

VCP-2867

3U OpenVPX Video and Graphics Board with BuiltSAFE®

Stream high-resolution 1080p60 3G-HD and 4K video with confidence

- Xilinx Kintex UltraScale FPGA for video processing
- 8x8 video I/O including ARINC 818-2
- Up to 18x18 video I/O
- Safety certifiable with complete DO-254 artifacts
- PCIe Gen3 data plane
- 25 W, quiet and rugged



TECHNICAL SPECIFICATIONS

Processor

User programmable Xilinx Kintex UltraScale XCKU115 - XCKU060 FPGA
See table 1 on next page

QDR memory for image processing acceleration

Memory

4x independent 16-bit DDR3L banks
512 MB each

3x independent 18-bit QDR-II banks
36 Mbit memory each

Video I/O

4x 3G HD-SDI input

4x 3G HD-SDI output

4x ARINC-818-2 @4.25 Gbps input
up to 10 user-selectable SDI or ARINC-818 input

4x ARINC-818-2 @4.25 Gbps output
up to 10 user-selectable SDI or ARINC-818 input

Extendible up to 18 input and 18 output

Video Switch

Optional 8x8 SDI or ARINC-818 low-latency COTS-based video switch

Up to 8 channel video capture

Up to 8 overlay channels for symbology on top of output

Dynamically loadable custom logic partitions for advanced processing

BuiltSAFE® Proven Elements

DO-254 hardware

Design and information assurance

Fabric Interface

2x PCIe Gen2/3 x4 on VPX connectors

20 Gbps Gen2, 32 Gbps Gen3

1x PCIe Gen2 x1 on VPX connectors

2x 1 Gbps safety-certifiable Ethernet

High-speed link CML (current mode logic) of 8 lanes at 4.25 Gbps and 2 lanes at 5.4 Gbps

Mechanical

3U OpenVPX, 1.0" slot pitch, VITA 65

Rugged and Low Power

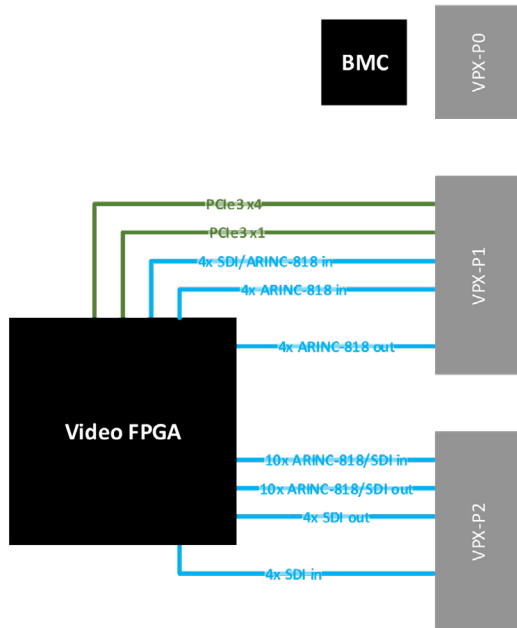
Temperature: -40°C to 85°C card edge

Conduction cooled

25-40W power consumption

[Advanced rugged packaging options](#)

VCP-2867 Functional Block Diagram



FPGA Block Diagram

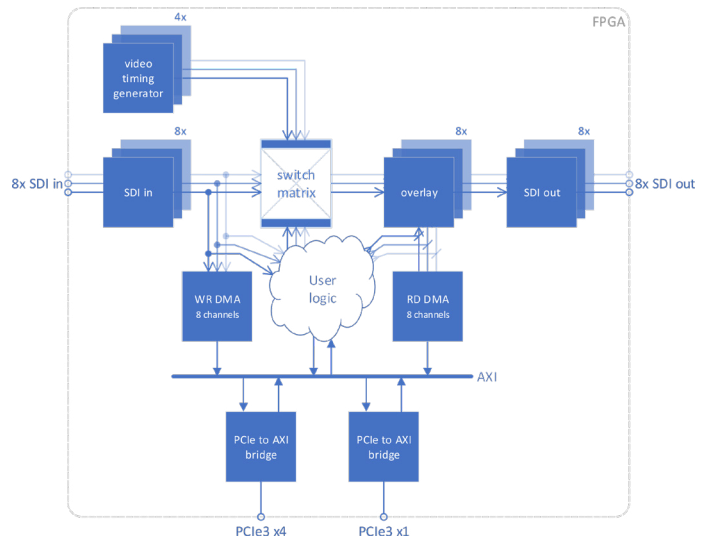


TABLE 1: PROCESSOR FPGA OPTIONS

Available with industrial temperature range -40°C to 100°C and speed grade 2.

	XCKU060	XCKU085	XCKU115
Flip-Flops	663,360	995,040	1,326,720
LUTs	331,680	497,520	663,360
DSP slices	2,760	4,100	5,520
Block RAM	38 Mbit	56.9 Mbit	75.9 Mbit



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