LANTRONIX®

INDUSTRY:

Lantronix Teams with Misty Robotics to Create Platform Robot

Success Highlights

- Enables OEMs to fast-track product development
- Facilitates quick creation of a market-ready prototype
- Reduces the total cost of development
- Includes FCC/IC and Canada Pre-certifications

Case Study Overview

An innovator in product development services and edge computing modules, Lantronix helped Misty Robotics Inc. create Misty II, a platform robot that enables developers to build applications. Among Misty II's applications are its ability to assist with COVID-19 Return-to-Work initiatives+putting it to work as a temperature-screening assistant.

CHALLENGE: Create a Platform Robot for Use in Education, Eldercare and Healthcare

Misty Robotics' team wanted to create a platform robot with a personality and perception abilities that could perform human-like tasks for use in applications including education, eldercare and healthcare. Misty II was designed to enable developers around the world to create and customize applications to contribute to its growth.
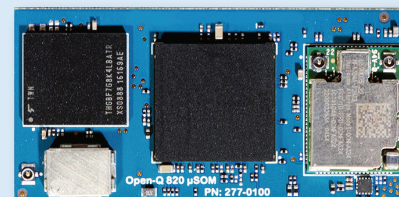
SOLUTION: Lantronix Open-Q 820Pro µSOM and Open-Q 410 SOM

Misty II was created using the advanced processing power of the Lantronix Open-Q™ 820Pro µSOM and the Lantronix Open-Q 410 SOM, both of which are based on Qualcomm® application processors. Misty Robotics relied on Lantronix's design expertise to incorporate Qualcomm Robotics solutions into the Misty II design.

Lantronix's design services were also leveraged to develop other software capabilities, including camera management, audio management, display panel support, audio topology support using multiple microphones and speaker output, inter-processor communication, battery charging and tuning of noise suppression. Lantronix also helped with hardware design reviews and FCC certification testing support.
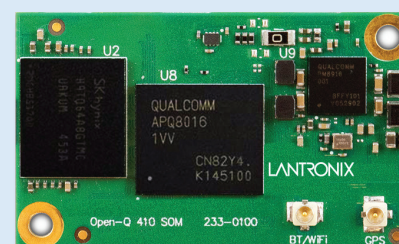
> " Working with Lantronix, we created Misty II with the performance and development capabilities needed for meaningful tasks and customization capabilities. "
>
> Morgan Bell,
> Head of Engineering,
> Misty Robotics

Lantronix Open-Q 820Pro µSOM

Lantronix's Open-Q 820Pro µSOM is the world's smallest (50mm x 25mm) ultracompact, production-ready, pre-certified, pin-compatible micro computing module based on the Qualcomm® cutting-edge Snapdragon™ 820E processor. The 820Pro µSOM can provide either more processing power for your demanding applications or lower average power consumption for the same processing tasks.

Lantronix Open-Q 410 SOM

Lantronix's Open-Q 410 SOM is an ultra-small (44mm X 26.5mm), production-ready, pre-certified module based upon the powerful Snapdragon 410 Series APQ8016, quad-core processor from Qualcomm® Technologies Inc.

For more information, visit https://www.lantronix.com/product-families/open-q/

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RESULTS: A Platform Robot With Unlimited Potential

Based on Lantronix's support, Misty Robotics created Misty II. Misty II features include:

- A high-resolution camera and object detection capabilities that enable Misty II sn see
- Far-field microphones and audio processing capabilities that provide the ability to hear speech while filtering out background noise, including commands starting with "Hey Misty"
- Ability to record video and audio data and share it with other devices or use the built-in screen and speakers to stream data shared by other devices
- Ability to respond to touch
- A platform robot on which applications can be created and customized

Built for exceptional performance, Misty II has an impressive array of capabilities. For example, Misty II is helping to combat the COVID-19 pandemic with its Temp Screening Assistant application, which includes the ability to ask health-screening questions that can surface symptoms potentially related to the virus. It also puts infrared cameras to work to check temperatures, reducing the risk of exposure.

Utilizing its system on modules and design support, along with FCC/IC and Canada pre-certifications, Lantronix helped Misty Robotics fast,track product development, facilitate quick creation of a market-ready prototype and reduce the total cost of development.

> " For robots to become a part of our everyday lives, developers need an accessible robot platform upon which to build, and Lantronix provided that for us. "
>
> – Morgan Bell, Head of Engineering
> Misty Robotics

About Misty Robotics

Headquartered in Boulder, Colo., Misty Robotics aims to have a robot in every business, home and school. They grew out of Sphero, a leading STEM company that provides education-oriented robots. For more information, visit www. mistyrobotics.com.

Open-Q 820Pro µSOM and Open-Q 410 SOM Development Kits

Lantronix's Open-Q 820Pro µSOM Development Kit (left) and Open-Q 410 SOM Development Kit (right) are versatile, easy-to-use exposed board platforms utilizing Lantronix's ultra-small form-factor. The Development Kits are the ideal starting point for creating the next generation embedded and IoT devices with highly integrated features.

For more information, visit https://www.lantronix.com/product-families/open-q/

About Lantronix

Lantronix Inc. is a global provider of Software as a Service (SaaS), connectivity services, engineering services, intelligent hardware and turnkey solutions for the Internet of Things (IoT) and Remote Environment Management (REM). Lantronix enables its customers to provide reliable and secure solutions while accelerating their time to market. Lantronix's products and services dramatically simplify operations through the creation, development, deployment and management of customer projects at scale while providing quality, reliability and security.

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