1.1 Board overview

1. (J8) Low Speed Expansion Connector
2. APQ8016 Snapdragon Processor
3. (U9) Power Management PMIC
4. (J7) Analog Expansion Connector
5. WLAN/Bluetooth/GPS
6. (J1) Power Jack
7. (J5) uSD Card Socket
8. (J6) HDMI Type A Port
9. (J9) High Speed Connector
10. (J4) Micro USB Type B Connector
11. Bluetooth/WLAN LED's
12. (J3) USB Host2 Connector
13. User LED's 1-4
14. (J2) USB Host1 Connector
15. (S3-4) Vol+Vol- Buttons
16. (S2) Power Button
17. Bluetooth/WLAN Antenna
18. GPS Antenna
19. (S6) Boot Switches
Feature Highlights

- **OS Support:** Android 5.1 (Lollipop) on Linux Kernel 3.10, Linux based on Debian 8.0, and Windows 10 IoT Core
- **CPU:** Quad-core ARM® Cortex® A53 at up to 1.2 GHz per core with both 32-bit and 64-bit support
- **Memory/Storages:** 1GB LPDDR3 533MHz / 8GB eMMC 4.5 / SD 3.0 (UHS-I)
- **Graphics:** Qualcomm Adreno 306 GPU with support for advanced APIs, including OpenGL ES 3.0, OpenCl, DirectX, and content security
- **Video:** 1080p@30fps HD video playback and capture with H.264 (AVC), and 720p playback with H.265 (HEVC)
- **Camera Support:** Integrated ISP with support for image sensors up to 13MP
- **Connectivity and Location:**
  - Wi-Fi 802.11 b/g/n 2.4GHz, integrated digital core
  - Bluetooth 4.1, integrated digital core
  - Qualcomm® IZat™ location technology Gen8C
  - On-board Wi-Fi, BT and GPS antenna
- **I/O Interfaces:** HDMI Full-size Type A connector, one micro USB (device mode only), two USB 2.0 (host mode only), micro SD card slot
  - Note: Micro USB (device mode) and USB 2.0 (host mode) are mutually exclusive and cannot be operated at the same time
- **Expansion:**
  - One 40-pin low speed expansion connector: UART, SPI, I2S, I2C x2, GPIO x12, DC power
  - One 60-pin high speed expansion connector: 4L MIPI-DSI, USB, I2C x2, 2L+4L MIPI-CSI
  - Footprint for one optional 16-pin analog expansion connector for stereo headset/line-out, speaker and analog line-in.
  - The board can be made compatible with Arduino using an add-on mezzanine board

**Full Dragonboard 410c Documentation**

https://www.96boards.org/products/ce/dragonboard410c/documentation/
## General Acronyms

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<th>Definition</th>
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<tr>
<td>IoT</td>
<td>Internet of Things</td>
<td>The new age, an environment in which objects, humans, and even animals can communicate and send information without human-to-human or human-to-computer interaction.</td>
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<td>OS</td>
<td>Operating System</td>
<td>Software that controls all of the computers software/hardware operations</td>
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<td>NDK</td>
<td>Native Development Kit</td>
<td>Tool used to write programs in C/C++ for Android devices</td>
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<td>AVD</td>
<td>Android Virtual Device</td>
<td>Tool which allows one to emulate an actual Android device virtually on one’s computer.</td>
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<td>ADB</td>
<td>Android Debug Bridge</td>
<td>Command line tool which lets one communicate with a connected Android device or an emulated virtual device</td>
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<td>APK</td>
<td>Android Application Package</td>
<td>File format which is used for distributing and installing application software on Android</td>
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<td>SoC</td>
<td>System on Chip</td>
<td>An integrated circuit chip with all the components of a computer on a single chip. It usually runs a fully operational OS on it. A very good example of a SoC is the Qualcomm APQ 8016 chip on the DragonBoardTM 410c.</td>
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<td>SoM</td>
<td>System on Module</td>
<td>A barebones SoC without the peripherals. In between an SoC and a microcontroller and needs Development Kit to program and push information onto it.</td>
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## References

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