RFbeam

K-LD7 PYTHON CODE EXAMPLES

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1　How to set up the python environment

It is recommended to use the Spyder python environment to run the scripts. You can skip the following steps if you use another python environment.

- Download the anaconda distribution for python 3.7.
  https://www.anaconda.com/distribution/
- Open Spyder (anaconda3) from start menu.
- Write into the Spyder console "`conda list`".
- Make sure that the packages "matplotlib", "numpy" and "pyserial" are installed. If a package isn't installed, install it by entering "`conda install packagename`" into the Spyder console.
- Enter the command "`%matplotlib qt`" into the Spyder console. By entering the command, the plots will be created in a separate window, instead of in the console. The command must be entered after every restart.
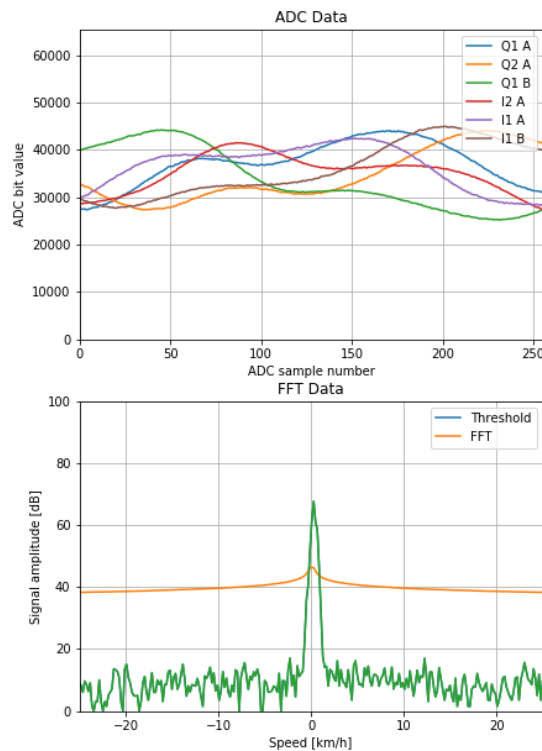
2　How to execute the code examples

- Connect the K-LD7 to the X2 and X4 connector of the evaluation kit.
- Connect the FTDI cable to the X1 connector of the evaluation kit. The black wire of the cable has to be connected to the pin 1 of the connector X1.
- Connect the USB side of the FTDI cable with your PC and wait until the serial COM port driver is installed. If the driver does not install automatically, install it by double clicking the FTDI_setup.exe in the installer folder of the USB stick.
- Open one of the K-LD7 code example scripts with your python environment (ex. Spyder).
- Enter the corresponding COM Port on line 24.
- Run the script.

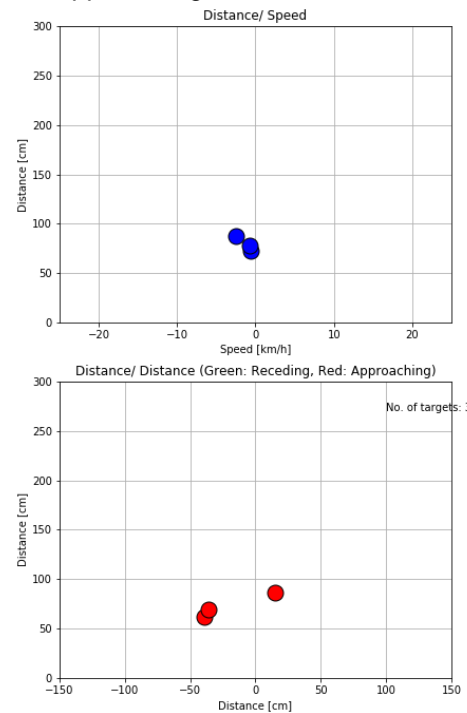## 3   Script overview

| ReadOut_KLD7_ADC_FFT.py	ReadOut_KLD7_PDAT.py	ReadOut_KLD7_TDAT.py
The ADC and FFT data get queried and displayed in diagrams.	This script shows the raw targets. These are FFT points, which extends the FFT-Threshold. The first diagram displays the speed [km/h] vs. the distance [cm]. The second diagram displays the x-distance and the y-distance of the targets [cm]. The distances are given by the distance and angle from the K-LD7 to the target. If the point is green, the targets is receding, otherwise the point is red and the target is approaching.	The tracked target is displayed in diagrams. The first diagram shows the speed of the target [km/h] vs. the distance [cm]. The second diagram the x-distance and the y-distance of the tracked target [cm]. If the point is green, the targets is receding, otherwise the point is red and the target is approaching.
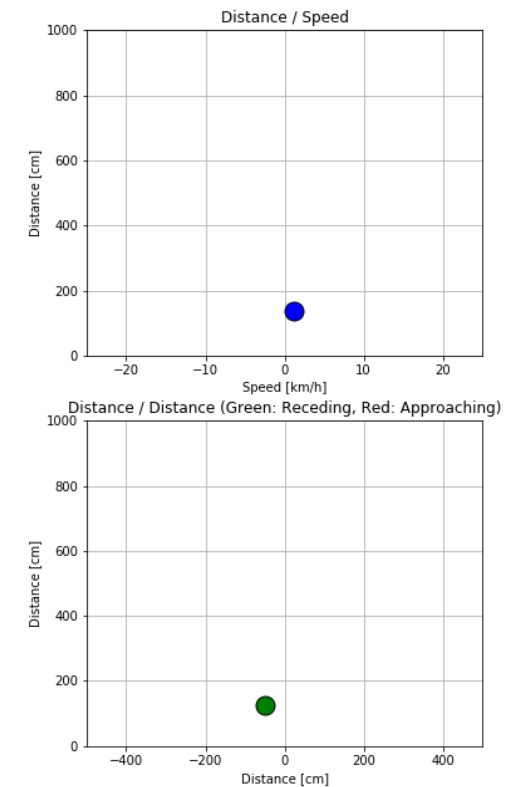
4   History

- Author: Florentin Nüesch, RFbeam Microwave GmbH, CH-9016 St. Gallen
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