



iWave's Zynq Ultrascale+ SoC Development kit comprises of Xilinx's Ultrascale+ MPSoC SOM and High Performance carrier card. The SOM is equipped with 64-bit 4GB DDR4 RAM with ECC for PS & 16-bit 1GB for PL. The Zynq ultrascale+ MPSoC development kit carrier board supports required set of features like FMC (HPC) Connectors, SATA, SFP+, Display Port, USB-Type-C and PCIe x4 connector, SDI IN and OUT BNC Connectors to validate Zynq Ultrascale+ MPSoC high speed transceivers and other on-board connectors to validate Zynq Ultrascale+ SoC PS interfaces.

APPLICATIONS: Machine Vision, ADAS/Embedded vision, Medical Endoscopy, Data Center, Industrial Motor Control, Industrial IoT, Sensor fusion, Cloud Computing, Networking, Aerospace.

iW-RainboW-G30D HIGHLIGHTS

Zynq Ultrascale+ SoC & FPGA device Compatibility

- XCZU4 CG/EG/EV
- XCZU5 CG/EG/EV
- XCZU7 CG/EG/EV

64-bit DDR4 support with ECC for PS

16-bit DDR4 support for PL

8 GB eMMC for PS booting

FMC HPC Connector x 2

Dual 12-Bit PMOD Connectors

SFP+ Connector

SDI Video In & Out HD BNC Connector

SATA Connector

USB Type C Connector

Display Port Connector

PCIe x 4 Connector

SPECIFICATIONS

Zynq Ultrascale+ MP SoC SOM:

Xilinx Zynq UltraScale+ ZU4/ZU5/ZU7

Quad/Dual Cortex A53 @ 1.5GHz

Dual Cortex R5, ARM Mali 400 Mp2

H.265, H.264 Video Codecs

8GB eMMC Flash for boot code

PMIC with RTC

4GB DDR4 RAM with ECC for PS

1GB DDR4 RAM for PL

Gigabit Ethernet PHY

USB2.0 Transceiver

PS Transceivers x 4 @ 6Gbps

PL Transceivers x 16 @ 16.3Gbps

JTAG, FAN Header

48 LVDS Pairs/96 SE IOs from HP BANKs

46 SE IOs from HD Banks

Operating System: Linux 6.1.30

Ultrascale+ SoC/FPGA Carrier Board:

Debug Console - 1 Port

USB 2.0 OTG - 1 Port

Gigabit Ethernet PHY

10/100/1000 Ethernet - 2 Ports

4-bit-SD Connector

CAN Header

RTC Coin cell Holder

High Speed Connectors:

FMC High Pin Count (HPC) Connector: 1

FPGA High Speed Transceivers x 8

20 LVDS IOS/40 SE IO's and 20 SE IO's

Four General Purpose Clock Input LVDS Pair/Single Ended

Two General Purpose Clock Output LVDS Pair/Single Ended

FMC High Pin Count (HPC) Connector: 2

FPGA High Speed Transceivers x 6

15 LVDS IOS/30 SE IO's and 4 SE IO's

Two General Purpose Clock Input LVDS Pair/Single Ended

One General Purpose Clock Input LVDS Pair/Single Ended

12-Pin PMOD Connectors x 2 (4LVDS Pair/8SE IO's per Connector)

SFP+ Connector

SDI Video In & Out Connector

SATA Connector

USB Type C Connector

Display Port Connector

PCIe x 4 Connector

Power Jack (12V DC Input)

Operating Temperature: -20°C to +85°C

Additional Features:

Power ON/OFF Switch

Reset Switch

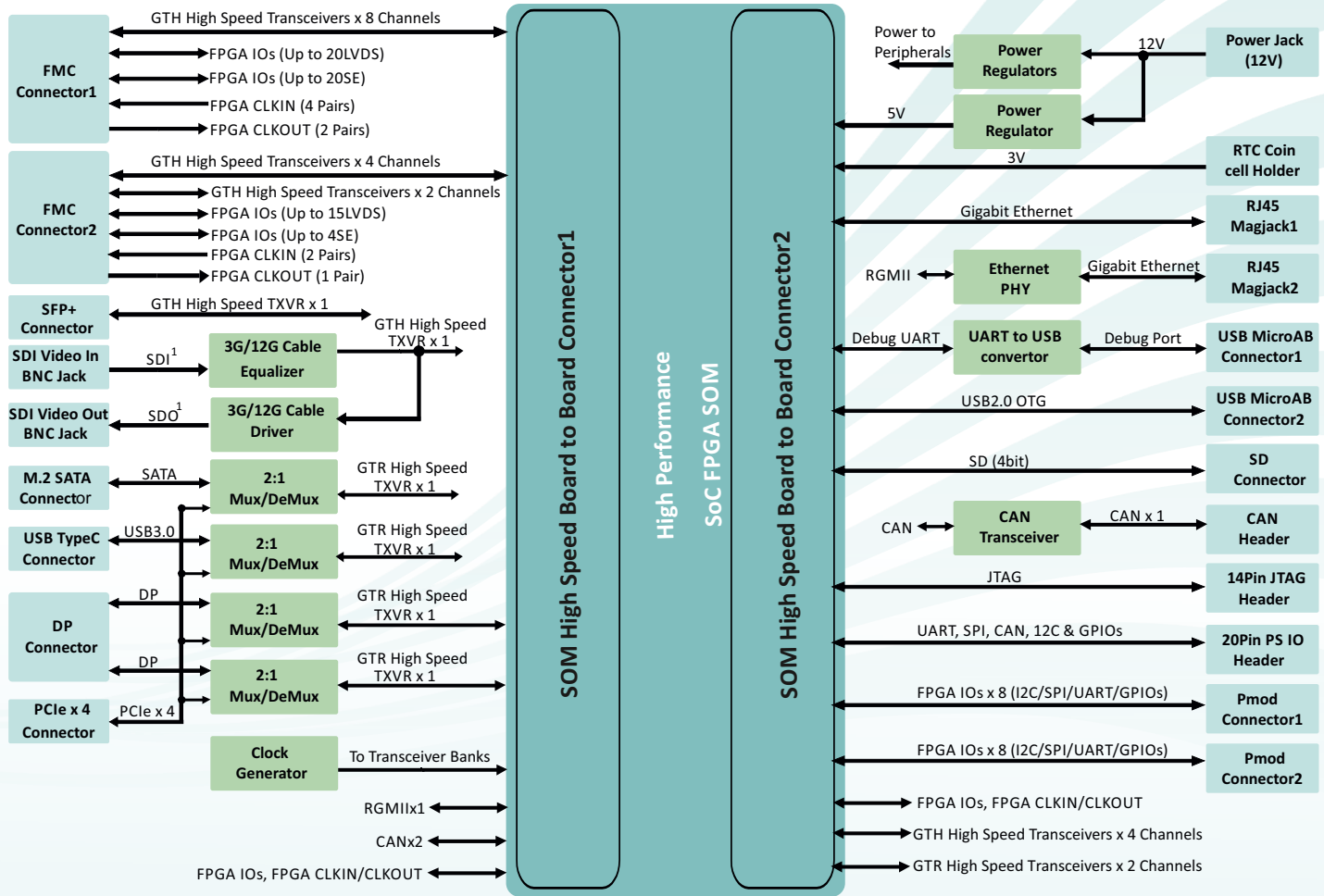
20Pin PS IO Header

JTAG Header

Power Supply:12V Power Input Jack

Farm Factor:130mm x 140mm

High Performance SoC FPGA SOM Carrier Board Block Diagram



NOTE:
¹ By default, 3G SDI IN/OUT is supported. Optionally, 12G SDI IN/OUT can be supported on request.

OS SUPPORT

Linux 6.1.30

DELIVERABLES

- Zynq Ultrascale+ MPSoC Development kit
- Linux 6.1.30 BSP
- 12V AC-DC Adapter
- HW/SW user manuals

OPTIONAL KITS/Modules

Pmod Modules

CUSTOM DEVELOPMENT

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

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iWave Systems offers various state of art ready ODM solutions such as Connected Telematic Control Unit / OBD II devices for the automotive edge analytics, Comprehensive ARINC818 solutions for the low latency Aerospace applications and Rugged IP rated performance scalable HMI solutions for Industrial applications.

iWave Systems also provides comprehensive Engineering design services involving Embedded Hardware, FPGA and Software development. iWave offers carrier board and custom hardware development with manufacturing and certification services. iWave's Hardware expertise spans complex board design up to 30 layers; Analog, Digital & RF Designs; FPGA Development up to 3+ million gates and VHDL / Verilog RTL Development & Verification. Our Software expertise ranges from OS Porting, Firmware & Device Drivers Development and Wireless & Protocol

*Optional items not included in the standard deliverables.

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Zynq Ultrascale+ MPSoC Development Kit
 The device can be ordered online from the iWave Website
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 Or from our Local Partners in your region
<http://www.iwavesystems.com/about-us/business-partner.html>