SECO-ULP-RANGER-GEVB
Low power measurement tool with adjustable voltage source

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Functional diagram

USB

FTDI

2 USB interface

SPI, GPIO port

3 wire, GPIO port

RSL10

GPIO port

FPGA

SPI

ADCs

Range

INPUT
(Measurement terminal)

GPIO port

GPIO port

Trigger input

LED
DPS – Top view

- EMI2121 (USB filter)
- FT4222 (FTDI USB-SPI bridge)
- RSL10
- FPGA
- CS5173 (DCDC)
- MC79L12 (LDO)
- MC78L12 (LDO)
- NCD98010 (SAR ADC)
- MC33077 (op amps)
DPS – Bottom view

- CAT24C512 (EEPROM)
- CAT5140 (Dig. Potentiometer)
- NSS12601 (power BJT – regulation)
Power supply from 0V to 3.6V (minimal step 0.01V)
Manual/Automatic scaling of the current range
Dynamic and static current measurements
Adjustable Sampling rate: 1kS/s - 1MS/s
Static current measurement ranges: 1µA to 100mA
Adjustable trigger (1/0) to start the measurement
USB Type-A to Mini-B cable
SW features

Windows® OS (7,8,10)
5 different predefined options for changing the supply voltage
Possibility of automatic name for files during upload
Possibility to set sample rate and recording time before recording
Display of the current measured value
The ability to scale and reduce the chart using the mouse
Possibility to save the waveform as an image
ULP Ranger SW – slow measurement

Actual: 0,91 mA
ULP Ranger SW – set file

Current range:
- 100mA
- 10mA
- 1mA
- 100μA
- 10μA
- 1μA

Index options:

0,88 mA (144)
The waveform display – manual range measurement (RSL10)