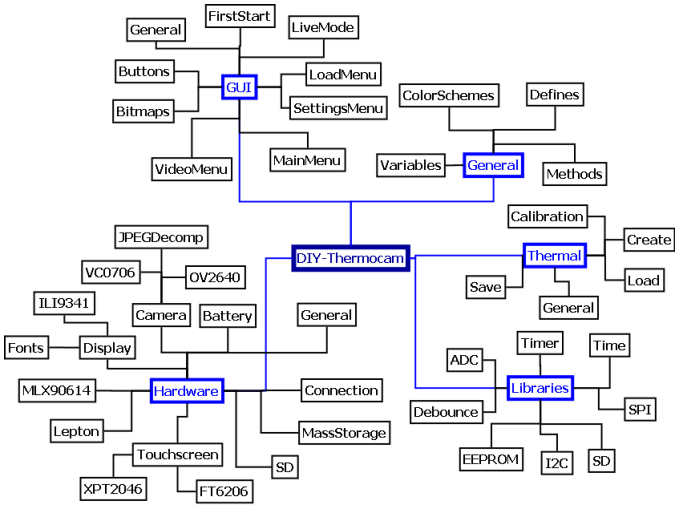
FIRMWARE DEVELOPMENT GUIDE

REV 01

This guide describes how-to install the development environment to make own changes to the firmware.



Download and install the following programs:

Arduino 1.6.13: https://www.arduino.cc/en/Main/Software
Teensyduino 1.34: https://www.pjrc.com/teensy/td_download.html
Visual Studio 2015 Community Edition: https://www.visualstudio.com/en-us/products/visual-studio-community-vs.aspx
Visual Micro: http://www.visualmicro.com/page/Arduino-Visual-Studio-Downloads.aspx

Now Start Visual Studio.

Go to Tools -> VisualMicro -> Configure Ide Locations.
Set the ide folder location of your Arduino installation (f.ex. "C:\Program Files (x86)\Arduino") and the optional sketchbook location to this project (f.ex. "C:\Dev\VisualMicro\DIY-Thermocam\").

In the "vMicro" menu, select the following settings:

For DIY-Thermocam V1:
IDE: Arduino 1.6;
Board: Teensy 3.1/3.2;
Option1: USB Type: Serial;
Option2: CPU Speed 144MHz;
Option3: Optimize: Faster

For DIY-Thermocam V2:
IDE: Arduino 1.6;
Board: Teensy 3.6;
Option1: USB Type: Serial;
Option2: CPU Speed 240MHz;
Option3: Optimize: Fastest

Finally, select the right Comport from the list.
If there is no Comport, upload a blank sketch with USB Type "Serial" to the Teensy first over the Arduino IDE.

Open the project with Open -> Arduino Project and select the "DIY-Thermocam.ino".

Compile the project with F7. The last step is to include the Mass Storage into the Hex file.

Copy the output hex "DIY-Thermocam.ino.hex" from Visual studio into the folder "MSD" and start the file "Unify.bat". A new file called "Firmware.hex" will be created.

Upload this file to your DIY-Thermocam with the teensy.exe uploader together with the teensy_reboot.exe from the "MSD" folder.