



## Open-Q™ 670 HDK Development Kit

Based on the Qualcomm® Snapdragon™ 670 processor

The Snapdragon 670 Mobile Platform offers a large step up in performance for the top of the 600-tier, with the multi-core Artificial Intelligence (AI) Engine providing twice the performance of the 660 Mobile Platform. The 670 also features the premium Qualcomm Spectra™ 250 ISP, Qualcomm Hexagon™ 685 DSP, and the Qualcomm Kryo™ 360 CPU in the 600-tier for the first time, bringing speed, efficiency, and user experiences to a new level.

The Open-Q 670 HDK is an open-frame development kit that empowers technology companies to integrate and innovate for devices based on the latest Snapdragon mobile platform, and provides developers and engineers with next generation technology and tools to accelerate software development and evaluation of Snapdragon 670 based devices.

### Key Features

- Qualcomm® Snapdragon™ SDA670 SoC — Kryo 360 CPU
- Multicore Artificial Intelligence Engine
- Spectra 250 ISP, Adreno 615 GPU, Hexagon 685 DSP
- Open chassis Dev Kit for evaluation and SW development
- Android™ 8 Oreo



## Technical Specifications

### Open-Q™ 670 HDK Development Kit

<b>Processors</b>	<b>Qualcomm® Snapdragon™ SDA670 Octa-core 64 bit Kryo 360 CPU</b> Customized 64 bit ARM v8 compliant processor 2X high-performance 2.016 GHz Kryo Gold cores 6X low-power 1.708 GHz Kryo Silver cores Qualcomm® Adreno™ 615 GPU with 64-bit addressing, designed for 430 MHz Qualcomm® Hexagon™ 685 DSP dedicated for Computer Vision and Video Post Processing
<b>Memory/Storage</b>	6GB LPDDR4x RAM, 64GB eMMC 5.1 Flash Storage (non-PoP memory)
<b>Wireless</b>	Qualcomm® Wi-Fi 802.11a/b/g/n/ac 2.4/5Ghz 2X2 MIMO (WCN3990) with MH4L antenna conn. and PCB antenna Bluetooth 5.x + BLE
<b>Video</b>	Encode: 4K30 8-bit: H.264/VP8/HEVC, Decode: 4K30 8-bit: H.264/HEVC/VP9 or 4K30 10-bit: HEVC/VP9 Concurrent: 4K30 Decode + 1080p30 Encode
<b>Graphics</b>	Adreno 615, 3D graphics accelerator with 64-bit addressing, 430 MHz (maximum frequency) OpenGL ES 3.2, Vulkan, DX12.2 OpenCL 2.0 DirectCompute, RenderScript
<b>Audio</b>	On-board Audio Codec (WCD9341), 3.5mm headset jack, audio input/output expansion headers
<b>Power Management</b>	Qualcomm® Power and battery management (PM670 + PM670L + SMB1355)
<b>Display Interfaces</b>	MIPI DSI connector with 1x 4-lane DSI port + Touch for included LCD/touch panel HDMI Video output via DSI -> HDMI bridge chip on dev kit VESA DisplayPort V1.3 on USB Type-C interface
<b>Camera Interfaces</b>	3x 4-lane MIPI CSI interfaces on single camera connector Qualcomm® Spectra™ ISP: Dual 14-bit + single Lite ISP: 16 +16 + 2 MP or 25MP 30fps 25MP30 ZSL with dual ISP; 16 MP 30 ZSL with a single ISP
<b>Location</b>	Qualcomm® SDR660 GNSS receiver with GPS/GLONASS/COMPASS/Galileo, PCB antenna and SMA connector option
<b>USB</b>	1x USB3.1, Type C with VESA DisplayPort V1.3, 1x USB micro-B serial UART
<b>I/O</b>	uSD card socket, NFC expansion header, Sensor expansion header, I2C, SPI, GPIO
<b>OS Support</b>	Android™ 8 Oreo™
<b>Power</b>	12V/5A input from included wall adapter or 3000mAh Li-Ion battery
<b>Size</b>	Mini-ITX form-factor — 170mm x 170mm

### Optional Accessories

<b>Camera Board</b>	Accessory camera board with: IMX318 rear camera, IMX258 front camera, OV2281 Iris camera
<b>Sensor Board</b>	Expansion board with gas, pressure, hall, UV, ALSP, magnetometer, accelerometer/gyro, humidity, temp. sensors.

Development Kit includes:

- Carrier board, SDA670 daughter board
- LCD Panel
- Battery
- 12V power supply
- USB cable and charger
- Quick Start Guide
- Basic Dev Kit support and documentation.

### Purchasing Information

<b>Open-Q 670 HDK Dev Kit</b>	Part number: QC-DB-S00003 <a href="#">Store Link</a>
<b>HDK Camera Board Accessory</b>	Part number: QC-DB-P00006 <a href="#">Store Link</a>
<b>HDK Sensor Board Accessory</b>	Part number: QC-DB-P00007 <a href="#">Store Link</a>

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