

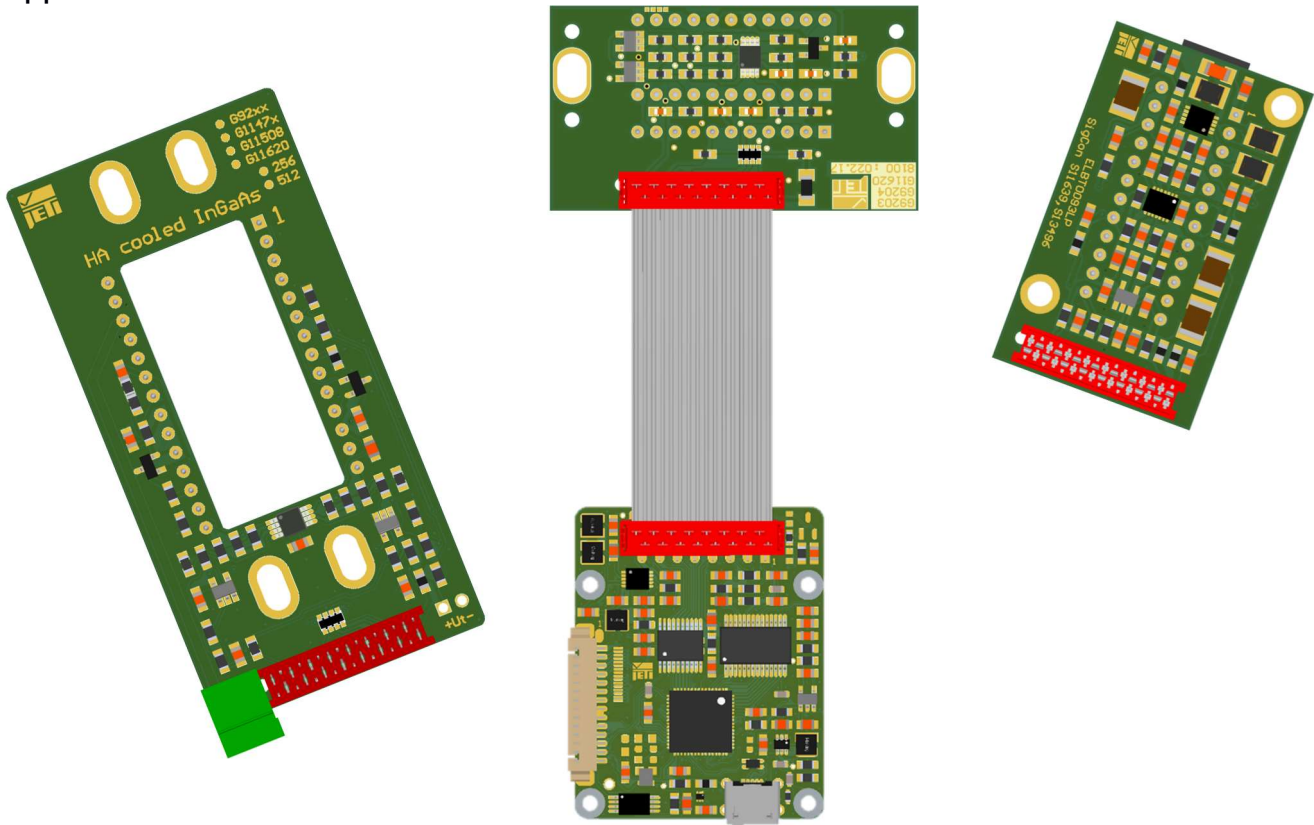
SDCM4

Spectrometer Processing Electronics

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

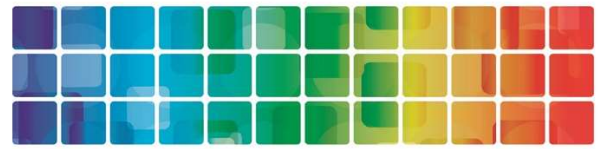
It can control various imaging arrays and supports simultaneous Peltier-temperature regulation as add-on board solution.

It's ideally featured for embedded or mobile spectroscopic applications with optional regulated current output for integrated light sources and support of battery powered applications.



Supported sensors:

- S11639, S14614 (CMOS)
- S390x, S593x, S838x,... (NMOS)
- G13913 (InGaAs mini)
- G1147x, G11620... (cooled InGaAs)
- S10420, S11071, S14650 ... (BTCCD)
- S11511, S11850, S1014x... (cooled BTCCD)
- Others on request



Specifications

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

- Powerful 200 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
- SPI master or slave communication interface with up to 48 Mbit/s
- 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 low cost applications
- Additional functionality
- Specials board-shapes
- Implementation of specific functionality in firmware

Add-on Boards:

TEC-S

- Very accurate and highly efficient 3 A TEC-Driver
- Constant current source up to 2 A with advanced dimming features
- Battery functionality

Communication Add-on-board (coming soon)

- Additional Interfaces
Bluetooth, LAN(POE),...

