Qualcomm® Snapdragon™ 600E Embedded Platform

The Snapdragon 600E embedded platform with multi-core performance supports rich multimedia and 3D graphics for IoT applications.

The Snapdragon 600E embedded platform (APQ 8064E) is designed to deliver high-performance computing, low power consumption and a rich multimedia experience for embedded products and is an ideal platform for developing products for the Internet of Things (IoT).

The Snapdragon 600E embedded platform is targeted for embedded devices and designed for longevity, providing extended availability for a minimum of ten years from the initial commercial sample (until 2025), in order to support customers with longer product life cycles. It is designed to run 1080p HD video, handle up to 20MP images and render intensive 3D on dedicated components, freeing the quad-core Qualcomm® Krait™ CPU for the main embedded application.

Build advanced embedded systems with multi-core performance and immersive 3D graphics on the energy efficient Snapdragon 600E embedded platform engineered to support exceptionally long battery life and small industrial designs.

The Snapdragon 600E embedded platform is designed for IoT devices and supports a clear deployment path for embedded device OEMs and developers—from development kits to customized solutions—including integration services, production-ready, customizable SoMs (System-on-Modules), and SBCs (single-board computers).

Solution Highlights

Powerful processing for advanced robotics

The Snapdragon 600E embedded platform offers a low power consuming, small form factor integrated solution for advanced robotics applications and Robot Operating System (ROS) support.

Attached connectivity for industrial and home appliances

Companion Wi-Fi/WLAN, Bluetooth® and precision GNSS (GPS + GLONASS) for portable applications.

HD video encode and decode for smart surveillance cameras

Supports up to three cameras and up to 20MP with image stabilization, zero shutter lag and High Dynamic Range for combining different exposures.

3D graphics and multimedia for next generation media players

Qualcomm® Adreno™ 320 GPU supports OpenGL ES 3.0/2.0/1.1 for next-generation media players.

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Snapdragon 600E Target Applications

- IoT/Industrial Automation
- Medical Devices
- Robotics
- Smart Home Devices
- HD Video
- Digital Media

Features

- Quad-core Krait 300 CPU at up to 1.5GHz for advanced multi-tasking and multi-threaded application support
- Performance-enhanced floating-point & SIMD functional unit with 128-bit data path, designed to use the Arm instruction set architecture (ISA), software and ecosystem
- Optimized computational units, including double-precision calculations for fast speed on demanding applications
- Asynchronous SMP (aSMP) technology with dedicated power management processor for optimal battery life
- Adreno 320 Graphics with support for multiple APIs and console-quality 3D graphics with low power consumption
- Qualcomm® Hexagon™ QDSP6 V4 (up to 500MHz) for differentiated signal processing
- 1080p video encode/decode with multi-screen HD support and integrated HDMI
- Support for up to 3 simultaneous cameras via 4-lane primary MIPI-CSI, 2-lane secondary MIPI-CSI & 1-lane 3D MIPI-CSI
- Worldwide ecosystem of Snapdragon vendors, customers, developers and embedded device OEMs

Ordering Information

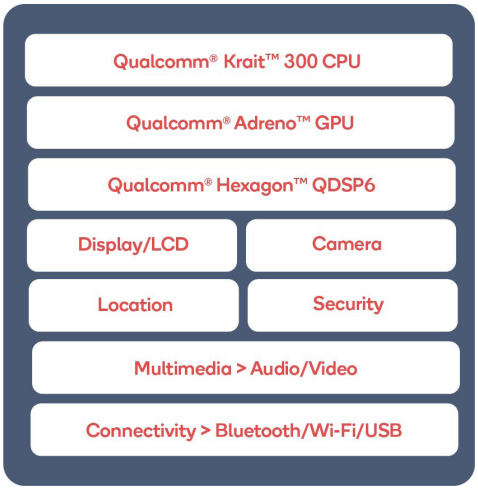
Product	Part Number
Snapdragon 600E SoC	APQ-8064E-0-784FCBGA
Power Management Module	PMM-8920AU-0-255FBGA
Wi-Fi & Bluetooth Connectivity	QCA6234XH-AM2D-R
GPS & Glonass RF Receiver	RGR-7640AU-0-24FBGA
Ethernet	AR8151-BL1A-R

To learn more visit:

snapdragon.com/embedded

or developer.qualcomm.com

Snapdragon 600E Block Diagram



Snapdragon 600E Specifications

Package	23mm x 23mm (784 BGA, 0.8mm pitch)
CPU	Quad-core Krait 300 CPU @ up to 1.5GHz per core
Memory and Storage	DDR3/DDR3L dual-channel 533MHz eMMC 4.51, SDIO 3.0 (UHS-I)
Connectivity	802.11 a/b/g/n/ac 2x2 dual-band 2.4GHz/5GHz Wi-Fi, Bluetooth 4.0LE/3.x, GPS
GPU	Adreno 320 GPU 400+ MHz
DSP	Hexagon QDSP6 V4 core @ up to 500MHz
Display Support	Up to 2048x1536 display via 4-lane DSI 1080p external display and integrated HDMI
Camera Support	Integrated ISP supports up to 20MP & stereoscopic 3D
Multimedia	1080p HD (MPEG-4, MPEG-2, H.264, DivX, VC-1, WMV-9) H.264 playback & capture
Interfaces	PCIe 2.0, HDMI, LVDS, HSIC, 3x USB2.0, 3x MIPI-CSI, 2x MIPI-DSI, SD3.0 & eMMC v4.5 with DDR support
Security	Secure Boot, Code signing service
Longevity	Product availability extended for a minimum of 10 years from initial commercial sample (to 2025)

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