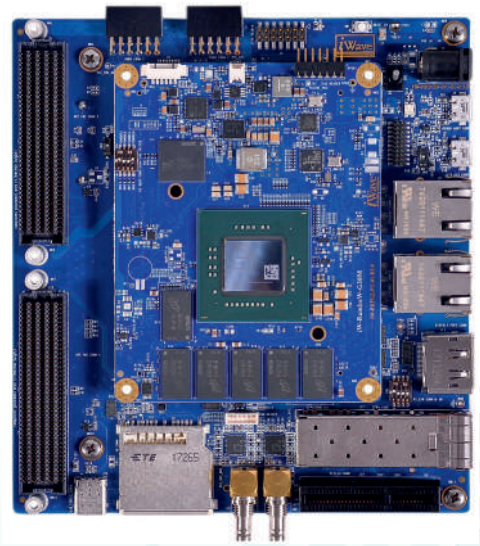
iWave
Embedding Intelligence

Development Platform iW-RainboW-G30D
Zynq Ultrascale+ MPSoC Development kit



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
48 SE IOs from HD Banks
Operating System: Linux 4.14.0
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 24 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
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

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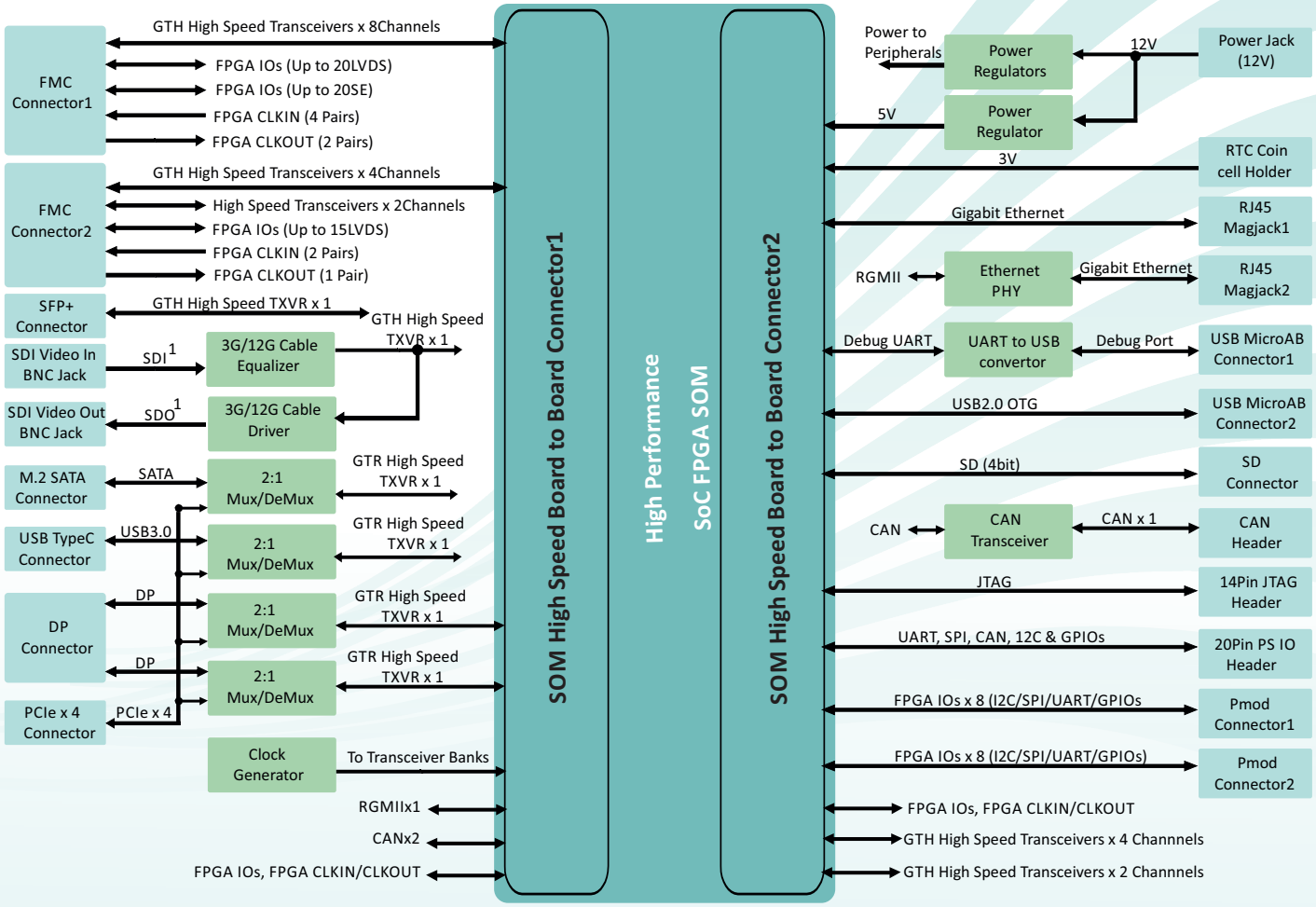
XILINX
ALLIANCE PROGRAM
CERTIFIED MEMBER — BASE

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 4.14.0

DELIVERABLES
Zynq Ultrascale+ MPSoC Development kit
Linux 4.14.0 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

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's continuous effort to meet the best in breed specification. The registered trademarks are proprietary of their respective owners.

Zynq Ultrascale+ MPSoC Development Kit

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-G30D-BR-R1.1

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