Lantronix’s Open-Q™ 212A Home Hub Dev Kit is a cost-effective, feature rich, exposed board platform, powered by our Open-Q™ 212A SOM, based on the APQ8009 SoC from Qualcomm® Technologies, Inc. The Dev Kit is ideal for evaluation of the Open-Q™ 212A SOM as well as jump-starting development of next-gen home hub, voice controlled, or smart speaker products requiring noise cancellation, voice recognition, or other advanced audio features. It supports Wi-Fi and Bluetooth connectivity for connection to home automation devices as well as audio development with speaker amps and microphone array included.

**Key Features**
- Digital microphone array and stereo speaker amps
- Qualcomm® Fluence™ Pro multi-mic solution
- Separate Wi-Fi and BT PCB antennas for diversity
- MIPI CSI camera connector
- Generous I/O expansion headers
- OpenEmbedded Yocto Linux OS

**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™ 212A Home Hub Development Kit

Hardware Specifications:

Open-Q™ 212A SOM

- **Processor**
  - Qualcomm® APQ8009 SoC
  - Quad-Core ARM Cortex A7 (32-bit) 1.267GHz, Qualcomm® Adreno™ 304 GPU, Qualcomm® QDSP6 DSP

- **Memory/Storage**
  - 1GB LPDDR3 RAM, 4GB eMMC Flash

- **Audio**
  - Qualcomm® Hi-Fi audio codec on SOM (WCD9326)

- **Wireless**
  - Pre-certified Wi-Fi/Bluetooth module: 802.11a/b/g/n/ac, 2x2 MU-MIMO, 2.4/5Ghz, Bluetooth 4.2 + BLE (QCA9379-3)

- **Location Services**
  - Qualcomm® GNSS solution (WGR7640) supporting GPS, GLONASS, Compass, with U.FL antenna connector

Open-Q™ 212A Carrier Board

- **Display Interface**
  - 4-lane MIPI DSI connector for optional LCD (not supported by current SW)

- **Camera Interface**
  - 4-lane MIPI CSI camera connector for optional camera accessory

- **Audio Interfaces**
  - Qualcomm® stereo speaker amps (WSA8815) with speaker wire terminals
  - Digital microphone array (6 mics) on carrier board
  - Digital audio expansion header and analog audio expansion header

- **USB Ports**
  - 2x USB2 Type A host ports, USB micro-B device ADB port, Debug UART USB micro-B port

- **Wireless Antennas**
  - 2x Wi-Fi PCB antennas (2x2 MIMO) + separate Bluetooth PCB antenna for isolation
  - GNSS receiver front-end LNA/BPF + PCB antenna

- **Power Input**
  - Power input: 12V/3A from included power adapter

- **Size**
  - SOM size: 50mm x 46.5mm
  - Carrier Board size: 170mm x 115mm

Software:

- **OS Support**
  - OpenEmbedded Yocto Linux for Home Hub applications with Qualcomm® Fluence™ Pro

*Note that all hardware features are not currently supported by SW versions — see latest SW release notes for details.

Purchasing Information:

- **Open-Q™ 212A Dev Kit**
  - PN: QC-DB-K10003D

- **Open-Q™ 212A SOM**
  - PN: QC-DB-K10004D

- **Open-Q™ OV5640 Camera**
  - PN: QC-DB-110007

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Development Kit includes: Carrier board, SOM, 12V power supply, Quick Start Guide, access to full documentation, SW updates, and basic development kit support.

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