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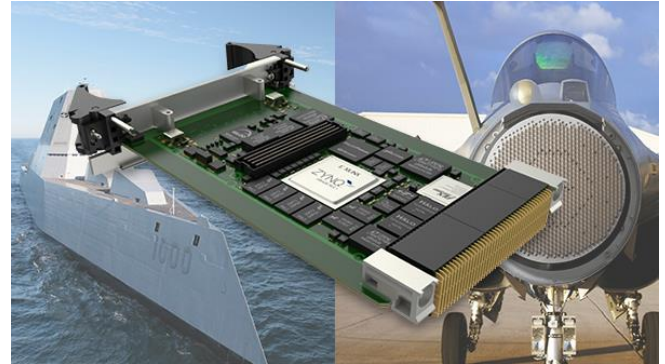
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HighRes Photos and Illustrations available upon request



### At a Glance:

- Compact 3U VPX Compatible Module
- Based on Xilinx Zynq UltraScale+ Multiprocessor SoC
- 6-Cores ARM up to 1.5GHz, and GPU
- 2.5 or 5GB DDR4 RAM, 64GB Flash
- Up to 750K Programmable Logic Cells
- FMC compatible socket for high-speed interface adapters
- Can operate as SBC or System Controller
- Best in Class SWaP-C

### Applications

- MILCOM, Software Defined Radio, MIMO
- Situational Awareness Systems
- EW / ISR Systems
- LIDAR / RADAR / SONAR Systems
- Advanced Multi-Axes Motors Control
- Video CODEC and Signal Processing

## PanaTeQ's 3U VPX Board with Xilinx Zynq UltraScale+ Sets Records in Computing per Size, Weight and Power

Geneva, Switzerland and Scottsdale, AZ, USA, January 23, 2017 – PanaTeQ

([www.panateq.com](http://www.panateq.com)) introduces the VPX3-ZU1, an expandable Single Board Computer of unparalleled computing power on a 3U (100 x 160mm) OpenVPX compatible board. The VPX3-ZU1 owes its exceptional performance to the Zynq UltraScale+, Xilinx's latest MultiProcessor SoC device built using 16nm technology. Product description can be downloaded from

[http://www.panateq.com/index\\_htm\\_files/FS-VPX3-ZU1.pdf](http://www.panateq.com/index_htm_files/FS-VPX3-ZU1.pdf)

“We are proud to be the first to bring the power of the Zynq MPSoC to the Standard 3U VPX+FMC format” says Panou Pabouctsidis, PanaTeQ's CTO. “The power and flexibility of our VPX3-ZU1 open a new world of possibilities in the Military/COTS and other ultra-high-end real-time computing applications”

In a single device, the Zynq UltraScale+ integrates a Quad-core 1.5GHz 32/64-bit ARM Cortex-A53 based Application Processing Unit (APU), a Dual-core ARM

Cortex-R5 based Real-Time Processing Unit (RPU), an ARM MALI-400 based Graphic Processing Unit (GPU) and a large Programmable Logic (PL) Array. The device also includes on-chip memory, external memory interfaces, and a rich set of peripheral connectivity interfaces.

The VPX3-ZU1 includes a FPGA Mezzanine Card (FMC) connector allowing the board to be targeted to specific applications by fitting it with any compatible front end I/O interfaces, such as ultra-high speed Analog to Digital Converters, Video Adapters, or high speed networking ports. The FMC site is compliant to the Vita 57.1 HPC standard and includes 90 Single Ended IO (45 Differential Pairs) and 10 Multi Gigabit Transceivers.

The multiple Cores and Programmable Logic can operate together to resolve today's and tomorrow's most demanding embedded computing challenges, in applications ranging from Software Defined Radio, Image Processing, Target Detection, EW / ISR, advanced Multi-Axes Motors controller, Multi-Gigabit Ethernet Communications, to LIDAR / RADAR / SONAR. Using Xilinx's powerful SDSoC Development Environment, the User Application Code can easily be partitioned between the Zynq's available Cores, and the Programmable Logic. Algorithms compiled to run in Hardware in the Programmable Logic can result in 10x to 100X speed improvement over Software execution.

The VPX3-ZU1 comes equipped with to 2 or 4GB 64-bit of DDR4-2400 RAM with ECC dedicated to the ARM Cores, and 512MB or 1GB of 16-bit of DDR4-2400 RAM dedicated to the Programmable Logic. Tight, high speed coupling of the RAM to the Programmable logic makes the board ideal for data streaming applications such as video CODEC and real-time signal/image processing application. In addition, 64GB of soldered eMMC managed NAND Flash is available for local, permanent data storage.

The board can act as a Single Board Computer thanks to its on-board PCIe Gen2 Switch. In this configuration, powerful systems can be built by adding only an enclosure and a power supply.

When the VPX3-ZU1 is used as a System Controller, it can manage up to eight 3U OpenVPX slots with a PCIe x1 Gen2 link per slot. There is no need to add any SBC in the VPX rack, improving the system's Size, Weight, Power and Cost (SWaP-C).

All of the Zynq Ultrascale+ peripherals are routed to the VPX backplane. These include: two ETH 1000Base-T, two USB 3.0/2.0, two USB 2.0, one SATA 3.1, two CAN-2.0B, two RS-232/422/485, four MGT, twenty GPIO, and a Video Out Display Port 1.2. A rear transition module is available from PanaTeQ to bring these signals to standard connectors.

The board can be ordered with different versions of the Zynq UltraScale+ family of devices and fitted either with 2.5 GB or 5 GB RAM. The board is also available in air or conduction cooled versions.

The VPX3-ZU1 can be ordered now from PanaTeQ. Engineering samples are scheduled for delivery in May 2017.

The air cooled PanaTeQ System Development Kit VPX3-ZU1-PSDK is available for the developers and includes a lab chassis with 3-slots OpenVPX CEN03-15-2-9 backplane, the VPX3-ZU1-B1-AC and RTM-ZU1-A1 boards, a Linux BSP, the PanateQ FPGA Design Kit (PAN-FDK) and cables.

### **About PanaTeQ**

Founded by experts in High-end Embedded Computing, PanaTeQ's mission is to integrate the most powerful Embedded Computing technology of the day into boards and systems of extreme reliability, availability and durability, for use in the most demanding Military, Medical, Instrumentation, and Industrial Applications.

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