Press Release

Q.ANT Launches World First Open-Source SDK for Photonic Computing

Developers can now write, run, and test applications accelerated by photonic processing

Stuttgart, September 23, 2026 — Q.ANT, the pioneer in commercial photonic computing, today debuted its open-source software development kit for photonic computing, making the programming tools for a photonic processor publicly available for the first time.

Programmers now have everything they need to develop applications for Q.ANT's Native Processing Units (NPUs), enabling them to compute with light, instead of electricity. The SDK includes: an API for programming languages including “C” and Python, sample applications, documentation, and a simulation backend that runs on a standard CPU, so that developers can build and validate applications on their own systems and then run it on real photonic hardware.

The SDK's examples draw on Q.ANT's published reference applications, including an advanced neural network that achieves better results with significantly fewer parameters; the source of Q.ANT’s speed and energy-saving benefits for computing.

In classical AI computing, most energy is consumed by the constant physical shuttling of data between separate memory and processor. Q.ANT's photonic chip changes that: the computation itself happens in the optical domain, where non-linear functions are executed natively instead of being approximated across many layers of transistors. More expressive networks can therefore be built with fewer parameters, so less data has to move in the first place, compounding the gain in energy efficiency.

"Markets and ecosystems are created by applications, and that is why Q.ANT is working every day to put photonic computing into developers' hands as fast as possible," said Michael Förtsch, Founder and CEO of Q.ANT. “An ecosystem isn’t created by hardware alone. It emerges when the software layer is open and others can build on it—that’s why we’re making it accessible in collaboration with HPC centers like the LRZ and JSC, and neo-clouds like IONOS. Anyone writing an AI model today should be able to run it on photonic hardware in the future, using a familiar toolchain and without specialized knowledge of photonics. This is the ‘Linux moment’ of photonic computing: the point at which a new possibility becomes a global platform.”

In the coming months, Q.ANT will open access to its breakthrough hardware through the cloud via commercial partner IONOS or through on-premise installations of its Native Processing Server. Developers who start building with the SDK today will be ready to take full advantage of these new computing technologies once hardware access becomes available.

This release marks the first openly available SDK for programming a photonic processor, giving developers a historic opportunity to program core operations. The SDK also includes examples for a direct comparison between a classical neural network and an advanced neural network based on photonic native operations, benchmarked on parameter count, accuracy, functional approximation, and training loss.

This SDK is designed to sit alongside the environments developers already work in, and to serve as the foundation software developers need to build frameworks and higher-level tools as the architecture scales.

"If you want to get started, all you need is a laptop: download the SDK, integrate the Python or C-API, and get going - no knowledge of photonics or special hardware required. The included simulation backend runs on any standard CPU. Using real-world examples, developers can see how their model behaves on photonic computing cores and how photonic operations can make AI models more efficient than classical methods. Those who then want to run simulations on real hardware can access it via the cloud or on-premises. At launch, the SDK covers the most important functions, with more to follow," says Utz Bacher, VP of Software at Q.ANT.

"The ever increasing cost, complexity, and power needs of traditional advanced computing systems are opening the door to new and innovative methods for solving some of today's most vexing computation problems. Q.ANT, with its innovative photonic processor that can work alongside CPUs and GPUs, offers a way to address these concerns, particularly in the areas of AI inference and training, scientific programming, and image processing. Q.ANT's new SDK, coupled with the availability of its hardware through a cloud access model, offers the advanced computing community an ideal way to explore the performance potential of Q.ANT's pioneering systems," said Bob Sorensen, Senior Vice President of Research, and Chief Analyst for Quantum Computing at Hyperion Research.

The Q.ANT SDK is available now on GitHub:
Toolkit: https://github.com/Q-ANT-GmbH/qant_native_computing_toolkit
Examples: https://github.com/Q-ANT-GmbH/qant_native_computing_toolkit_examples

About Q.ANT

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Q.ANT is commercializing photonic accelerators for AI and high-performance computing, offering a scalable alternative to transistor-based systems. Its Native Processing Units (NPUs) perform mathematical operations directly on Thin-Film Lithium Niobate (TFLN) based photonic integrated circuits, enabling energy-efficient, high-performance co-processing for complex computational tasks.

Q.ANT was founded in 2018. Its European headquarters is in Stuttgart, Germany, where it operates its own TFLN chip pilot line with IMS CHIPS, and it maintains a U.S. office in Austin, Texas. The company secured Europe's largest Series A for photonic computing in 2025 and introduced its second-generation processor the same year, now installed and running at leading scientific computing centers with its first commercial deployment planned for 2026.
www.qant.com

Media Contacts:
LaunchSquad for Q.ANT
qant@launchsquad.com

Jörg Kochendörfer
joerg.kochendoerfer@qant.gmbh
+49 160 5619730

Photo:

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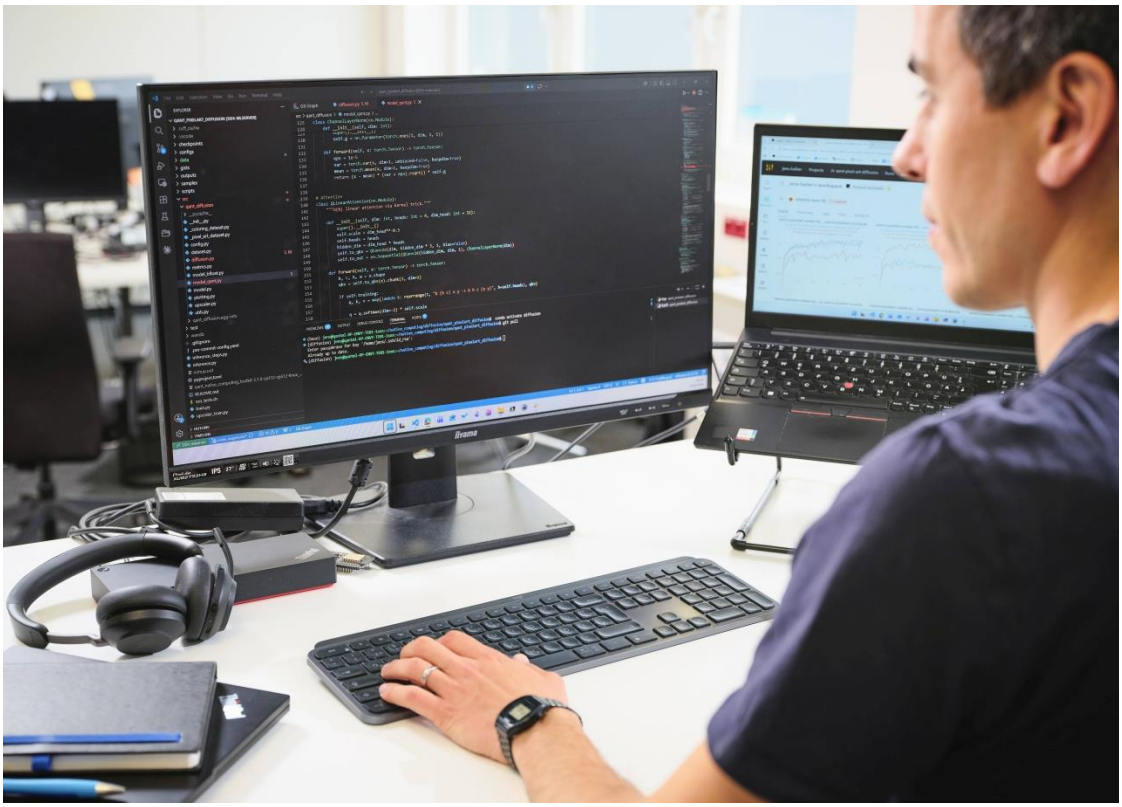

Caption: Q.ANT developer using SDK.