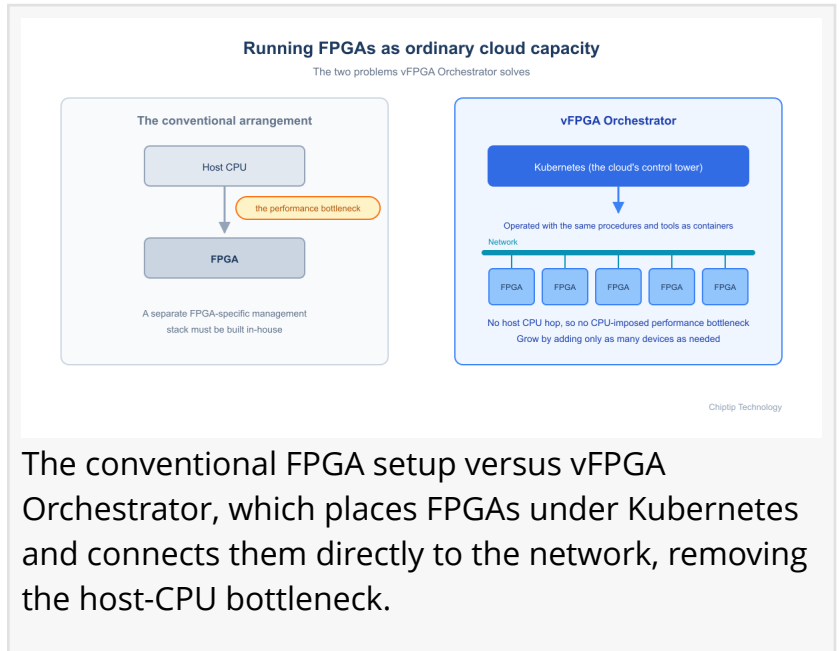


Chiptip Launches vFPGA Orchestrator, Software for Operating FPGAs Under Kubernetes

Adopted for EmotionX's fully homomorphic encryption (FHE) cloud, with ASIC prototyping, 5G/6G and post-quantum cryptography as the next targets.

SAN FRANCISCO, CA, UNITED STATES, August 17, 2026 /EINPresswire.com/ -- Running FPGAs at datacenter scale means hitting two walls. The first is operations: FPGAs do not fit the machinery a cloud uses to manage its fleet, so an operator has to build and maintain its own way to distribute circuits, watch what is running and swap it out. The second is performance: when data reaches an FPGA by way of a host CPU, the CPU becomes the bottleneck however fast the FPGA is.



Chiptip Technology, Inc. today announced the launch of vFPGA Orchestrator, platform software that addresses both. By placing FPGAs under Kubernetes and attaching them directly to the network instead of to a host CPU, it lets an FPGA cloud be built and operated with the same procedures and tools as any other cloud software. The first adoption is the fully homomorphic encryption (FHE) confidential computing cloud being built by EmotionX Inc.

“

With vFPGA Orchestrator, we can now scale encrypted-computation performance with the number of FPGA machines we deploy.”

*Yasuhito Yoshimizu, CEO,
EmotionX Inc.*

What It Does

Kubernetes is the control tower of a modern cloud,

deciding automatically which work runs on which server. Until now it could direct only CPU

servers and their containers; Chiptip made FPGAs something it can direct directly. A vFPGA is the unit in which an FPGA appears to Kubernetes as a single compute resource, reserved and reloaded with new circuits through the same operations that schedule a container.

FPGAs become Kubernetes custom resources: placement, monitoring and circuit replacement use the same machinery as containers, so no FPGA-specific management platform is needed in-house.

Attaching FPGAs directly to the network removes the host CPU as a bottleneck, widening the range of workloads worth accelerating and lowering per-node cost.

As an ASIC prototyping environment, it covers not only functional verification but running a design as a live service to confirm requirements with real users. An ASIC cannot be corrected once it is made.

The same machinery continues after a move to an ASIC, so know-how from the FPGA phase carries over intact.

The technology is patented, held by Japanese parent Chiptip Technology K.K. (Japan Patent No. 7611613), with applications pending in the United States (No. 18/555,242, published as US-2024-0193121-A1), Europe, India and China.

Why Confidential Computing First

EmotionX, a deep-tech company founded on R&D results from Kioxia, is building a confidential computing infrastructure in which the data stays hidden even from the operator. FHE takes orders of magnitude more computation than the same work on plaintext, so purpose-built circuitry is a precondition for practical use, not a refinement. That makes it the hardest possible first customer, and a platform that holds up there will hold up elsewhere.

Nothing in vFPGA Orchestrator is particular to encryption. Needing dedicated hardware without the years and tens of millions of dollars an ASIC demands is a problem shared by 5G/6G communications, post-quantum cryptography (PQC), network security appliances and ASIC prototyping.

“Chip development has been a privilege of the few. We are changing that,” said Eric Fukuda, Founder & CEO of Chiptip Technology, Inc. “A startup without deep capital can still attempt world-changing hardware, by combining rewritable hardware with the way clouds are already operated. What should decide the outcome is not how much capital you hold but how good your idea is.”

“Launch a live service on FPGA, then move to custom silicon where it is warranted — together with Chiptip, we have envisioned a future where both run on the same operational footing,” said Yasuhito Yoshimizu, CEO of EmotionX Inc. “With vFPGA Orchestrator, we can now scale encrypted-computation performance with the number of FPGA machines we deploy.”

For operators building FPGA clouds: <https://chiptip.tech/technologies/>

About Chiptip Technology, Inc. Chiptip Technology, Inc. develops vFPGA Orchestrator, platform software for building and operating an FPGA cloud. Its purpose is to democratize chip development, so that bold ideas — not billion-dollar budgets — define the future of computing. A U.S. subsidiary of Chiptip Technology K.K. (Tokyo, Japan). Website: <https://chiptip.tech/>

About EmotionX Inc. EmotionX Inc. is a startup carved out of Kioxia. Built around its high-speed FHE processing technology, it develops a cloud platform for homomorphic-encryption computation and the dedicated hardware beneath it. Website: <https://www.emotionx.co.jp/>

vFPGA Orchestrator is a trademark of Chiptip Technology K.K.

Eric Fukuda
Chiptip Technology, Inc.
info@chiptip.tech

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