EPIC MEMBERS — NEW PRODUCT RELEASE · 9 JUNE 2026

Acqiris SA6

12-bit Data Acquisition Card with FPGA signal processing

2 channels · up to 1 GS/s · the most compact PCIe DAQ in its class

Presented by Giovanni Lucia – DAQ Solutions Manager
Acqiris SA - Signal Acquisition Solutions · Plan-les-Ouates / Geneva, Switzerland

COMPANY OVERVIEW

Your dependable OEM partner in signal acquisition

Acqiris develops, manufactures and supports innovative high-speed data-acquisition solutions — dedicated to OEMs in medical, industrial and research instruments.

A dependable partner

Easy industrialization, performance stability and a low total cost of ownership — reducing your risk and time-to-market.

27+ years of DAQ expertise

Proprietary ADC / digitizer technology; an independent company since 2017 with multinational-grade quality processes.

Full product life-cycle support

From design-in and customization through manufacturing and end-of-life — hardware, firmware, software and engineering.

27+

years in ADC & digitizer technology

- 100% focused on the OEM business
- Hardware + firmware + software + engineering service
- Quality tested for industrial & medical use

Member of EPIC · SPIE

TECHNOLOGY & PRODUCTS

More than a digitizer: complete DAQ Solutions

Every Acqiris solution combines four building blocks, fine-tuned to your application:

Hardware

High-speed DAQ PCIe cards & modules (a.k.a. ADC cards / digitizers).

Firmware

Flexible real-time signal processing & data reduction in the FPGA.

Software

Drivers, API, GUI and code examples — Windows & Linux.

Engineering

Dedicated support and customization services for OEMs.

Three application-dedicated Solution packages — all compatible with the new SA6:

AQOCT

SS-OCT imaging

Medical & industrial Swept-Source OCT: real-time K-space resampling, FFT, averaging.

AQTOF

Time-of-Flight MS

Mass spectrometry: real-time averaging, peak detection and thresholding.

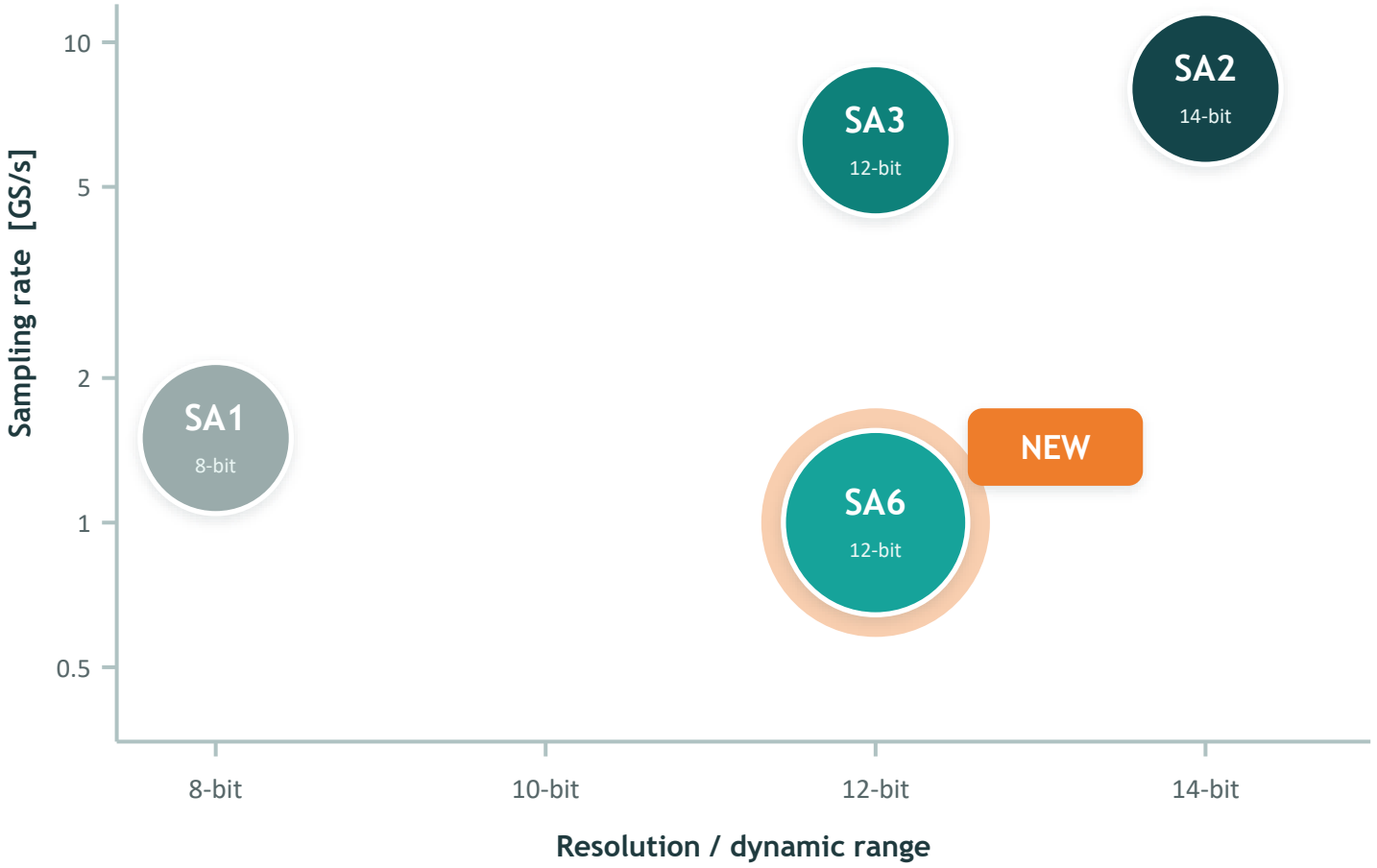
AQDAQ

Data acquisition

DFOS, NDT, SAM, ultrasound, LiDAR & laser: multi-trigger, streaming, baseline.

PRODUCT PORTFOLIO

Where the SA6 fits in the DAQ platform



SA1 — Entry

8-bit · up to 2 GS/s · cost & size optimized

SA6 — Essential (NEW)

12-bit · up to 1 GS/s · ultra-compact, clinical-grade fidelity

SA3 — Optimized

12-bit · up to 6.25 GS/s · 2–3 ch, galvo control

SA2 — High performance

14-bit · up to 8 GS/s · highest dynamic range

NEW

Introducing the Acqiris SA6

Superior SS-OCT performance in the most compact PCIe form factor in its class.

Compact by design

Half-length PCIe with integrated cooling — most compact in its class, ~20 W.

Clinical-grade fidelity

12-bit at up to 1 GS/s on 2 channels · 9.3 ENOB low-noise front end.

Proprietary FPGA resampling

Unique IP optimizes the Point Spread Function for superior resolution & sensitivity.

High-throughput

Streaming with direct GPU transfer (RDMA) for low-latency reconstruction.

SA6 — TECHNICAL HIGHLIGHTS

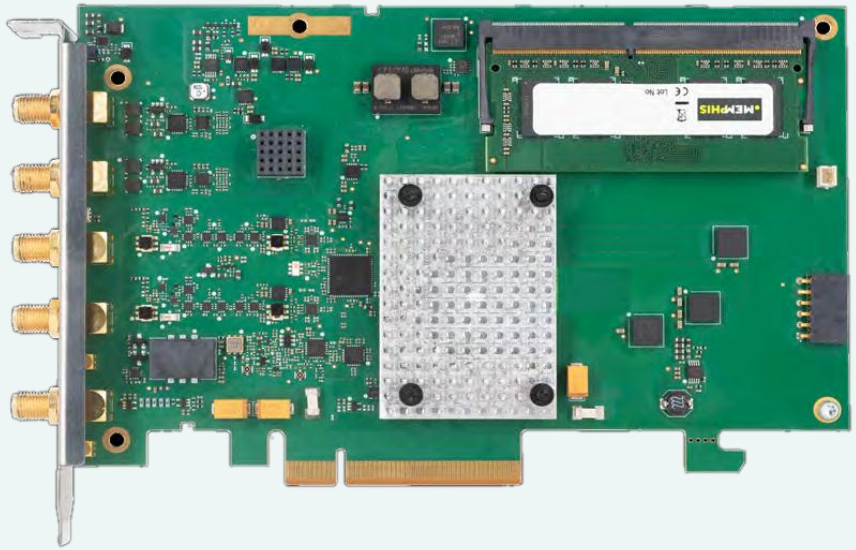
Excellent signal fidelity in a tiny footprint

12-bit	1 GS/s	500 MHz	7 GB/s
resolution	2 channels	bandwidth (DC-coupled)	streaming + GPU RDMA

Innovative low-noise front end

- 9.3 ENOB · 59.2 dB SNR · 73.4 dBc SFDR @ 100 MHz
- Flexible full-scale range: 250 mV / 500 mV / 1 V / 2 V (software-selectable)
- Fine channel delay alignment with ps resolution
- Dual accurate trigger inputs · 25 ps trigger time precision
- 50 fs sampling clock jitter · 4 GB acquisition memory

More than a digitizer: real-time on-board FPGA processing, programmable I/O, half-length PCIe x8, < 351 g, only ~20 W.

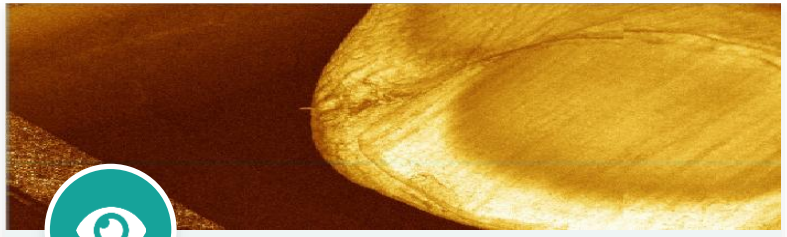


SA6 open view — FPGA, DDR4 memory & proprietary low-noise front end

APPLICATIONS

Built for demanding OEM measurement systems

Real-time on-board processing reduces data volumes and speeds up analysis — fine-tuned per application.

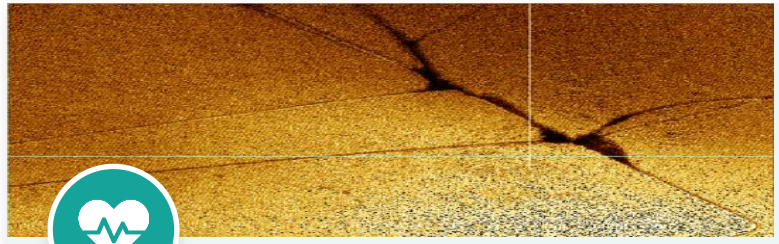


SS-OCT Medical Imaging

Swept-Source OCT — skin, retina & anterior-segment imaging.

Fiber-Optic Sensing (DFOS)

Long-range strain, temperature & acoustic sensing.



Ultrasound & NDT

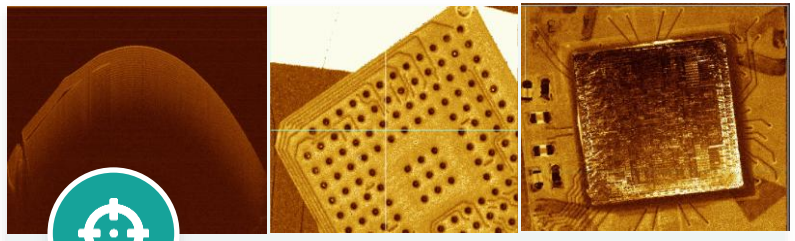
Electronics, materials & coatings — non-destructive inspection.

Mass Spectrometry (TOF)

Time-of-Flight MS: high trigger rates and real-time averaging.

Laser & LiDAR

Laser processing, ranging and high-frequency physics.

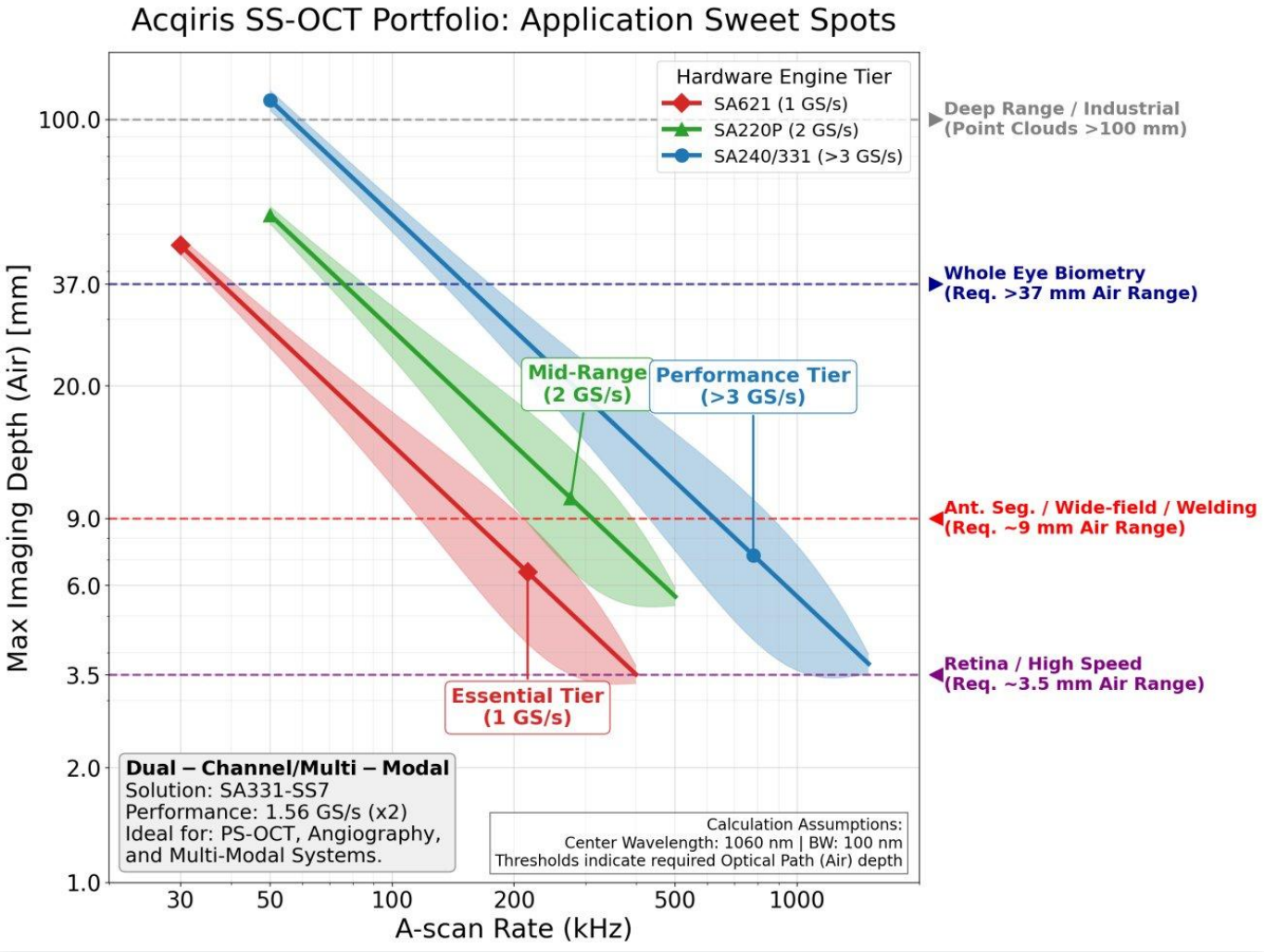


SS-OCT Industrial imaging

Thickness, coatings & material cross-sections.

WHERE THE SA6 FITS

SS-OCT application sweet spots



SA6 — the Essential SS-OCT tier

1 GS/s · 12-bit

- Sweet spot: standard-resolution retina (~3.5 mm) & high-volume laser welding
- Clinical-grade clarity & premium SFDR
- TCO-optimized — no over-engineering
- On-board OCT engine: K-resampling · FFT · averaging

Example of super compact integration of the SA6 in a mini-workstation

THE ACQIRIS ADVANTAGE

A complete, production-ready solution

Not a component — every Acqiris product bundles hardware, firmware and SDK, pre-validated and ready to integrate.

A complete solution

Hardware + firmware + SDK + a ready-to-use OCT GUI — pre-validated, not just a card.

Proprietary resampling IP

Real-time, optimal Point Spread Function for maximum image sharpness & contrast.

Strategic cost of ownership

Sweet-spot performance (12- or 14-bit) — no over-engineering, reliable and cost effective.

Lifecycle & supply-chain guarantee

We handle components & obsolescence for the life of your medical or industrial device.

Compact, system-ready I/O

Half-length PCIe with I/O mezzanine to drive galvos, light sources & triggers directly.

Make vs. Buy

"Your 18-month R&D project, in a box."

- Start building your application today
- Focus on your IP — optics, probes, diagnostics
- Validated real-time IP: 3rd gen, 10 years' experience
- Risk transferred — we own the DAQ platform

Imagine what you can see…

…see what you can imagine.

The Acqiris SA6 — superior SS-OCT performance in the most compact PCIe form factor in its class.

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acqiris.com/hardware/12-bit-sa6

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