DYNAMIC NANO SPECTRUM DEVELOPMENT PLATFORM (DNSP)

RFSoC based lab development platform with direct transition path to a tactical hardware solution

Features:
- Complete laboratory prototyping kit for RF conversion and processing
- RFSoC module transition-able from lab environment to Nano Cricket MOD Payload 4.0 tactical form factor
- Applications
  - Enable effective deployment of 5G wireless networks
  - Resolve propagation issues in highly contested environments
  - Software Defined Radio transceiver
  - Electronic Warfare and spectrum monitoring
  - Analog data recording and playback
  - Multimode data acquisition

Specifications:
- Input Power: 12V
- Breakout Card Size: 10.6” x 8.6”
- RFSoC Card Size: 6” x 3.4”

Interfaces:
- USB 3.0 Type-C
- Gigabit Ethernet
- PCIe Gen 3 x4
- PCIe Gen 3 x1
- JTAG/UART

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: 6.4 GHz
    - 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

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

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