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Model 8257
1-slot 3U VPX development chassis for Quartz products

Ideal for developing applications on RFSoC based Quartz boards

- 1-slot, small footprint chassis
- Optional dual MPO interfaces support 100 GigE
- Supports VITA 66.4

- Navigator® BSP for software development
- Navigator® FDK for custom IP development

The 8257 is a low-cost 3U VPX chassis ideal for developing applications on Mercury's 5550 or 5553 Quartz® RFSoC boards. Providing power and cooling to match the 5950 and 5953 in a small desktop footprint, the chassis allows access to all required interfaces on the 5950 and 5953 front panel and the 5901 rear transition module. The 8257 can be configured with optional rear-panel dual MPO optical connectors to support the dual 100 GigE interfaces on the 5950 and 5953.

The 5950 supports the Zynq UltraScale+ RFSoC Gen 1. The 5953 supports the Zynq UltraScale+ RFSoC Gen 3.

DEVELOPMENT ENVIRONMENT

At the heart of Models 5950 and 5953 is Xilinx's Zynq UltraScale+ RFSoC FPGA. It contains 8 channels of 4 GHz 12-bit A/Ds, 8 channels of 6.4 GHz 14-bit D/As and is enabled with a multiprocessor ARM architecture running Linux. The FPGA supports communication interfaces typically found on general purpose processors including: USB, RS-232, Ethernet, and DisplayPort.

The rear transition module of the 5950 and 5953 provides access to these interfaces as well as JTAG and general purpose I/O. This allows the 5950 or 5953, the 5901 rear transition module, and the 8257 chassis to operate as a stand-alone 1-slot development platform. Developers can connect a notebook or desktop PC with Xilinx's Vivado Design Suite and Pentek's Navigator Design Suite and develop, run and debug their application on the 5950 or 5953.

OPTICAL INTERFACE

The 8257 can be optioned with optical support, providing a path from the VITA 66.4 backplane interface on the 5950 and 5953 to the exterior of the chassis with standard MPO connectors. While the built-in functions of the 5950 and 5953 include a dual 100 GigE interface, data acquisition, and waveform generator engines, the 8257 chassis supports high-speed data streaming through the optical interface.

THE QUARTZ FAMILY

Quartz brings the performance and high density integration of the RFSoC to a wide range of different application spaces with a uniquely flexible design path. Quartz is available in standard form factors like the 5950 and 5953 3U VPX boards, or as the Model 6001 or 6003 QuartzXM, a small 2.5" x 4" module.

With the QuartzXM Carrier Design Kit, the 6001 or 6003 can be deployed on application-specific custom carriers. In the custom carrier environment, the 5950 or 5953, combined with the 8257, provides a path for engineers to immediately start software and IP development while a hardware carrier design is developed in parallel.
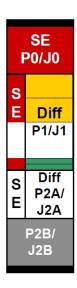
SPECIFICATIONS

- Dimensions: 192.8mm W x 307.8mm D x 425.5mm H
- Weight: 17.8 lb
- Power Supply: 300 Watts
- Operating Temp: 0° to +50° C
- Storage Temp: –40° to +85° C
- Relative Humidity: 5 to 95%, non-condensing
- Power Requirements: 100 to 240 VAC, 50 to 60 Hz, 1000 W max.

OpenVPX Compatibility

The 8257 is compatible with the following module profile, as defined by the VITA 65 OpenVPX Specification:

SLT3-PAY-1F1U1S1S1U2F1H-14.6.11-n

ORDERING INFORMATION

Model	Description
8257	1-Slot 3U VPX Development Chassis for Quartz Products

Options	Description
-110	Dual MPO optical interfaces

Contact Mercury for compatible option combinations and complete specifications.

LIFETIME SUPPORT FOR QUARTZ PRODUCTS

Mercury offers worldwide customers shorter development time, reliable, rugged solutions for a variety of environments, reduced costs, and mature software development tools. We offer free lifetime support from our engineering staff, which customers can depend on through phone and email, as well as software updates. Take advantage of our 40 years of experience in delivering high-performance radar, communications, SIGINT, EW, and data acquisition MIL-Aero solutions worldwide.
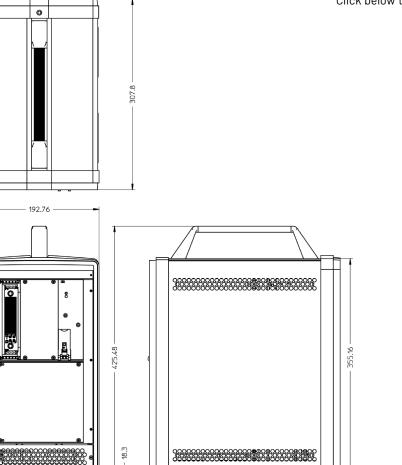
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MODEL 8257

307.8

192.76

425.48

355.16

18.3

STRATEGIES FOR DEPLOYING XILINX'S RFSOC

Click below to read a white paper about Xilinx's RFSoC.

WHITE PAPER
Xilinx's new RFSoC Gen 3 brings a powerful and unique solution for addressing some of the most demanding requirements of high bandwidth and high channel count systems.

ROBERT ISANNBURG
Director, Product Management
Mercury, now part of MERCURY

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Strategies for Deploying Xilinx's Zynq UltraScale+ RFSoC

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