

Sidekiq™ NVM2

Wideband RF transceiver in M.2 3042 Key B+M form factor with FPGA

EXCEPTIONAL RF PERFORMANCE IN A SMALL FORM FACTOR SDR

IDEAL FOR MULTI-CHANNEL SDR APPLICATIONS

Sidekiq NVM2 is a highly flexible RF powerhouse optimized to tackle your most challenging signal environments. This embeddable SDR-based RF transceiver comes in a tiny M.2 3042 Key B + M form factor that allows it to be used in millions of host devices where PCIe-based NVMe® solid state drives (SSDs) are supported. Sidekiq NVM2 leverages Analog Devices' ADRV9004, a wideband transceiver RFIC that delivers extended RF tuning capabilities, as well as exceptional RF fidelity and instantaneous dynamic range. Multiple RF operating modes are supported, including SISO, dual band SISO, MIMO, and phase coherent Rx or Tx. The NVM2 is supported by Epiq Solutions' libsidekiq API, enabling rapid customer development.

KEY HIGHLIGHTS



AMD® Artix®-7 XC7A50T FPGA with a Gen2 x2 PCIe Interface



Ideal for Low-SWaP EW, SIGINT, C5ISR, and Tactical Communications



Up to 50MHz Instantaneous Bandwidth and 6GHz RF Frequency Coverage

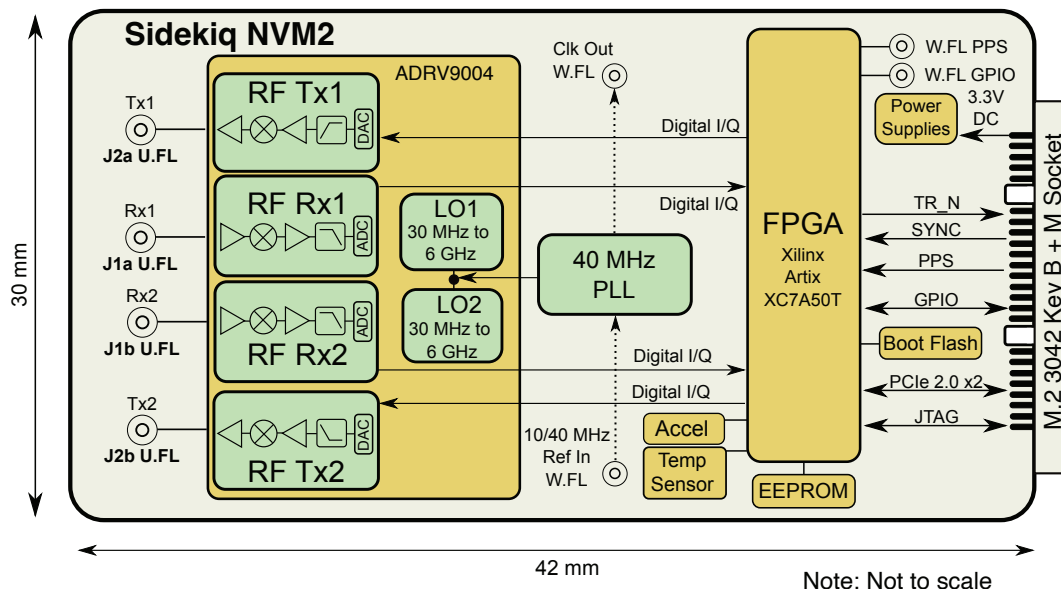


Libsidekiq API for SDR Control and Application Development



Enables MIMO Applications in the M.2 3042 Form Factor

BLOCK DIAGRAM



PHYSICAL SPECIFICATION

FORM FACTOR

- M.2 3042 key B + M form factor, commonly used for NVMe SSD drives

DIMENSIONS

- 30mm x 42mm x 5mm

WEIGHT

- 9g

TYPICAL POWER CONSUMPTION

- 3 – 4 W

DIGITAL SPECIFICATION

FPGA

- AMD® Artix®-7 XC7A50T FPGA with a Gen2 x2 PCIe interface to host

FPGA REPROGRAMMING

- Over PCIe

GPIO

- Available at M.2 edge connector; one GPIO available on a W.FL connector

COMPONENT TEMPERATURE RANGE

- -40 deg C to +85 deg C

TEMPERATURE SENSOR

- -55 deg C to +125 deg C (+/- 2 deg C)

MOTION TRACKING

- 6-axis, combining a 3-axis gyroscope and 3-axis accelerometer

RF SPECIFICATION

RF TUNING RANGE

- 30 MHz to 6 GHz (RF access to 10 MHz)

RF CHANNEL BANDWIDTH

- Up to 50 MHz

TYPICAL RX NOISE FIGURE

- 16 dB

TYPICAL RX IIP3

- +30 dBm

RX AND TX SAMPLE RATES RANGE

- Up to 61.44 Msamples/sec

A/D AND D/A CONVERTER SAMPLE WIDTH

- 16-bits

RX GAIN RANGE

- 0-34 dB, 0.5 dB steps

TX GAIN RANGE

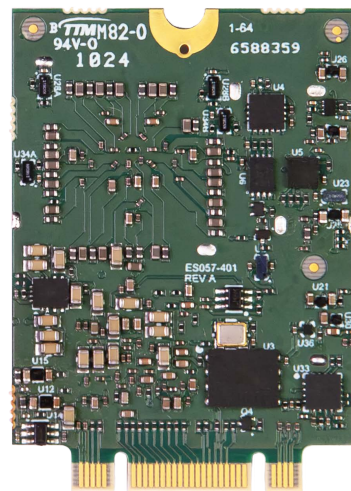
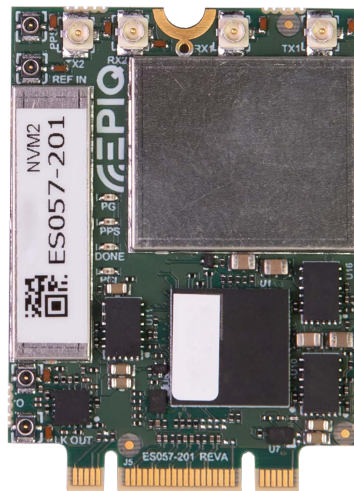
- 0-48 dB

EXTERNAL CLOCK REFERENCE

- W.FL coaxial input or edge connector, configurable for 10 MHz or 40 MHz input clock
- W.FL coaxial output, 40 MHz signal suitable to drive another Sidekiq module

EXTERNAL PPS

- W.FL coaxial input or edge connector



Specifications subject to change without notice.

Epiq Solutions is a business dedicated to advancing RF technology through products designed and manufactured in the U.S.A.

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