mercury

RF Signal Acquisition Demo

Demonstrating coverage of the entire RF signal chain

Create a powerful RF signal acquisition system with Mercury's highperformance, state-of-the-art components. Choose from various options for the tuner, data acquisition card, and recorder or processing workstation. We have the signal chain covered no matter what the application or environment.

Demo system: Consists of Mercury's RFM3101 3U VPX tuner, Quartz[®] 5950 3U VPX RFSoC data acquisition board, and a Talon[®] 2737A 100 GigE portable recorder. But this is just one of many possible combinations of components.

Tuner options: Optimized for applications such as radar, SIGINT, ELINT, and EW with high-performance operation, low phase noise, and various rugged and form factor options.

Data acquisition options: Include powerful Xilinx Virtex[®], Kintex[®], and Zync[®] UltraScale[™] boards in a variety of form factors and ruggedization levels. Our RFSoC products integrate eight RF-class A/D and D/A converters into the Zynq's multiprocessor architecture, creating a multichannel data conversion and processing solution on a single chip.

High-speed recording systems: Stream data to disk in real time and include large amounts of storage, allowing users to record for hours and even days contiguously. Recorders can be built with several different front ends and in several different form factors, allowing for operation in a variety of environments.

Software – Client GUI: Point-and-click GUI for configuration and recording systems. Simple parameter setup: RF tuning frequency, bandwidth, gain, record time.

SystemFlow Signal Viewer: Real-time signal monitoring before, during or after recording. Virtual O-scope, spec-an, and spectrogram displays. Basic signal analysis like frequency detection, harmonic distortion, and SINAD. Includes cursors, zoom, averaging, and peak hold.

Demo Packaging: Recorder package is a ~30 lb briefcase portable and comes with a carrying case with wheels and telescoping handle. 3U VPX chassis has a handle and weighs ~20 lbs. Optical 100 GigE cable and Gigabit Ethernet RJ45 cables with mounted router are provided.

Tuner Options

FLEXIBLE TUNER SOLUTIONS, FROM DC TO 40 GHZ WITH UP TO 2 GHZ OF IBW

Data Acquisition Options

OUR LATEST, MOST INNOVATIVE PRODUCTS, VARIOUS FORM FACTORS

Recorder Options

HIGH-SPEED, LARGE STORAGE, WIDE VARIETY OF CHASSIS

Ideal for Radar, EW SIGINT & ELINT

HIGH CHANNEL COUNTS AND BANDWIDTHS



CUSTOMIZE YOUR SYSTEM

Components can be interchanged in this RF signal acquisition system. To discuss your needs, contact us at techsales@mrcy.com. A preliminary list of components includes:

RF Tuner - Model **RFM3101**: OpenVPX Wideband Microwave Transceiver; Model **RFM3102**: OpenVPX Microwave Dual Downconverter; and models from the **RFT** and **TAC** tuner lines

Data Acquisition

Quartz[®] 5950 & 5953: 8-channel A/D & D/A 3U VPX board with Xilinx Zynq UltraScale+ RFSoC - Gen 1 & Gen 3; Quartz 6353: 8-channel A/D & D/A in a rugged small form factor enclosure with Xilinx Zynq UltraScale+ RFSoC - Gen 3; Jade[®] 71141A: 1-channel 6.4 GHz A/D, or 2-channel 3.2 GHz A/D, 2-channel 6.4 GHz D/A XMC module with Kintex UltraScale FPGA; DCM3220: Configurable, low-latency, coherent 3U OpenVPX RX/TX module

Recorder - Rugged portable, small form factor (1/2 ATR), and rackmount Talon® Recorders and Rugged Edge Servers



+41 22 884 5100 tel



The Mercury Systems logo and the following are trademarks or registered trademarks of Mercury Systems, Inc.: Mercury Systems, Innovation That Matters, Talon, and Quartz. Other marks used herein may be trademarks or registered trademarks of their respective holders. Mercury believes this information is accurate as of its publication date and is not responsible for any inadvertent errors. The information contained herein is subject to change without notice. © 2022 Mercury Systems, Inc. 1-0-092122-RFSIGACQDEMO

+1 978.256.3599 fax