

# Ezurio Transforms Industrial HMIs for Food & Beverage Equipment

MediaTek Genio 510 enables advanced graphics and long-lifecycle reliability in a ready-to-deploy platform

## Case Study



## Application

HMI (Human Machine Interface)

## Background

In today's connected foodservice market, equipment manufacturers are under pressure to deliver smarter, more intuitive systems for restaurants, cafes, and beverage stations. Whether it's a self-serve drinks dispenser, countertop fryer, or commercial oven, operators expect HMIs that look good as they perform: responsive, networked, and easy to maintain.

These systems run continuously in harsh environments, exposed to heat, moisture, and aggressive cleaning cycles, while needing to present crisp, high-resolution graphics and fast touchscreen response.

Ezurio, a U.S.-based designer and manufacturer of wireless modules, System-on-Modules (SOMs), and Single Board Computers (SBCs), recognized this shift early. Leveraging its experience across connectivity and embedded platforms, Ezurio partnered with MediaTek to develop the Tungsten HMI, a ready-to-deploy HMI built on the MediaTek Genio 510 platform. This solution combines compute, display, and enclosure in one integrated system, eliminating the costly integration and validation work engineers typically face when sourcing components from multiple vendors.

"We've built the core of this product for years—SOMs, carrier boards, wireless modules, and enclosures," said Pejman Kalkhoran, VP of Strategic Business Development at Ezurio. "Now they're combined in a single, field-tested HMI that saves our customers time, cost, and engineering effort."

## Challenge:

Designing reliable industrial HMIs presents many recurring challenges for equipment manufacturers:

- **Complex Integration:** Traditional HMIs often require multiple vendors and validation cycles, adding cost and complexity.
- **Performance Limitations:** Legacy platforms struggle to support high-resolution graphics and real-time workloads.
- **Durability:** Devices must operate reliably under heat, humidity, and frequent cleaning.
- **Lifecycle Longevity:** Industrial products often need 10+ years of availability and service, which typical consumer-grade electronics can't guarantee.
- **Compliance and Certification:** Each hardware change can trigger new EMC, wireless, and safety testing, delaying time-to-market.

## Solution

Ezurio's strength is in delivering a complete, production-ready platform, that reduces integration time, certification risk, and overall engineering effort. Powered by the MediaTek Genio 510, the Tungsten HMI provides OEMs with a compact, high-performance platform for graphics, edge AI, and long-term reliability in next-generation food and beverage equipment.

Key solution highlights:

- **Integrated Architecture:** Combines Ezurio's Tungsten510 SMARC SOM, 10.1" touch display, and dedicated HMI carrier with RS485, CAN, dual GbE, USB, HDMI, and GPIO interfaces.
- **Powered by MediaTek Genio 510:** Six-core CPU (dual Cortex-A78 + quad Cortex-A55), Mali G57 GPU, and 3.2 TOPS AI accelerator for responsive graphics and edge AI processing.
- **Software flexibility:** Pre-validated BSPs for Yocto Linux, Buildroot, and Android enable quick development.
- **Connectivity options:** Integrated Sona™ MT320 module, powered by MediaTek Filogic 320, supports Wi-Fi 6 and Bluetooth 5.4 for wireless monitoring and control.
- **Industrial Build:** Manufactured in Ezurio's U.S. facility with pre-certified FCC, ISED and CE certifications for global deployment.

Together, Ezurio's system level integration and MediaTek's processing performance create an HMI platform purpose-built for the food and beverage industry. Visit [ezurio.com/tungsten-HMI](https://ezurio.com/tungsten-HMI) to learn the full specifications and design resources for the Tungsten HMI.



More Information  
on Tungsten HMI



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