

iG-G35M

ZU19/17/11 Zynq UltraScale+ MPSoC System on Module

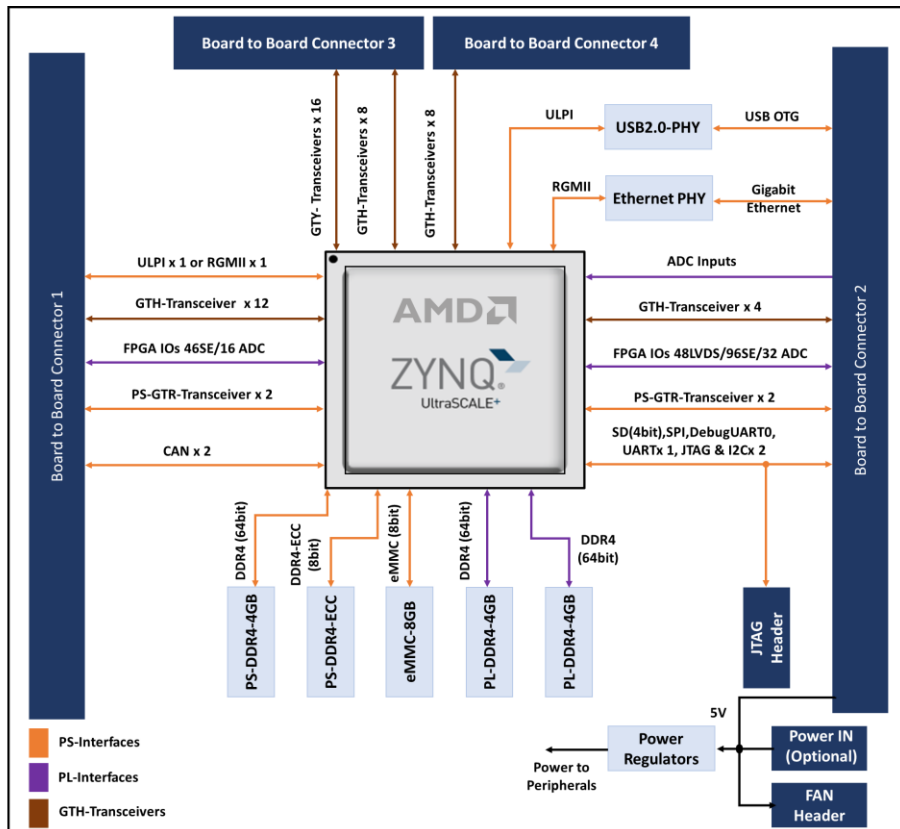
Zynq UltraScale+ MPSoC based System On Module features the Zynq UltraScale+ MPSoC EG ZU11/ZU17/ZU19 devices with C1760 package. MPSoC supports Quad/Dual Cortex A53 up to 1.5GHz with programmable LEs up to 1 million. SOM supports high speed connectivity peripherals such as PCIe, USB3.0, SATA3.1, Display 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.



Highlights

- ❖ Zynq™ UltraScale+™ MPSoC Family Compatible with ZU19/ZU17/ZU11 EG Devices
- ❖ Quad/Dual Cortex A53 @ 1.5GHz
- ❖ Dual Cortex R5, ARM Mali 400 MP2
- ❖ 4GB DDR4 RAM for PS with ECC, 4GB DDR RAM for PS without ECC and Dual 4GB DDR4 RAM for PL
- ❖ 8GB eMMC Flash Expandable up to 128GB
- ❖ Up to 1143K Logic cells & 522K LUTs
- ❖ 16 GTY Transceivers, 32 GTH Transceivers, 4 GTR Transceivers and 142 IOs
- ❖ Industrial grade availability

Block Diagram



Technical Specifications

SoC	• Zynq US+ EG ZU19/ZU17/ZU11 • Quad/Dual Cortex A53@1.5GHz • Dual Cortex R5 MPCore up to 600MHz • ARM Mali 400MP2
Memory & Storage	• 64bit, 4GB DDR4 RAM for PS with ECC (Expandable up to 8GB) • 64bit, Dual 4GB DDR4 RAM for PL (Expandable up to 16GB) • 8GB eMMC Flash (Expandable up to 128GB)
On SOM Features	• 10/100/1000 Ethernet PHY For PS • USB2.0 PHY Transceiver • 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

Dual Board to Board Connector Interfaces:	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
Software Features	• Multi OS Support: Linux, Ubuntu, VxWorks, PYNQ, Baremetal • Security: Secure boot, TPM, watchdog, multiboot • Docker & QEMU support • Dynamic FPGA configuration • Flexible boot options • BIST, 100G & video support
Operating Temp.	-40°C to +85°C (Industrial Grade)
Form Factor	110mm x 75mm (OREN+)
Power Input	5V through B2B Connector 2

Ordering Information

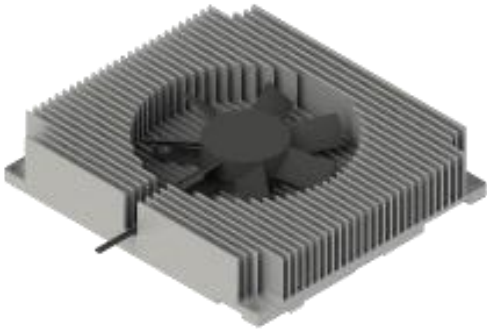
iW-G35M-11EG-4E004G-E008G-BIA	ZU11EG (-1) MPSoC (XCZU11EG-1FFVC1760I), 4GB PS DDR4 with ECC, Dual 4GB PL DDR4, 8GB EMMC, Without MAX10 FPGA – Boot Code Loaded
iW-G35M-11EG-4E004G-E008G-LIA	ZU11EG (-1) MPSoC (XCZU11EG-1FFVC1760I), 4GB PS DDR4 with ECC, Dual 4GB PL DDR4, 8GB EMMC, Without MAX10 FPGA – Linux Loaded
iW-G35M-17EG-4E004G-E008G-BIA	ZU17EG (-1) MPSoC (XCZU17EG-1FFVC1760I), 4GB PS DDR4 with ECC, Dual 4GB PL DDR4, 8GB EMMC, Without MAX10 FPGA – Boot Code Loaded
iW-G35M-17EG-4E004G-E008G-LIA	ZU17EG (-1) MPSoC (XCZU17EG-1FFVC1760I), 4GB PS DDR4 with ECC, Dual 4GB PL DDR4, 8GB EMMC, Without MAX10 FPGA – Linux Loaded
iW-G35M-19EG-4E004G-E008G-BEA	ZU19EG (-1) MPSoC (XCZU19EG-1FFVC1760E), 4GB PS DDR4 with ECC, Dual 4GB PL DDR4, 8GB EMMC, Without MAX10 FPGA – Boot Code Loaded
iW-G35M-19EG-4E004G-E008G-LEA	ZU19EG (-1) MPSoC (XCZU19EG-1FFVC1760E), 4GB PS DDR4 with ECC, Dual 4GB PL DDR4, 8GB EMMC, Without MAX10 FPGA – Linux Loaded

Product accessories



Development Kit

iWave's Zynq UltraScale+ SoC DevKit includes a MPSoC SOM with 4GB DDR4 (ECC) for PS and 4GB Dual DDR4 for PL, featuring high-speed connectivity like FMC+, FireFly, QSFP, HDMI, PCIe, and SDI IN/OUT.



Thermal Solutions

For any highly integrated System On Modules, thermal design is very important factor. iWave Supports Heat Sink and Fan Sink Solution for ZU19/17/11EG Zynq UltraScale+ MPSoC SOM.

Applications

- **Video Surveillance**
Enables high-resolution Video Surveillance with real-time processing, AI-based analytics, and high-speed data transmission for enhanced security.
- **Artificial Intelligence/Machine Learning**
Empowers AI/ML applications with high-performance computing, real-time data processing, and efficient deep learning acceleration.
- **5G Wireless**
Enables 5G Wireless with high-speed processing, low-latency communication, and advanced RF signal processing for next-gen connectivity.

A Global Leader in Embedded Systems Engineering and Solutions

Since 1999, we have pioneered leadership in embedded systems technology, establishing ourselves as a strategic embedded technology partner for advanced solutions. Our comprehensive portfolio encompasses ARM and FPGA System on Modules, COTS FPGA solutions, and ODM solutions which include Telematics, Gateways & HMI Solutions.

Beyond our robust product ecosystem, we provide comprehensive ODM support with specialized custom design and manufacturing capabilities, enabling customers to accelerate and optimize their product development roadmaps. With a strategic focus on industrial, automotive, medical, and avionics markets, we deliver innovative technology solutions to global clients.

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