SCFE3920

OpenVPX™ FPGA processing module

SWaP-focused, 3U module for agile system integration

- Ruggedized for harsh environments
- Open architecture for easy integration
- Multi-stream video processing
- Virtex® Ultrascale+™ FPGA for simple performance migration
- High performance fiber I/O

Designed for high performance and agile system integration, the SCFE3920 incorporates Virtex® Ultrascale+™ FPGA processing power into an open-architecture, 3U form factor. Performance is achieved by connecting streaming data directly to FPGA compute resources and an I/O that utilizes mid-board fiber optic connections. Designed to be delivered in multiple cooling options, the SCFE3920 is ideal for SWaP-focused applications that require high-performance operation in harsh, diverse environments.

FEATURES

Physical

- Single-slot 3U OpenVPX form factor
- OpenVPX interface compliant
- Two independent single-link DVI interfaces
- Ruggedized for diverse environments

Operation

- Two banks of 8 GB (1G x 64) DDR4 SDRAM for FPGA fabric @ 2666 bps
- Dual 2 Gb QSPI Flash used to configure the Prosecutor FPGA
- Single 2 Gb QSPI Flash used for storing user application data

- Sensor interface to monitor temperature, voltage on board current consumption
- Power sequencing
- Secure JTAG
- 2 x 100 Gbps (8 lanes) optical Tx/Rx (each utilizing 4 x GTYs @ 28 Gbps)

SCFE3920 BLOCK DIAGRAM
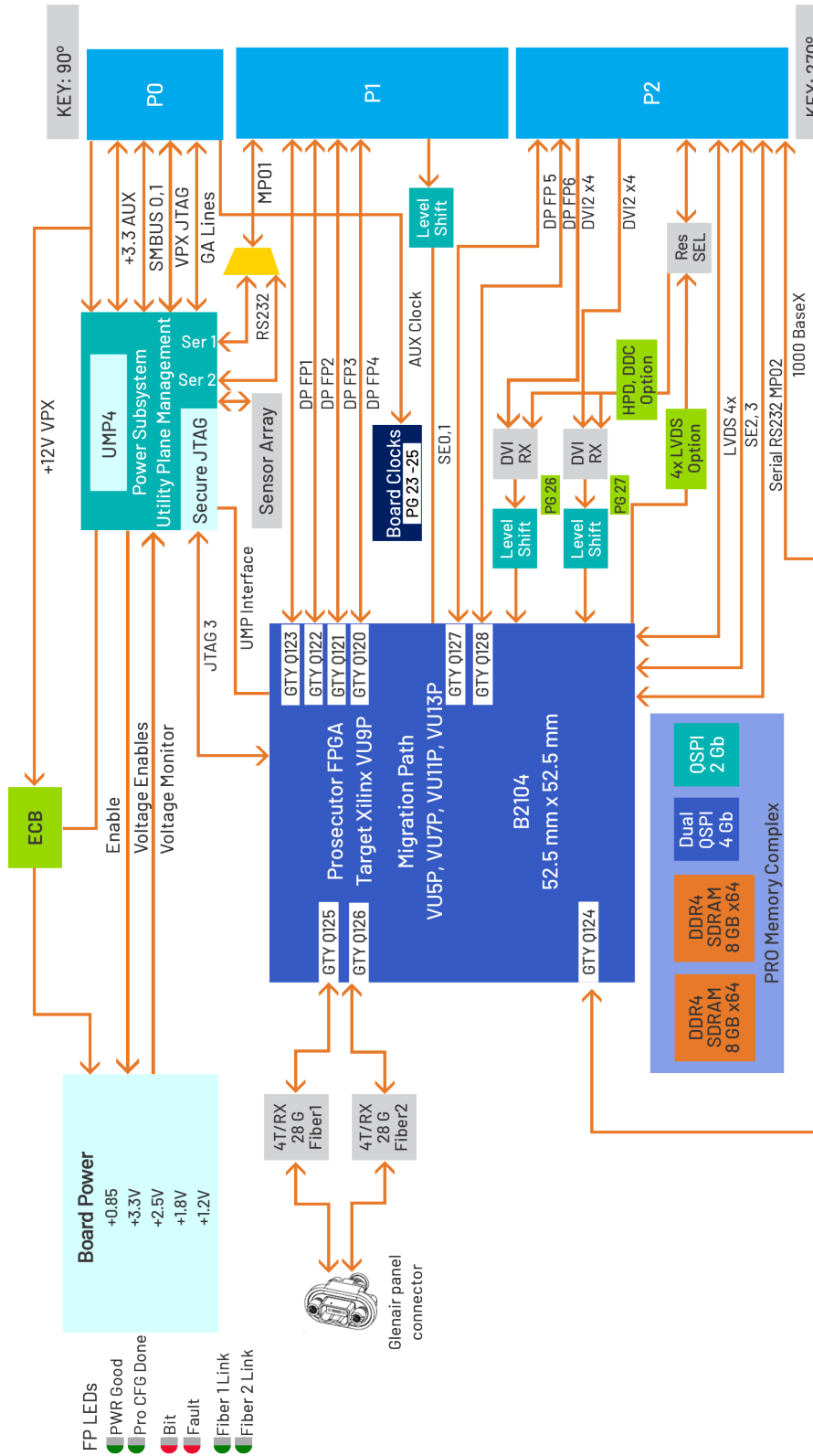
SCFE3920 SLOT PROFILE
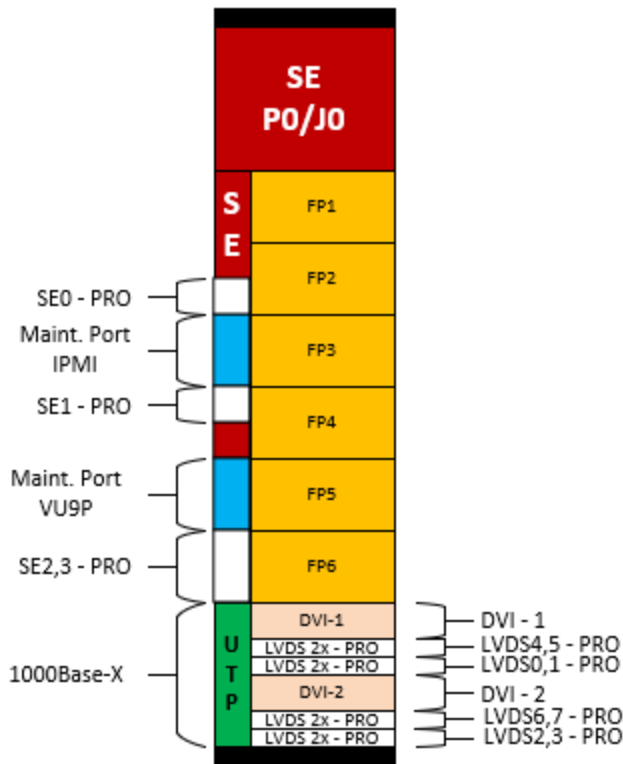
SCFE3920 VPX Interface

FPGA PROCESSOR

Virtex® Ultrascale+™ VU9P FPGA

- 2,586K logic cells
- 2,364K CLB flip flops
- 1,182K CLB LUTS
- 75.9 Mb Block RAM
- 270 Mb Ultra RAM
- 6,840 DSL slicese

SCFE3920 REVISION HISTORY (910-92069-03)

Revision	Description
100	Initial product release
A	1. Added Conformal Coat drawing for board (Urethane Humiseal 1A33).
	2. Updated Fiber Y cable drawing to reflect vendor feedback for clarity (no real changes).
	3. Added Letter of Volatility (COV-00002_RA_ITAR.pdf) to the 910-92069-03 level BOM (uploaded to SFTP site for RC).
B	Updated Conformal Coat drawing for board to change coat material per RC (Acrylic Humiseal 1B31S).
B1	Process change to assembly and installation of the Fiber modules and application of Loctite on screws used to connect Fiber modules to assembly.

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