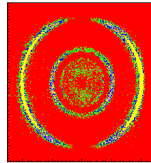


The USB-IO1



RoentDek

Handels GmbH

Supersonic Gas Jets
Detection Techniques
Data Acquisition Systems
Multifragment Imaging Systems

The **RoentDek USB-IO1** is a unit for digitally measuring/setting analogue voltages (0-10V) and digital switch states (high/low).. It is controlled via USB by a PC.. Simple C++ example code, a LabView example and direct integration into the data acquisition software *CoboldPC* are provided. The **USB-IO1** can for example be used to control **RoentDek** high voltage power supplies (*HV2/4* and *BLASET3* and higher). Among other designated applications is vacuum pressure logging with certain gauges (as obtainable from **RoentDek**).



Generally, experimental parameters (e.g. the beam current in storage rings or accelerator devices) can be logged/controlled in correlation with acquired data.

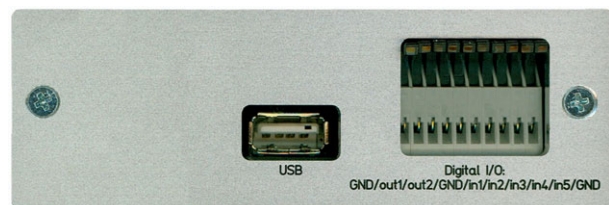


Figure: Front and rear panels of the USB-IO1 device with 2 LEMO analogue in-/output sockets, optional sub-D adapter (left picture), 5 digital input / 2 digital-output connections and the USB-port for the PC-connection.

Summary of features:

- 2 analogue outputs and 2 analogue inputs (0-10V, typ. 2mA, max. 5mA)
- resolution: input 14bits, output 16bits
- Input non-linearity: $\pm 3\text{mV}$ (max.) at 0 .. 10V (equivalent to 0.03%)
- Output non-linearity: $\pm 6\text{mV}$ (max.) at 0 .. 10V (equivalent to 0.06%)
- Zero offset for output: 30mV (max.)
- Zero offset for input: 3mV (max.)
- Input resistance of analogue inputs: 100kOhm

- 5 digital in (probes connection to ground potential, max. 5V, 1mA)
- 2 digital out (open collector: act like 2 controllable switches, max. 24V, 2mA)
- Temperature range: 0...40 degrees Celsius