Picture of a face profile,
taken with the HTPA32x32d L5.0

HTPAd USB application set
Plug and play evaluation of Heimann Sensor thermopile arrays

Our HTPAd USB application set is a complete open source plug and play board, which can be used to evaluate all the Heimann Sensor thermopile arrays of the HTPAd family.

It can be instantaneously connected to our graphical user interface for visualization ArraySoft v.2, which allows you to determine the sensor performance on the spot. Compared to our UDP application sets, no basic network knowledge is needed.

Source code and circuitry

The source code was generated by utilizing Microchips MPLAB Harmony for the USB connectivity. The main part of the source is written in a way that allows to use the same functions for every array type. The microcontroller used for the application set is a controller from the PIC32MZ family. For reprogramming of the board (not needed for evaluation purposes) a programmer like PICKit4 is needed.

Also, the circuitry of the board is provided.

Visualization and evaluation

The application set can be immediately connected via USB to our visualization tool ArraySoft v2 (windows platform), which allows to visualize the data, create own color schemes, stream the data into txt- and avi files, connect up to 10 recipients, add filtering such as IIR, FIR and median, and has even an alarm feature, which determines which pixel exceed a given temperature. The saved data in txt files can be used i.e. for later evaluations in MATLAB, Excel, etc.
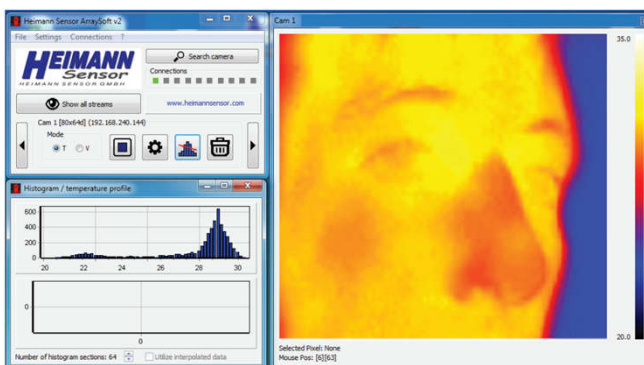
Appearance
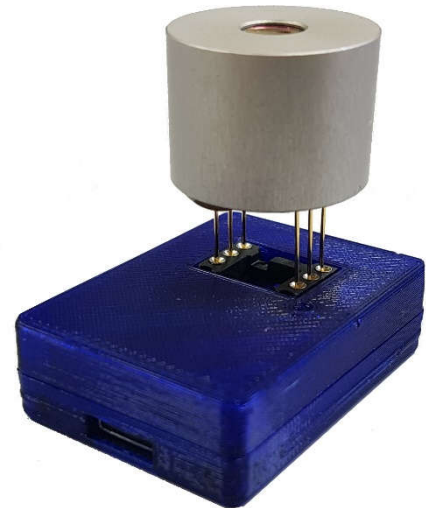
Scope of delivery

- Application set, prepared for the chosen sensor:
    - Soldered socket for given sensor type
    - Flashed with associated code for given sensor type
- USB cable (Type A to micro B)
- Schematic
- Source code
- Heimann Sensor ArraySoft v2

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