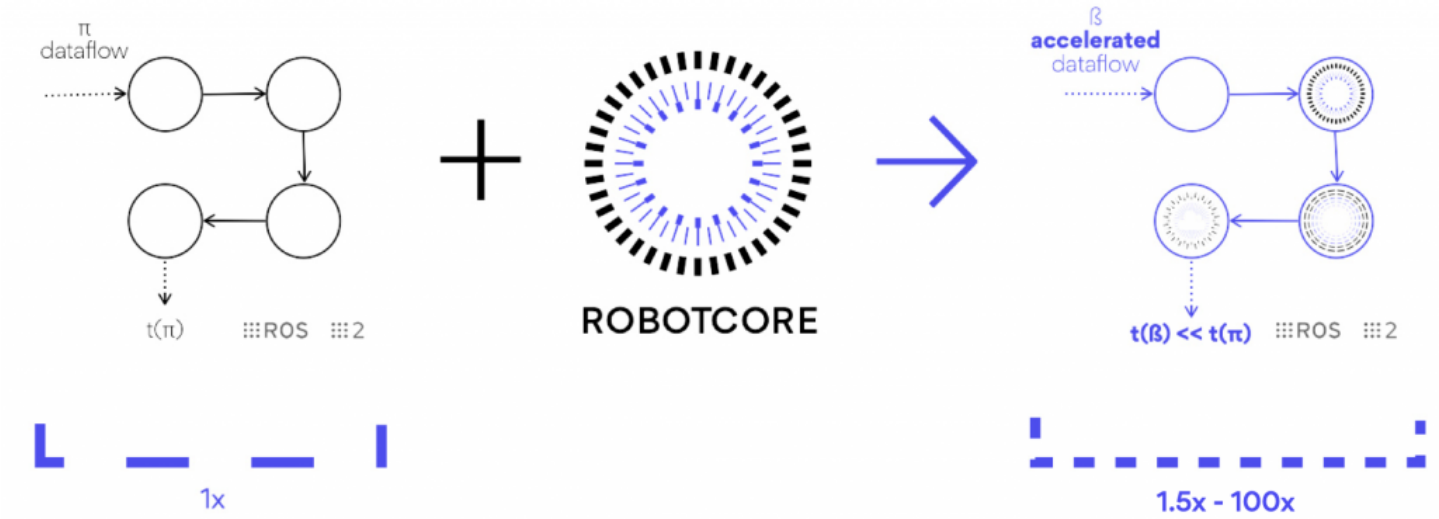
Acceleration Robotics launch ROBOTCORE™ to speed-up ROS 2 robots

The ROBOTCORE™ hardware acceleration framework helps roboticists build "robot chips" and make robot computations faster, more deterministic and power efficient through FPGAs and GPUs.



Vitoria, Alava Jun 16, 2022 (Issuewire.com**)** - Acceleration Robotics S.L., a robotics semiconductor startup based in the Basque Country and focused on designing customized brains for robots to hasten their response time via FPGAs and GPUs released **ROBOTCORE™, a hardware acceleration framework for the Robot Operating System (ROS)**, the standard in robotics. Delivering *semiconductor building blocks* for robots, the company creates custom compute architectures for high-performance robots through hardware acceleration while remaining robot and accelerator-agnostic (supporting popular FPGAs and GPUs).

ROBOTCORE™ allows robotic engineers to create ROS and ROS 2 API-compatible Intellectual Property (IP) cores that increase the robot's performance, including latency and throughput. These "***robot cores"*** **make robots faster, more deterministic, and power-efficient**. ROBOTCORE™ launches with support for more than 10 development boards, including the most popular hardware acceleration solutions to build robots with ROS.

The framework builds on top of proven open-source software in robotics, such as ROS 2, so that roboticists don't spend time redeveloping what already works and focus instead on delivering higher-performance robotic applications. While providing a vendor-agnostic ROS-centric development flow, ROBOTCORE™ solves customer design challenges in robotic areas including sensing, perception, mapping, localization, motion control, low-level control, or actuation, with **speedups surpassing 500x modern processors**.

ROBOTCORE™ helps build faster compute architectures for robots, or robot cores, that makes robots

faster, more deterministic, and power-efficient. It provides a development experience for creating robot hardware accelerators similar to the standard ROS development flow.

“Robots are networks of networks, with sensors passing data to compute technologies and actuators. These networks can be understood as the nervous system of the robot. Like with the human nervous system, low latency and real-time information are fundamental for the robot to behave coherently. Faster robots (or with more dexterity) require faster computations. Hardware acceleration with ROBOTCORE™ empowers exactly this. With ROS being the common language roboticists use to build “robot brains”, ROBOTCORE™ extends ROS and deals with GPU and FPGA vendor-proprietary libraries, empowering hardware acceleration across silicon vendors”. – **Víctor Mayoral-Vilches**, Acceleration Robotics, Founder.

Additional resources

- ROBOTCORE™ performance benchmarks
- Sign up for Hardware Acceleration News in Robotics
- Join the ROS 2 Hardware Acceleration Working Group

About Acceleration Robotics

Acceleration Robotics is a firm focused on designing customized brains for robots to hasten their response time. Founded by top robotic experts to deliver semiconductor building blocks for robots, the company leverages GPUs and FPGAs to create custom hardware that speeds up a robot's operation.

ACCELERATION ROBOTICS

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