 GHz
    - Resolution: 12-bits
  - Analog Outputs
    - Quantity: 8
    - Sampling rate: 12-bits
    - Resolution: 14-bits
- Option -03: Xilinx Zynq UltraScale+ RFSoC XCZU47DR
  - Analog Inputs
    - Quantity: 8
    - Sampling rate: 5 GHz
    - Resolution: 14-bits
  - Analog Outputs
    - Quantity: 8
    - Sampling rate: 10 GHz
    - Resolution: 14-bits

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