

# 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

##### SoC:

Xilinx Zynq US+ EG ZU19/ZU17/ZU11

Quad Cortex A53@1.5GHz

Dual Cortex R5 MPCore upto 600MHz

ARM Mali 400MP2

##### 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

8GB eMMC Flash (Expandable)

##### On SOM Features:

10/100/1000 Ethernet PHY for PS

USB2.0 OTG Transceiver for PS

MAX10 FPGA for PL

JTAG Header

FAN Header

##### Dual Board to Board Connector Interfaces:

##### Zynq Ultrascale+ MPSoC PL Interfaces:

PL GTY Transceivers x 16 @ 32.7Gbps

PL GTY Transceivers x 32 @16.3Gbps

48 LVDS/96 SE/32 ADC from HP BANKs

46 SE/16 ADC from HD BANKs

##### Zynq Ultrascale+ MPSoC PS Interfaces:

Gigabit Ethernet x 1 Port

USB 2.0 OTG x 1 Port

SPI x 1 Port

CAN x 2 Ports

I2C x 2 Ports

SD x 1 Port

Debug UART

UART x 1 Port

JTAG

GEM 3 or USB1 2.0 x 1 Port

PS Transceivers x 4 @ 6Gbps

**OS Support:** Linux

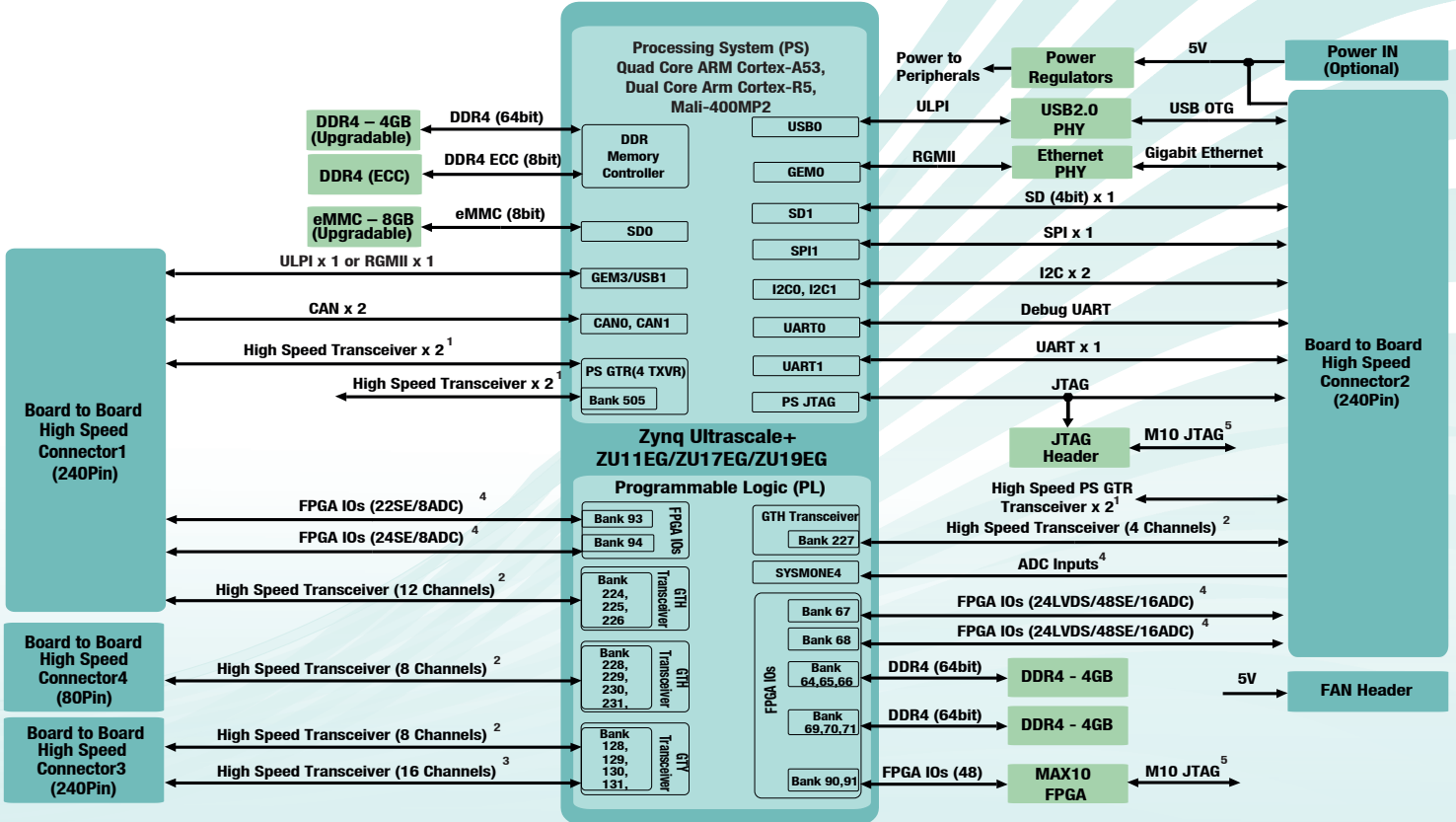
##### Power Supply:

5V through Board to Board Connector 2

**Temperature:** -40°C to +85°C (Industrial Grade)

**Form Factor:** 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 GTH 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.

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\*Optional items not included in the standard deliverables.

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**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>

IW-G35M-BR-F1.0

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