

# Open-Q™ AL Development Kit



The Open-Q™ AL development kit is designed for rapid prototyping of new innovative products requiring advanced imaging and computer vision performance in low-cost and low-power embedded situations. It comprises separate hardware modules connected by high-speed and low-speed connectors. It is compliant with the 96Boards open hardware specification standard, providing the flexibility for users to add additional 3rd party mezzanine expansion boards.

The development kit is compatible with the Open-Q 4200 and 2200 SIP families. Users can use the same development kit to evaluate or prototype with many SIP families from Lantronix.

## Key Features & Benefits

- The development kit provides hardware interfaces to evaluate camera, video, display on LCD and HDMI, and connectivity capabilities
- Supports many robotic features
- User can expand the kit with compatible boards from 96Boards



Open-Q 4200 SIP Family



Open-Q 2200 SIP Family

## Engineering Services:

We provide a full solution – our unparalleled engineering expertise and product development skills deliver innovative products that are cost-effective and can jumpstart your go-to-market timeline.

Our business model offers turnkey product development services, or we can augment your team in specific areas of development. The choice is yours.

## Key development expertise in:

- Camera development and tuning
- Voice control
- Machine learning
- Mechanical & RF design
- Thermal & power optimization

IoT product development made easy.



# Lantronix Open-Q™ AL Development Kit

## Hardware Specifications:

<b>The Development Kit is compatible with the following SIP</b>	<ul style="list-style-type: none"><li>• Open-Q 4290CS</li><li>• Open-Q 2290CS</li></ul>
<b>Display Interfaces</b>	<ul style="list-style-type: none"><li>• TFT LCD, 4.99 inch, 720 x RGB x 1280 dots</li><li>• HDMI Type A</li></ul>
<b>Camera Interfaces</b>	<ul style="list-style-type: none"><li>• 2x 4-lane MIPI CSI</li><li>• 1x 1-lane MIPI CSI</li><li>• 1x 4-lane or 2-lane MIPI CSI</li><li>• 2x GMSL2 camera inputs</li></ul>
<b>Audio Interfaces</b>	<ul style="list-style-type: none"><li>• 4x Digital PMD mics</li><li>• Speaker connectors</li></ul>
<b>I/O Interfaces</b>	<ul style="list-style-type: none"><li>• 3x Low-speed connectors, 96Boards</li><li>• 3x High-speed connectors, 96Boards</li><li>• USB Type C, 2 USB Type A, Debug UART, RJ45 Ethernet, microSD card, JTAG</li><li>• Antenna on interposer</li><li>• 3x Infrared interfaces</li></ul>

<b>Wireless</b>	Wi-Fi and Bluetooth depend on the specific SIP purchased and installed
<b>Ethernet</b>	Ethernet through USB 3.0 (1GB)
<b>Power Input</b>	12V
<b>Form Factor</b>	96Boards compliant

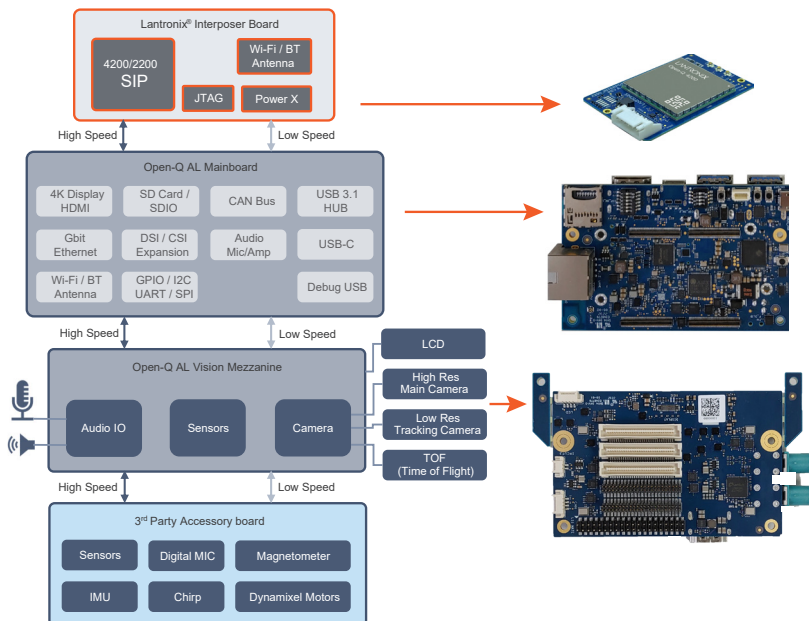
## Software:

<b>OS Support</b>	<ul style="list-style-type: none"><li>• Operating system software depends on the specific SIP purchased and installed. See compatible SIP list.</li><li>• Demo BSP and OS</li></ul>
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## Dev Kit SKUs

### How to order an Open-Q™ AL Development Kit

1. The customer orders a fully preassembled Open-Q AL kit if the customer wants to evaluate camera features.  
SKU of the full kits are:
  - QC-DK-AL1-2290CS-A
  - QC-DK-AL2-4290CS-C
2. Contact us for accessories and third-party 96Boards



### SIP on Interposer Board

Part Number	Description
QC-SIP-CONN-2290CS-A	Open-Q 2290CS SIP (2GB/16GB) on Interposer Board with B2B Connectors Android 12 Go
QC-SIP-CONN-4290CS-B	Open-Q 4290CS SIP (4GB/64GB) on Interposer Board with B2B Connectors Android 12
QC-SIP-CONN-4290CS-C	Open-Q 4290CS SIP (4GB/256GB) on Interposer Board with B2B Connectors Android 12

### Fully Assembled Development Kits

Part Number	Description
QC-DK-AL1-2290CS-A	<ul style="list-style-type: none"><li>• Compatible with Open-Q 2200 SIP Series</li><li>• Pre-assembled</li><li>• Open-Q AL2 Main Board</li><li>• Open-Q AL Vision Kit with Nav Mezzanine Board, 13 MP IMX258 camera and 5 MP OS05A10 camera</li><li>• 5.45" TFT LCD, 720 x 1440 dots, touch screen</li></ul>
QC-DK-AL2-4290CS-C	<ul style="list-style-type: none"><li>• Compatible with Open-Q 4200 SIP Series</li><li>• Pre-assembled</li><li>• Open-Q AL2 Main Board</li><li>• Open-Q™ AL Vision Kit with Nav Mezzanine Board, 13 MP IMX258 camera and 8 MP OS08A10 camera</li><li>• 5.45" TFT LCD, 720 x 1440 dots, touch screen</li></ul>

## Certifications



## Contact Information:

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