Eragon 845
Hardware Development Kit

Based on the Qualcomm® Snapdragon 845 Processor (SDA 845)

Snapdragon Official Licensee
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Snapdragon 845 (SDA845)
Qualcomm® Snapdragon 845 (SDA845) processor is based on a 64-bit Octa-core Kryo™ 385 CPU, built on Arm® Cortex™, a 10nm technology, offers immersive multimedia experiences. It comprises of Qualcomm® Adreno™ 630 GPU for rich multimedia functionality along with Quick Charge™ 4+ technology for mobile solutions.

Key Features
- Quad-core Qualcomm® Kyro™ 395 CPU - 64-bit ARMv8-compliant Processor at upto 2.2 GHz
- Qualcomm® Adreno™ 630 GPU with support for OpenGL ES 3.2, OpenCL 2.0 Full, Vulkan, DX12
- Qualcomm® Spectra™ 280 ISP for premium camera and XR experience
- High-performance capture of up to 16 MP at 60 images per second
- Video encode / decode up to 4K (3840x2160) Ultra HD at 60fps
- High Speed Connectivity Options with Wi-Fi 802.11 a/b/g/n/ac 2x2 MU-MIMO, WiGig 802.11ad optional support

einfochips Advantages
- 20 years of experience in system design
- 1700+ professionals for HW, Firmware, Application Software and Mechanical
- 30+ B$ corporations as customers
- 10 design centres in USA and India
- 500+ products across applications
- 200+ designs on Android and Linux
- ISO 9001 and CMMI L3 compliant processes

Virtual Cinema
3D Gaming
Artificial intelligence
Internet of Things
High-end Camera
Augmented and Virtual Reality
4K Video Solutions

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Datasheet Rev 1.0

Connectivity
Wi-Fi:
- Qualcomm® Wi-Fi 802.11a/b/g/n/ac 2.4/5Ghz 2x2 MIMO
Bluetooth:
- Bluetooth 5.0
Location:
- GNSS daughter card with GPS, GLONASS, COMPASS, and Galileo
- PCB antenna and SMA connector option

Memory / Storage
- 6GB LPDDR4x PoP Memory, 128 GB UFS 2.1, MicroSD 3.0 UHS-1

USB
- 2x USB2.0 Type-A host (on-board hub)
- 1x USB 3.1 Type-C with DisplayPort video out

Camera
- 3x 4-lane + 1x 2-lane MIPI-CSI Ports on 120-pin Connector
- Qualcomm® Spectra™ 280 ISPs

Audio
- Qualcomm® audio codec on-board (WCD9340)
- 1x US Standard CTIA Headset Jack, Analog audio input and output expansion headers
- Qualcomm Aqstic™ audio codec and speaker amplifier

Display
- 1x DisplayPort over USB 3.1 Type-C
- 2x 4-lane MIPI-DSI connector for Optional Display Adapter Accessory
- HDMI 1.4 via DSI -> HDMI bridge on board

Video Encode
- 4K (3840x2160) Ultra HD at 60fps
- HEVC video encoding of either HD (720p) video up to 480fps or FHD (1080p) up to 240fps
- Supports H.264, H.265 (HEVC) 10-bit HDR

Video Decode
- 4K (3840x2160) Ultra HD at 60fps
- H.264 (AVC), H.265 (HEVC), VP9

Kit Content
- Processor Card with SD845
- Mini-ITX Carrier Board
- 12V AC Power Adapter
- Battery
- USB Cable
- Setup Guide

Add-on Accessories
- Display Daughter Card
- Camera Daughter Card

Other
High Speed I/O:
- 1x USB3.1 Type-C with DisplayPort video out
- 1x PCIe interface to either mini PCIe socket or PCIe 1x slot

General I/O:
- 1x USB micro-B UART
- NFC expansion header
- Sensor expansion header, with I2C, SPI, UART, GPIO

Operating System
- Android™ 8 Oreo™

Mechanical specification
- Mini-ITX form-factor-170mm x 170mm

Power specification
- Power supply input: 12V/3A input from wall adapter (included) or 3000mAh Li-Ion battery (included)

Part Number
- EIC-Q845-210

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