

# Requirements to the GUI

## for working with digitized signals (May 2025)

In order to completely substitute the Oscilloscopes with analog signals from IS-devices (incl. ACCT) the following functions have to be realized in a GUI for digitized signals:

- **Basic osci functions:**

- possibility to show multiple signals in one chart (in different colors)
- possibility to move the “zero-point” ( $Y=0$ ) and to adjust the amplitude (Y-scale) of each signal separately
- possibility to set “tagging” (vertically and horizontally)
- basic math functions for “tagging” (+, -,  $\Delta$ )
- sample averaging of signals (2x, 4x, 8x, ...)
- screenshot option

- **Trigger:**

- possibility to change the “trigger event” in a simple way (for signals from different ion sources)

- **Operation mode:**

- sample rate up to 50 Hz
- pulse length up to 7 ms