

# System On Module iW-RainboW-G35M

## ZU19/17/11 Zynq UltraScale+ MPSoC SOM



Xilinx Zynq UltraScale+ MPSoC based System On Module features the Zynq UltraScale+ MPSoC EG ZU11/ZU17/ZU19 devices with C1760 package. MPSoC supports Quad Cortex A53 up to 1.5GHz with programmable LEs up to 1 million. SOM supports high speed connectivity peripherals such as PCIe, USB3.0, SATA3.1, Display port, Gigabit Ethernet through GTR high speed transceivers from MPSoC. Furthermore, it supports 32 GTH high speed transceivers supports up to 16.375 and 16 GTY high speed Transceivers which can up to 32.725 Gbps to run demanding applications.

**APPLICATIONS:** Video Surveillance, Cloud Computing, Artificial Intelligence/ Machine Learning, 5G Wireless, High Precision Test Instrument.

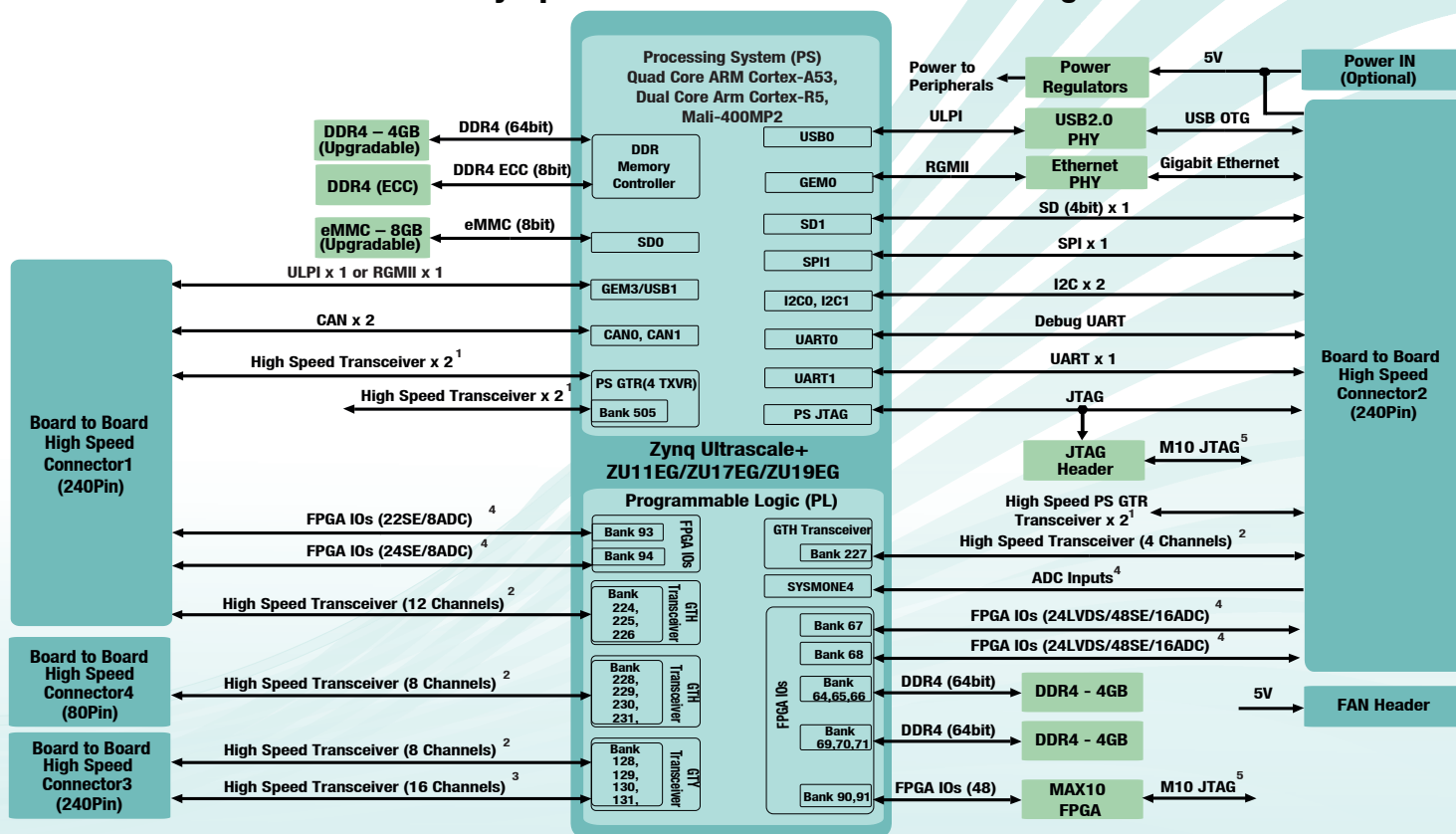
### iW-RainboW-G35M HIGHLIGHTS

- Quad Cortex A53 @ 1.5GHz
- Dual Cortex R5, ARM Mali 400 Mp2
- 16 Channels GTY Transceivers up to 32.75Gbps
- 32 Channels GTH Transceivers up to 16.3Gbps
- 4 Channels GTR Transceivers up to 6Gbps
- Industrial grade availability
- 10+ Years availability

### SPECIFICATIONS

|                                                  |                                                       |
|--------------------------------------------------|-------------------------------------------------------|
| <b>SoC:</b>                                      |                                                       |
| Xilinx Zynq US+ EG ZU19/ZU17/ZU11                | 48 LVDS/96 SE/32 ADC from HP BANKs                    |
| Quad Cortex A53@1.5GHz                           | 46 SE/16 ADC from HD BANKs                            |
| Dual Cortex R5 MPCore upto 600MHz                | <b>Zynq Ultrascale+ MPSoC PS Interfaces:</b>          |
| ARM Mali 400MP2                                  | Gigabit Ethernet x 1 Port                             |
| <b>Memory:</b>                                   | USB 2.0 OTG x 1 Port                                  |
| 4GB DDR4 for PS with ECC                         | SPI x 1 Port                                          |
| 4GB DDR4 (64 Bit) for PL from BANK 64,65,66      | CAN x 2 Ports                                         |
| 4GB DDR4 (64 Bit) for PL from BANK 69,70,71      | I2C x 2 Ports                                         |
| 8GB eMMC Flash (Expandable)                      | SD x 1 Port                                           |
| <b>On SOM Features:</b>                          | Debug UART                                            |
| 10/100/1000 Ethernet PHY for PS                  | UART x 1 Port                                         |
| USB2.0 OTG Transceiver for PS                    | JTAG                                                  |
| MAX10 FPGA for PL                                | GEM 3 or USB1 2.0 x 1 Port                            |
| JTAG Header                                      | PS Transceivers x 4 @ 6Gbps                           |
| FAN Header                                       | <b>OS Support:</b> Linux                              |
| <b>Dual Board to Board Connector Interfaces:</b> | <b>Power Supply:</b>                                  |
| <b>Zynq Ultrascale+ MPSoC PL Interfaces:</b>     | 5V through Board to Board Connector 2                 |
| PL GTY Transceivers x 16 @ 32.7Gbps              | <b>Temperature:</b> -40°C to +85°C (Industrial Grade) |
| PL GTY Transceivers x 32 @16.3Gbps               | <b>Form Factor:</b> 110mm x 75mm                      |

## ZU19/17/11 Zynq Ultrascale+ MPSoC SOM Block Diagram



Notes:

<sup>1</sup> PS GTR Transceiver supports data rates up to 6Gb/s and can be configured as PCIe/SATA/USB3.0/DisplayPort/Ethernet SGMII.

<sup>2</sup> PL GTM Transceiver supports data rates up to 16.3Gb/s

<sup>3</sup> PI GTY Transceiver supports data rates up to 32.75Gb/s

<sup>4</sup> SYSMONE4 supports 10bit 200KSPS ADC and supports upto 17 Analog Inputs (One dedicated Analog input and 16 auxiliary analog input from any PL BANKs)

<sup>5</sup> The MAX10 JTAG Signals and the PS JTAG Signals are connected to JTAG Connector in JTAG Chain mode.

## OS SUPPORT

Linux 4.14.0

## DELIVERABLES

# Zynq Ultrascale+ MPSoC Module Board Support Package User Manual

## OPTIONAL KITS/Modules

## Zynq Ultrascale+ Development Kit Heat Sink

## CUSTOM DEVELOPMENT

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

iWave Systems Technologies, established in 1999, focuses on Product Engineering Services involving Embedded Hardware, Software & FPGA. The company designs and develops cutting edge products and solutions. iWave has been an innovator in the development of highly integrated, high performance, low power and low cost System On Modules and Development Platforms.

iWave System has won the confidence of its customers over the years by being a reliable partner in developing innovative products. Our engineers combine outstanding System design experience to deliver Quality Solutions. iWave specializes across Industrial, Automotive and Medical domains. We support our customers by being time efficient, which in turn helps our customers accelerate time to market their products. iWave is a Windows embedded Silver partner and a winner of the Partner Excellence Award.

*\*Optional items not included in the standard deliverables.*

*Note: iWave reserves the right to change these specifications without notice as part of iWave continuous effort to meet the best in breed specification. The registered trademarks are proprietary of their respective owners.*



## ZU19/17/11 Zynq Ultrascale+ 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>

W-G35M-BR-R10

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