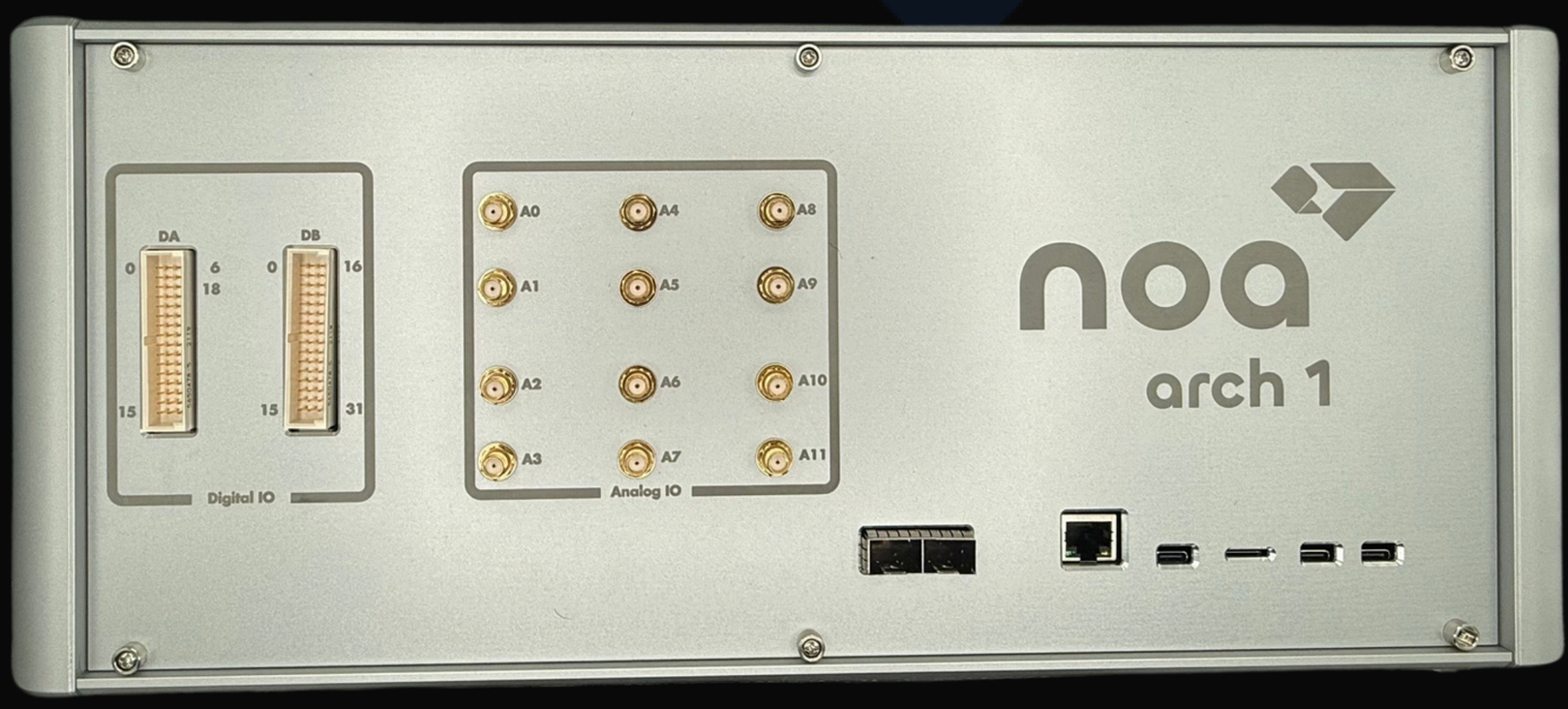
noa arch 1



noa arch 1 empowers you with the precision, speed, and reliability needed for all your applications.

Take your projects to the next level with **noa arch 1**. Contact us today to discuss your use case and integration needs.

Industrial applications

- Power electronics (inverters, converters, motor drives, smart grids)
- Automotive & aerospace embedded control validation
- Renewable energy systems & microgrid simulation
- Industrial automation & motor control development
- Real-time control hardware prototyping & verification

KEY TECHNICAL FEATURES

FPGA-Accelerated Real-Time Processing

- Powered by AMD/Xilinx Zynq™ UltraScale+™ MPSoC XCZU5EV-2SFVC784I
- High-speed parallel processing with deterministic execution
- Essential for time-critical applications in power electronics and automotive systems

High-Fidelity Analog & Digital I/O

- up to 12 14-bit 100 MSPS analog outputs
- up to 12 14-bit 100 MSPS analog inputs
- Sub-microsecond latency signal acquisition
- 52 configurable digital I/Os

Optimized for Power Electronics & Control Systems

- Real-time simulation of inverters, motor drives, and power grids with high-frequency switching capabilities
- Closed-loop control validation with ultra-low latency feedback mechanisms
- Supports high-speed PWM generation and synchronization with external controllers

Seamless Software & Model Integration

- Pre-configured PYNQ 3.0 image included, providing an intuitive and streamlined setup
- Native support for MATLAB/Simulink, Python, and VHDL/Verilog for FPGA customization
- Free FPGA IPs provided

Scalable & Modular Architecture

- Designed for extensibility, supporting modular expansions for advanced applications
- FPGA reconfigurability allows for custom signal processing, model integration, and application-specific hardware acceleration

Enterprise-Grade Storage & Networking

- 256 GB NVMe SSD for high-speed data logging, enabling detailed real-time analysis
- Dual SFP+ 10 Gbps connectors for high-bandwidth networking and multi-node distributed HIL applications
- 1Gbps Ethernet link for seamless integration into industrial networks and cloud-based simulation workflows

CONTACT US

info@rexys.io

80 Rue Saint-Laurent W
Suite 220
Longueuil, QC J4H 1L8