



Qualcomm® Snapdragon™ Processors

410E

Model APQ 8016E for Embedded Computing

From the DragonBoard™ Community Board to production-ready System-on-Modules (SoMs) for commercialization, the Snapdragon 410E processor is designed to meet the demanding requirements of embedded computing applications with its high performance, energy efficiency, multimedia features, integrated connectivity and long-term support.

The Snapdragon 410E processor is targeted for embedded devices and designed for longevity; with extended availability and support for a minimum of ten years from the initial commercial release*, in order to support customers with long product life cycles. It is designed to offer high performance, rich multimedia, low power consumption and support for multiple operating systems (Android, Linux, and Windows 10). The Snapdragon 410E platform is designed for Internet of Things (IoT) use cases in smart homes, industrial automation, digital media players, smart surveillance and home appliances.

Snapdragon 400E processors for embedded are designed for IoT devices and support a clear deployment path for embedded device OEMs and developers—from development kits to customized solutions—including integration services, production-ready, customizable SoMs, and single-board computers (SBCs).

*The initial commercial release of the Snapdragon 410E processor was in 2015.
Qualcomm Snapdragon and Qualcomm Adreno are products of Qualcomm Technologies, Inc.

The Snapdragon 410E processor for embedded computing is an ideal platform for the Internet of Things

Solution Highlights



Integrated connectivity for the smart home

Integrated Wi-Fi/WLAN, Bluetooth and GPS for portable applications without sacrificing a USB port.



Powerful processing for industrial and home appliances

Superior CPU architecture is capable of both 32-bit and 64-bit processing—designed for an improved user experience.



HD video encode and decode for smart surveillance cameras

Snapdragon 410E video core supports popular codecs including H.264, MPEG4, MPEG2 and VC1 for better software compatibility.



3D graphics and multimedia for digital media and TV dongles

Qualcomm® Adreno™ 306 GPU supports OpenGL ES 3.0, and DirectX 9.3 for next-generation media players.

Embedded Computing Applications



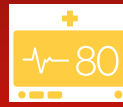
IoT



Industrial Automation



Digital Media



Medical



Smart Home



HD Video

Features

- Quad-core ARM Cortex A53 up to 1.2GHz with both 32-bit and 64-bit support — commercialized in millions of mobile devices worldwide
- New ARM v8-A ISA offers an efficient instruction set
- Adreno 306 GPU with support for multiple APIs including: OpenGL ES 3.0, OpenCL, DirectX, content security, and decreased power consumption
- Qualcomm® Snapdragon StudioAccess™ technology and Qualcomm® SecureMSM™ platform for content and platform security
- 13MP camera support with Wavelet Noise Reduction and JPEG Decoder done in hardware
- Worldwide ecosystem of Snapdragon vendors, customers, developers and embedded device OEMs

Related Products

available on arrow.com

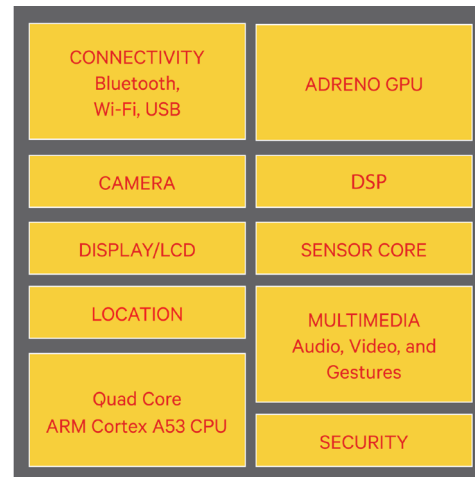
Develop using the **DragonBoard 410c Community Board**—designed to support rapid software development and prototyping.

Product	Part Number
Snapdragon 410E SoC	APQ-8016E-1-760NSP
Integrated PMIC & Audio Codec	PM8916-0-176NSP
Wi-Fi & BT Connectivity	WCN3620-0-61WLNSP
GPS & Glonass RF Receiver	WGR7640-0-17WLNSP

To learn more visit:

snapdragon.com/embedded
or developer.qualcomm.com

Block Diagram



Snapdragon 410E Specifications

Package	12mm x 14mm (760NSP, 0.4mm pitch)
CPU	Quad ARM Cortex A53 @ up to 1.2GHz per core with both 32-bit and 64-bit support
Memory and Storage	LPDDR2/3 @ 533MHz single channel SDIO 3.0 (UHS-I), eMMC 4.5
Connectivity	802.11 b/g/n/ Wi-Fi, Bluetooth 4.1LE, GPS
GPU	Adreno 306: OpenGL ES 3.0/2.0/1.1, OpenCL 1.1e (Android only), DirectX 9.3 (Windows 10 only)
Display Support	1920x1200 1080p external displays supported 720p Miracast support
Camera Support	Integrated ISP supports up to 13MP
Multimedia	1080p HD @ 30fps H.264 Playback and capture
Interfaces	2x USB2.0, MIPI-CSI, MIPI-DSI, SD3.0 & eMMC v4.5 with DDR support
Security	Qualcomm® Snapdragon StudioAccess™ technology and Qualcomm® SecureMSM™ platform
Operating Systems	Android, Linux, Windows 10
Longevity	Product availability and support extended for a minimum of 10 years from initial commercial release (to 2025)



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