

# LANTRONIX®

## INDUSTRY:

## Augmented Reality / Industrial Lantronix Supports Next-Gen Industrial Smart Glasses



### Success Highlights:

- Supported development of augmented reality smart glasses
- Provided support to deliver a market-ready prototype
- Supplied advanced  $\mu$ SOM technology
- Provided an affordable solution to help contain development costs
- Helped facilitate product's quick entry to market

### Case Study Overview:

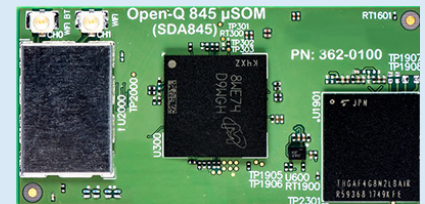
Youbiquo designs wearable electronics and IoT devices with a focus on industry-specific applications. By partnering with technology from Lantronix, including the Lantronix Open-Q™ 845 Micro System on Module ( $\mu$ SOM), which is based on the powerful Qualcomm® Snapdragon™ SDA845 System on Chip (SoC) from Qualcomm® Technologies Inc. (QTI), Youbiquo's design team created its Next-Gen Leonardo Augmented Reality Smart Glasses, giving maintenance and construction technicians and quality inspectors a powerful tool to improve the speed and quality of their work.

### Enhancing Technical Work Performance With Smart Glasses

In developing its Next-Gen Leonardo Augmented Reality Smart Glasses, Youbiquo focused on solving a key challenge faced by maintenance and quality assurance: technicians needing to stop their tasks at hand in order to use their computers or mobile devices. These interruptions disrupt the workers' progress, creating an inconvenient, inefficient and potentially unsafe work environment. With the updated smart glasses, technicians can access documentation, log relevant data and remotely communicate with others via video conferencing like never before, all without disrupting workflow. On the other side, quality inspectors are supported in the anomaly detection process thanks to the defects highlighted by the smart glass on the production lines.

“ Lantronix's Open-Q 845 micro SOM technology helped jumpstart the design of Youbiquo's Next-Gen Leonardo Augmented Reality Smart Glasses, quickly bringing the product to market. ”

– Pietro Carratu, CEO, Youbiquo



### Lantronix Open-Q 845 $\mu$ SOM

The Lantronix Open-Q 845 production-ready  $\mu$ SOM is based on the Qualcomm® Snapdragon™ SDA845 System on Chip.

### Product Highlights

- Bluetooth® and Wi-Fi® connectivity
- Octa-Core 64-bit Kryo™ 385 CPU
- Adreno™ 630 GPU
- Hexagon™ 685 DSP
- Ultra-compact 25mm x 50mm
- Android™ 9 & 10
- Linux OS based on Yocto Rocko



For more information:  
<https://www.lantronix.com/products/open-q-845-usom/>

## Challenge: Create Comfortable and Functional Augmented Reality Smart Glasses

To be truly effective, augmented reality smart glasses need to be lightweight and simultaneously bring both the technician's task and computer into the field of vision while also enabling remote communication.

### The challenges included:

- Incorporating sensors, camera and microphone into the glasses
- Tying them together with necessary on-device processing power
- Enabling wireless connectivity for remote communication
- Ensuring secure boot, wireless communication and secure updates
- Delivering quickly to improve the time to development and market

### Solution: Lantronix Open-Q 845 $\mu$ SOM

To create the Next-Gen Leonardo Augmented Reality Smart Glasses, the Youbiquo designers chose the Lantronix Open-Q 845  $\mu$ SOM integrated with the Qualcomm® Snapdragon™ SDA845 SoC. The result delivered the ideal balance of advanced processing power, heat dissipation, wireless connectivity and power efficiency in a small, lightweight form factor for the smart glasses design. Its built-in software solutions include 3D rendering, computer vision and natural language processing.

### Result: Next-Generation Smart Glasses Improve Speed and Quality of Complex Work

Utilizing the Lantronix Open-Q 845  $\mu$ SOM, Lantronix's engineering team helped Youbiquo developers jumpstart the design and quickly deliver to market its Next-Gen Leonardo smart glasses. The smart glasses give users the ability to use fingerprint authentication to securely log in, easily take photos and record data to remote databases, access important documentation within their fields of vision and remotely conduct video conferences. The Leonardo smart glasses also feature a depth camera module for better performance while using less power than other smart glasses and have the ability to use camera data, audio data and IMU Sensor over USB and GSP data over UART.



### Lantronix Open-Q 845 $\mu$ SOM Development Kit

Lantronix's Open-Q™ 845  $\mu$ SOM Development Kit is a versatile, easy-to-use, exposed board platform powered by the Open-Q 845 production-ready  $\mu$ SOM, based on the Qualcomm® Snapdragon™ SDA845 SoC. The development kit provides the ideal starting point for evaluation of the Open-Q™ 845  $\mu$ SOM as well as development of next-generation embedded and IoT devices.

### About Lantronix

Lantronix Inc. is a global provider of secure turnkey solutions for the Internet of Things (IoT) and Remote Environment Management (REM), offering Software as a Service (SaaS), connectivity services, engineering services and intelligent hardware.

Lantronix's products and services dramatically simplify the creation, development, deployment and management of IoT and IT projects across Robotics, Automotive, Wearables, Video Conferencing, Industrial, Medical, Logistics, Smart Cities, Security, Retail, Branch Office, Server Room and Datacenter applications.

**LANTRONIX**<sup>®</sup>

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“ Having worked with Lantronix on a previous product development, we were confident that they could assist us with the next generation of our Augmented Reality Smart Glasses. Lantronix delivered once again. ”

– Pietro Carratu, CEO, Youbiquo

### Benefits Include:

- Quickly build a market-ready prototype
- Reduce total cost of development
- Easily customize capabilities for different user types
- Get to production and market faster
- Deliver a comprehensive, globally certified solution to market