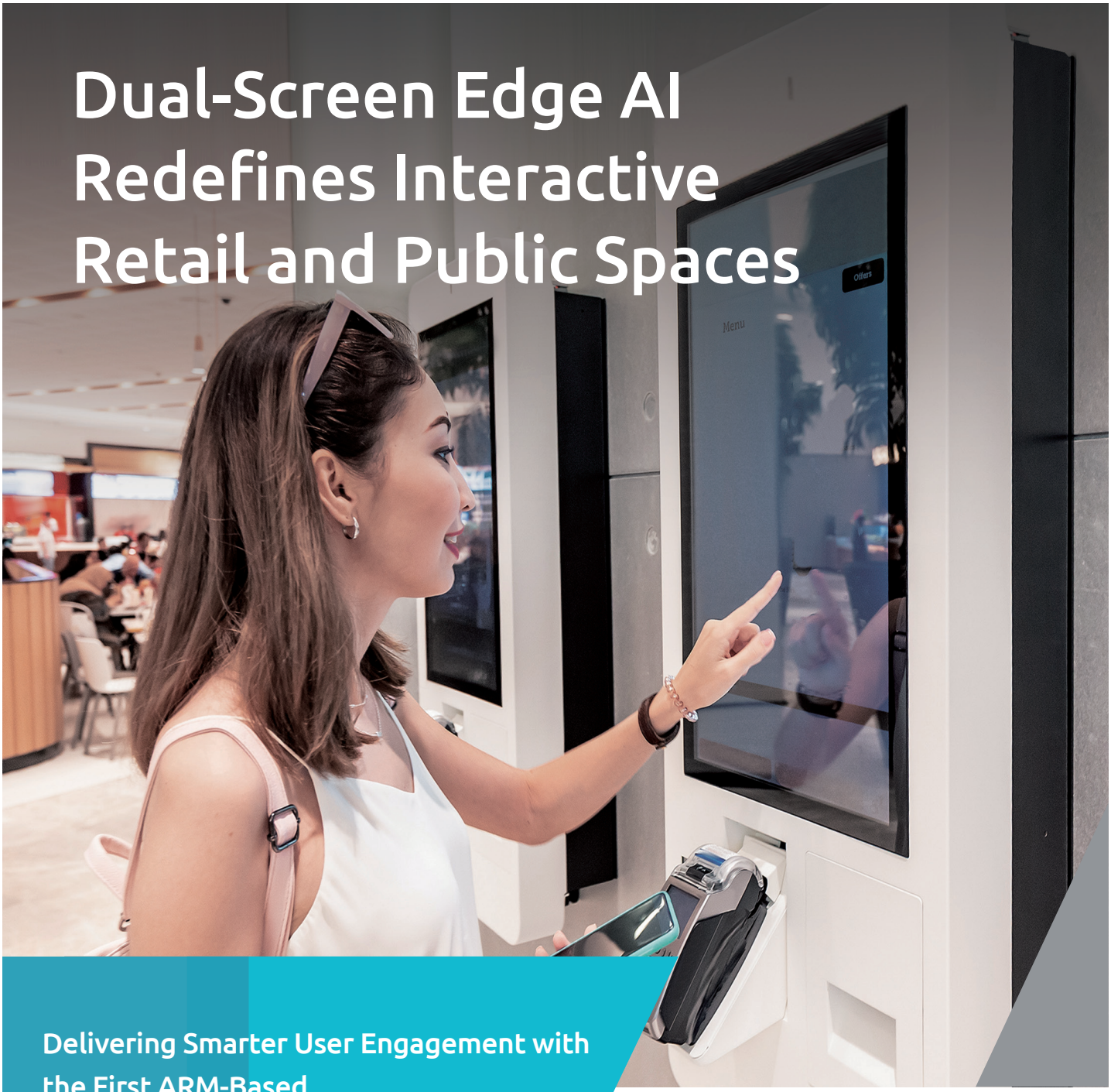
ADLINK
LEADING EDGE AI COMPUTING

Dual-Screen Edge AI Redefines Interactive Retail and Public Spaces



Delivering Smarter User Engagement with the First ARM-Based Dual Independent 4K Display Platform

MEDIATEK

Application Story

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Adaptive Design for Dual-Screen Deployment Challenges

To meet evolving digital signage demands, more applications need more than a single screen. To ensure flexibility and rapid adoption, systems must go beyond performance to deliver real-world adaptability. Users expect seamless, real-time access to both information and services. This shift is driving the adoption of dual-screen systems, in which one interface supports front-end interaction while the other delivers complementary content, such as information, media, or system-driven updates.

However, deploying such systems presents challenges. Solution providers must balance performance, space constraints, power efficiency, and diverse I/O requirements across different environments. They also need platforms that can handle AI workloads locally while supporting flexible configurations for various use cases.

Across environments such as smart retail stores and public areas, AI-powered edge computing can enhance more business opportunities. For solution providers, the opportunity lies in delivering intelligent, responsive experiences at scale, requiring platforms that are compact, energy-efficient, and easy to integrate without sacrificing performance.

How the ADLINK MXA-312M Compact Edge Platform Meets Deployment Requirements

At its core, dual-screen capability enables a new interaction model: one display for user engagement and the other for AI-driven insights, content delivery, or operational information. Built on an ARM-based platform and powered by MediaTek Genio 520/720 with a fanless design, it combines AI acceleration with dual-display support for intelligent, interactive experiences.

- Palm-sized form factor supports space-constrained deployments like kiosks and retail systems.
- Dual HDMI with 4K output enables synchronized dual-display visuals for seamless user interaction and AI-driven content.
- Delivers up to 10 TOPS of AI performance for real-time edge intelligence.
- Consumes 12W during operation and under 5W at idle for high energy efficiency.

Its modular architecture enables precise configuration per use case, whether mounted on a DIN rail, embedded in a kiosk, or deployed in retail and public spaces, ensuring fast and seamless integration.

10 TOPS

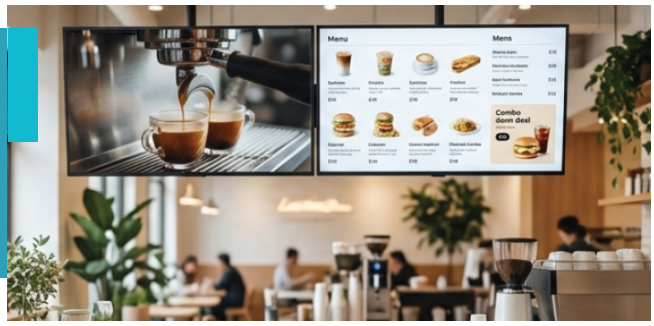


Transforming In-Store and Public Experiences with Dual-Screen AI Systems

Smart Retail Stores

Dual-screen digital signage and kiosks:

- QSR (Quick Service Restaurants)
- Convenience stores
- Apparel and fashion retail stores



In retail environments, dual-screen systems redefine customer engagement. One screen serves as the interactive interface, displaying product information, promotions, or self-service options, while the second screen runs AI-driven analytics such as personalized recommendations or targeted advertising.

For example, in QSR (quick service restaurants), one screen can display a dynamic menu and limited-time promotions, while the second screen runs AI-driven upsell suggestions such as meal upgrades or combo recommendations based on ordering behavior. In apparel and fashion stores, one screen can show a virtual fitting or product browsing interface with outfit or bag recommendations tailored to the customer, while the second screen analyzes shopper profiles and behavior to suggest styles, accessories, or personalized offers.

This separation allows retailers to deliver immersive experiences while simultaneously optimizing operations through real-time insights.



Public Spaces

Dual-screen AI-enabled applications:

- Airports and transi t stations
- Museums and art galleries
- Amusement parks and cruise ships
- Offices and classrooms

In transportation hubs, dual-screen AI systems enhance both efficiency and communication. A front-facing screen interacts with passengers for check-ins, navigation, or ticketing, while the second screen processes backend tasks such as demographic analysis, queue monitoring, and operational alerts.

For example, in airports and tourist spots, one screen can provide interactive wayfinding or destination highlights, while the second screen displays real-time flight schedules, gate updates, or travel alerts. In museums and galleries, one screen can offer interactive exhibits such as quizzes, augmented storytelling, or "guess-the-artifact" challenges, while the second screen provides supporting content like artist insights, hidden details, or curator commentary.

This dual-layer approach improves passenger flow, reduces wait times, and ensures clearer, more effective communication in high-traffic environments.

Also, in workplaces and educational settings, dual-screen configurations support collaboration and productivity. One display focuses on content delivery, while the other provides AI-powered assistance such as real-time transcription, summarization, or interactive feedback, creating a more dynamic and responsive user experience without increasing system complexity.

All processing happens locally, reducing latency, protecting data privacy, ensuring consistent performance, and minimizing operational costs.

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Powering Smarter Decisions with Split-Display Experience



By combining dual-screen capability, AI acceleration, a compact fanless design, and AFM-driven flexibility, the MXA-312M delivers a differentiated edge AI platform for interactive environments.

From retail and airports to offices and classrooms, it enhances user engagement while bridging front-end interaction with back-end intelligence. As the industry's first on-base dual display solution, it enables scalable, real-world deployment of dual-screen edge AI.

With efficient, always-on local AI processing, the MXA-312M ensures intelligent experiences are delivered where they matter most.
ADLINK partners with MediaTek to advance power-efficient edge AI computing, combining MediaTek Genio SoC platforms with ADLINK's system integration expertise. This collaboration delivers high-performance, low-power, and reliable solutions that support sustainability goals through integrated NPU capabilities.

Dual-Monitor Support	Ultra-Compact	Low-Power Consumption	AI Acceleration
HDMI x2, 4K @ 60fps	**120 x 90 x 40 mm**	**12W (Idle mode <5W)**	**10 TOPS**

More AFM Options Available

Customized Options
Based on Project Needs,
Accelerated Time-to-Market



Flexible Mounting for Various Environments

Compact Device for Narrow Spaces with Flexible Installation


DIN Rail Mounting 1


DIN Rail Mounting 2


Wall Mounting

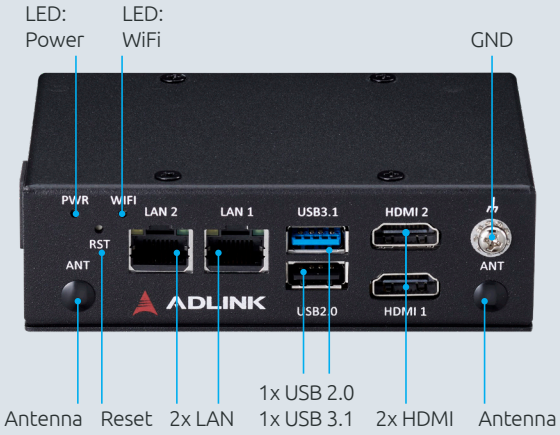
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Compact Edge AI Platform

MXA-312M

Built for Dual-Screen Edge AI Applications:

- MediaTek Genio 520/720 with dual-core Arm Cortex-A78 and six-core Cortex-A55
- MediaTek DLA + VPU AI engine up to 10 TOPS
- 2x HDMI with 4K high-resolution output
- 2x RJ45 GbE LAN, 1x USB 3.1+1 x USB 2.0, 1x RS232+ 1x RS485, 1x M.2 E-Key, 1x extension function connector
- Up to 8GB LPDDR4L or 16GB LPDDR5
- Up to 128GB eMMC
- Rugged operating temperature range: -20°C to 70°C





ADLINK Product Offerings

Dual 4K HDMI Media Player

MXA-312M

Ultra-Compact, Fanless, Low-Power Edge Computing Platform powered by MediaTek Genio 520/720



Industrial Touch Monitor

OM Series

7"/10.1"/12.1"/15"/15.6"/17"/ 18.5"/19"/21.5"/23.8"/27"/ 32"/43" Open Frame Industrial Touch Monitor



IM Series

15"/17"/19"/21.5"/23.8"/27.0" Standalone Industrial Touch Monitor



Learn More

For a complete view of our MediaTek-based solutions and to explore our full range of ADLINK products, please visit ADLINK MediaTek-based solutions.

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