



# 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.

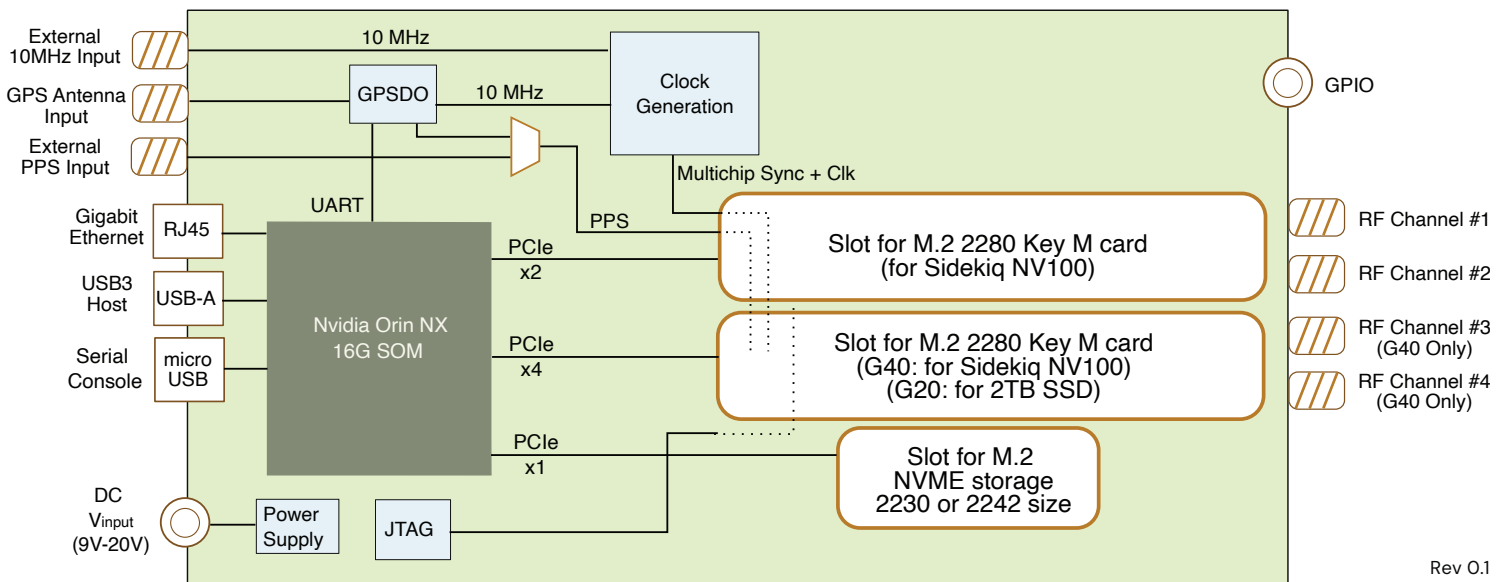
With Sidekiq™ NV100 at the core, Matchstiq™ G20 and G40 are designed for small form factor UsX payloads, as well as handheld and dismounted applications, offering an unprecedented level of integration and performance.

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

- 7.6" x 4.4" 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.*

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