Spectrometric solutions from components to systems

JETI TECHNISCHE INSTRUMENTE GMBH

PE60_2

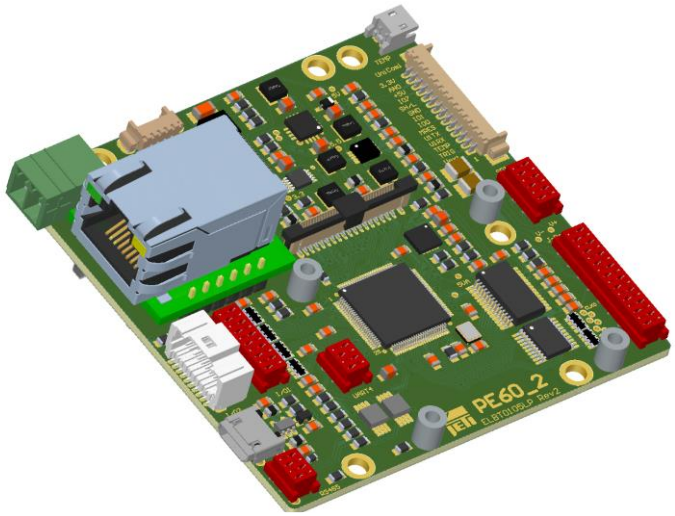
Line array read out electronics

The **PE60_2** line array readout electronics is a versatile powerful 32 bit RISC processor based operation solution for spectrometers. It is especially suited for process control applications.

It can control most of the popular spectroscopy image sensors with JETI's wide range of available signal conditioning boards.

PE60_2 has many industrial interfaces like Ethernet or RS232/485 onboard and is stackable with add-on TEC-S electronics for precise temperature regulation of image sensors equipped with Peltier element.

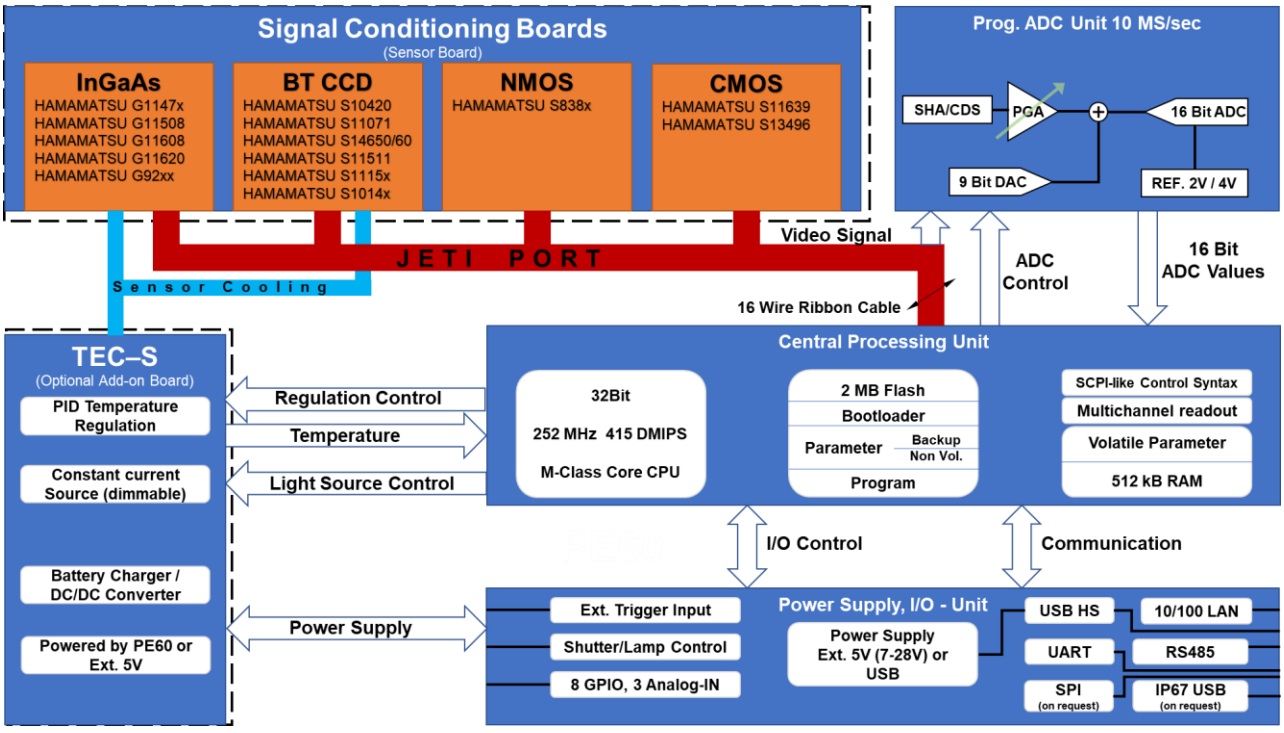
The **PE60_2** line array readout electronics has the following advanced features:



- 16 bit, 10 MS/s, 2 channels ADC with programmable offset correction and gain, capable sample/ hold and correlated double sampling
- DC/DC converter on board to generate additional voltages for image specific sensor needs from supply voltage
- 8 GPIO Pins, 3 Analog Inputs (12Bit, 18Msps) (e.g. periphery control or ambient temperature measurement)
- Shutter/Lamp control Output LV-TTL (JETI high speed piezo Shutter compatible)
- 252 MHz MIPS 4K core based RISC CPU with 2 MB Flash Program Memory and 128 KB RAM
- In field programmable by integrated bootloader
- Firmware can utilize general application or user specific OEM applications in spectroscopy
- SCPI compliant control syntax for setting operation parameters, configuration, measurement, data format, endianes, etc.
- Standardized JETI-Port allows to control the JETI signal conditioning units for CMOS, NMOS, CCD, BTCCD and InGaAs image sensors
- Communication interface USB 2.0 High-Speed (USB CDC class)
- Communication interface RS232, RS485 up to 2.5Mbps
- Communication interface LV-TTL-UART 8N1, up to 25Mbps (pre defined 3000000, 921600, 230400, 115200 or 38400 bit/s)
- Communication interface SPI Master or Slave with up to 50 Mbit/s, mode 1,2 or 3 (application specific OEM solution)

Specifications

Power supply	USB powered, 5V external or 7-28V DC
Operation current	up to 500 mA
ADC resolution	16 bit, 2 bit RMS (without oversampling), 4 bit INL, no missing code
Sampling speed	Max. 10 MS/ s
Sampling mode	Sample and Hold: 1,4 - fold prog. oversampling or Correlated Double Sampling
Analog video inputs	2 (odd and even), programmable for positive or negative video signals
Input full scale range	2 V or 4 V, programmable
Gain	1 … 5 programmable in 64 steps
Offset	External compensation or programmable up to +/- 300 mV
Supported sensors	S837x, S11639, S13496, … (**CMOS**) S838x, … (**NMOS**) G13913 (**InGaAs** mini) G11620, G92xx, … (uncooled **InGaAs**) G1147x, G11620, G92xx, … (cooled **InGaAs**) S10140, S10420, S11071, S1115x, S7030, … (**BTCCD**) S10141, S11511, S11850, S1325x, S7031, … (cooled **BTCCD**) Others on request



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Technical data may be changed without notice