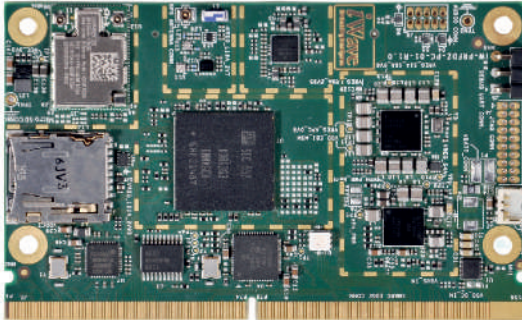


System On Module iW-RainboW-G25M

Snapdragon 820 System on Module



The Snapdragon 820 SMARC System On Module integrates Qualcomm's APQ8096 SOC offering 64-bit Quad Kryo CPU, H.265 hardware decode & encode, Adreno 530 GPU with on board 802.11ac Wi-Fi, BT4.1 and the GPS. The Snapdragon 820 SOM module is intended for high end embedded computing applications which require high processing power, graphics and multimedia capabilities such as Augmented & Virtual Reality, 4K Digital signage, Media streaming, Connected home & entertainment, High end wearables, Drones, Secure POS, Video analytics to name a few.

APPLICATIONS: Augmented & Virtual Reality, 4K Digital Signage, Media streaming, Connected home & entertainment, High end wearables, Drones, Secure POS, Video analytics.

iW-RainboW-G25M HIGHLIGHTS

64-bit Quad Kryo Snapdragon 820 CPU

- Dual Kryo cores Gold cluster @ (2.15 Ghz)
- Dual Kryo cores Silver cluster @ (1.6 Ghz)

Adreno 530 3D Graphics @ 624MHz

H.265 4K60 decode, 4K30 encode

Hexagon 680 DSP @ 825MHz

14-bit Qualcomm Spectra ISP

802.11ac Wi-Fi & BT 4.1

Qualcomm IZat Gen8C GPS

SMARC R2.0 compatible

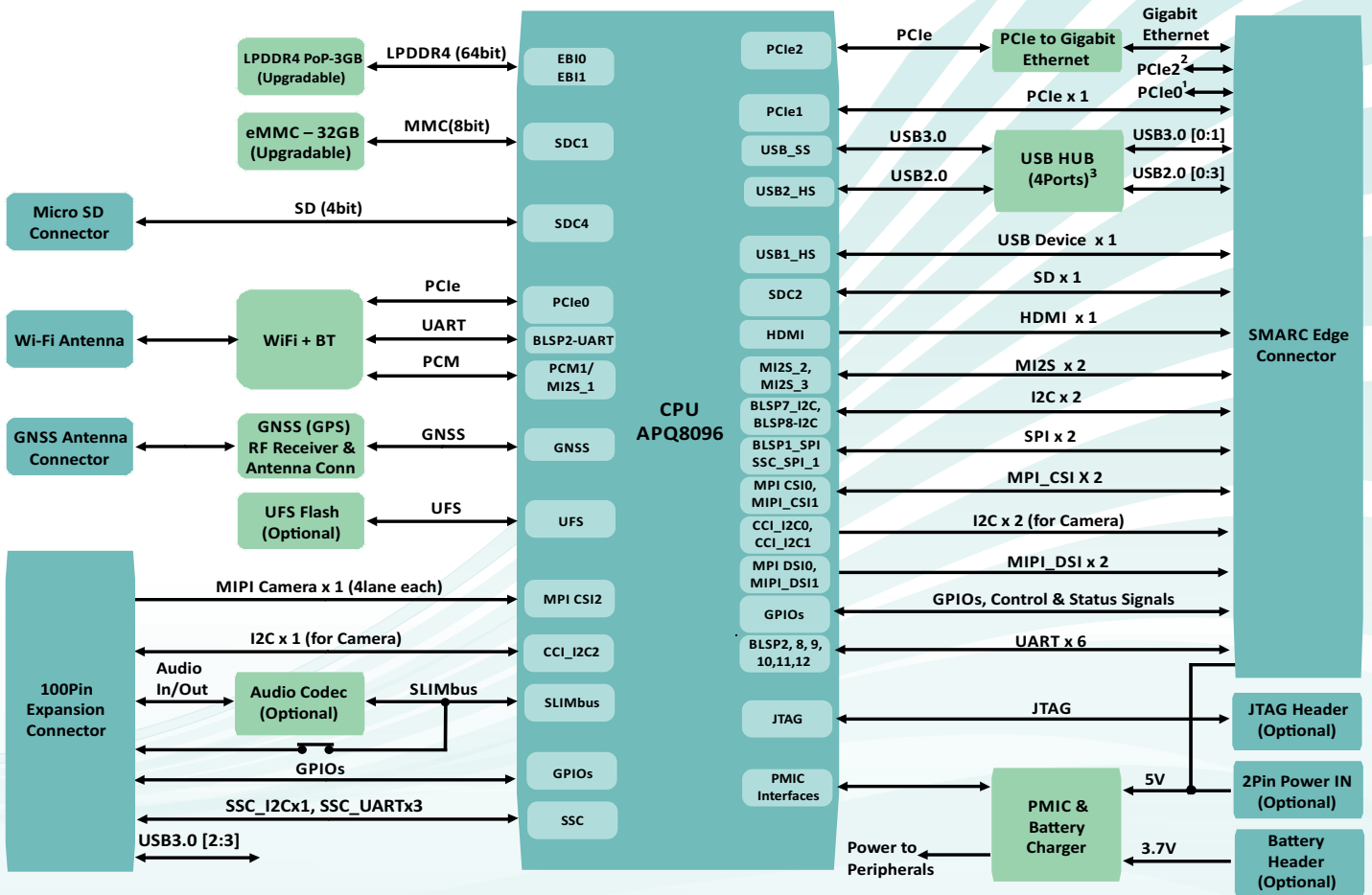
SPECIFICATIONS

SOC: Qualcomm APQ8096	SMARC Edge Connector Interfaces:
64-bit Quad Kryo core	Gigabit Ethernet x 1 Port
Adreno 530 3D Graphics @ 624MHz	PCIe x 1 Port
H.265 4K60 decode, 4K30 encode	HDMI2.0 x 1 Port
Qualcomm Hexagon DSP	USB3.0 host x 2 Ports*
Memory:	USB2.0 host x 2 Ports
3GB LPDDR4	USB2.0 device x 1 Port
32GB eMMC or optional UFS Flash	MIPI CSI0 x 2 lanes
Micro SD Slot	MIPI CSI1 x 4 lanes
Communication:	MIPI DSI x 2 port (4 lanes each)
PCIe to Gigabit Ethernet + PHY	SD (4bit) x 1 Port
USB3.0 HUB	UART x 6 Ports
Wi-Fi+ BT, GPS	MI2S x 1 Port
Power Supply:	SPI x 2 Ports, I2C x 2 Ports
5V through SOM edge connector	RTC & GPIOs
Temperature support :	Expansion Connector interfaces:
0°C to 70°C	MIPI CSI x 1 Port (4 lanes)
Form Factor: 82mm x 50mm	I2C x 1 Port, GPIOs, SLIM bus
SMARC R2.0 compatible	OS Support: Android Marshmallow or Higher, Linux**

Note: *USB3.0 host ports can be used as USB2.0 host ports.

**Optional features are not supported by default

Snapdragon 820 SOM - BLOCK DIAGRAM



Note1: If On-SOM WiFi+BT is used, PCIe0 cannot be used on SMARC Edge
 Note2: If On-SOM Ethernet PHY is used, PCIe2 cannot be used on SMARC Edge
 Note3: Four port/Two Port Hub can be supported

OS SUPPORT

Android Marshmallow or Higher, Linux*

DELIVERABLES

Snapdragon 820 SOM Board Support Package
 User Manual

OPTIONAL KITS/Modules

SD820 SMARC Development Kit
 5.5" Cap touch Display
 Heat Sink
 Camera Module

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's expertise has brought out multiple SOMs based on ARM NXP, Intel Atom, Marvell and TI Processors.

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.



Ordering the Snapdragon 820 SOM

The SOM Module can be ordered online from the iWave Website
<http://www.iwavesystems.com/webforms>

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