

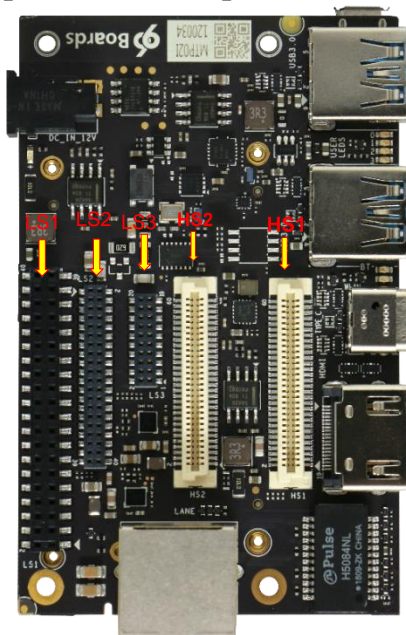


DragonBoard™ 845c

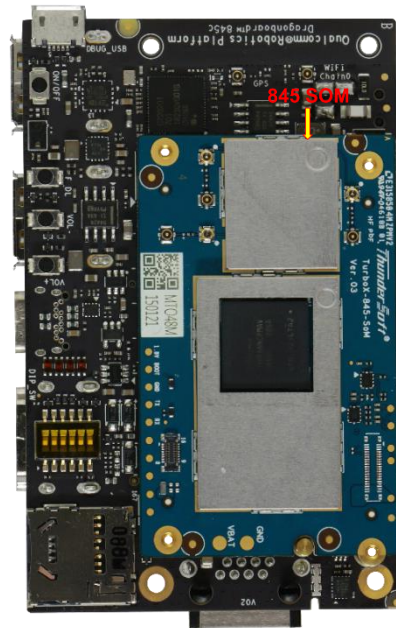
Introduction

The DragonBoard™ 845c development board is based on the top-tier Qualcomm® Snapdragon™ 845 embedded platform. This Snapdragon processor introduces the new Qualcomm® Hexagon™ 685 Vector DSP architecture, plus GPU and CPU optimizations, that together deliver up to three times faster processing of neural networks running on-device compared to the prior generation SoCs.

The development board supports new architectures for AI, 4K@60fps H.264/H.265 Encode & Decode, rich interfaces, and many I/O expansion headers. It is an ideal platform for developers to quickly start the product development work.



Top View



Back View

Features

- Top-tier octa-core Qualcomm® Kryo™ 385 CPU, up to 2.8 GHz
- Powerful computing GPU and DSP cores
- Snapdragon Neural Processing Engine (SNPE)
- Multi cameras concurrency
- 6-Axis sensor supported
- 4K@60fps video H.264/H.265 Encode & Decode
- Wi-Fi integrated 2x2 802.11ac with MU-MIMO
- Rich interfaces on the small form factor board

Applications

- Service Robot
- Industrial Drone
- Automated Guided Vehicle
- AR/VR
- Self-driving vehicle for logistics

Technical Specifications

| Component | Description |
|-----------------------------|---|
| SoC | Qualcomm® Snapdragon™ 845 |
| CPU | Snapdragon™ 845 embedded platform, custom 64-bit ARM v8-compliant octa-core CPU Up to 2.8 GHz, 10nm LPP FinFET process technology |
| GPU | Adreno™ 630 GPU OpenGL™ ES 3.2 + AEP, DX next, Vulkan® 2 OpenCL™ 2.0 full profile, RenderScript |
| DSP | Hexagon™ 685 DSP |
| RAM | 4GB LPDDR4x SDRAM @ 1866 MHz |
| Storage | 64GB UFS 2.1 on-board storage and 1 x MicroSD card slot |
| Ethernet | 1 x GbE Ethernet |
| Wireless | WLAN 802.11a/b/g/n/ac 2.4/5GHz 2x2 MIMO & Bluetooth 5.0, on-board WLAN/BT/GPS antennas |
| USB | 1 x USB 2.0 Micro B (Debug only) 1 x USB 3.0 Type C (OTG mode) 2 x USB 3.0 Type A (Host mode only) |
| Display | Two 4-lane DSI, D-PHY 1.2 or C-PHY 1.0; VESA DSC 1.1 1 x HDMI 1.4 (Type A - full) connector |
| Video | 4K60 decode for H.264 High Profile, H.265 Main 10 Profile and VP9 Profile 2 4K60 encode for H.264 High Profile, H.265 Main 10 Profile |
| Audio | MP3; aacPlus, eAAC; WMA 9/Pro |
| Camera | Qualcomm Spectra™ 280 ISP, dual 14-bit ISP+one Lite ISP, 32 MP 30 fps ZSL with a dual ISP |
| Sensor | Accelerometer + Gyro Sensor/ Proximity sensor |
| Expansion Interfaces | Expansion Connectors: HS1: 1 x 60 pin High-Speed connector (4L-MIPI DSI, USB 2.0 x2, I2C x2, 2L+4L-MIPI CSI) HS2: 1 x 60 pin High-Speed connector (4L-MIPI CSI x 2, SSC SPI, PCIe 3.0, USB 3.0 x1, GPIO x 9) LS1: 1 x 96boards 40 pin Low-Speed connector (UART x 2, SPI, I2S, I2C x2, GPIO x 12, DC power) LS2: 1 x 96boards 40 pin Low-Speed connector (headset, stereo speaker, DMIC I/F x 3, CAN, I2S, GPIO x 7, PWM x 2, ADC x 2) LS3: 1 x 96boards 20 pin Low-Speed connector (SSC SPI x 3, SSC I2C, sensor interrupt x 5) |
| LED | 7 LED indicators: 4 - user controllable 2 - for radios (BT and WLAN activity) 1 - power indicator |
| Button | Power, Volume Up/Down, Force Usb Boot, Dip Switch(6 PIN) |
| Power Source | 12V@2.5A adapter with a DC plug: Plug specification is inner diameter 1.75mm and outer diameter 4.75mm |
| OS Support | LE |
| Size | 85mm by 54 mm meeting 96Boards™ Consumer Edition Standard form dimensions specifications |

