Spectrometric solutions from components to systems

JETI TECHNISCHE INSTRUMENTE GMBH

PE6000

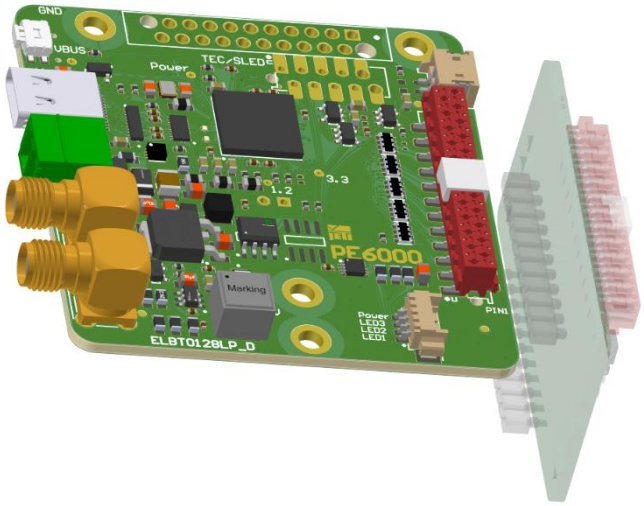
Line array readout electronics

The PE6000 is a **USB 3.2 SuperSpeed** spectrometer electronic for highest speed applications.

It enables 10MHz sensor clock with continuous data output signal, which equals 34000 Spectra/s for 256-pixel sensors.

It's ideally featured for ultra highspeed spectral measurements with a very small form factor, low power demand and economic price.

The **PE6000** spectrometer processor electronics has the following advanced features:

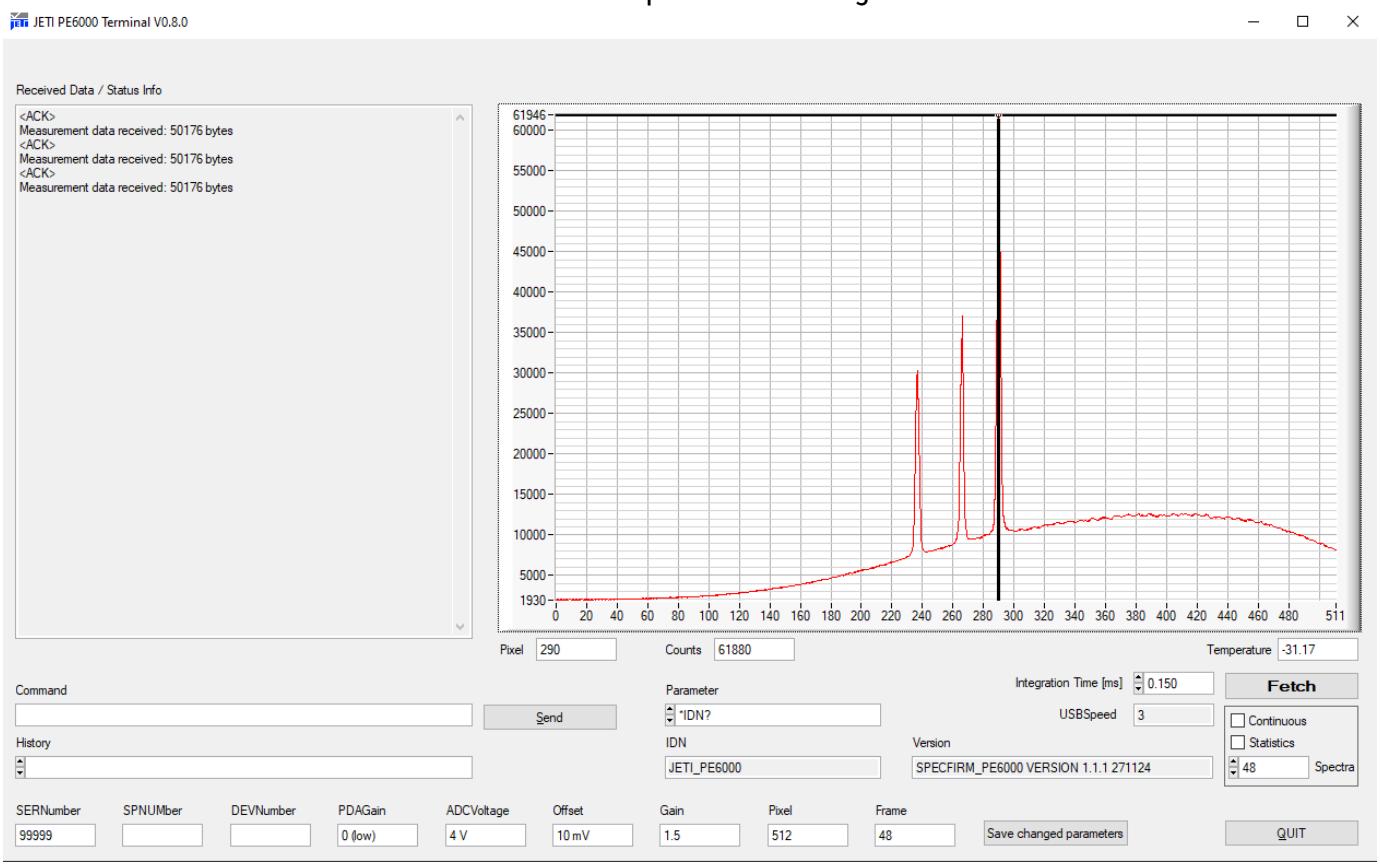


- True and continuous **10 MS/s 16-bit Data-Rate, ADC** with programmable offset correction and gain
- **USB 3.2 Gen 1** compliant communication interface with up to 5 Gbit/s
- **<2.5W Power demand** in full speed data streaming mode
- **Plug and Play evaluation Software** for an easy start into custom projects
- **200MHz 32-bit ARM core** for configuration and additional features
- **Firmware**, that can be used in general, or user specific OEM applications
- Possibility of in field programming and **firmware update** via USB by integrated bootloader
- Digital **trigger** in- and output LV-TTL signals
- **SCPI like control syntax** for setting of operation parameters, measurement configuration etc.
- 3 User configurable digital-**Outputs** for status LED's
- **Power supply** via USB or external 6-28 V
- **USB-PD 3A/5V** profile supported
- Stabilized 5 V **power output**
- Compatible with multiple Hamamatsu image-line-sensors
- small PCB **dimensions** of 56x58x14 mm³
- TEC-S Add-on board with **LED/SLED/LASER driver** and thermal regulation available
- **Compatible** with IBSEN I-MON Spectrometers

Specifications

Power supply	USB powered or 6-28 V DC externally
Operation current	<250 mA @5V
ADC resolution	16-bit, 2-bit RMS, 4-bit INL, no missing code
Sampling speed	10 MS/ s
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	G11620 series (**InGaAs**) S11639/S13496/S165xx series (**CMOS- planned**) G14714 series (**InGaAs - planned**)

JETI PE6000 Terminal Software for evaluation and parameter settings:



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