



Zynq UltraScale+ MPSoC (ZU19/17/11EG) 3U-VPX Plug-in Module

iW-RainboW-G35V

iWave's 3U-VPX Plug-in Module based on ZU19/17/11EG 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 64-bit Dual 4GB DDR4 RAM for the PL (Programmable Logic).

The Zynq UltraScale+ MPSoC (ZU19/17/11EG) 3U-VPX Plug-in Module is equipped with VPX Connectors (P1A+P1B & P1B+P2A) and an MT Ferrule Connector (P2B). 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 and Expansion Switch.

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

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HIGHLIGHTS

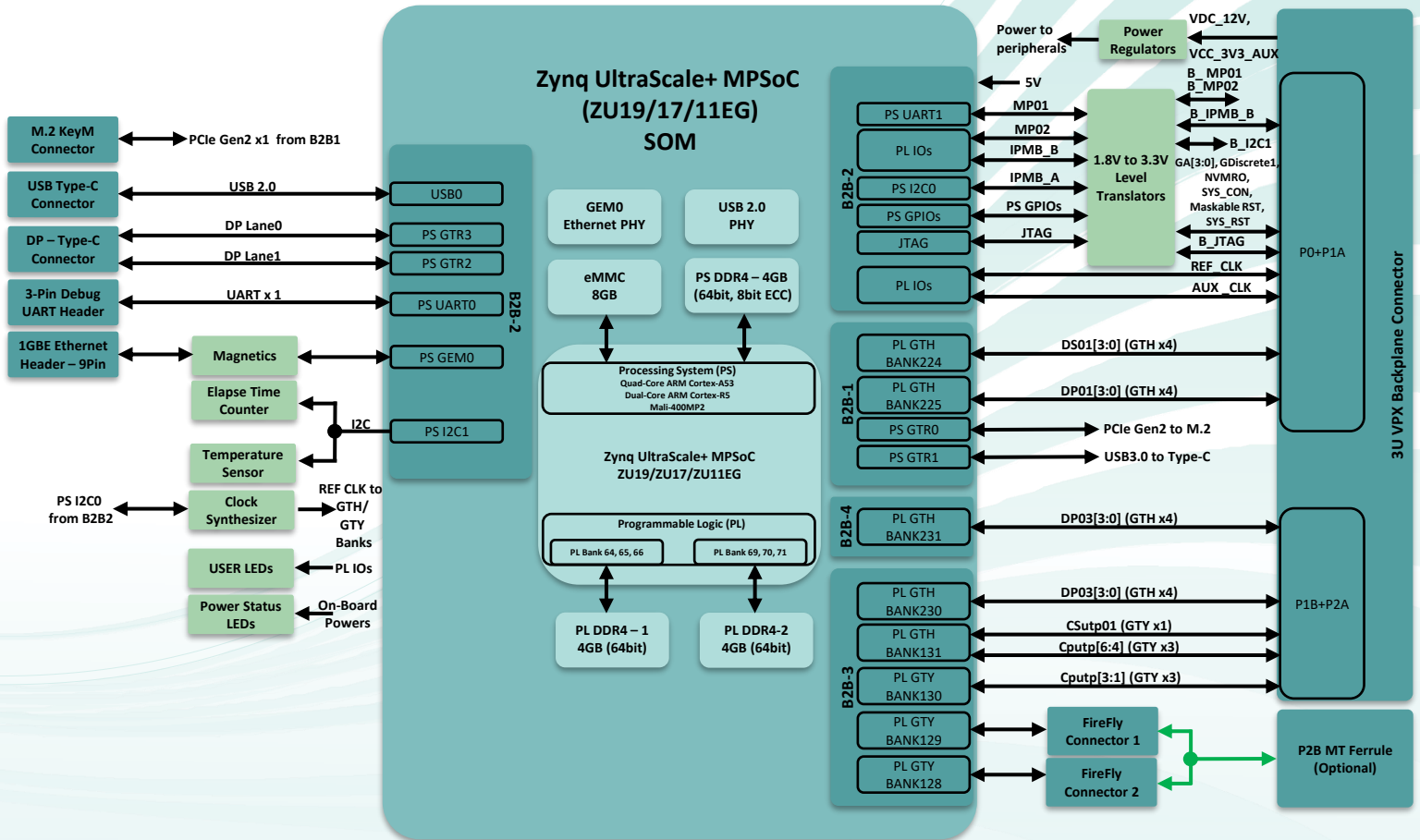
- Zynq UltraScale+ MPSoC (ZU19EG)
- Compatible with ZU11EG & ZU17EG
- Up to 1,143K Logic cells & 523K LUTs
- 4GB PS DDR4 with ECC (64bit)
- Dual 4GB PL DDR4 (64bit)
- Supports 1GBase-KX/10GBase-KR
- 10+ Years long term support

SPECIFICATIONS

ZU19/17/11EG – Zynq UltraScale+ MPSoC
Processing System (PS):
Compatible SoCs – ZU11EG & ZU17EG
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 1,143K Logic cells & 522K LUTs
RAM Memory:
4GB DDR4 for PS with ECC
4GB DDR4 (64 Bit) for PL from BANK 64,65,66
4GB DDR4 (64 Bit) for PL from BANK 69,70,71
On-SOM Flash:
8GB eMMC Flash (Expandable)
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
Other On-Board Features:
PCIe Gen2 through M.2(Key-M) Connector
Quad User LEDs
Temperature Sensor
Time Elapse Counter
Clock Generators:
Clock Synthesizer with 10 Outputs
3 LVDS Clock Buffers for Transceivers reference Clocks
Power:
12V through 7 Power Pins of P0
Compliance:
RoHS Compliant, REACH Compliant & CE

3U-VPX Backplane Features
3U-VPX Connector (P0+P1A)
DS01[3:0] - 1G/2.5G/10G or PCIe Gen3 (using GTH Transceivers @ Upto 16Gbps/lane)
DS01[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)
DP02[0:2] - 1G/2.5G/10G Ethernet (using GTH Transceivers @ Upto 16Gbps/lane)
DP03[3:0] - 1G/2.5G/10G Ethernet (using GTH Transceivers @ Upto 16Gbps/lane)
CPUTP[6:1] - 1G/2.5G/10G/25G Ethernet (using GTY Transceivers @ Upto 25Gbps/lane)
CsUTP01 - 1G/2.5G/10G/25G Ethernet (using GTY Transceivers @ Upto 25Gbps/lane)
MP01 and MP02
Maskable Reset
MT Ferrule Connector (P2B)
8 Fiber Optical Transceiver (4 x 2) Upto 28.125Gbps (Through two Firefly connectors)
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

Zynq UltraScale+ MPSoC (ZU19/17/11EG) 3U-VPX Plug-in Module Block Diagram



OS SUPPORT

Linux 5.15.36
Xilinx-V2022.2

DELIVERABLES

Zynq UltraScale+ MPSoC (ZU19/17/11EG) 3U-VPX Plug-in Module
Petalinux BSP with Example FPGA Design
3U VPX Module Datasheet

OPTIONAL KITS/Modules

FireFly Optical Module*
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

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*Optional items not included in the standard deliverables.

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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>