



Matchstiq™ G20 & G40

LOW SWaP-C SDR TAILORED FOR AI & ML APPLICATIONS

AN ALL-IN-ONE RF + SDR + FPGA + CPU + GPU TRANSCEIVER PLATFORM

The Matchstiq™ G20 and G40 are highly flexible RF and signal processing SDR platforms, ready to enable applications with the most challenging SWaP-C requirements. Both the Matchstiq™ G20 and G40 have Epiq's flagship SDR, Sidekiq™ NV100, as a fundamental component. The Matchstiq™ G20 incorporates a single Sidekiq™ NV100, a 2TB SSD, and an Nvidia Orin NX, enabling direct RF record, analysis, and playback. The Matchstiq™ G40 integrates the Orin NX with two Sidekiq's (both NV100), enabling phase-coherent operation across four RF channels, ideal for beamforming applications or independent operation for multi-band applications.

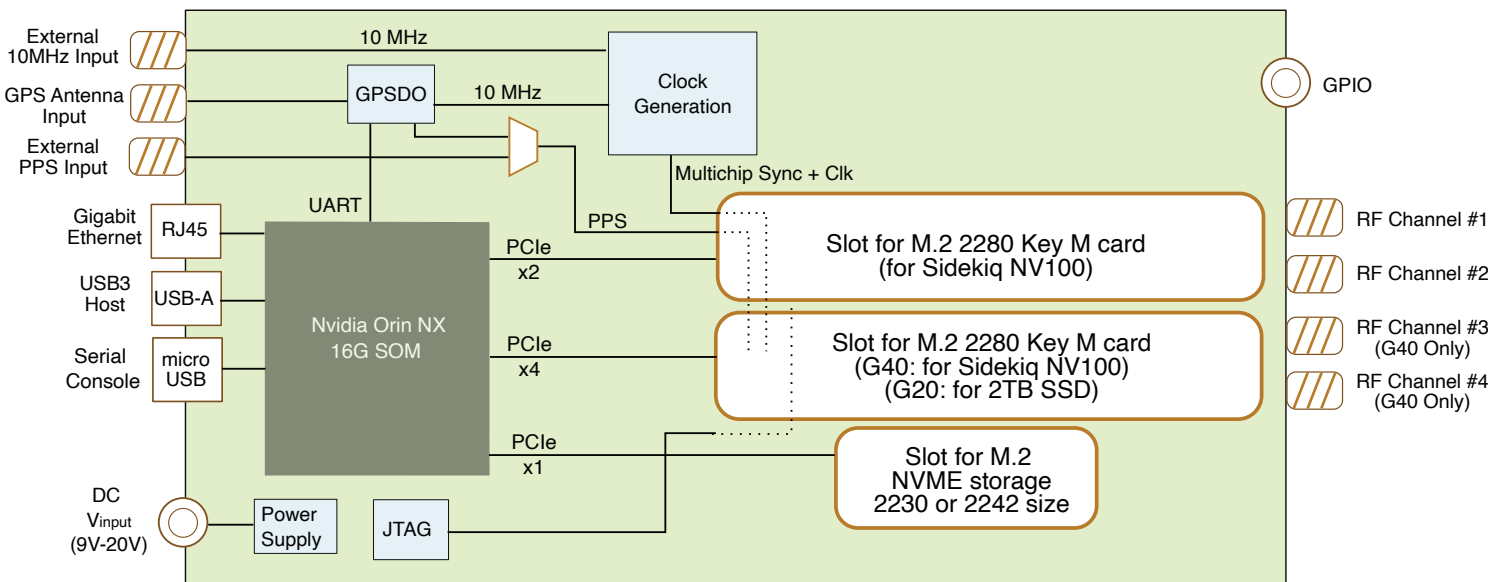
With Sidekiq™ NV100 at the core, Matchstiq™ G20 and G40 are designed for small form factor UsX payloads, as well as handheld and dismounted applications, offering an unprecedented level of integration and performance.

In addition, both platforms are equipped with the Nvidia Orin NX 16G SOM—ideal for hosting AI and machine learning algorithms. These low SWaP-C platforms enables AI & ML capabilities to move to the RF edge, reducing data transfer speeds to the host and system power consumption.

KEY HIGHLIGHTS

- Low SWaP-C Platform with High Level of Integration
- Optimized for Small Form Factor Payloads and Dismounted Applications
- Up to 50MHz Instantaneous Bandwidth and 6GHz RF Frequency Coverage
- Supports Frequency-Phase Coherent and Frequency-Phase Independent Operation Across All RF Channels
- Fast Frequency Hopping Supported on All RF Channels
- Integrated **Nvidia Orin NX** and AMD Artix7 FPGA and for Signal Processing
- Libsidekiq API for SDR Control and Application Development

BLOCK DIAGRAM



GENERAL SPECIFICATIONS

ENVIRONMENTAL OPTIONS

- Storage -40° to 85° C
- Operation, -40° to 70° C

PHYSICAL SPECIFICATIONS

DIMENSIONS

- 4.4" x 2.8" x 1.0"
- Weight: 2.0 lbs

WEIGHT

- 2.0 lbs

DIGITAL SPECIFICATIONS

INTEGRATED CPU/GPU

- Nvidia Orin NX 16G

INTEGRATED FPGA

- AMD Artix7 FPGA

RF SPECIFICATIONS (Matchstiq G20)

NUMBER OF RECEIVERS

- Up to Two

NUMBER OF TRANSMITTERS

- Up to Two

RF COVERAGE

- 10 MHz to 6 GHz

RF CHANNEL BANDWIDTH

- Up to 50 MHz

TYPICAL RX NOISE FIGURE

- <5 dB

TYPICAL RX IIP3

- +2 dBm

A/D NUMBER OF BITS

- 16

TYPICAL RF OUTPUT POWER

- Up to +5 dBm

D/A NUMBER OF BITS

- 16

INTEGRATED SSD

- 2TB

RF SPECIFICATIONS (Matchstiq G40)

NUMBER OF RECEIVERS

- Up to Four

NUMBER OF TRANSMITTERS

- Up to Four

RF COVERAGE

- 10 MHz to 6 GHz

RF CHANNEL BANDWIDTH

- Up to 50 MHz

TYPICAL RX NOISE FIGURE

- <5 dB

TYPICAL RX IIP3

- +2 dBm

A/D NUMBER OF BITS

- 16

TYPICAL RF OUTPUT POWER

- Up to +5 dBm

D/A NUMBER OF BITS

- 16

INTEGRATED SSD

- None

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.

Epiq Solutions exports its products strictly in accordance with all US Export Control laws and regulations which shall apply to any purchase or order.

