

Grid-EYE TrackMe

People Tracking and Counting Software

User Manual

By purchase of any of the products described in this document the customer accepts the document's validity and declares their agreement and understanding of its contents and recommendations. Panasonic reserves the right to make changes as required at any time without notification. Please consult the most recently issued Product Specification before initiating or completing a design.

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This User Manual does not lodge the claim to be complete and free of mistakes.

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1 About This Document



1.1 Purpose and Audience

This User Manual provides details on the usage of the Grid-EYE TrackMe software. The product is referred to as “Grid-EYE TrackMe Software” or “the software” within this document.

1.2 Revision History

Revision	Date	Modifications/Remarks
1.0	19.01.2017	1st preliminary version.
1.1	11.10.2017	Added the driver installation steps for Windows 8 and Windows 10. Actualized some images.
1.2	20.10.2017	Actualized images and software description.

1.3 Use of Symbols

Symbol	Description
	Note Indicates important information for the proper use of the product. Non-observance can lead to errors.
	Attention Indicates important notes that, if not observed, can put the product’s functionality at risk.
⇒ [chapter number] [chapter title]	Cross reference Indicates crossreferences within the document. Example: Description of the symbols used in this document ⇒ 1.3 Use of Symbols .

2 Overview

The Grid-EYE TrackMe Software can be used together with the Grid-EYE Evaluation Kit and shows the potential of this Sensor. It demonstrates that it is possible with an 8 x 8 pixels grid to detect, track and count persons very accurate.

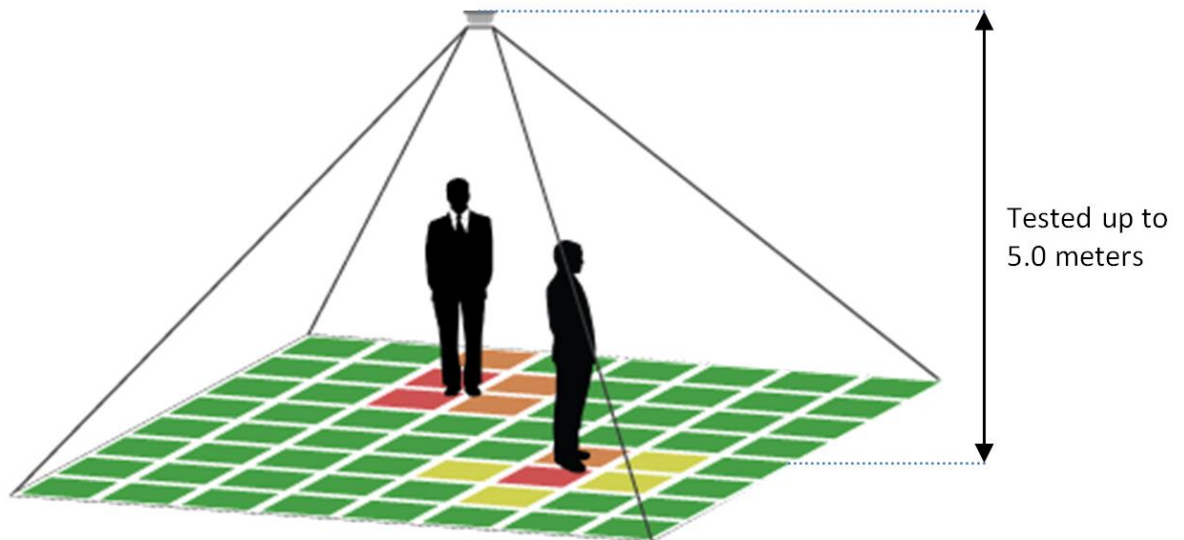
The software is also available as embedded code for integration into a microcontroller. To get the source code please fill out the SLA which is available on the Evaluation Kit website.

<https://eu.industrial.panasonic.com/grideye-evalkit>

The software is able to detect, track and count several persons at the same time. It is possible to differ between the directions a counting line was crossed. Because of that incoming and outgoing persons can be counted separately.

2.1 Mounting information

The Grid-EYE Evaluation Kit must be mounted in a way that the sensor is looking from above on the persons. The tracking and counting functions were tested with a mounting height up to 5 meters. This is not the limit of the algorithm. The maximum mounting Height is influenced by the filter and threshold setup. This Setup is fixed in this firmware.

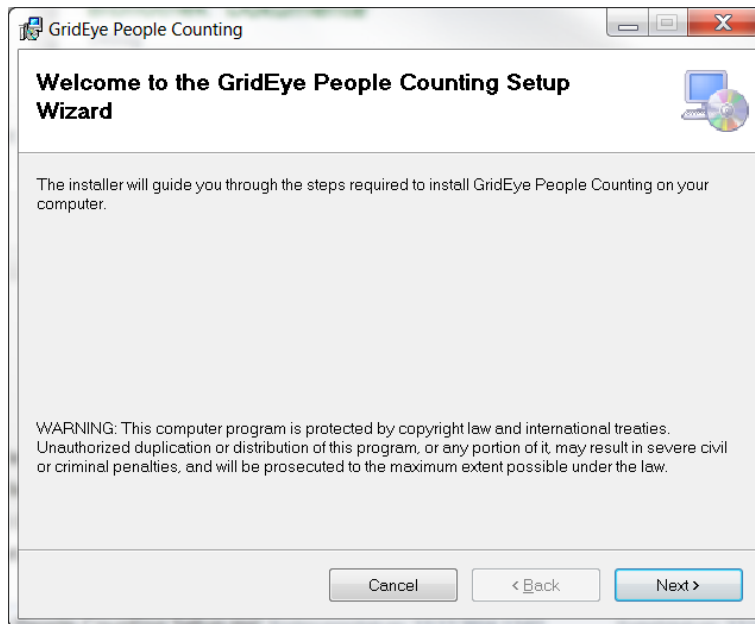


3 Software installation

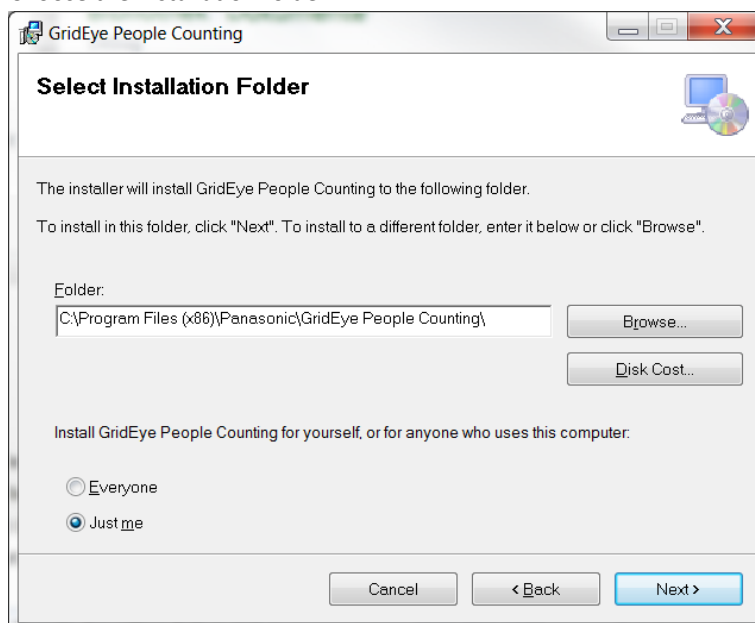
3.1 Main application

Please follow these steps for the installation of the software.

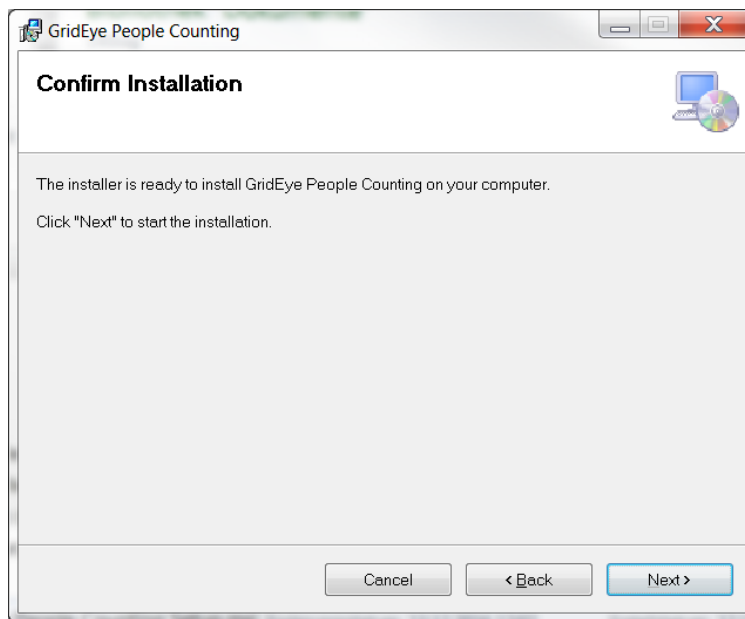
1. Double click the Installation file.
2. Click on next.



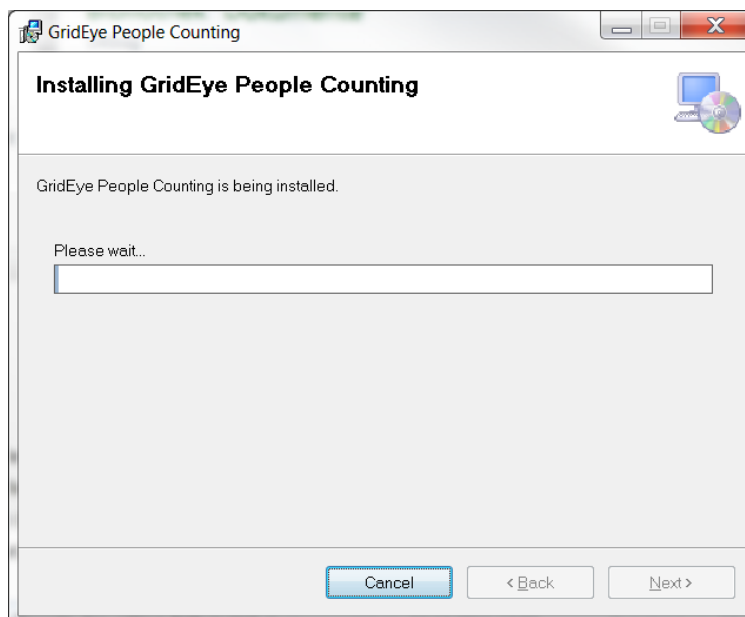
3. Choose the installation folder.



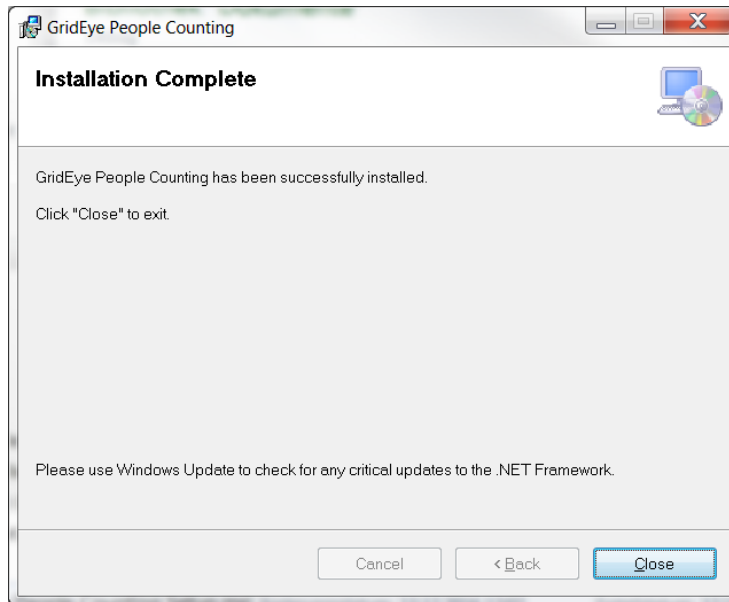
4. Click on next.



5. Wait until the installation of the software is finished.



6. After finishing the installation process, click on Close.

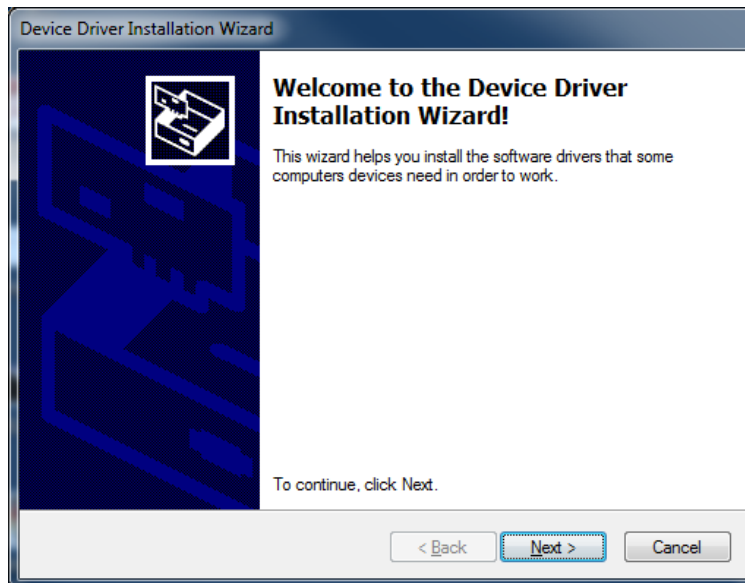


3.2 USB drivers

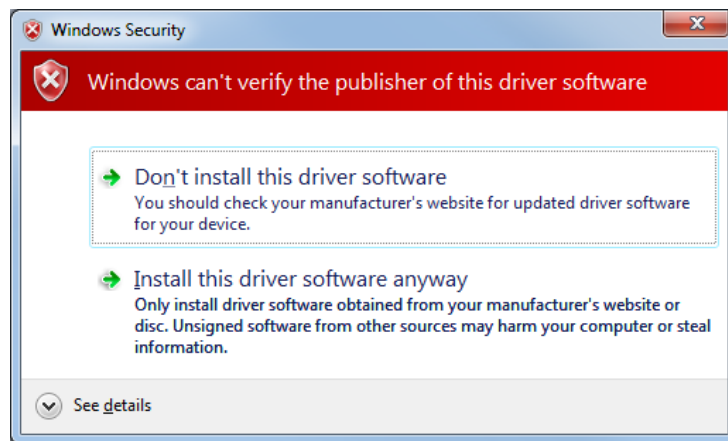
The USB driver installation process will start automatically after installing the main application.

3.2.1 Windows 7

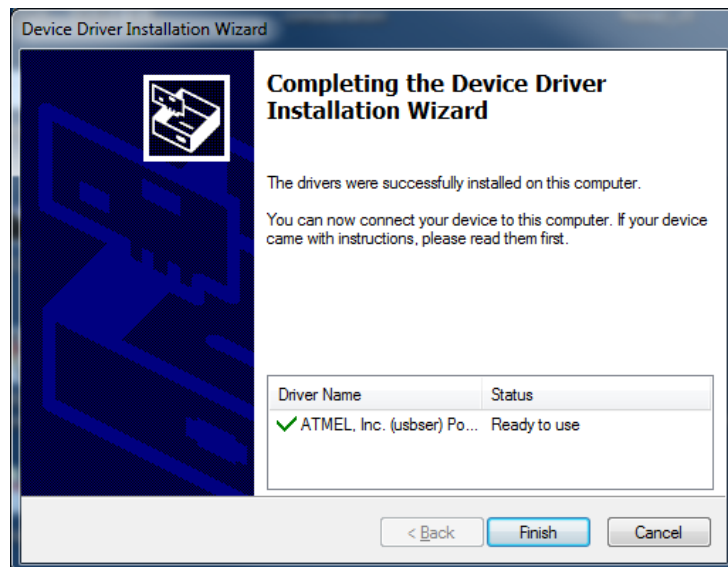
7. After this procedure the usb driver installation part will start automatically.



8. Click on next.
9. The Driver is an unsigned driver. Because of this security information will be displayed. Please **click on Install this driver anyway.**



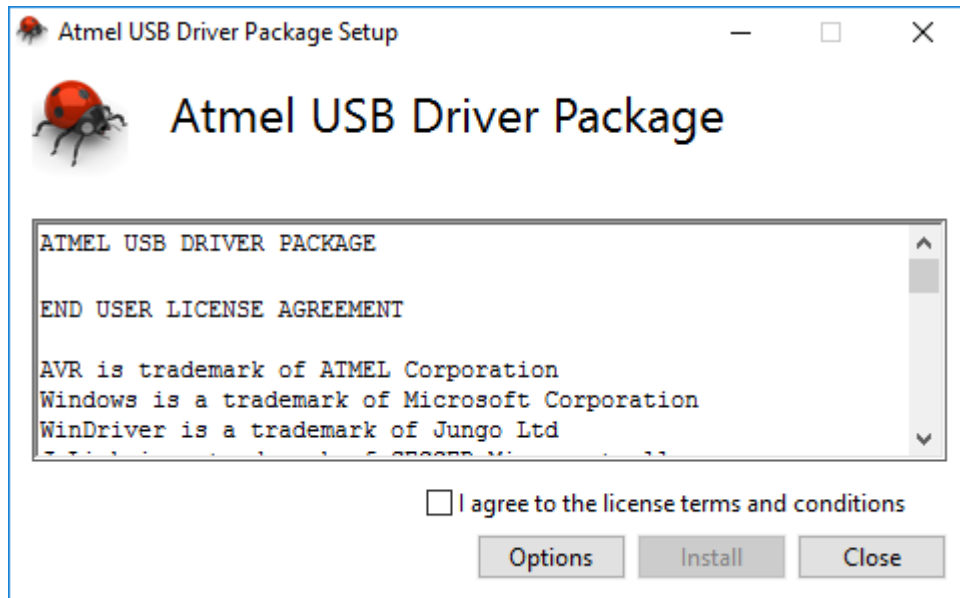
10. After the driver installation click on finish and close on the installation windows.



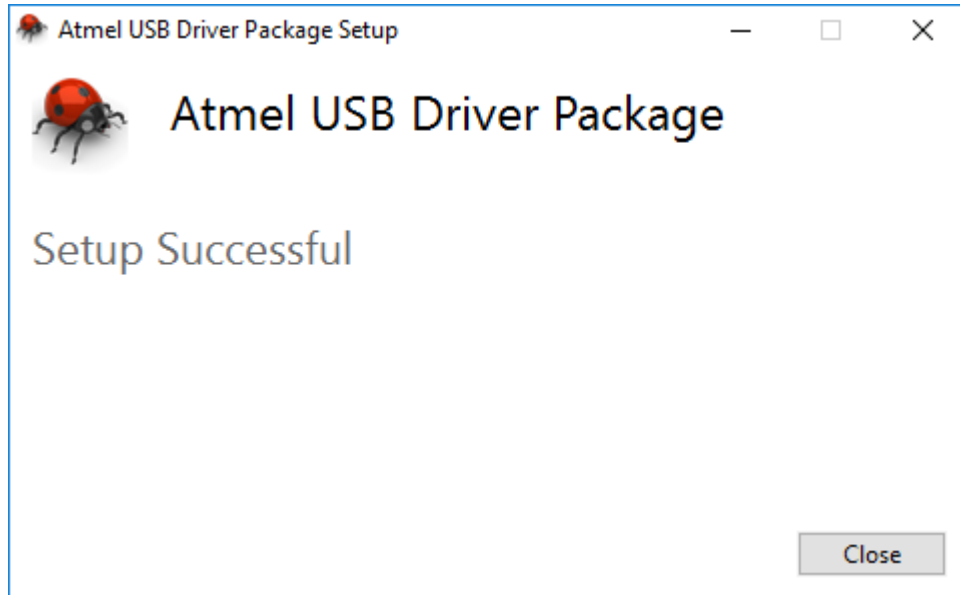
3.2.2 Windows 8 & 10

For Windows 8 and Windows 10 there will start a different driver installation routine.

1. Agree the license terms and conditions and then click on Install.

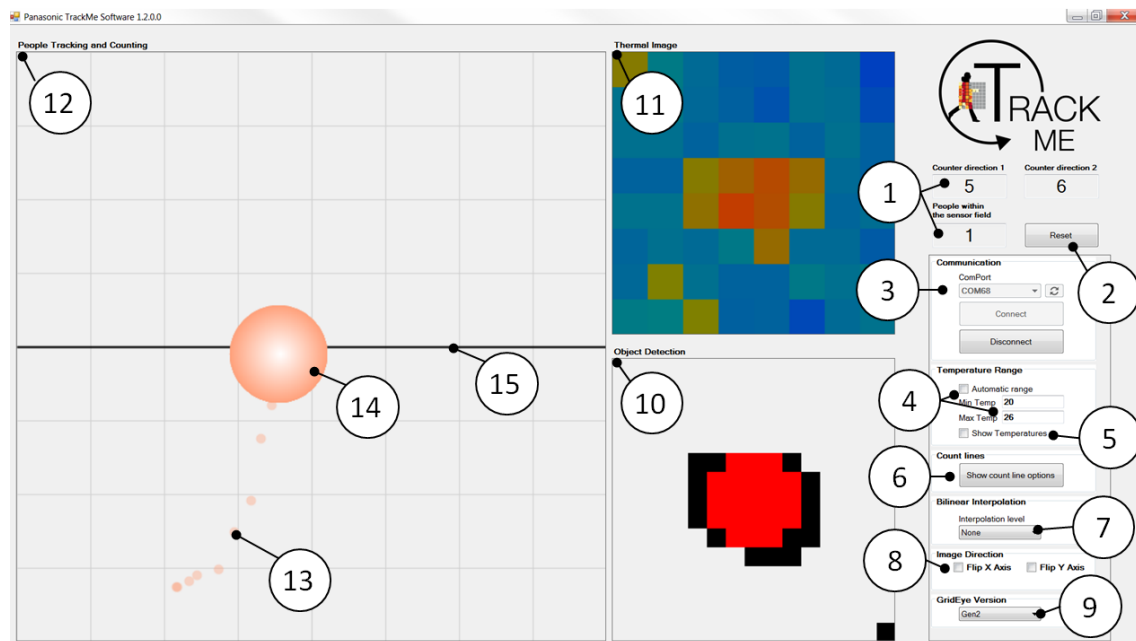


2. After installing the drivers click on Close.



4 Software handling

4.1 Main window

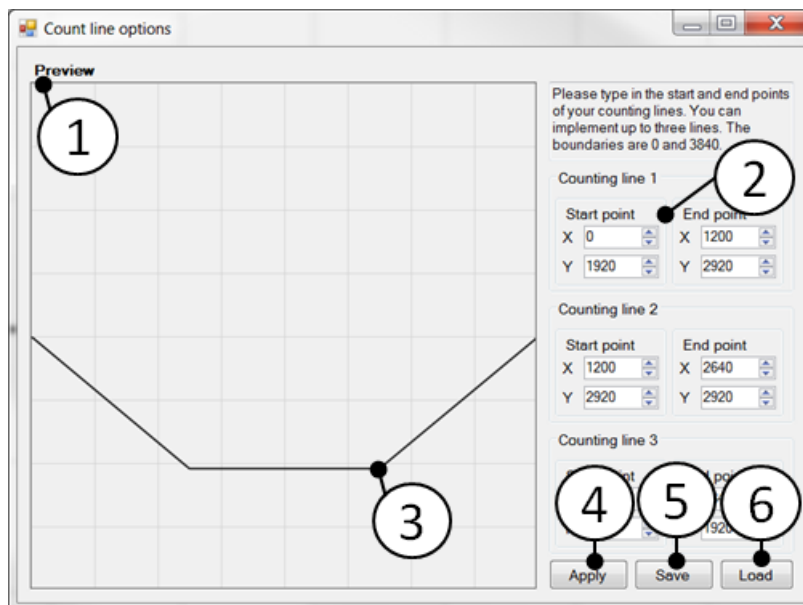


Legend:

1. Counter values and the number of persons within the sensor field.
2. The reset button will reset the whole algorithm.
3. In the communication area the com port of your GridEye Evaluation Board has to be chosen. The com ports can also be connected, disconnected and refreshed.
4. In the temperature range field can be set the boundary temperatures for calculating the colors of the thermal image. If the automatic range field is checked in, it will automatically choose the minimum and maximum temperatures and will display it in the min and max temp fields.
5. If the show temperatures field is checked in, the pixel temperatures will be displayed in the thermal image.
6. The count line option gives the possibility to setup lines in the people count image. If a person cross that line, the counter values will increase according to which direction the line is crossed.
7. With the interpolation level options the thermal image can be interpolated. It is possible to create interpolated thermal images with a resolution of 15 x 15, 29 x 29, 57 x 57, 113 x 113 and 225 x 225 pixels. Used is a special tangential interpolation algorithm which is much more realistic than a linear interpolation.
8. Gives the option to flip the images. Changing these fields leads to a reset of the people counting algorithms.

9. The Software can be used for both generations of the GridEye sensor. Please note that the performance of the software is better with the generation 2 GridEye sensor.
10. The object detection image gives information about detected objects. Black pixels are object pixels. Red pixel areas are indicating a detected person.
11. The thermal image is the result of the filtered raw data of the GridEye sensor.
12. The people tracking and counting window shows the results of the tracking and counting algorithms in form of a bubble for each detected person.
13. The Bubbles are detected persons.
14. The smaller bubbles show the tracked motion history.
15. The counting line

4.2 Count line option window



1. The Preview Image shows a preview for the actual counting line setup.
2. A counting line has a start point and an end point. Both are described by an x coordinate and a y coordinate. The boundaries for the coordinates are 0 and 3840. Up to three counting lines can be used.
3. Previewed counting line
4. Pressing the apply button will transfer the chosen counting line options to the main window and they will be transferred to the Grid-EYE Modbus Unit. This option will be saved and if the application is closed and then reopened the last chosen line option will be used.
5. A line setup can be saved by pressing the save button.
6. A saved line setup can be load by pressing the load button.

5 Appendix