Development Platform iW-RainboW G35D
Zynq Ultrascale+ MPSoC Development kit

iWave’s Zynq Ultrascale+ SoC Development kit comprises of Xilinx’s Ultrascale+ MPSoC SOM and Ultra-High-Performance carrier card. The SOM is equipped with 64-bit 4GB DDR4 RAM with ECC for PS & 64-bit 4GB Dual DDR4 RAM for PL. The Zynq Ultrascale+ MPSoC development kit carrier board supports required set of features like FMC+ (HPC), FMC (HPC), FireFly, QSFP, SFP+, 12-Pin Pmod, and HDMI- IN/OUT connectors to validate Zynq Ultrascale+ MPSoC high-speed PL interfaces and PCIe x4, SATA, USB-Type-C, Display Port, Gigabit Ethernet and SDI Video IN/OUT on-board connectors to validate the Zynq Ultrascale+ MPSoC high-speed PS interfaces.

Applications: Artificial intelligence, Broadcast audio/video, HPC, Desegregated computing, 5G wireless, 100G connectivity

**iW-RainboW G35D HIGHLIGHTS**

- Zynq Ultrascale+ MPSoC with 1143K Logic Cells
- PS - GTR Transceivers x 4 @ 6Gbps
- PL - GTH Transceivers x 32 @ 16.3Gbps
- PL - GTY Transceivers x 16 @ 32.735Gbps
- FireFly Connector
- FMC+ HPC Connector
- FMC HPC Connector
- QSFP & SFP+ Connector
- Dual 12-Bit Pmod Connectors
- HDMI - IN/OUT
- SDI Video IN/OUT
- Dual 1G Ethernet

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Zynq Ultrascale+ MPSoC SOM:</th>
<th>GPO Header1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zynq Ultral+2CU19EG(MPSoC+1speed)@1300MHZ</td>
<td>RTC Holder1</td>
</tr>
<tr>
<td>PMC with RTC</td>
<td>JTAG Connector1</td>
</tr>
<tr>
<td>8GBeeMMC Flash (for boot code)</td>
<td>PL Interface</td>
</tr>
<tr>
<td>4GB DDR4 RAM for PS</td>
<td>Pmod Connector2</td>
</tr>
<tr>
<td>4GB Dual DDR4 RAM for PL</td>
<td>SFP Connector2</td>
</tr>
<tr>
<td>PS-GTR Transceivers x4 @ 6Gbps</td>
<td>QSFP Connector1</td>
</tr>
<tr>
<td>PL-GTH Transceivers x32 @ 16.3Gbps</td>
<td>SDI Video IN/OUT Connector1</td>
</tr>
<tr>
<td>PL-GTY Transceivers x16 @ 32.735Gbps</td>
<td>HDMI IN/OUT Connector1</td>
</tr>
<tr>
<td>Gigabit Ethernet PHY</td>
<td>HDMI IN Connector2</td>
</tr>
<tr>
<td>UBS 2.0 Transceiver</td>
<td>HDMI OUT Connector1</td>
</tr>
<tr>
<td>Ultra-High-Performance Carrier Board:</td>
<td>FMC Connector1</td>
</tr>
<tr>
<td>PS - Interface</td>
<td>FireFly Connector1</td>
</tr>
<tr>
<td>10/100/1000 Ethernet x2</td>
<td>Power Supply</td>
</tr>
<tr>
<td>CAN Header1</td>
<td>4-Pin DIN Power Connector (12V) x1</td>
</tr>
<tr>
<td>Debug Console x1</td>
<td>Switches</td>
</tr>
<tr>
<td>SD Connector1</td>
<td>Reset Button x1</td>
</tr>
<tr>
<td>USB 2.0 OTG Connector1</td>
<td>Power ON/OFF Switch x1</td>
</tr>
<tr>
<td>M2 SATA Connector1</td>
<td>PS-GTR Lane Selection Switch x1</td>
</tr>
<tr>
<td>DP Connector1</td>
<td>Operating System</td>
</tr>
<tr>
<td>USB Type-C Connector1</td>
<td>Linux</td>
</tr>
<tr>
<td>PCIe#1 Connector1</td>
<td><a href="mailto:mktg@iwavesystems.com">mktg@iwavesystems.com</a></td>
</tr>
</tbody>
</table>
**Zynq Ultrascale+ MPSoC Development Kit**

**DELIVERABLES**
- Zynq Ultrascale+ MPSoC Development kit
- Linux 4.14.0 BSP
- 12V AC-DC Adapter
- HW/SW user manuals
- Quick Start Guide

**OS SUPPORT**
- Linux 4.41.0

**Optional KITS/Modules**
- Pmod Modules

**CUSTOM DEVELOPMENT**
- BSP Development/OS Porting
- Custom SOM/Carrier Development
- Custom Application/GUI Development
- Design Review and Support

---

**Note:**
- *Optional items not included in standard deliverables*
- 1. These interfaces can be used only with ZU19/17/11
- 2. By default, 3G SOI IN/OUT is supported. Optionally, 12G SOI IN/OUT can be supported on request.

---

**Optional KITS/Modules**

- Pmod Modules

---

**Zynq Ultrascale+ MPSoC Development Kit**

The device can be ordered online from the iWave website
http://www.iwavesystems.com/webforms

---

**Zynq Ultrascale+ MPSoC Development Kit**

**ZU19/17/11**

**BLOCK DIAGRAM**

---

**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 innovator in development of highly integrated, high performance, low power and low cost System On Modules and Development Platforms. iWave’s expertise brought out multiple SOMs based on ARM, NXP, Intel Atom, Marvell and TI Processors.

iWave Systems 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 windows embedded Silver Partner and winner of the Partner Excellence Award.