# TOP 6 REASONS *RETAIL AI* RUNS ON AMD EPYC™ SERVER CPUs

Thanks to leaps in performance, AMD EPYC™ Server CPUs can now run AI in space and power constrained retail locations. With these new capabilities and rapidly decreasing model sizes, AI is ready for mass adoption.

AMD Retail AI Solutions help retailers move fast with concept-to-deployment consulting and fulfillment services coupled with a growing portfolio of tested and validated solutions for barcode-free checkout, real-time inventory management, and loss prevention, plus smart assistants for management and staff.

## 1 AMD PACKS PERFORMANCE INTO EDGE SERVERS

**Run AI on off-the-shelf hardware**

You don't need specialized hardware to run today's retail AI solutions. Single-socket servers with edge-optimized AMD EPYC™ Server CPUs can support AI software for existing cameras alongside general-purpose workloads. If you need more performance, high-core-count AMD EPYC Server CPUs can support complex AI software for extensive camera installations in large-format stores and power solutions that can scale across an entire fleet of stores, large or small.

## 2 THERE'S NO HEAVY LIFTING FOR R&D

**AMD Retail AI Solutions handle the tech, so you can deploy AI now**

Most retailers don't have time to create an AI application from scratch or search for the ideal hardware and software pairing. So, we worked with our partners to develop, test, and refine solutions for popular retail use cases. From computer vision-enabled checkout to real-time shopper intelligence, you can choose from an open ecosystem of tested and validated solutions, sidestepping long development cycles and expensive pilots. Access a catalog of production-ready AMD Retail AI Solutions on AMD.com.

## 3 WITH AMD, AI IS AFFORDABLE

**Now you can adopt AI at retail-friendly prices and power envelopes**

AMD Retail AI Solutions are cost-optimized to give retailers an easier entry into AI. They also deliver something the competition simply can't: extraordinary value. AMD EPYC Server CPUs give you the performance, core density, and energy profiles you need for AI and traditional workloads, while keeping initial and ongoing costs in check. For example, edge-optimized AMD EPYC 8534PN Server CPUs deliver up to 42% lower system power and 52% higher performance per watt, per dollar than Xeon Platinum 8471N CPUs.[1]

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## 4 BRING AI TO YOUR STORES WITH A SINGLE PROVIDER

**AMD Retail AI Solutions are ready to deploy at a global scale**

AMD Retail AI Solutions provide consulting, integration, and global fulfillment services that draw on a growing portfolio of software that has been tested and validated on hardware from industry leaders like HPE, Lenovo, and Supermicro. Retailers can scale AI seamlessly from the smallest location to the largest chain of megastores.

## 5 RETAILERS TRUST AMD FOR AI

**7 of the 10 largest Fortune 100 retailers run on AMD EPYC Server CPUs[2]**

The faster a retailer can start using AI to help make decisions, the sooner they can see results in their profit margins — and that's why they love AMD. AMD Retail AI Solutions bring cost-effective, enterprise-caliber AI to in-store technology along with system design and deployment services so that retailers go from concept to production as quickly as possible.

## 6 AMD IS AT THE FOREFRONT OF AI DEVELOPMENT

**Tap into the AI ecosystem that's only getting better**

AMD technology is a key driver of AI's expansion, and not just in retail. From our 6-Gigawatt AI strategic infrastructure partnership with OpenAI[3] to producing the best CPUs for enterprise AI,[4] AMD is helping improve AI every day. While our ecosystem is already extensive, our open innovation platform is poised for growth as more solutions become available.

# BRING AI *OUT OF THE BOX* AND *INTO YOUR STORE*

AMD Retail AI Solutions bring together integrators, software vendors, and OEMs in a unified service so that retailers can deploy AI with ease. For the first time, powerful in-store AI is ready for mass-market retail.

**Learn more**

1. SP6-006: AI/ML workloads (Neural Magic DeepSparse, oneDNN, OpenCV, OpenVINO, and TensorFlow averaged) performance/system W/system $ comparison based on Phoronix Test Suite paid testing as of 8/18/2023. Configurations: 1P 64C EPYC 8534PN (0.96x relative performance, 247 avg system W, est $8,482 system cost USD) powered server versus 1P 52C Xeon Platinum 8471N (1.07x relative performance, 423 avg system W, est $8,477 system cost USD) powered server for 0.89x the performance, 42% lower system power (1.52x the performance/system W), comparable system cost for 1.52x the overall system performance/W/$. Testing not independently verified by AMD. Scores will vary based on system configuration and determinism mode used (default TDP power determinism mode profile used). Estimated system pricing based on Bare Metal Server GHG TCO v9.52. https://www.amd.com/en/legal/claims/epyc.html#q=SP6-006.
2. EPYC-059: Top 10 U.S. retail companies by revenue according to 2025 Fortune 500 list as of June 2, 2025. https://fortune.com/ranking/fortune500. https://www.50pros.com/fortune500. 'Fortune 100' refers to the top 20% ranked companies in the 2025 Fortune 500 list, published in June 2025. From Fortune Magazine. ©2025 Fortune Media IP Limited. All rights reserved. Used under license. Fortune and Fortune Media IP Limited are not affiliated with, and do not endorse products or services of Advanced Micro Devices, Inc.
3. AMD Newsroom, AMD and OpenAI Announce Strategic Partnership to Deploy 6 Gigawatts of AMD GPUs, October 6, 2025.
4. EPYC-029D: Comparison based on thread density, performance, features, process technology and built-in security features of currently shipping servers as of 10/10/2024. EPYC 9005 series CPUs offer the highest thread density, leads the industry with 500+ performance world records including world record enterprise leadership Java® ops/sec performance, top HPC leadership with floating-point throughput performance, AI end-to-end performance with TPCx-AI performance and highest energy efficiency scores. Compared to 5th Gen Xeon, the 5th Gen EPYC series also has more DDR5 memory channels with more memory bandwidth and supports more PCIe® Gen5 lanes for I/O throughput and has up to 5x the L3 cache/core for faster data access. The EPYC 9005 series uses advanced 3-4nm technology and offers Secure Memory Encryption + Secure Encrypted Virtualization (SEV) + SEV Encrypted State + SEV-Secure Nested Paging security features. https://www.amd.com/en/legal/claims/epyc.html#q=EPYC-029D&sortCriteria=%40title%20ascending.



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