FOR ENERGY EFFICIENT INNOVATIONS

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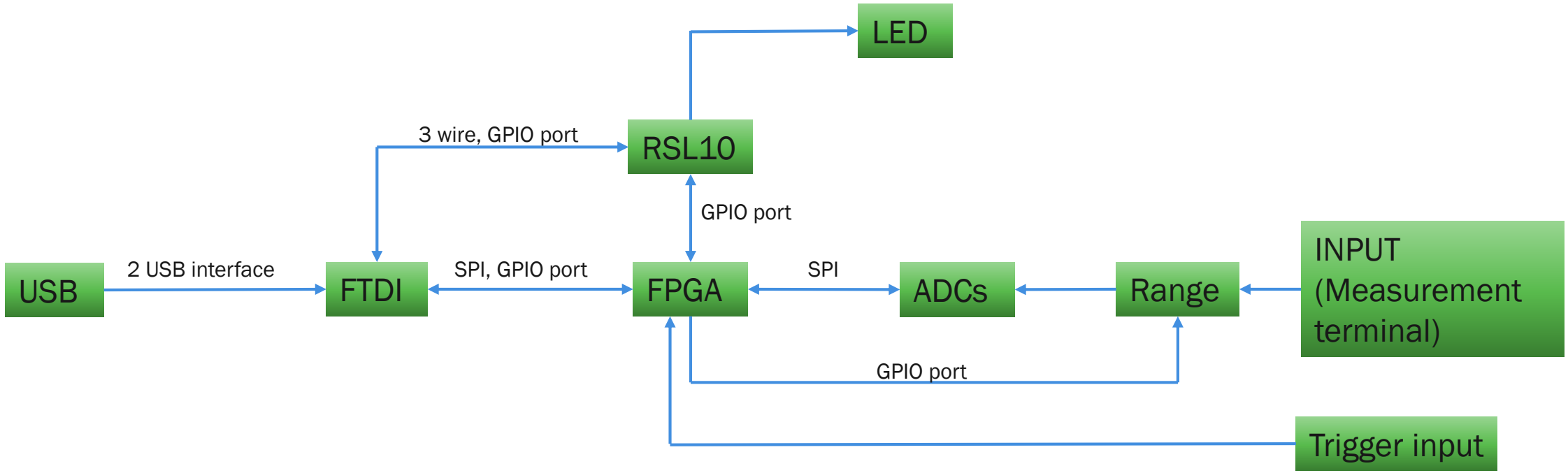
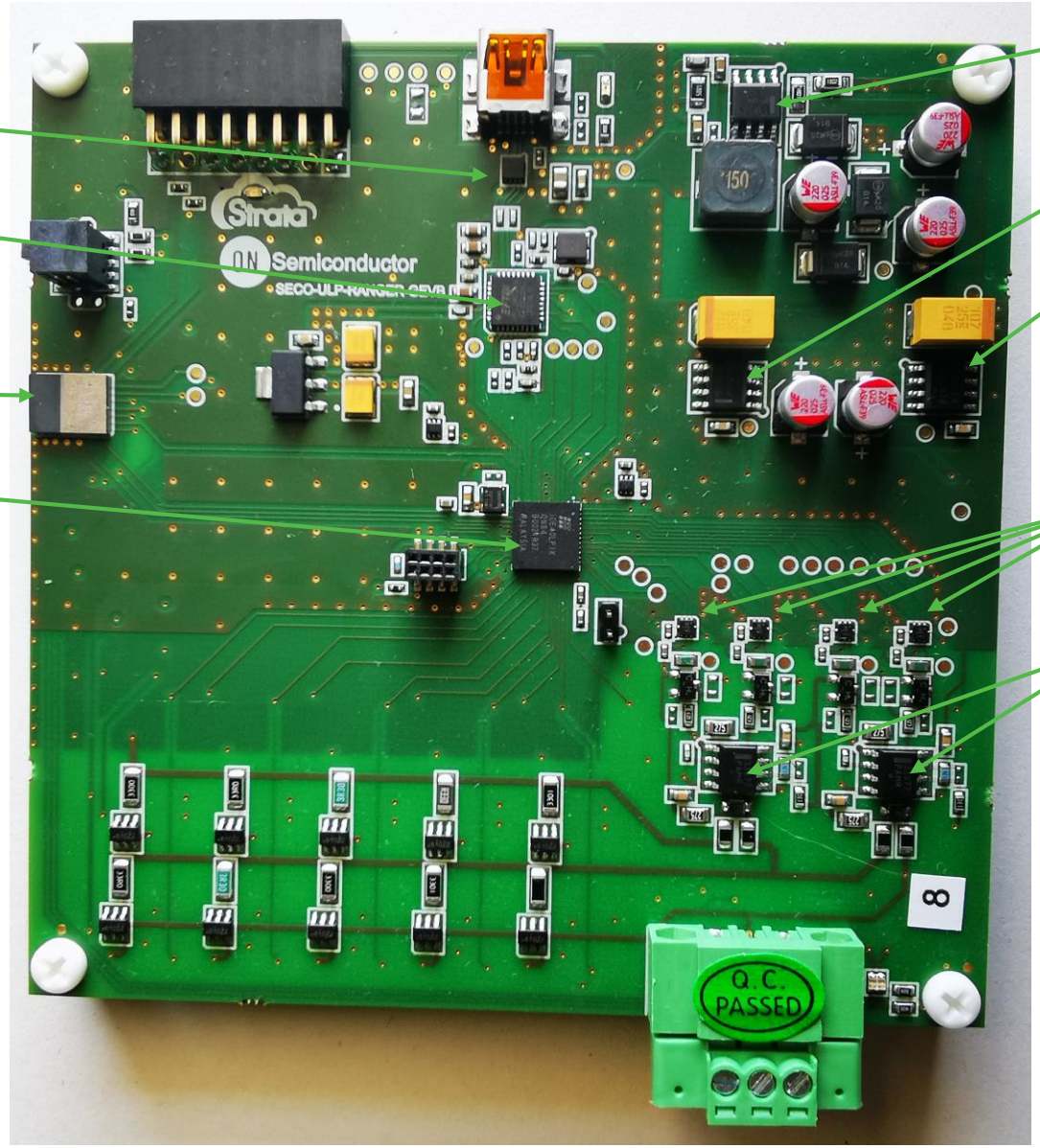
SECO-ULP-RANGER-GEVB
Low power measurement tool with adjustable voltage source

Maros Duratny

Functional diagram



DPS – Top view



EMI2121 (USB filter)

FT4222 (FTDI USB-SPI bridge)

RSL10

FPGA

CS5173 (DCDC)

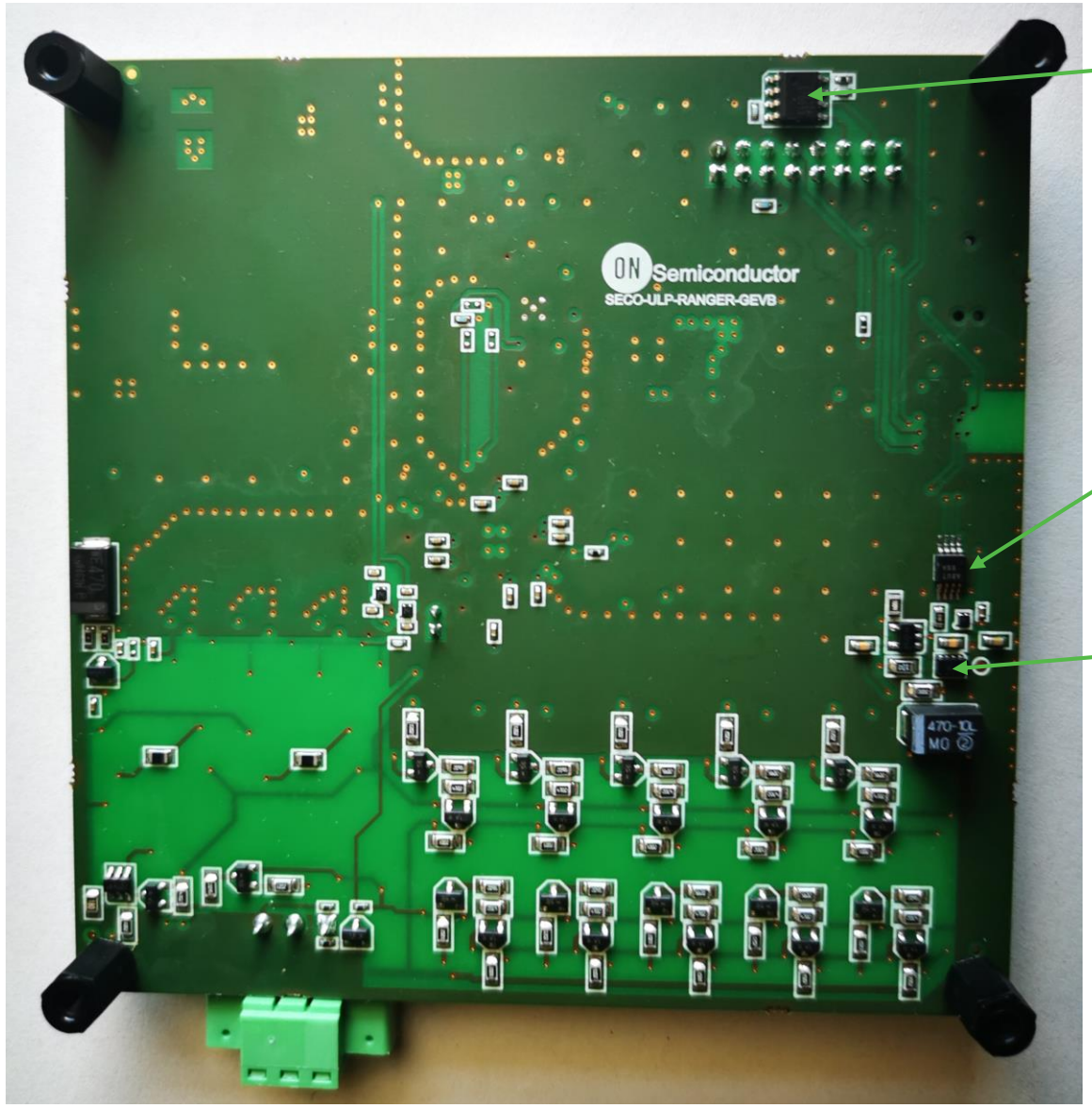
MC79L12 (LDO)

MC78L12 (LDO)

NCD98010 (SAR ADC)

MC33077 (op amps)

DPS – Bottom view



CAT24C512 (EEPROM)

CAT5140 (Dig. Potentiometer)

NSS12601 (power BJT – regulation)

HW features

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

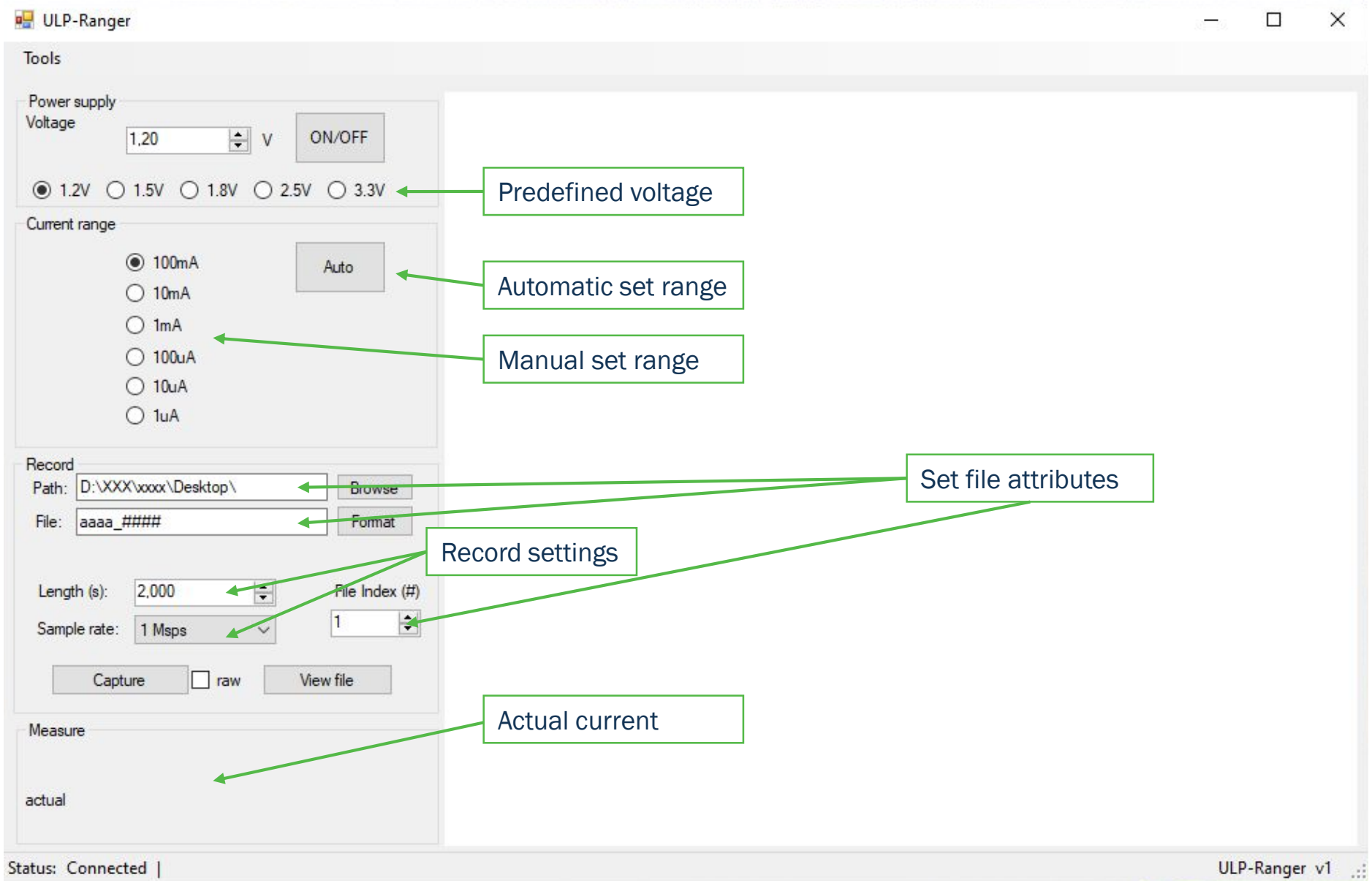
Possibility to set sample rate and recording time before recording

Display of the current measured value

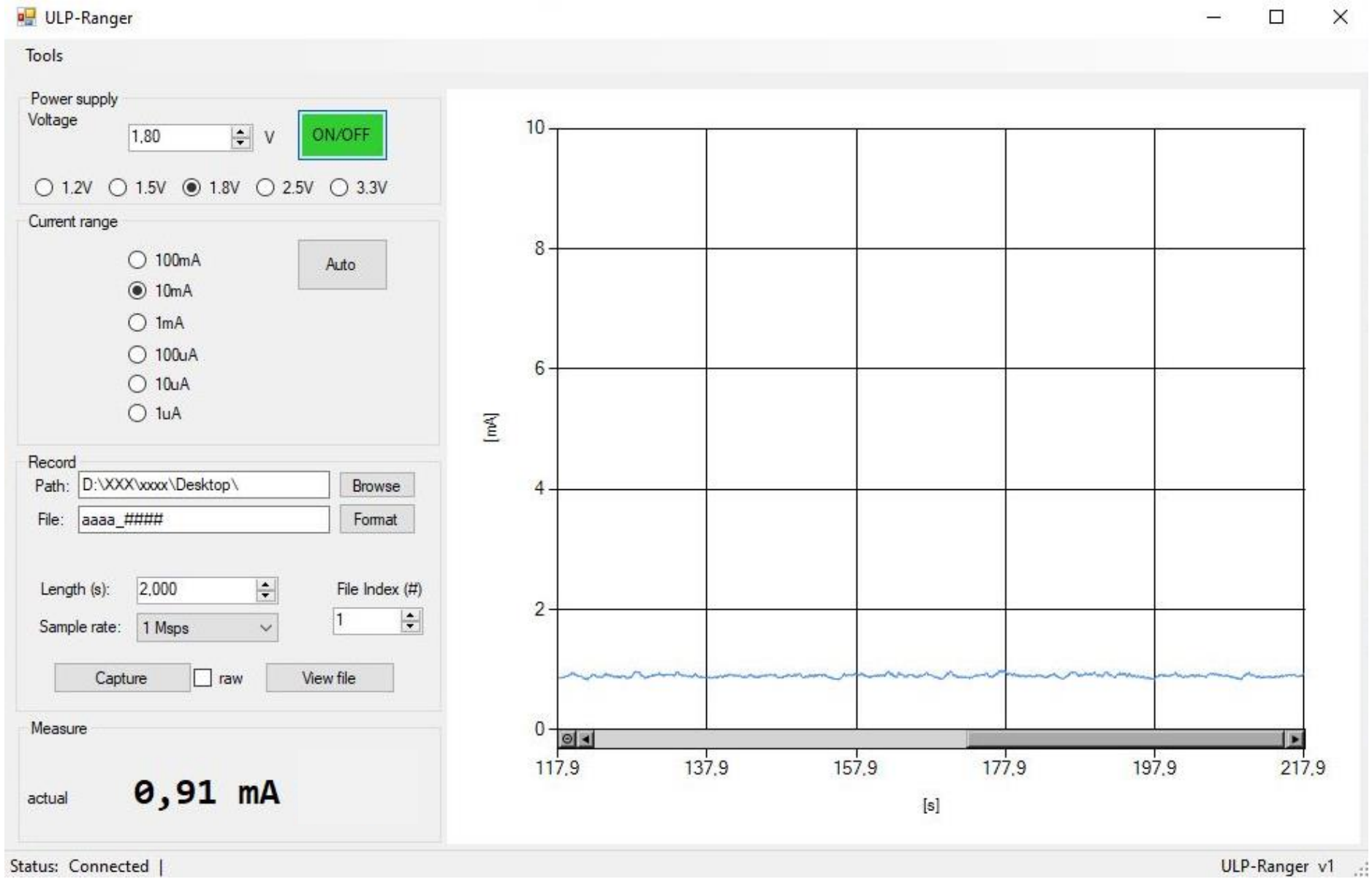
The ability to scale and reduce the chart using the mouse

Possibility to save the waveform as an image

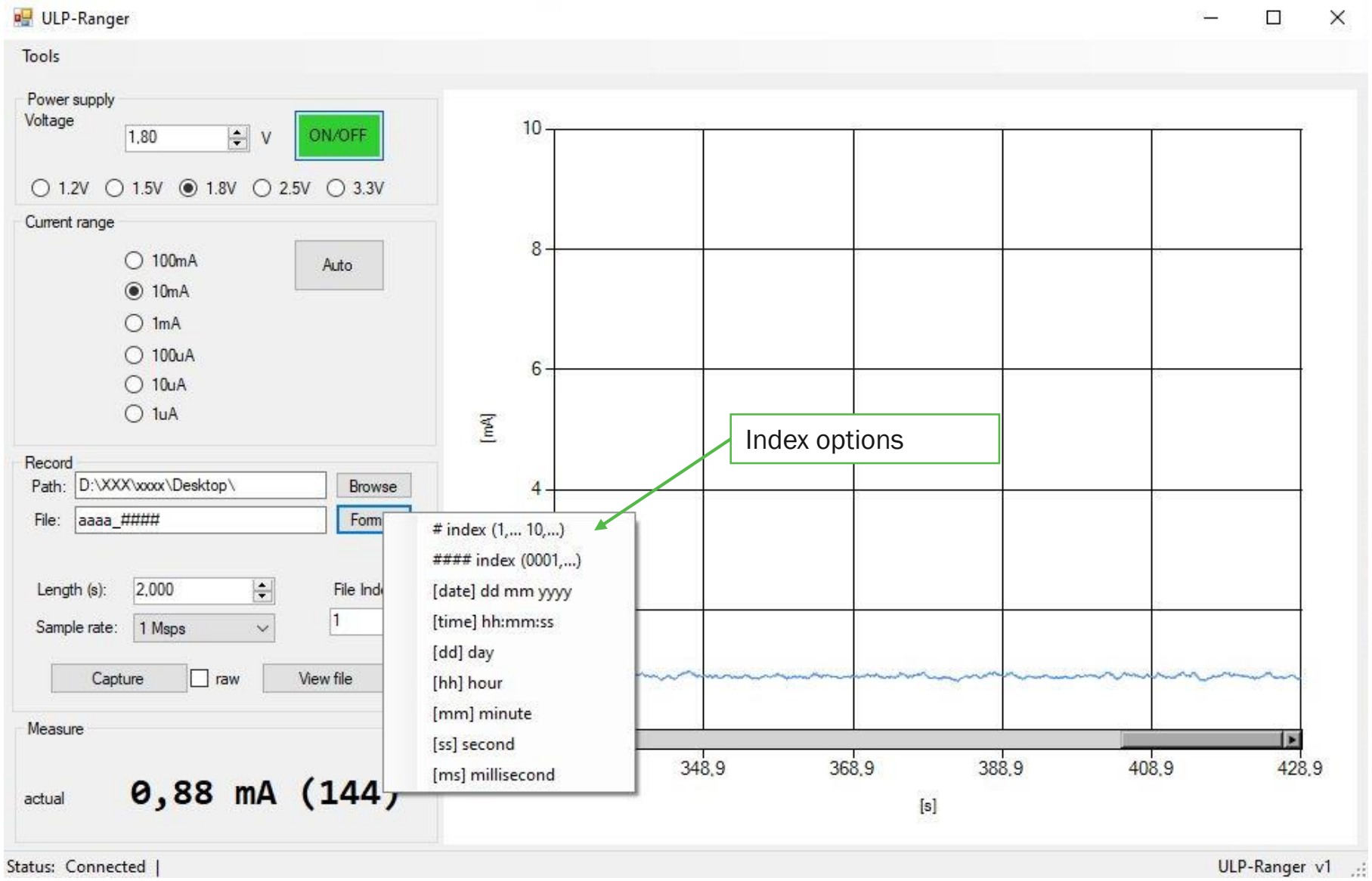
ULP Ranger SW



ULP Ranger SW – slow measurement



ULP Ranger SW – set file



The waveform display – manual range measurement (RSL10)