MarDaSo

Functions of the Android FIRsensor Application:
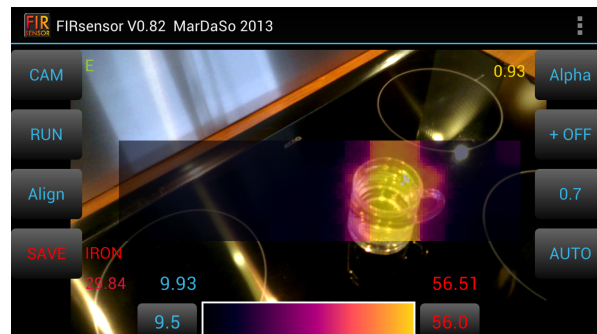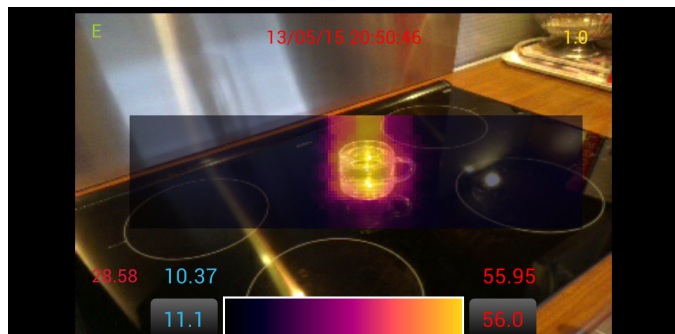
Functions:

#	Text:	Function
L1	CAM	Switch camera preview on/off
L2	RUN/Pause	Freeze overlay data to adjust or view
L3	Align	Align the sensor data field with the camera preview
L4	SAVE	Short click: Screen shot of entire display. Hold for +/- 2 seconds. You can find the screen shot png file in in the selected directory of your phone memory (card). Default is root directory. Long click: switch between raw sensor data and interpolated data.
R1	Alpha	Adjust the alpha channel with the slider e.g. transparency of the overlay data
R2	X-On/X-off	Switch on or off the spot temperature metering. Touching the data field will turn spot metering on at the touched position.
R3	X.X	Adjust sensor threshold with the slider, for the filtering of the thermal noise.
R4	AUTO/MAN	Switch between auto and manual scales

Bottom row:
Left (blue) -/+ manual adjust lower value of the scale in manual mode, Long press will change the value for 10 degrees.
Right (red) -/+ manual adjust upper value of the scale in manual mode, Long press will change the value for 10 degrees.
Blue data field: lower scale value
Red data field: upper scale value
Between the two data fields the color scale, touching this scale will change the palette.

On screen data:
Red data field, lower left in camera preview: PTAT sensor data (only for test). Temperature of sensor die.

Red D, Upper left in camera preview: Default values from datasheet loaded for calculations.
Green E, Upper left in camera preview: EEPROM values from sensor loaded for calculations.

Yellow data field right upper in camera preview: Emissivity value, you can change this in the settings menu if you know the emissivity of the material you want to measure.

Blue data field bottom (above minimum scale value): Lowest sensor value
Red data field bottom (above maximum scale value): Highest sensor value

Auto modes:

Blue Auto Mode: Minimum and maximum values of scaling calculated with the last sensor minimum and maximum measurements.

Yellow Auto Mode: Minimum and maximum values of scaling calculated with the last ten sensor minimum and maximum measurements.

Green Auto Mode: Minimum and maximum values of scaling calculated with the last two sensor minimum and maximum measurements.

Calculate Offset:
Before running this you should put the sensor facing down on a surface (uniform in temperature).
The app will take 5 temperature readings of each pixel and will calculate the average value of this reading.
After that the average of all pixels will be calculated and for each pixel the offset of that (overall) value.

Clear Offset:
Clears the calculated offset.

Bluetooth connection:
BT secure:
Most Android phones and tablets can work with a secure Bluetooth setting, but some don't and if you get a message "connection refused" then you should switch off BT secure in the settings menu.

BT auto reconnect:
When this option is active the app will auto reconnect to the last known sensor BT connection.

Emissivity:
Materials have a different emissivity's meaning that the amount of radiated heat is different. Also the temperature reading of the sensor will be different if you point it at wood or point it at aluminum sheet of the same temperature. Therefor you can set the emissivity value in the settings menu.

Celsius:
Uncheck this setting if you want the app to display Fahrenheit.

Save Dir:
Set the directory where you want to put in the saved sensor files. These settings should work for most phones. If you have a different setting please report and we will add that.
If you have Dropbox with enabled camera uploads it will sync the sensor images with your Dropbox account.

Buttons on image:
Check this option if you want the user interface buttons on the saved image.

Hardware:
Should be IR-Blue, in the future we will support more sensor hardware.

Camera scaling:
In the settings menu there's an option to scale the camera preview so it will better align with the sensor data field.