

# Thundercomm TurboX™ D820 SOM General SPEC

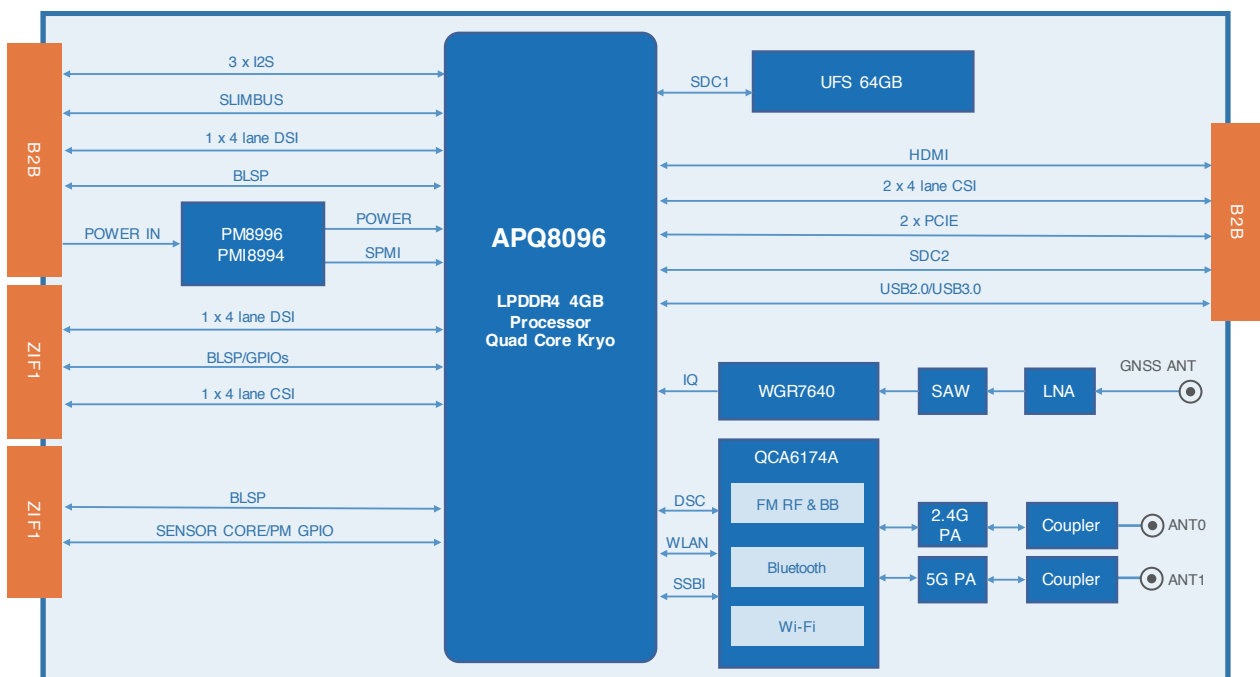
Thundercomm TurboX™ D820 SOM is a board to board connected, small size (36mm x 51mm), production ready, pre-certified (CE, FCC, RoHS) module, powered by the next-gen ARM®v8 64-bit Quad-core Qualcomm® Snapdragon™ 820 applications processor (APQ8096).

The TurboX D820 SOM is suitable for high computing power required embedded IOT product. It supports SNPE and high-performance CPU/GPU. It provides pre-tested HW and SW OS/BSP, powerful computing resource, rich interface and valid AVL, and reference IO board. It pins out all the main IO for industrial usage, such as PCIE to Ethernet, PCIE to USB. It can accelerate your product development.

## Major Target Markets



## HW Block



## D820 SOM General SPEC

Category	Item	Description
<b>Platform</b>	Chipset	Snapdragon™ 820 processor (APQ8096)
	CPU	Qualcomm® Kryo™ CPU, Quad-Core, 64-bit, 2.2GHz
	GPU	Qualcomm® Adreno™ 530
	DSP	Qualcomm® Hexagon™ 680
	OS	Android 8.1
	Memory and Storage	LPDDR4 4GB + UFS 64GB
<b>Multimedia</b>	Display	2x MIPI-DSI 4-lane, 60fps, Up to 4K@60fps 1x HDMI out v2.0 up to 4K, 60fps
	Camera	Dual 14-bit Spectra™ ISP ,3x MIPI-CSI 4-lane, up to 28MP
	Decode	1080p@240fps/4K@60fps/8x1080p@30fps (H.264, VP8, HEVC 8/10-bit, VP9)
	Encode	1080p@120fps/4K@30fps/4x1080p@30fps (H.264, VP8, HEVC)
<b>Connectivity</b>	Wi-Fi/BT	802.11 ac/a/b/g/n 2x2 MIMO & BT4.2
<b>Interface</b>	Interface	1 x USB2.0; 1 x USB3.0; 2 x PCIe 2.1; 4 x I2C; 4 x UART; 2 x SPI; 3 x I2S; 4 x GPIOs; 1xSDIO 3.0; 1 x TF card
<b>Dimension</b>	Size	36mm x 51mm x 6.5mm
<b>System Environment</b>	Power	+3.8V/3A Input
	Operating Temperature	-20°C to 70°C
	Storage Temperature	-20°C to 80°C
	Relative Humidity	5% to 95% non-condensing

## Carrier Board For TurboX D820

### Audio

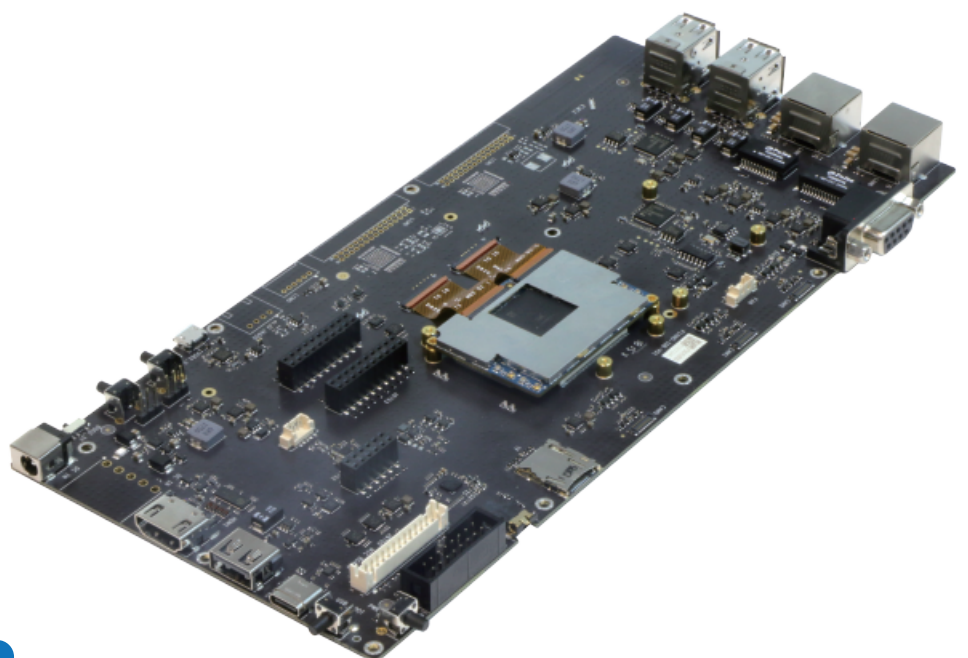
- 1 x 3.5mm ANC headset
- Audio codec on board

### Power

- DC-IN +12V

### Other Interfaces

- 1 x UART debug
- 1 x USB 2.0 host Type A
- 4 x USB 2.0 host Type A, PCIE to USB
- 1 x USB 3.0 Type C
- 1 x sensor connector
- 1 x HDMI OUT
- 1 x CAN
- 2 x LAN
- 1 x T flash Card
- 1 x LCD/TP



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<https://www.thundercomm.com/>