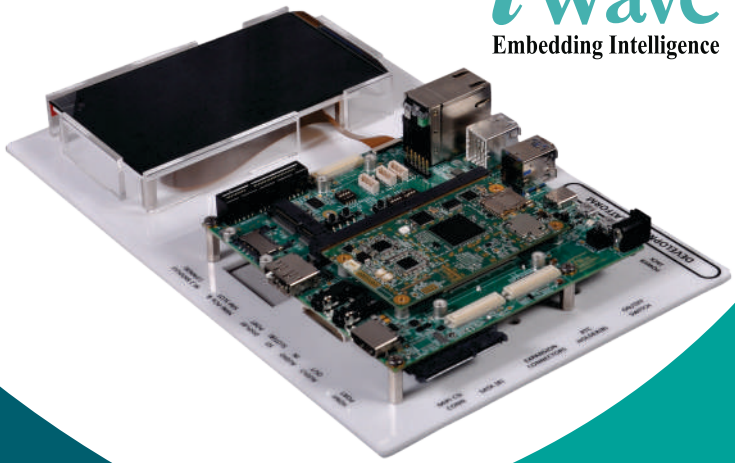
iWave
Embedding Intelligence



Snapdragon-820 SMARC Development Platform

iW-RainboW-G25D Quick Start Guide

REL0.1

(Draft Version)

Disclaimer

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CONTENTS

Warnings ----------02
Introduction ----------03
Quick Start Steps ----------04
Android Features List ----------11
Need More Help ? ----------12
What Is Next ----------13

Warning!

Do not assemble or use this development platform before reading the installation procedure.

ESD Protection

This development platform is ESD sensitive. Handle this 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. Your development platform is not water proof. Water damage is not covered under the warranty.

RoHS Compliance

iW-RainboW-G25D-Snapdragon 820 SMARC Development Board is designed by using RoHS compliant components and manufactured on lead free production process.

WEEE regulations

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

ESD Sensitive

RoHS Ccomplint

WEEE

Introduction

Quick Start Guide (QSG)

This document is designed for users to understand the iW-RainboW-G25D-Snapdragon 820 SMARC Development Board and evaluation quickly and easily. Quick Start Guide (QSG) provides the detailed instructions for setting-up the Development board from a packed box.

Development Board Description

The iW-RainboW-G25D-Snapdragon 820 SMARC Development Board is a demonstration, development and experimentation platform based on the Qualcomm APQ8096 SOC.

This development platform incorporates with Snapdragon 820 SMARC SOM (based on Qualcomm APQ8096 SOC), rugged interface connectors and display unit, provides all of the hardware necessary to get started developing a complete embedded application.

Some key features of the board include:

- 64-bit Quad Kryo Snapdragon 820 CPU
- Adreno 530 3D Graphics @624MHz
- Hexagon 680 DSP @ 825MHz
- H.265 4K60 decode, 4K30 encode
- 802.11ac Wi-Fi, BT 4.1 and GPS
- 5.5" HD AMOLED Display with CAP touch
- SMARC R2.0 compatible

Quick Start Steps

Step 1 - What's Inside The Box ?

Make sure that, below Deliverables are received without any physical damage. Before unpacking, learn about precautions you must take to prevent damage to electronic components from ESD.

OTG Cable*

WiFi, BT Antenna

12V, 2A Power Supply

QSG

W-RainboW-G25D-Snapdragon 820 SMARC Development Board

Package BOX

* Optional Item. Contact iWave team for further details

Step 2 - Unpacking

Remove the Development board from antistatic box and place above the ESD free area. Use anti-static pad/mat with proper grounding to place the Development Platform. Also this development plat form is not water proof. Keep away from wet surface.

Step 3 - Read DVD Contents

Given DVD contains below folders.

1. Binaries
2. Documents
3. Source Code
4. Programming Tool

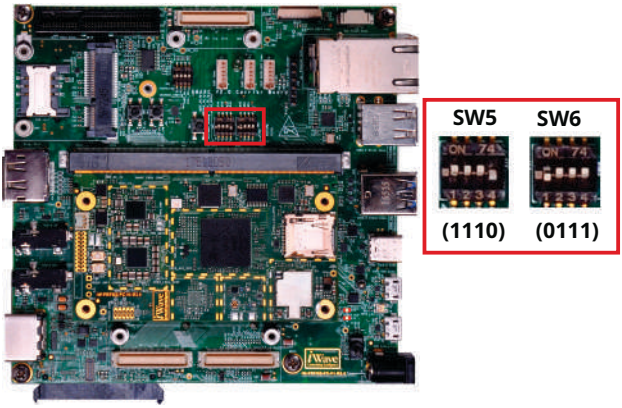
Content inside the each deliverable folder will be changed based on the operating system on particular delivery. Source code can be customized according to user wish and corresponding binaries can be generated. Once the binaries generated, user can download the binaries into the development platform using programming tool.
Also “Documents” folder contains of User Guides (both hardware and software), Release Note and Quick Start Guide.

Step 4 - Setting-Up

Before setting up the test environment, one must go through "Hardware User Guide" and get familiar about hardware section of iW-RainboW-G25D-Snapdragon 820 SMARC Development Board.

Check The On Board Switch Setting

Make sure On-Board Switches (SW5 and SW6) are set properly as shown below image.

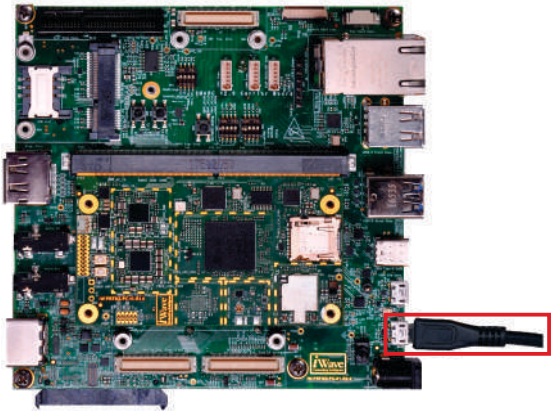


SW5 - Boot Selection Switch
SW6 - Configuration Switch

Note : Refer the Hardware User Guide for detailed information of each switch.

Debug Port Setting

Connect TypeA end of USB cable to PC and MicroB end of USB cable to Development platform's debug Micro USB connector (J22) as shown below.



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

http://www.ftdichip.com/Products/ICs/FT232R.html

Setup the Debug Terminal parameters.

Baud Rate : 115200

Data bits : 8

Parity : None

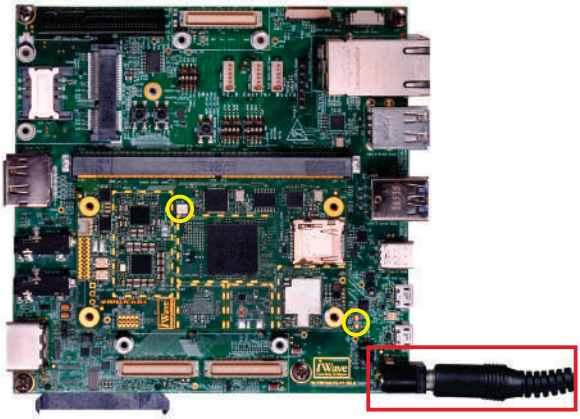
Stop Bits : 1

Flow Control : None

Power-ON SMARC Development Platform

Connect the 12V power supply plug to the power connector (J26) of the Development platform as shown below and switch ON the power supply.

Once Power is applied to the Development platform, the Power LEDs in the Snapdragon 820 SMARC 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 supplied along with the Development Kit

2. Do not plug or remove the Snapdragon 820 SMARC SOM from carrier board with live power.

3. Contact iWave If power LEDs are not glowing.

Step 5 - Test Environment setup

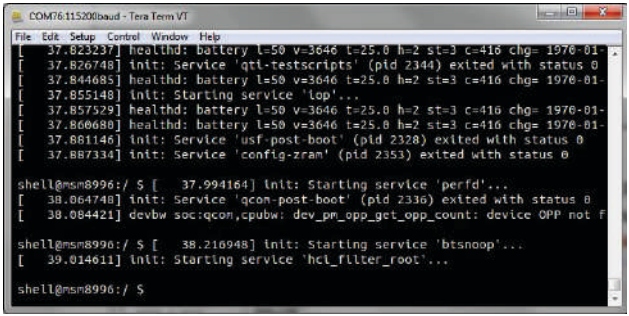
You must go through "Software User Guide" and get familiar about test cases of iW-RainboW-G25D-Snapdragon 820 SMARC Development Board.

Operating System Support

Marshmallo 6.0.1 (or higher)

Once the boot get success, Depending upon the supported Operating system and boot loader on particular delivery, You will observe boot messages being prompted in the terminal window.

Press Enter key in terminal to see the command prompt as shown below. Once you get the prompt you are done with Test Environment setup on particular delivery.



Command Prompt (Android)

If any display unit is connected with development board, then based on the operating system, Launch screen will be Appeared on the Display Unit.

Android Launch (Android)

Android Features List

Android Marshmallo 6.0.1 supports below features in Snapdragon 820 SMARC Development Platform.

- ■Bluetooth
- ■Debug UART
- ■eMMC
- ■Ethernet
- ■GPS
- ■HDMI
- ■LED
- ■LPDDR4 RAM
- ■Micro SD
- ■MIPI Display
- ■Multimedia
- ■PCIe SATA
- ■Power Button
- ■RTC
- ■Standard SD
- ■Touch
- ■USB
- ■Volume Button
- ■WiFi

Note : Refer the Software User Guide for test procedures.

Need More Help ?

iWave Systems provide Worldwide Technical Support to all customer around the world.

■Email

Write your technical quires to ***support.ip@iwavesystems.com***

■Phone

Call us on : +91-80-26683700, 26781643, 26786245

■Live Chat

We provide Live Chat technical support to our customers. Contact your iWave window to enable Live Chat support.

■Office Address

Refer below address for any shipment.

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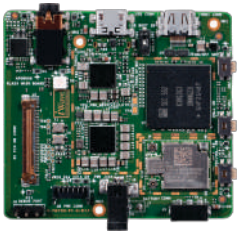
Bangalore - 560 076, India.

Warranty & RMA

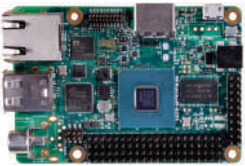
Warranty support for Hardware: 1 Year from iWave or iWave's EMS partner.

For warranty terms, go through below web link,
http://www.iwavesystems.com/support/warranty.html
For Return Merchandise Authorization (RMA), below web link,
http://www.iwavesystems.com/support/rma.html

What's Next ?

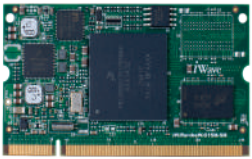


Product Name: Snapdragon 820 SBC
Processor : APQ8096
Memory : 3GB LPDDR4*
Application : High end graphics and multimedia solution



Product Name: Renesas G1C SBC
Processor : RZ/G1C
Memory : DDR3 SDRAM – 512 MB*
Application : Quick Prototype

Product Name: Renesas Q7 SOM
Processor : RZ/G1H
Memory : 2GB DDR3*
Application : high performance video intensive and graphic rich Solution



Product Name: Renesas SODIMM SOM
Processor : RZ/G1E
Memory : 512MB DDR3*
Application :Low-power cost-effective general embedded Solution

* DDR memory expandable. Contact iWave team for further details

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