Zynq UltraScale+ MPSoC (ZU7/ZU5/ZU4)

3U-VPX Plug-in Module

iW-RainboW-G30V

iWave's 3U-VPX Plug-in Module based on ZU7/ZU5/ZU4 Zynq UltraScale+ MPSoC SOM, comprises of the Zynq UltraScale+ MPSoC SOM and a 3U-VPX Carrier board. The SOM boasts a 64-bit 4GB DDR4 RAM for the PS (Processing System), featuring 8-bit ECC, and a 16-bit 2GB DDR4 RAM for the PL (Programmable Logic).

The Zynq UltraScale+ MPSoC (ZU7/ZU5/ZU4)) 3U-VPX Plug-in Module is equipped with VPX Connectors (P1A+P1B & P1B+P2A). This VPX Module offers a seamless Ethernet interface, delivering 1GBase-KX/10GBase-KR connectivity to the Backplane. Furthermore, there's an optional feature for PCIe Gen3 support through the VPX Connector's Data Plane.

APPLICATIONS: Military & Aerospace Systems, Embedded Computing, Data Center & Network Infrastructure, Sensor Networks and Telecommunications

iW-RainboW-G30V HIGHLIGHTS

Zynq UltraScale+ MPSoC (ZU7/ZU5/ZU4)

Up to 504K Logic cells & 230K LUTs

4GB PS DDR4 with ECC (64bit)

2GB PL DDR4 (16bit)

Supports 1GBase-KX/10GBase-KR

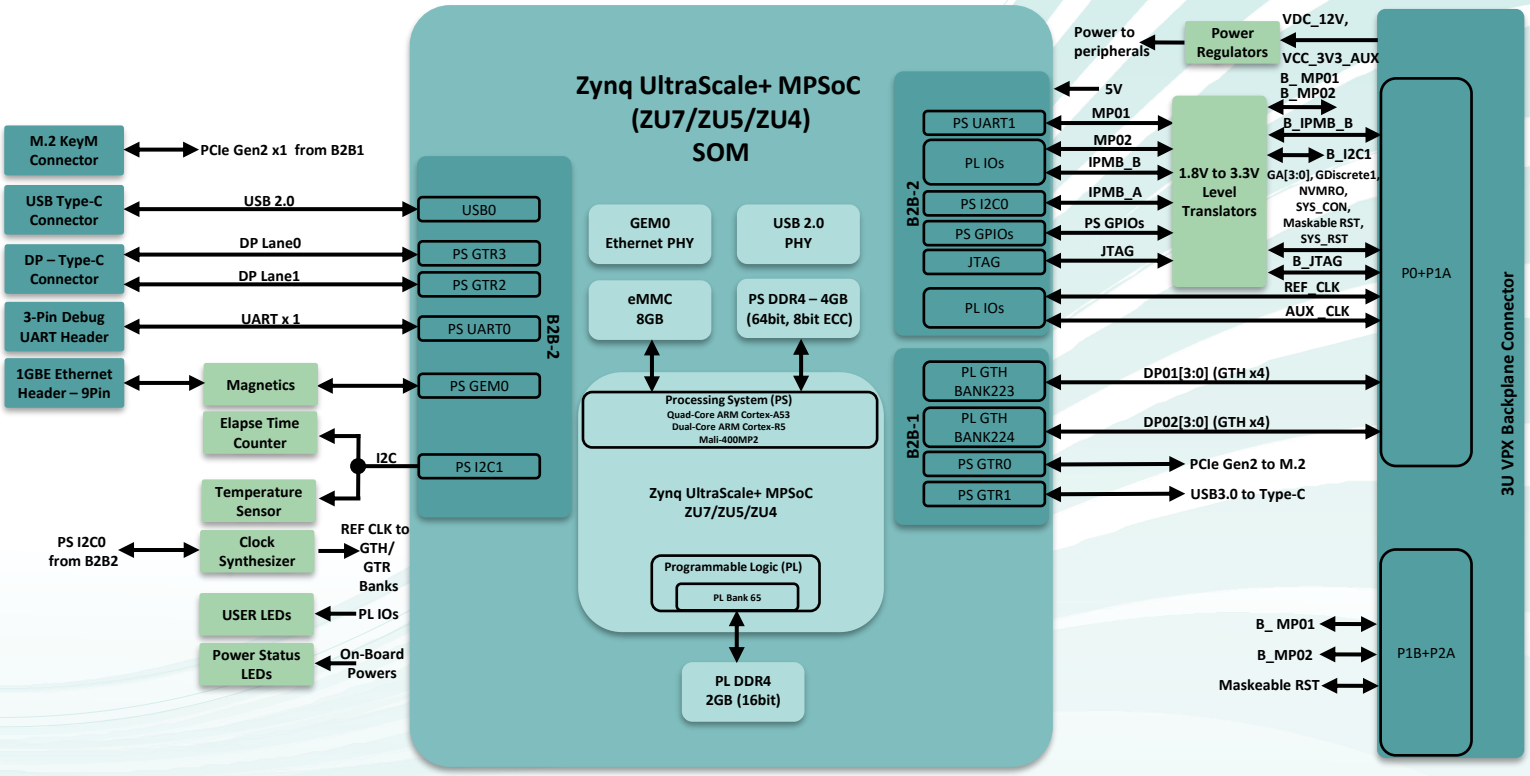
10+ Years long term support

SPECIFICATIONS

Zynq UltraScale+ MPSoC
Processing System (PS):
Compatible SoCs – ZU7EV/EG/CG, ZU5EV/EG/CG & ZU4EV/EG/CG
Quad ARM Cortex A53 @1.5GHz
Dual-core ARM Cortex-R5 (up to 600MHz)
Mali™-400 MP2 Graphics Processor @677MHz
Programming Logic (PL/FPGA):
Up to 504K Logic cells & 230K LUTs
RAM Memory:
4GB DDR4 for PS with ECC
2GB DDR4 (16 Bit) for PL from BANK 65
On-SOM Flash:
8GB eMMC Flash (Expandable)
Other On-Board Features:
PCIe Gen2 through M.2(Key-M) Connector
Quad User LEDs
Temperature Sensor
Elapsed Time Elapse Counter
Clock Generators:
Clock Synthesizer with 10 Outputs
Clock Buffers for GTH and GTR Transceiver Reference clocks
Power:
12V through 7 Power Pins of P0

3U-VPX Backplane Features
3U-VPX Connector (P0+P1A)
DP01[3:0] - 1G/2.5G/10G or PCIe Gen3 (using GTH Transceivers @ Upto 16Gbps/lane)
DP02[3:0] - 1G/2.5G/10G or PCIe Gen3 (using GTH Transceivers @ Upto 16Gbps/lane)
1 REF Clock Differential Pair Input
1 AUX Clock Differential Pair Input
I2C x 2
JTAG
Geographical Address (GA[0:4] & GP)
Control Signals
12V - 7 Power Pins
3U-VPX Connector (P1B+P2A)
MP01 and MP02
Maskable Reset
3U-VPX Front Panel Features:
USB3.0 & USB 2.0 through USB Type-C Connector
4K DisplayPort through Type-C Connector
1G Ethernet through 9-Pin Header
Form Factor:
160mm X 100mm (3U-VPX Standard)
Slot Profile: SLT3-SWH-4F1U7U1J-14.8.7-n
Module Profile: MOD3-SWH-4F1U7U1J-16.8.7-n
Compliance:
RoHS Compliant, REACH Compliant & CE

Zynq UltraScale+ MPSoC (ZU7/ZU5/ZU4) 3U-VPX Plug-in Module Block Diagram



OS SUPPORT

Linux 5.15.36
Xilinx-V2023.2

DELIVERABLES

Zynq UltraScale+ MPSoC (ZU7/ZU5/ZU4) 3U-VPX Plug-in Module
Petalinux BSP with Example FPGA Design
3U VPX Module Datasheet

OPTIONAL KITS/Modules

9-Pin Header to Gigabit Magjack Cable

CUSTOM DEVELOPMENT

BSP Development/OS Porting
Custom SOM/Carrier Development Custom Application/GUI Development
Design Review and Support

iWave Systems Technologies is an ISO 9001:2015 certified company, head quartered in Bangalore India established in the year 1999. The company focuses on providing embedded solution and services for Industrial, Medical, Automotive and various other Embedded Computing applications. iWave Systems offers wide range of System On Modules and Single Board Computers built using wide range of CPU and FPGA SoC platforms with different form factors such as Qseven, SMARC, SODIMM and HPC by closely working with Tier-1 silicon companies such as NXP, Xilinx, Intel etc.

iWave Systems offers various state of art ready ODM solutions such as Connected Telematic Control Unit / OBD II devices for the automotive edge analytics, Comprehensive ARINC818 solutions for the low latency Aerospace applications and Rugged IP rated performance scalable HMI solutions for Industrial applications. iWave Systems also provides comprehensive Engineering design services involving Embedded Hardware, FPGA and Software development. iWave offers carrier board and custom hardware development with manufacturing and certification services. iWave's Hardware expertise spans complex board design up to 30 layers; Analog, Digital & RF Designs; FPGA Development up to 3+ million gates and VHDL / Verilog RTL Development & Verification. Our Software expertise ranges from OS Porting, Firmware & Device Drivers Development and Wireless & Protocol

Zynq UltraScale+ MPSoC (ZU7/ZU5/ZU4) 3U-VPX Plug-in Module

The device can be ordered online from the iWave Website
http://www.iwavesystems.com/webforms
Or from our Local Partners in your region
http://www.iwavesystems.com/about-us/business-partner.html

iW-G30V-BR-R1.0

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