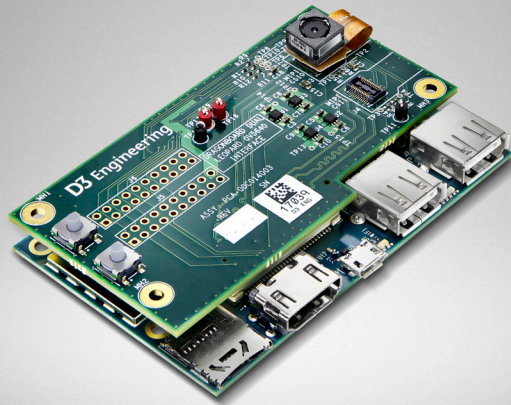


# DRAGONBOARD™ 410c

## CAMERA KIT



## Starter Kit for fast evaluation of embedded vision with the DragonBoard™ 410c

Designed for rapid development of embedded vision applications, this kit includes a DragonBoard™ 410c by Arrow Electronics, based on the Qualcomm® Snapdragon™ 410E processor, with a D3 DesignCore™ Camera Mezzanine Board, and a 5MP micro camera module.

Direct MIPI CSI-2 access to camera data allows more realistic evaluation of embedded vision designs. Direct access eliminates the need to decode USB or Ethernet protocols, resulting in lower power and higher performance.

The kit includes demonstration software running Linux to display 1080p video via HDMI. It is ideal for algorithm development, end application development, and evaluation of image sensors and optics.

### THE DRAGONBOARD™ 410c CAMERA KIT INCLUDES:

DragonBoard™ 410c

D3 Engineering DesignCore™ Camera Mezzanine Board OV5640

Leopard Imaging Micro Camera Module OV5640 with Autofocus

Autec 12V Power Supply

### FEATURES

#### DragonBoard™ 410c

This development board by Arrow Electronics with 64-bit capable Qualcomm® Snapdragon™ 410E processor features advanced processing power, WiFi, Bluetooth® connectivity, and GPS—all packed into a board the size of a credit card. Designed for rapid software development and prototyping, it is ideal for enabling embedded computing and Internet of Things (IoT) products including the next generation of robotics, cameras, medical devices, smart buildings, digital signage, and much more.

#### D3 Engineering DesignCore™ Camera Mezzanine Board OV5640

This mezzanine board directly connects up to two MIPI CSI-2 cameras to the DragonBoard™ 410c. Expansion headers provide access to other communication interfaces on the Snapdragon™ 410E including I2C, SPI, and UART.

#### Leopard Imaging Micro Camera Module OV5640

This miniature camera module features an OmniVision 5MP image sensor and micro lens with autofocus. Available output formats include 5MP at 15fps and 1080p at 30fps.



## SPECIFICATIONS

DragonBoard™ 410c	
Processor	Qualcomm® Snapdragon™ 410E Quad-core ARM® Cortex® A53 at up to 1.2 GHz per core 64-Bit capable Qualcomm® Adreno™ 306 400MHz GPU for PC-class graphics with support for advanced APIs, including OpenGL ES 3.0, OpenCL, and content security
Memory/Storage	1GB LPDDR3 533MHz 8GB e.MMC 4.51 uSD 3.0 (UHS-I)
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
Audio	PCM/AAC+/MP3/WMA, ECNS, Audio+ post-processing (optional)
Connectivity	WLAN 802.11 b/g/n 2.4GHz Bluetooth® 4.1 One USB 2.0 micro B (device mode only) Two USB 2.0 (host mode only) GPS On-board GPS antenna On-board BT and WLAN antenna
External Storage	Micro SD card slot
Power	+6.5V to +18V
Dimensions	54mm by 85mm meeting 96Boards Consumer Edition standard dimensions specifications
Operating Temp	0°C to +70°C
RoHS	RoHS and Reach compliant
OS Support	Linux

### DesignCore™ Camera Mezzanine Board OV5640

Conforms to 96Boards Consumer Edition Specification  
Camera Interfaces: Two MIPI CSI-2 (2-lane)  
Expansion Interfaces: Two UART, two SPI, one I2C, one PCM, GPIO

### Autec Power Supply

Plug-in adapter  
Output: 12V DC  
Input: 90–264 VAC

### Leopard Imaging Micro Camera Module OV5640

OmniVision OV5640 1/4" 5MP CMOS image sensor  
Micro lens with VCM-driven autofocus  
Focal length: 3.5mm  
Focus distance: 10cm to infinity  
FOV: 65°

*D3 Engineering can provide assistance with interfacing other image sensors and custom camera development.*

## ORDERING INFORMATION

The DragonBoard™ 410c Camera Kit and its individual components can be ordered from Arrow.

### DragonBoard™ 410c Camera Kit

Part # DRAGONBOARD 410C CAMERA

### DragonBoard™ 410c

Part # DRAGONBOARD 410C

### DesignCore™ Camera Mezzanine Board OV5640

Part # D3 CAMERA MEZZ OV5640  
(QTY 1 part # LI-OV5640-MIPI-AF is included)

### Leopard Imaging OV5640 Camera Module

Part # LI-OV5640-MIPI-AF

### Autec 12V Power Supply

Part # WM24P6-12-A-QL

To order, contact your local Arrow account manager, call **1-855-326-4757**, or visit [arrow.com](http://arrow.com).

## ACCELERATE TIME TO MARKET

The DragonBoard™ 410c Camera Kit enables rapid development of your proof-of-concept prototype. D3 Engineering supports additional smart camera development with our proven DesignCore™ reference designs and our full-cycle embedded system design services. Our expertise with image sensors, optics, video analytics, and imaging system design will help you get to market faster, while reducing the risks and costs of new product development.

**CALL:** 1-585-429-1550

**EMAIL:** [sales@D3Engineering.com](mailto:sales@D3Engineering.com)

**VISIT:** [D3Engineering.com/Solutions/Embedded-Vision](http://D3Engineering.com/Solutions/Embedded-Vision)