

# Product Data Sheet

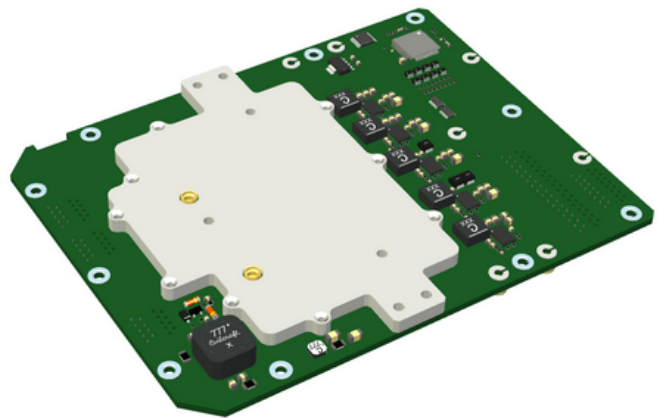
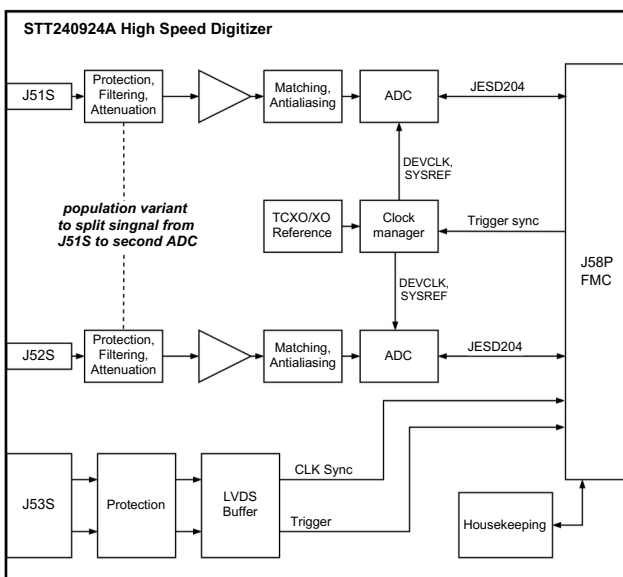
## High Speed Digitizer (STT240924A)

Spaceflight Electronics

Version 2.1 | 2025

### Product Description

The high-speed analog-to-digital converter module offers precise capture of fast transient signals with sampling rates up to 3 GSPS and resolution up to 14 bits. Engineered for harsh environments, these digitizers are ideal for spaceborne and scientific applications, where accurate timing and high-resolution signal capture are critical. LEO versions with reduced SWaP and radiation-hard versions for missions way beyond Earth's orbit are feasible.



### Product Features

- 1 or 2 ADC channels, each up to 3 GSPS, 14 bits, for two anodes or detectors in parallel
- Analog frontend can be tailored to the particular application — 1 input with power splitter, 2 independent inputs, flat group delay filters for time-domain applications, etc.
- LVDS or single-ended 50  $\Omega$  trigger input
- Up to 100 MHz clock input to synchronize to external clock domain

### Typical Applications

- Time-of-Flight Mass Spectrometers (TOF-MS) — to capture ion signals precisely
- Particle detectors — where timing and resolution are crucial
- High-energy physics and space instrumentation
- Dynode and MCP detector read-out
- Radar and LIDAR systems
- Telecommunications (e.g., 5G, satellite radio)

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