



Sidekiq NVM2

High Performance

Space-Based Missions

Spectrum Dominance

Open Architecture

Small Form Factor

Small Form Factor Portfolio



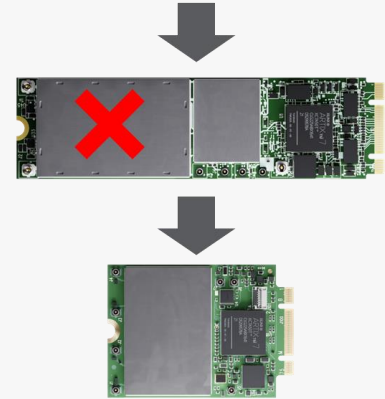
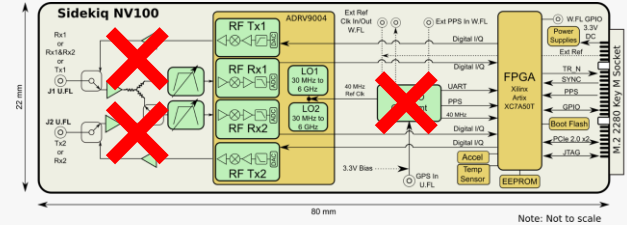
Industry's Smallest Complete SDR Platforms

| Sideiq Product |  MiniPCIe |  M.2 |  Z2 |  Stretch |  NV100 |
|---------------------------|--|---|---|---|---|
| Max # Rx / Tx Channels | 2 / 1 | 2 / 2 | 1 / 1 | 1 / 1 | 2 / 2 Ind. Tunable |
| Phase Coherence | 2 Rx | 2x2 MIMO | No | No | 2 Rx or 2 Tx |
| RF Coverage | 45MHz – 6GHz | 45MHz – 6GHz | 45MHz – 6GHz | 45MHz – 6GHz | 10MHz – 6GHz |
| Max Total BW | 50MHz | 50MHz | 50MHz | 50MHz | 50MHz / Ch 100MHz Total |
| ADC / DAC Performance | 12 bits | 12 bits | 12 bits | 12 bits | 16 bits |
| Typical Rx NF | <8dB | <8dB | <8dB | <8dB | <5dB |
| Typical Rx IIP3 | -10dBm | -10dBm | -10dBm | -10dBm | +2dBm |
| Integrated Filters | No | No | Yes | Yes | Yes |
| On Board FPGA | Spartan 6 | Artix 7 | Zynq 7010 | Artix 7 | Artix 7 |
| On Board Linux Computer | No | No | Yes, Dual Core ARM A9 | No | No |
| On Board GPS | No | No | No | Yes | Yes |
| Host Interface | Gen1 PCIe x1 + USB2 | Gen2 PCIe x1 + USB2 | USB2 | Gen2 PCIe x1 | Gen2 PCIe x2 |
| Typical Power Consumption | 2 – 2.5W | 2.5 – 3.5W | 2 – 2.5W | 2 – 2.5W | 4 – 6W |

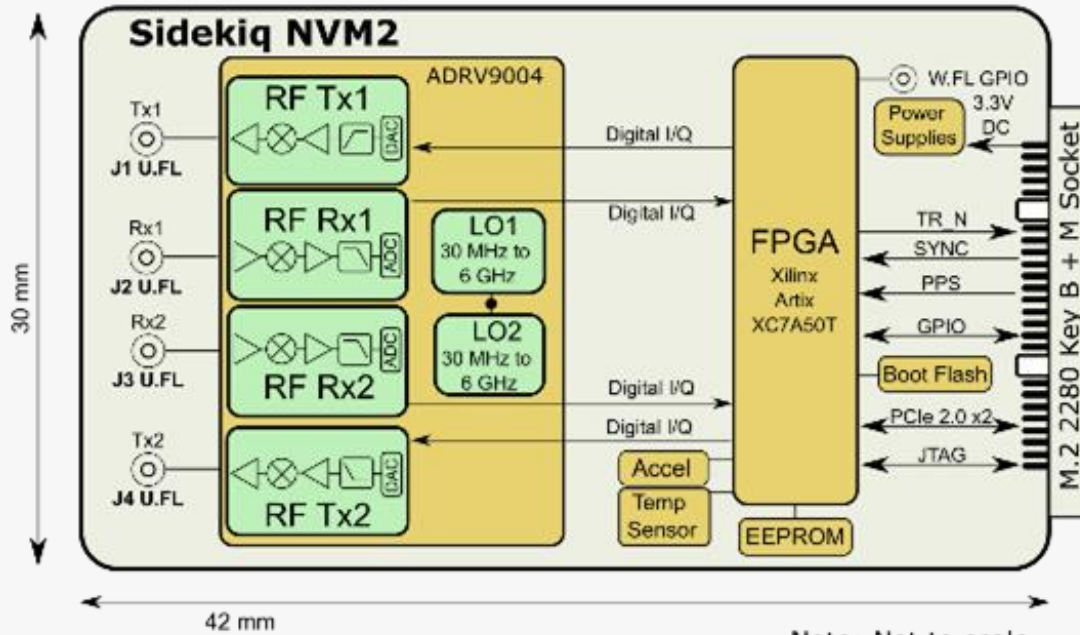
Sidekiq NVM2

NV100 Performance in the M.2 3042 Form Factor

- Extremely Low SWaP: Target 30% Reduction Compared to NV100
 - Remove RF Filtering & GPS Receiver
- Same Form Factor as Original Sidekiq M.2, with Updated Capability
 - Improved Rx Performance
 - 16b ADCs & DACs
 - Enhanced Frequency Hopping
 - Independent & Coherent Frequency Capability
- Supports Multiple Modes of Operation
 - 2 Rx + 2 Tx, FDD or TDD
 - 2 Rx, Independently or Coherently Tuned
 - 2 Tx, Independently or Coherently Tuned
- Features & Interfaces
 - AMD Artix 7 for Control & On Board Processing
 - Ext 10MHz Input + PPS Input via W.FL or Edge Connector
 - Gen2 PCIe x2 Interface to Host
 - FPGA GPIO + Sync Pins Accessible at the Key B/M Edge Connector



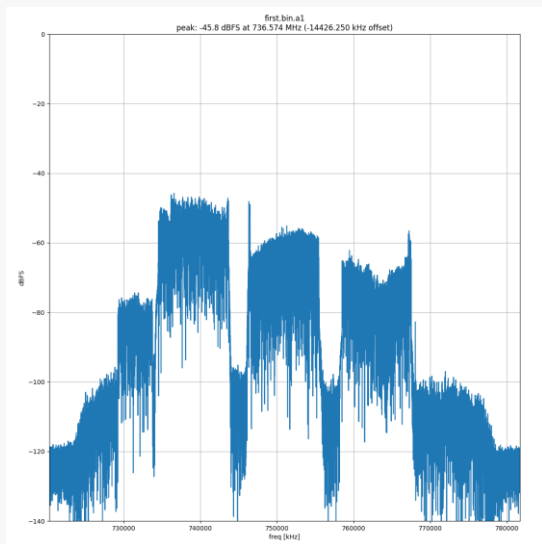
NVM2 Block Diagram



Sidekiq NVM2 Product Status



- First Boards Received at Epiq
 - IQ Data Streaming on First Day!
- Early Demo Units Available in 3Q24
- Production Release in 4Q24
- Contact Epiq Solutions for More Information



SFF Evaluation & Development Environment



Sidekiq NUC PDK Platform

- Simplifies Development & Lab Use
- Compatible with Sidekiq MiniPCle, M.2, Stretch, NV100, and NVM2
- Sidekiq SDR Card is Embedded in NUC Mini PC
- Development Software Environment Provided by Epiq
- Exposed Connectors for Easy Access
 - SMA x 5 for Rx, Tx, GPS, PPS, & Ref Clk
 - JTAG Header
 - GPIO Header
 - HDMI
 - USB
 - Ethernet



Thank You

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