

# LANTRONIX®

INDUSTRY:

## Augmented Reality / Industrial



### Success Highlights:

- Support development of augmented reality smart glasses
- Provide support to deliver a market-ready prototype
- Supply advanced  $\mu$ SOM technology
- Provide an affordable solution to help contain development costs
- Help 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 taking advantage of technology from Lantronix, including the Lantronix Open-Q™ 626 Micro System on Module ( $\mu$ SOM), which is based on the Qualcomm® APQ8053-Pro System on Chip (SoC) from Qualcomm® Technologies Inc. (QTI), Youbiquo's design team created the Talens Holo Augmented Reality Smart Glasses, giving maintenance and construction technicians a powerful tool to improve the speed and quality of their work.

### Enhancing Technical Work Performance With Smart Glasses

In developing the Talens Holo Augmented Reality Smart Glasses, Youbiquo focused on solving a key challenge faced by the maintenance and construction industries: 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 smart glasses, technicians can access documentation, log relevant data and remotely communicate with others via video conferencing, all without disrupting workflow.

“Lantronix's Open-Q 626 micro SOM technology helped jumpstart the design of Youbiquo's Talens Holo Augmented Reality Smart Glasses, quickly bringing the product to market.”

– Pietro Carratu, CEO, Youbiquo



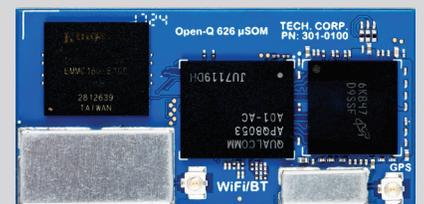
### Product:

#### Lantronix Open-Q 626 $\mu$ SOM

The Lantronix Open-Q 626 production-ready  $\mu$ SOM is based on the Qualcomm® APQ8053-Pro SoC processor.

### Product Compatibility

- Bluetooth® and Wi-Fi® connectivity
- Octa-Core 64-bit ARM®
- Cortex® A53
- Adreno™ 506 GPU
- Hexagon™ 546 DSP
- Dimensions 25mm x 50mm
- Android™ 9 & 10



For more information:  
<https://www.lantronix.com/products/open-q-626-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 626 $\mu$ SOM

To create the Talens Holo Augmented Reality Smart Glasses, the Youbiquo designers chose the Lantronix Open-Q 626  $\mu$ SOM integrated with the Qualcomm® APQ8053-Pro SoC processor. 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.

### Results: Smart Glasses Improve Speed and Quality of Complex Work

Utilizing the Lantronix Open-Q 626  $\mu$ SOM, Lantronix's engineering team helped Youbiquo developers jumpstart the design and quickly deliver to market its Talens Holo 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.

“ Utilizing Lantronix's unique micro SOM technology, Youbiquo's innovators were able to create Talens Holo Augmented Reality Smart Glasses to help improve the speed and quality of work done by maintenance and construction technicians. ”

– 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



### Lantronix Open-Q 626 $\mu$ SOM Development Kit

Lantronix's Open-Q™ 626  $\mu$ SOM Development Kit is a cost-effective, feature-rich, camera-tuned, exposed board platform powered by the Open-Q 626 production-ready  $\mu$ SOM, based on the APQ8053Pro processor. The development kit is ideal for evaluation of the Open-Q™ 626  $\mu$ SOM as well as quick development of connected camera devices or other high-performance embedded products.

### About Lantronix

Lantronix Inc. is a global provider of software as a service (SaaS), engineering services and hardware for Edge Computing, the Internet of Things (IoT) and Remote Environment Management (REM). Lantronix's solutions are deployed inside millions of machines at data centers, offices and remote sites serving a wide range of industries, including energy, agriculture, medical, security, manufacturing, distribution, transportation, retail, financial, environmental, infrastructure and government.

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