



Sidekiq™ VPX400

Antenna-to-Bits, Multi-Channel, Phase Coherent RF Transceiver in a Single MORA-Compliant/SOSA-Aligned 3U VPX Card

A SINGLE WIDEBAND RF CARD WITH MULTI-RECEIVE/MULTI-TRANSMIT CAPABILITIES

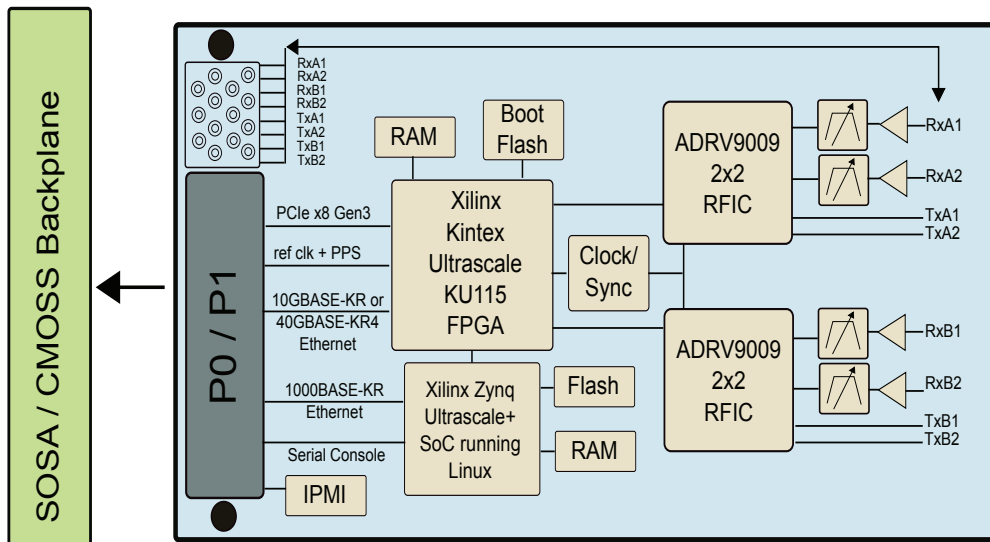
COMPLETE SOFTWARE-DEFINED RADIO FOR EW, SIGINT, C5ISR AND OTHER MISSION CRITICAL APPLICATIONS

The MORA-compliant/SOSA-aligned Sidekiq VPX400 is a modular, multi-channel RF transceiver solution that enables rapid development of converged SIGINT/EW platforms while reducing slot count requirements, power consumption, and engineering-related cost. Its modularity complies with MORA 2.4 standards and aligns with the SOSA™ Technical Standard while its core software-defined radio (SDR) technology future-proofs applications by allowing quick adoption of emerging capabilities. Sidekiq VPX400 is also interoperable with Sidekiq VPX410 for access to RF spectrum up to 18 GHz.

KEY HIGHLIGHTS

- Complete RF-to-Bits, Multichannel, Phase Coherent Solution in a Single 3U VPX Card
- Wide RF Tuning Range (Up to 6 GHz)
- Supports 4-Channel Phase Coherent Operation at 200MHz IBW; or 2-Channels Independently Tunable at 450MHz IBW, for a Total of 900MHz IBW for the SDR
- Unified Open API for Use Across All Sidekiq Products
- Typical power consumption Under 40W
- Support for both PCIe and 10/40 GbE

BLOCK DIAGRAM



GENERAL SPECIFICATIONS

ENVIRONMENTAL OPTIONS

- ECC1 conduction cooled 0° to 55° C, or
- ECC3 conduction cooled, -40° to 70° C
- Options available for conformal coating and underfill
- Options available for air cooled

PROFILE SPECIFICATION

- SLT3-PAY-1F1U1S1S1U1U2F1H-14.6.11-n
(“-4” for a SOSA aligned option)
- SLT3-PAY-1F1U1S1S1U1U4F1J-14.6.13-n

FORM FACTOR SPECIFICATIONS

DIMENSIONS

- 178.6 mm x 99.8 mm x 23.6 mm
(includes overhang for ejector)

WEIGHT

- 1.1 lbs

DIGITAL SPECIFICATIONS

SYSTEM-ON-CHIP (SOC)

- AMD® Zynq® UltraScale+™ MPSoC XCZU7EV
- 4 GB SSD, with a build option to 32 GB SSD
- 4 GB of DDR4 RAM

FPGA

- AMD Kintex® UltraScale™ XCKU115 FPGA memory
- 5 GB DDR4 Per DDR4 x80 DRAM port(s)
- 256 MB BPI NOR Flash (x16 Async Parallel Flash)

RF TRANSMITTER SPECIFICATIONS

RF TUNING RANGE

- 1 MHz to 6 GHz

NUMBER OF PHASE COHERENT TRANSMITTERS

- Four frequency-phase coherent channels, or
- Two independent pairs of two frequency-phase coherent channels

RF CHANNEL BANDWIDTH

- Up to 200 MHz in 4 channel mode; Up to 450MHz in 2 channel mode

TYPICAL RF OUTPUT POWER

- Up to +5 dBm

MAX D/A SAMPLE RATE

- 500 Msamples/sec

D/A CONVERTER SAMPLE WIDTH

- 14 bits

RF TUNING STEP SIZE

- 5 Hz

RF RECEIVER SPECIFICATIONS

NUMBER OF RECEIVERS

- Four frequency-phase coherent channels, or
- Two independent pairs of two frequency-phase coherent channels

RF TUNING RANGE

- 1 MHz to 6 GHz

RF TUNING STEP SIZE

- < 5 Hz

RF CHANNEL BANDWIDTH

- Up to 200 MHz in 4 channel mode; Up to 450MHz in 2 channel mode

TYPICAL RX NOISE FIGURE

- 8 dB

TYPICAL INPUT IP3 (AT 8 dB NOISE FIGURE)

- +8 dBm

MAX A/D CONVERTER SAMPLE RATE

- 500 Msamples/sec

A/D CONVERTER SAMPLE WIDTH

- 16 bits

RX GAIN MODES

- Manual or automatic (AGC)

PRE-SELECT FILTER

- Seven bandpass RF filters on each RF receiver

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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