

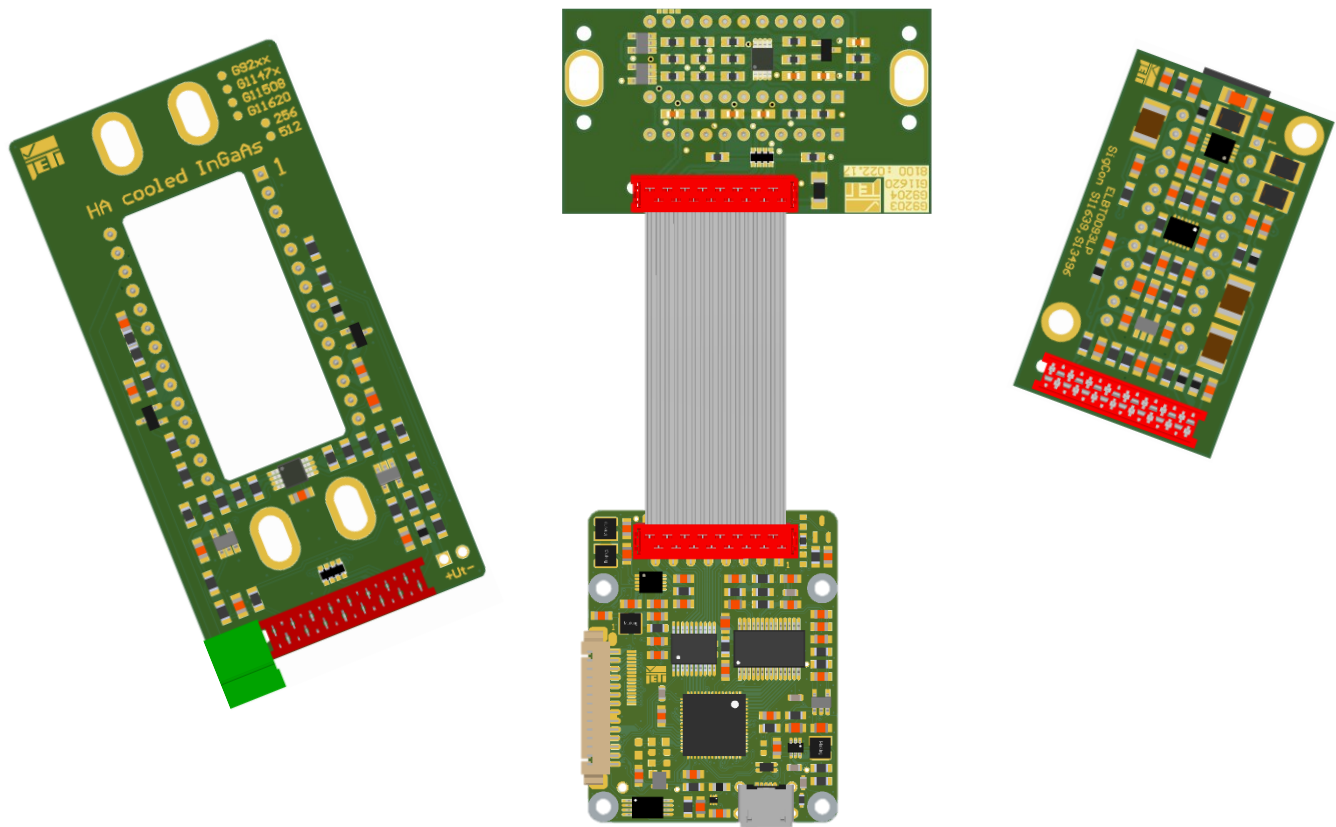
SDCM4

Line array readout electronics

The **SDCM4** line array readout electronics is a versatile powerful 32-bit RISC processor-based operation solution for miniature spectrometers.

It can control various imaging arrays and supports simultaneous Peltier temperature regulation and light source supply as add-on board solution.

It's ideally featured for embedded or mobile spectroscopic applications.



Supported sensors:

- S16514, 13496, S11639, S837x, ... (**CMOS**)
- S838x, S390x... (**NMOS**) (one board version available)
- G13913 (**InGaAs mini**) (only one board version – flex sensor)
- G11620, G92xx, ... (uncooled **InGaAs**)
- G11620, G11508, G1147x, G92xx, ... (cooled **InGaAs**)
- S14650/60, S1115x, S10420, S10140, S7030, ... (**BTCCD**)
- S14651/61, S1325x, S11850, S10141, S7031, ... (cooled **BTCCD**)
- Others on request

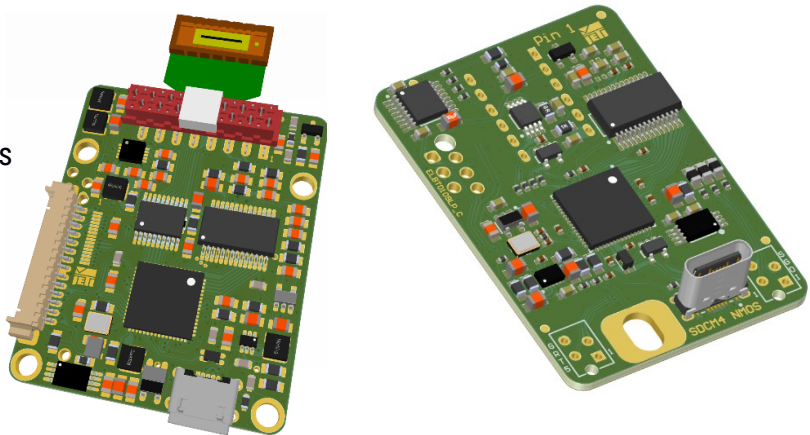
Specifications

The **SDCM4** spectrometer processor electronics has the following advanced features:

- Powerful 96 MHz MIPS 4K core-based RISC CPU
- 16 bit 5 MS/s ADC with programmable offset correction and gain
- Possibility of in field programming and firmware update by integrated bootloader
- Various on-board calculations in firmware (dark correction, averaging, binning, filters, ...)
- Firmware, that can be used in general application or user specific OEM applications in spectroscopy
- SCPI like control syntax for setting of operation parameters, configuration, measurement, data format, endianness, etc.
- User configurable digital-I/O and analog-Inputs
- USB High speed communication interface with up to 480 Mbit/s via virtual COM port driver
- LV-TTLUART communication interface 8N1 with up to 24 Mbit/s
- Digital trigger input LV-TTL
- Shutter/lamp control output LV-TTL
- Power supply via USB or external 5 V
- Stabilized 5 V power supply output
- Tiny PCB dimensions of 45 x 36 x 10 mm³

Customer specific adaptations:

- One-board-solutions for highly integrated applications
- Additional functionality and interfaces
- Special board-shapes
- Implementation of specific functionality in firmware



Add-on Board:

TEC-S

- Very accurate and highly efficient 3 A TEC-Driver
- Constant current source up to 2 A with advanced dimming features
- Optional onboard footprint for 14-Pin Butterfly SLED/LASER-Packages

