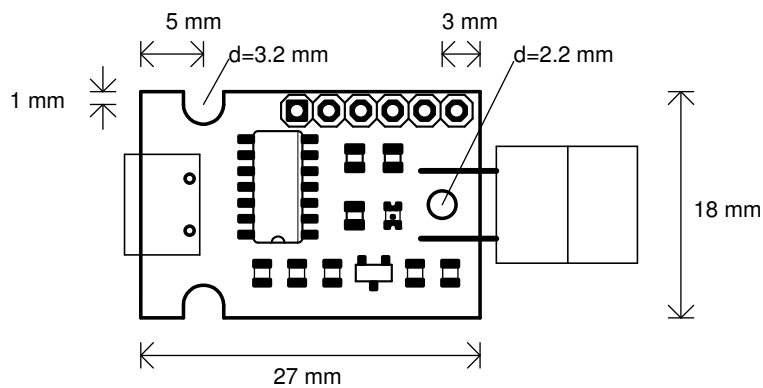
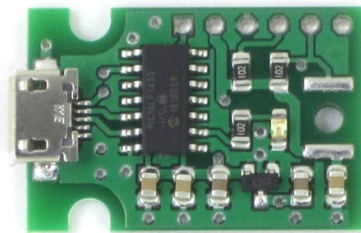

USB2FIR EB – USB visual thermometer with MLX90640

Datasheet

USB2FIR is a interface board to connect the far infrared thermal sensor array MLX90640 via USB to a host system.



Main features

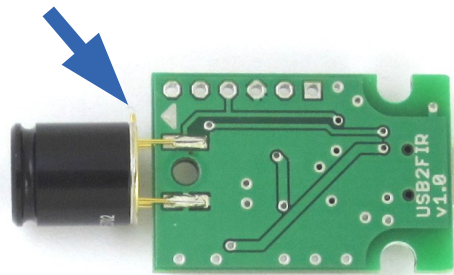
- USB powered, no external power supply needed
- Full access to MLX90640 memory (EEPROM, IR data) over USB control transfer
- Raw sensor data, calculation of pixel temperatures by host
- Firmware sources available; bootloader for firmware updates
- Open source Python library

Sensor

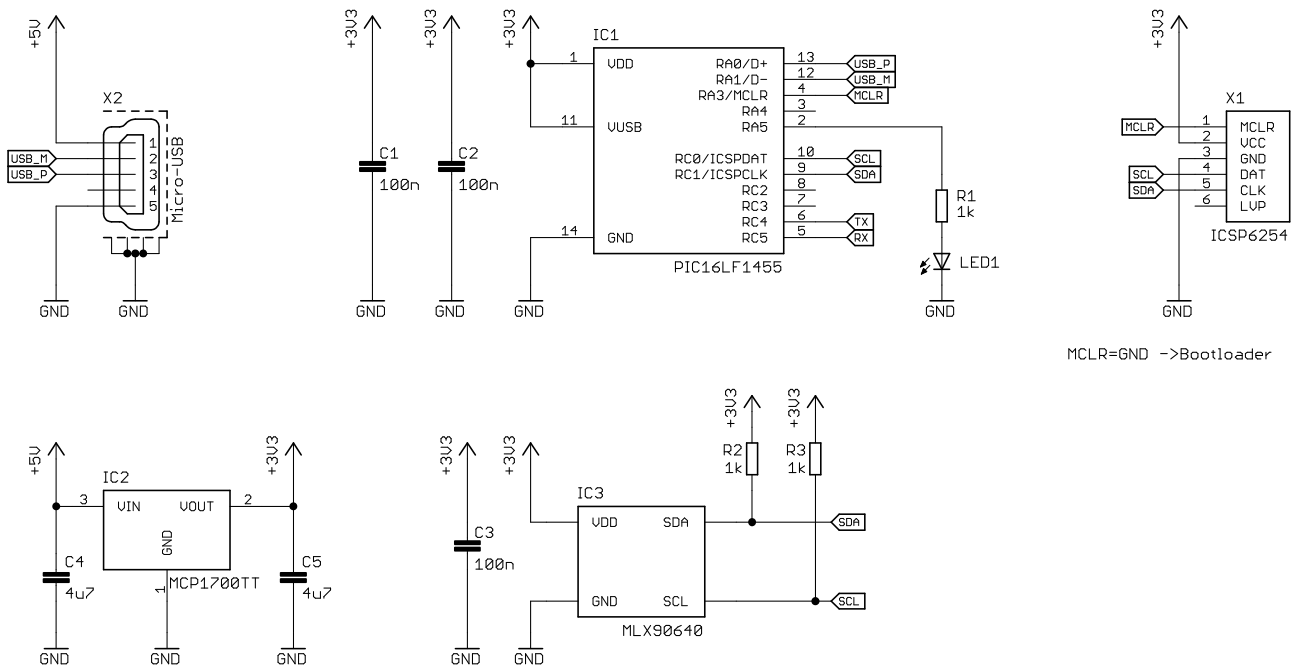
The board is delivered without pre-mounted sensor. The sensor is available in two versions, whereby the field of view (FoV) differs: standard 55°x35° and 110°x75° wide angle.

| FoV | Melexis part number | Digikey | Mouser |
|----------|---------------------|---------------------------|----------------------|
| 55°x35° | MLX90640ESF-BAB-000 | MLX90640ESF-BAB-000-TU-ND | 482-MLX90640ESFBABSP |
| 110°x75° | MLX90640ESF-BAA-000 | MLX90640ESF-BAA-000-TU-ND | 482-MLX90640ESFBAASP |

The desired sensor is soldered onto the board. Please note the marking on the bottom of the board. The marking on the sensor must point in the same direction.



Schematics diagram



MCLR=GND ->Bootloader

Evaluation board notice

USBtin EB is an evaluation board intended for use for engineering development or evaluation purposes in laboratory environment only. It is not considered as an end user application. If you intend to use it in an end-product, you have to ensure in your own responsibility that the device meets the relevant regulations (e.g. CE, FCC).