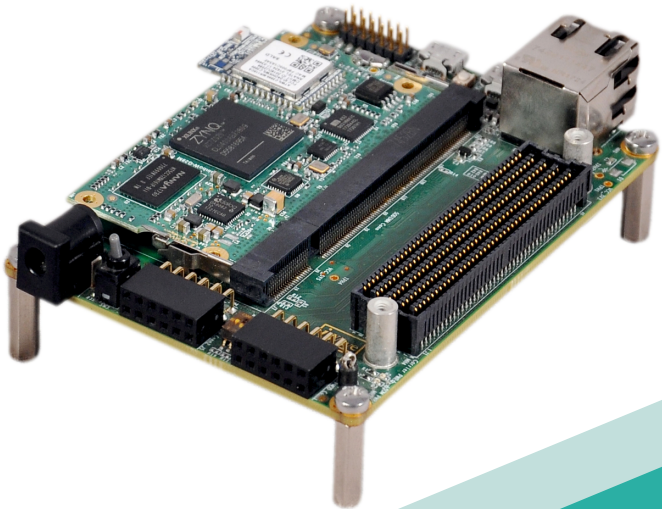


Zynq-7000 SoC SODIMM SOM Development Platform



**iW-RainboW-G28D
Quick Start Guide**

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Introduction

Quick Start Guide (QSG)

This Quick Start Guide (QSG) is designed for Users to quickly understand the iW-RainboW-G28D Zynq-7000 SoC SODIMM Development Board and start the evaluation. It provides the instructions for setting-up the development board from the packed box.

Development Platform Description

The iW-RainboW-G28D Zynq-7000 SoC SODIMM Development platform incorporates with Zynq-7000 SoC based SODIMM SOM, SODIMM carrier board with rugged IO connectors and interface connectors which provides all necessary hardware for developing an embedded FPGA application based on Xilinx Zynq-7000 SoC.

Some Key Features of the Board Include:

- Compatible Zynq-7000 SoC- Z-7007S, Z-7014S, Z-7010, Z-7020
Integrated Dual Core ARM Cortex A9 @ up to 866MHz
Up to 85K Logic Elements
- DDR3-512MB (Expandable)
- QSPI-2MB (Expandable)
- eMMC-8GB (Expandable)
- Wi-Fi/BT
- Gigabit Ethernet Port
- USB2.0 OTG Host & Device Port
- FMC Connector
- Pmod Connectors

Warning!

ESD Protection

This development platform is ESD sensitive. Handle the product only in accordance with the installation instructions given in the manual. Therefore ESD precautions should be taken care during transport and handling. You must use a ESD ground strap or other grounded source before unpacking or handling the hardware.

WEEE Regulations

WEEE is Waste Electrical and Electronic Equipment. Check the local regulations for disposal of electronic products before disposing.

RoHS Compliance

iW-RainboW-G28D Zynq-7000 SoC SODIMM Development board is designed by using RoHS compliant components and manufactured on lead free production process.



ESD Sensitive



WEE



RoHS Compliant

Quick Start Steps

Step 1 - Unpacking

Remove the Development platform from antistatic cover and place it above the ESD free area. Use anti-static pad/mat with proper grounding to place the Development Platform. Don't touch inside surface of the circuit board.

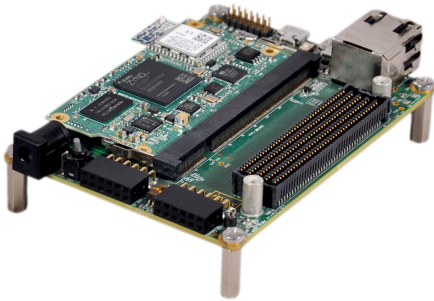
Avoid using board in extreme dust, humidity and temperature conditions. Also this development platform is not water proof. Keep away from wet surface.



Package Box

Step 2- What's Inside The Box?

Make sure that, below deliverables are received without any physical damage.



Zynq-7000 DevKit



USB OTG Cable



5V,2.5A Power Supply

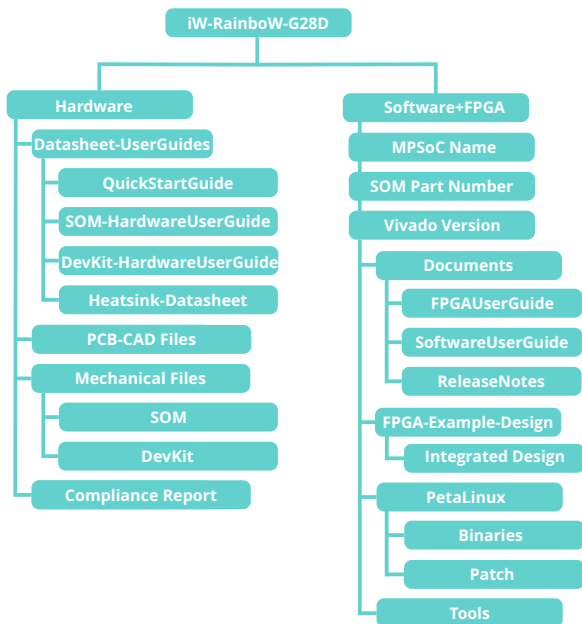


QSG

Step 3 - Download FTP Contents

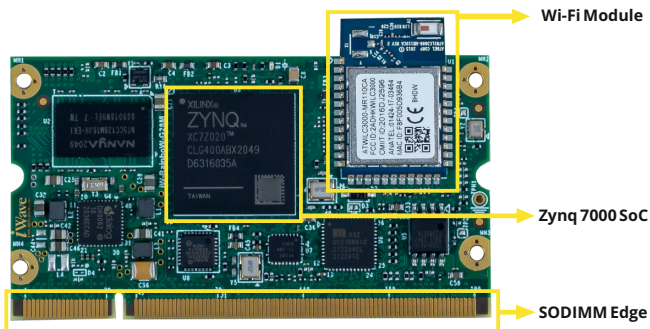
All the technical resources of iW-RainboW-G28D Zynq-7000 SoC- Z-7007S/Z-7014S/Z-7010/Z-7020 SODIMM Development platform is available in iWave FTP server.

FTP Folder Structure

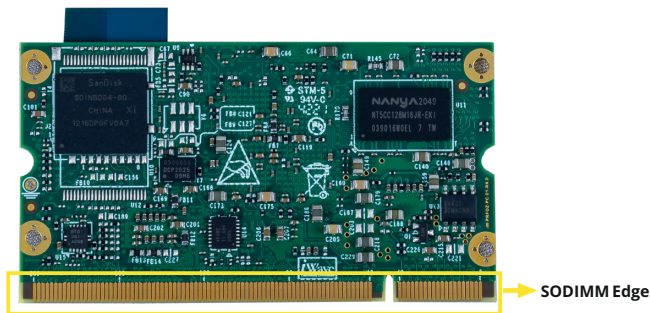


Step 4 - Quick View-SOM

TOP View

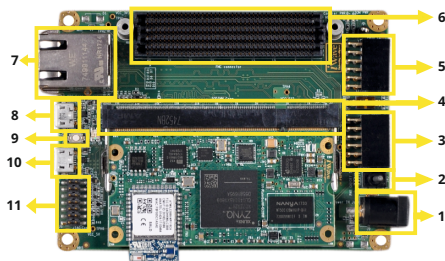


BOTTOM View



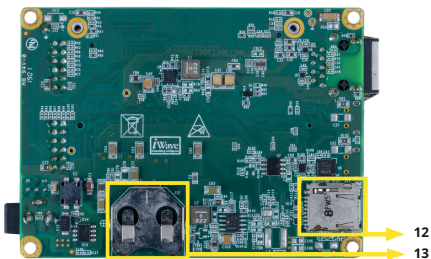
Step 5 - Quick View-Carrier Board

TOP View



1. Power Jack (J9)
2. Power On/Off Switch (SW3)
3. PmodConnector2 (J5)
4. SODIMM Connector (J7)
5. Pmod Connector1 (J3)
6. FMC Connector (J1)
7. Ethernet Jack (J2)
8. USB OTG MicroAB Port (J4)
9. Reset Switch (SW1)
10. Debug USB MicroAB Port (J6)
11. JTAG Connector (J8)
12. Micro SD Connector (J11)
13. Coin Cell Holder (J12)

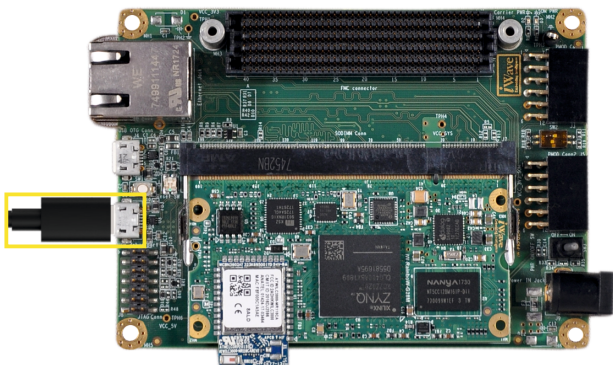
BOTTOM View



Step 6 - Setting-Up

Debug Port Setting

Connect TypeA end of USB cable to PC and MicroB end of USB cable to Development platform's Debug USB MicroAB Connector(J4) as shown below.



Install the driver for Debug Port in Host PC/Laptop using the below link.

<https://ftdichip.com/products/ft232rq/>

Setup the Debug Terminal parameters.

Baud Rate : 115200

Data bits : 8

Parity : None

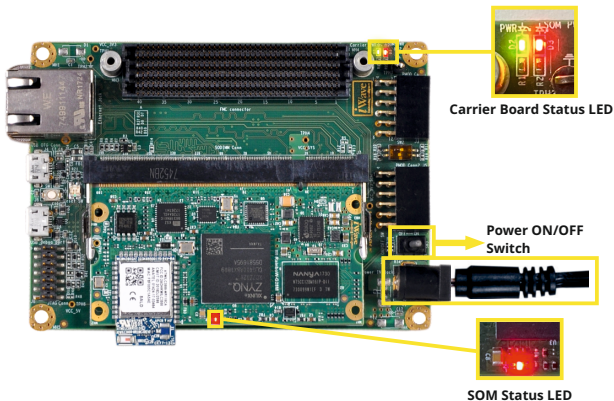
Stop Bits : 1

Flow Control : None

Step 7 - Power-ON the Development Platform

Connect the 5V power supply to the power jack (J9) of the Development platform as shown below and slide the Power ON/OFF button (SW3) as indicated in below image to turn ON the Development platform.

Once Power is applied to the Development platform, the Power LEDs in the Zynq-7000 SODIMM SOM and carrier board will glow as shown in the below image.



Warning:

1. Do not try to connect any other power supply other than the supplied one along with the Development Kit.
2. Do not plug or remove the SOM from carrier board with live power.
3. Contact iWave If power LEDs are not glowing.

JTAG

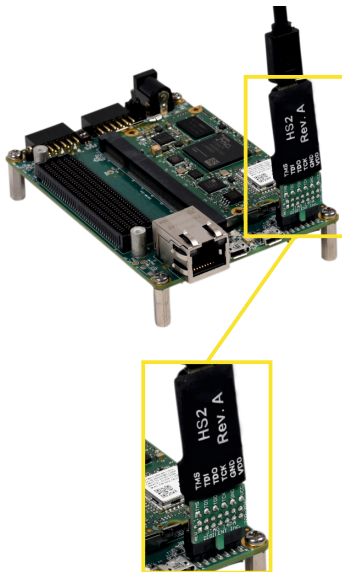
JTAG Connection

The iW-RainboW-G28D Zynq-7000 SoC SODIMM Development platform Support JTAG interface in Carrier Board for MPSoC/FPGA Programming and debugging.

Example JTAG Cable which is tested with this Platform is mentioned below.

JTAG-HS2 Programming Cable

Part Number: 410-249 from Digilent



iWave's Other Products

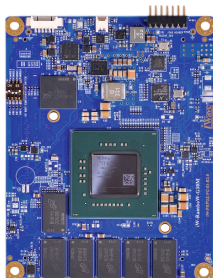


Product Name: Zynq UltraScale+ MPSoC (ZU5/ZU4/ZU3/ZU2) SBC

Processor: Xilinx's Zynq US+ MPSoC (2/3/4/5-EV/EG/CG)

RAM: 8GB PS DDR4* & 4GB PL DDR4*

Application: AI/ML, Industrial IoT, Human Machine Interface, Advanced Driver Assistance Systems.



Product Name: Zynq US+ MPSoC (4/5/7-EV/EG/CG) SOM

Processor: Xilinx's Zynq US+ MPSoC (4/5/7-EV/EG/CG)

RAM: 4GB PS DDR4*
1GB PL DDR4*

Application: Industrial Motor Control & IoT, Sensor Fusion, ADAS/Embedded Vision, Data Center, Medical Endoscopy



Product Name: Zynq US+ MPSoC (11/17/19-EG) SOM

Processor: Xilinx's Zynq US+ MPSoC (11/17/19-EG)

RAM: 4GB PS DDR4*
4GB Dual PL DDR4*

Application: Video Surveillance, Cloud Computing, Artificial Intelligence/Machine Learning, 5G Wireless, High Precision Test Instrument.

** RAM size is expandable. Contact iWave team for further details*

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