

Introducing Aquila: The Next Generation Toradex SoM Family

High Performance. Future-Proof. Empowering Next-Gen AI.



The advertisement features the Toradex logo at the top left with the tagline "Swiss. Embedded. Computing." and a blue eagle icon at the top right. The central focus is a green System on Module (SoM) board with a large gold processor chip. To the left of the board, a "NEW" badge is above the text "Aquila AM69 System on Module". Below this, four feature boxes are shown: "A72 @2.0GHz x8", "R5F @1.0GHz x2", "NPU", and "3D GPU". To the right of the board are three green icons for Wi-Fi, Bluetooth, and temperature control. At the bottom, logos for Torizon, Linux (Tux penguin), Yocto Project, and TensorFlow are displayed.

Horw, Luzern Apr 6, 2024 ([IssueWire.com](https://www.issuewire.com)) - Toradex, a leading embedded systems solutions provider, has launched its newest family of pin-compatible and scalable System on Modules (SoMs) - Aquila.

Aquila is tailored for demanding applications in the fields of medical, industrial and robotics. Engineered with a focus on rugged durability, future-proof scalability, and power efficiency, it integrates cutting-edge AI and machine learning capabilities alongside a modern software stack to expedite time-to-market and effortlessly adapt to evolving security regulations.

Aquila is not just about meeting today's requirements but powering the potential of tomorrow.

"With Aquila, we're thrilled to push the boundaries of embedded computing. We've leveraged extensive market research and invaluable customer feedback to develop this highly powerful yet cost-effective solution for high-performance applications. Aquila represents our unwavering commitment to innovation and customer satisfaction, delivering unmatched performance, reliability, and value." said Samuel Imgrueth, CEO of Toradex.

Key Features:

1. High-Performance Real-Time Computing: Aquila delivers exceptional computing power, rivalling traditional x86 platforms and proprietary GPU-accelerated hardware, making it ideal for applications executing computationally intensive workloads.

2. **AI and Machine Learning Optimized:** With built-in high-performance deep learning accelerators, Aquila SoMs enable seamless integration of artificial intelligence capabilities into embedded systems; unlocking new possibilities for intelligent automation, predictive analytics, LLM, computer vision applications, and more.
3. **Industrial Reliability:** From the mechanical design and component selection to continuous testing, the Aquila form factor and Aquila SoMs are engineered for long-term reliability; making those a trusted choice for mission-critical applications.
4. **Power Efficiency:** Featuring power-efficient Arm® cores and optimized dedicated Deep Learning Accelerators, Aquila SoMs deliver exceptional performance with a small thermal footprint, reducing energy costs and enabling passive cooling designs.
5. **Cost Optimization:** Offering a superior alternative to expensive x86 and other GPU-accelerated hardware, Aquila SoMs provide for cost-effective solutions for high-performance computing and machine learning in embedded applications, ensuring a low total cost and minimal maintenance requirements.
6. **Easy-to-use and LTS-maintained Software:** Aquila SoMs seamlessly integrate with Torizon, Toradex's Linux-based software platform, streamlining development, monitoring, and updating processes. Toradex Linux support simplifies compliance with new security regulations such as the EU Cyber Resilience Act (CRA)

Introducing Aquila AM69

The first SoM in the new series is the Aquila AM69, which is based on the Texas Instruments (TI) AM69A Arm-based processor.

- **TI AM69A processor:** Aquila AM69 is powered by the TI AM69A Arm-based processor, known for its exceptional performance and reliability
- **Exceptional Performance and for demanding applications:** With 8x Arm Cortex-A72 cores and a 32 TOPS deep learning accelerator, Aquila AM69 is the ideal solution for embedded applications requiring the highest performance and low power consumption. Featured Applications include:
 - o High-Performance Edge Computing
 - o Artificial Intelligence (AI) and Machine Learning (ML)
 - o Computer/Machine Vision and Image Processing
 - o Automated and Autonomous Vehicles and Robots
 - o High-Resolution HMIs
 - o Real-time Processing and Control
 - o and more
- **With modern high-speed interfaces and about 400 pins,** the Aquila AM69 provides the connectivity and power required for harsh industrial environments, all based on a rugged board-to-board connector, with up to 30W TDP.

For more information on the Aquila AM69 and to get the latest updates, see <https://www.toradex.com/computer-on-modules/aquila-arm-family/ti-am69>.

About Toradex:

Toradex specializes in embedded hardware and software, offering Arm®-based System on Modules (SoMs) and customized Single Board Computers (SBCs); and industrial-grade software such as Torizon, an easy-to-use open-source industrial Linux platform.

Toradex's offerings are an ideal fit in applications such as healthcare, transportation, industrial automation, test & measurement and smart city. Its easy-to-use, commercial off-the-shelf embedded computing SoMs are pin-compatible thereby offering scalability. They also come with free premium support and long-term product availability. Through innovation, Toradex performs market-leading integration of hardware, software and services to reduce complexity, time-to-market, risk and costs for its customers.

Founded in 2003 and headquartered in Horw, Switzerland, the company's network stretches across the globe with offices in the U.S., China, India, Japan and Brazil. For more information, please visit <https://www.toradex.com/>.

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