Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

EVB90632

User manual

Dear Melexis Customer,

Thank you for your interest in the MLX90632 infrared thermometer.
In this document, the hardware and software for the MLX90632 Evaluation kit will be described.

For software and manual please refer to the following address:
www.melexis.com/EVB90632

Check our website for more information www.melexis.com or contact your distributor.

EVB90632

User manual

1. Introduction

The EVB90632 is an easy interface between the SMD MLX90632 infrared thermometer and a Windows PC.
With this PCB one can quickly and easily perform a first test of the MLX90632.
It also gives access to the internal settings of the sensor to adjust the sensor to a specific application by changing optical window compensation constants, the refresh rate and the I^{2}C address of the sensor.

2. Hardware

- Comes with one MLX90632 soldered on separate breakout board, interface board and cable
- HID USB interface, Mini-b connector
- Windows compatible software
- Test pins to sniff the I²C bus
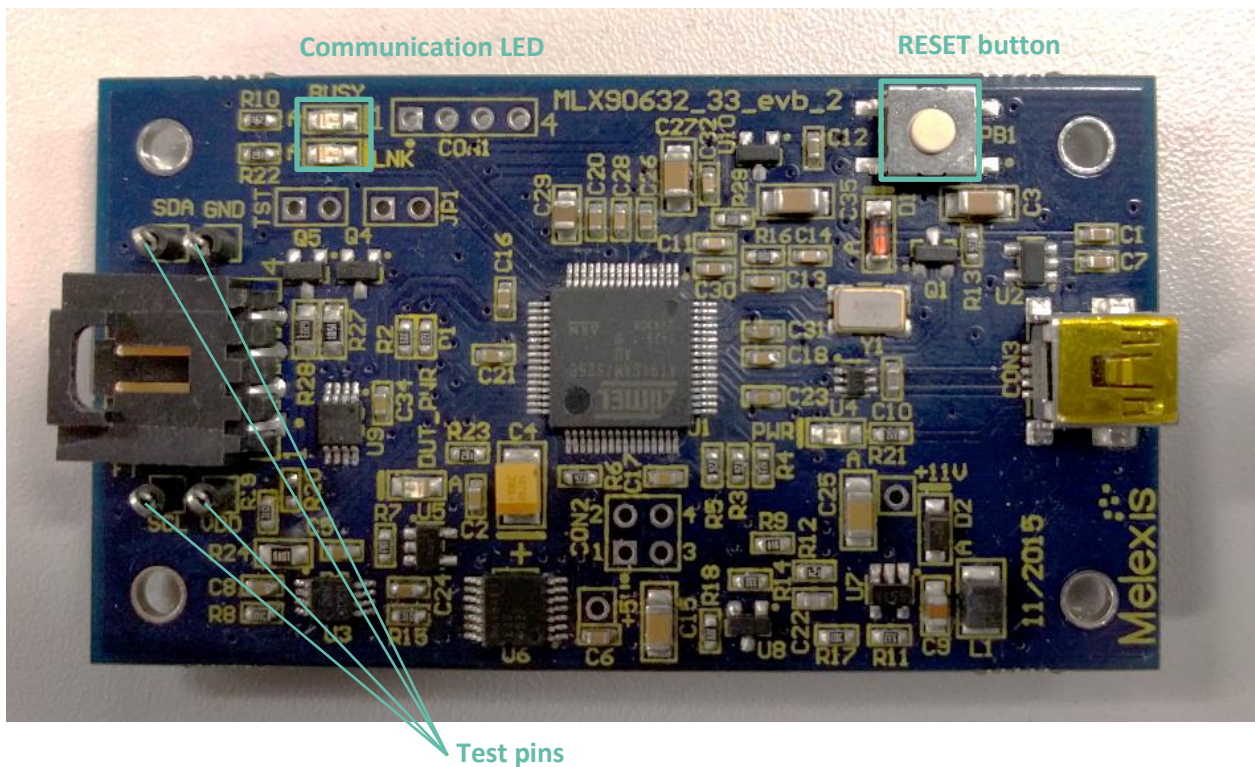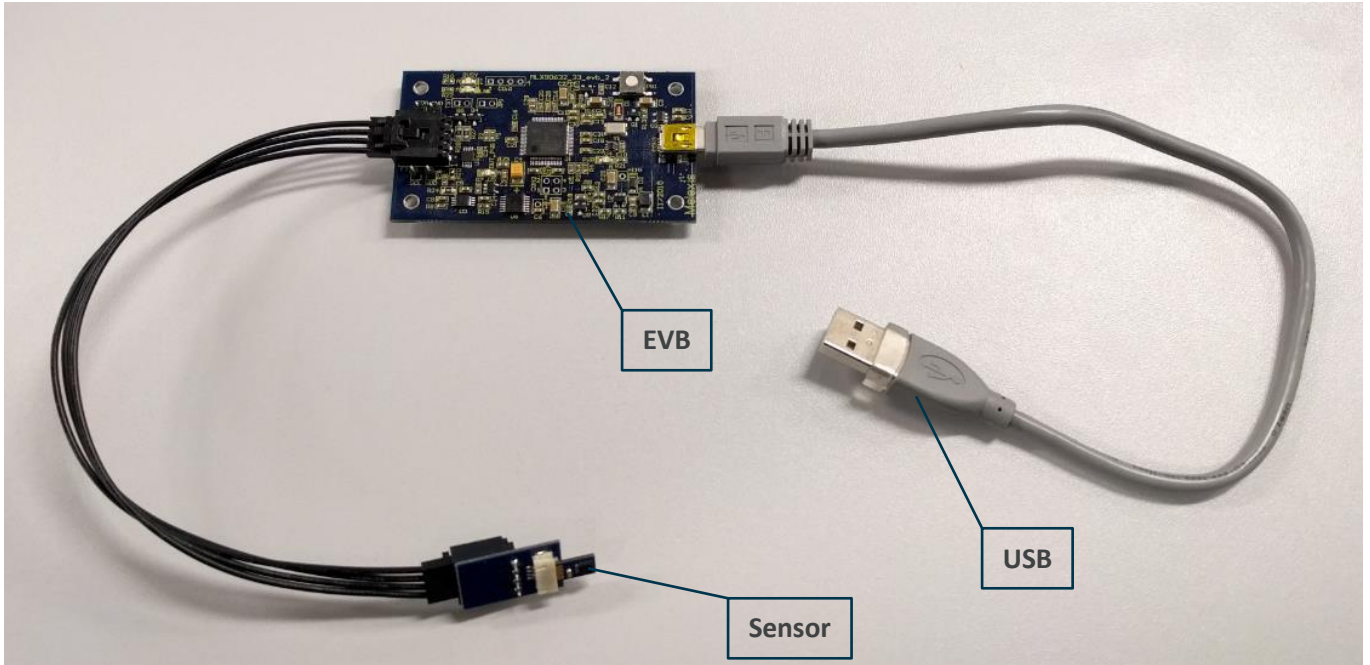
3. Software

3.1. Installation

- Download and install the EVB90632 software

- After installation connect the EVB90632 to the PC

- Wait until the board is recognized in Windows

- Open "MlxCIRT 90632"

3.2. Application settings

When the application is started, the software will automatically search for connected Evaluation boards. The following status is shown when an EVB90632 is detected.
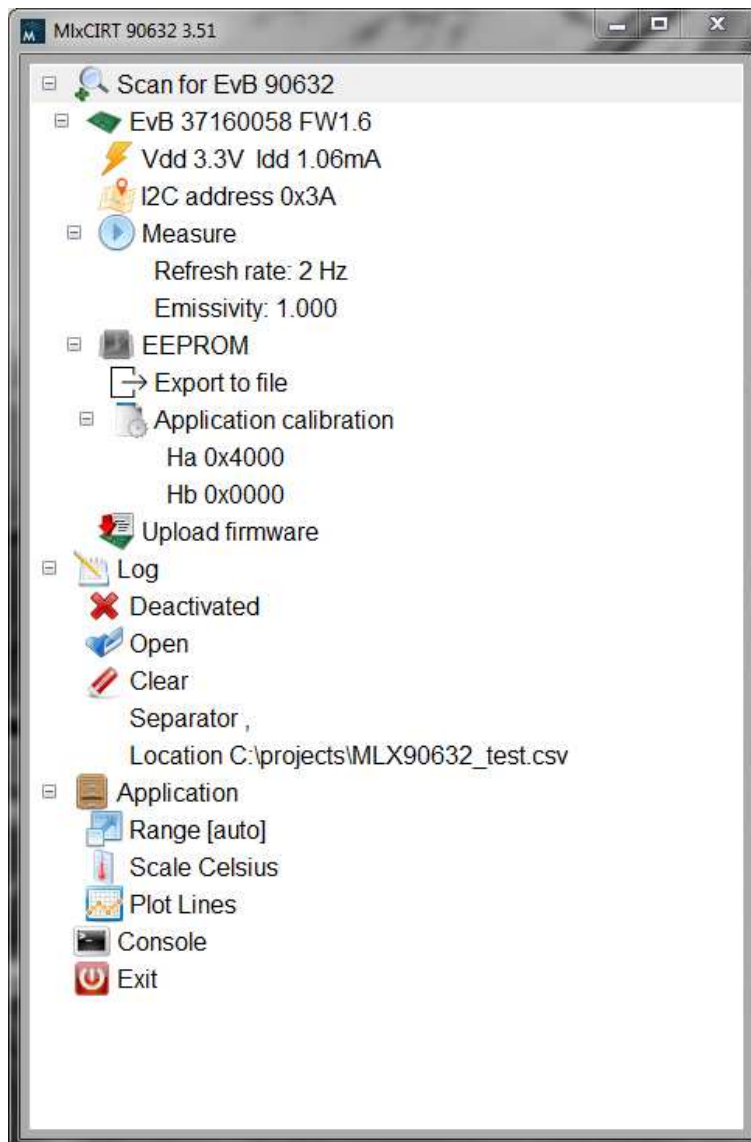
3.2.1. Scan for EVB 90632

- *EvB xxxxxxxx FW1.6*

  Hardware ID and firmware version
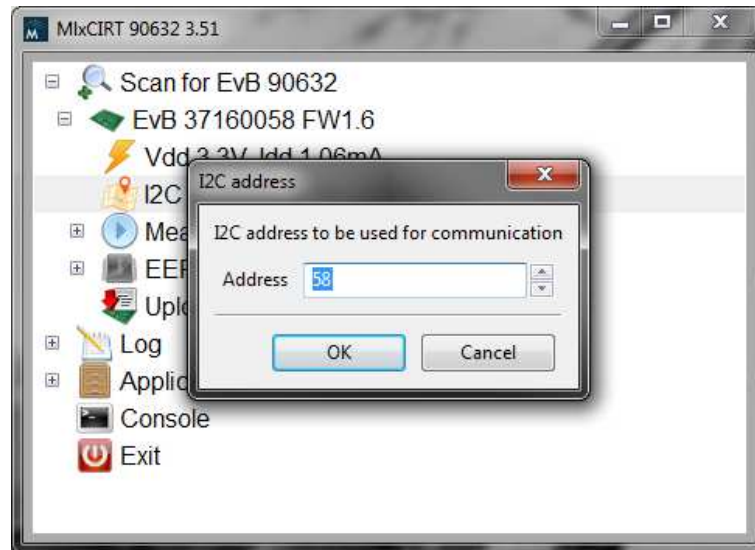
  - ❑ *Vdd 3.3V Idd 1.06mA*

    Voltage and current consumption

  - ❑ *I2C address 0x3A*

    Master I^{2}C address (does not change the I^{2}C address of the sensor itself)
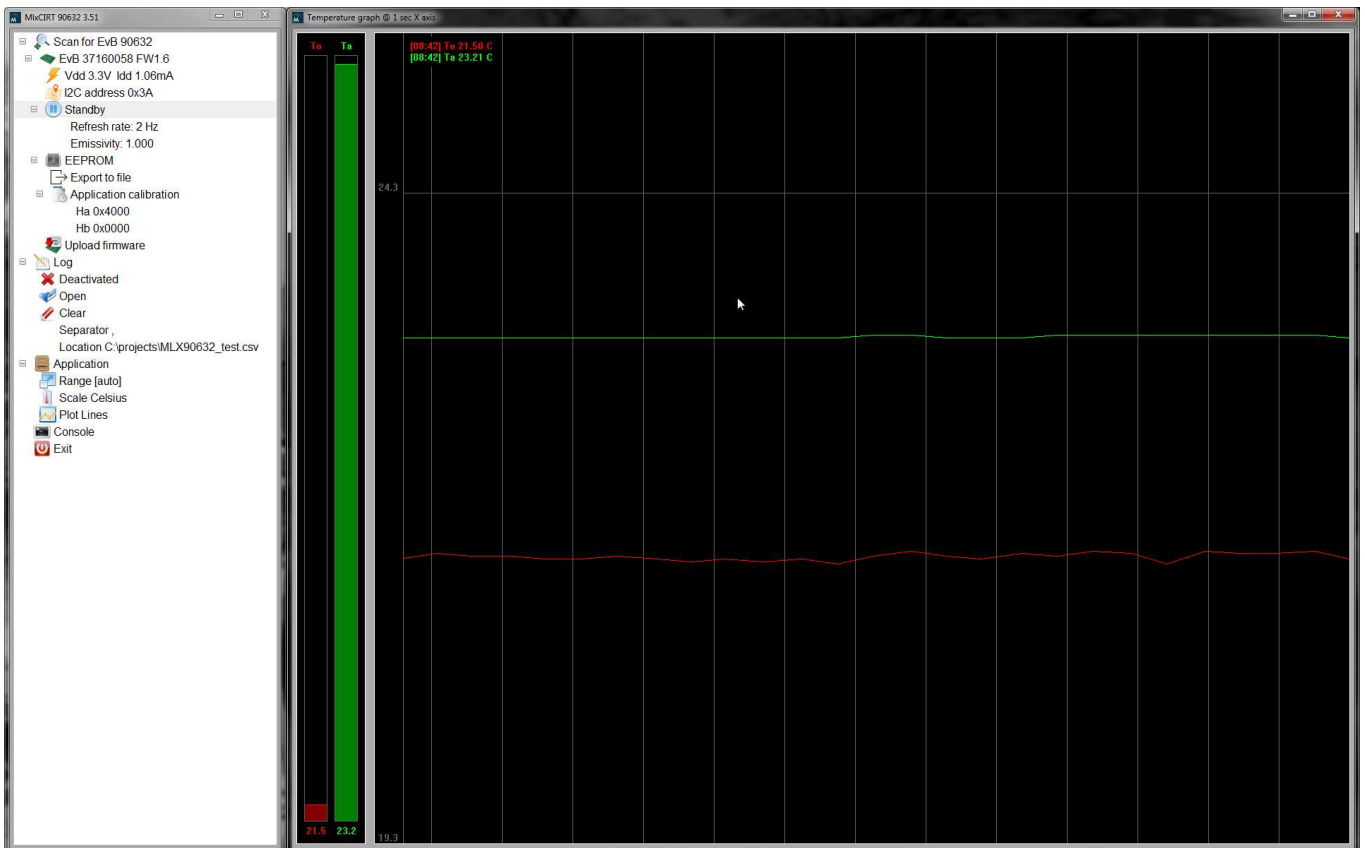
    Note:

    The input value is in decimal format

❑ *Measure*

Double click to start measuring

Hover the mouse pointer over the graph to show ambient and object temperature in left top corner

- ▪ *Refresh rate: 2Hz (default)*

  Writes the desired refresh rate to EEPROM measurement settings

  Measurement speed will adapt to the selected speed immediately

  Other refresh rate can be chosen according to the application needs

  Note:

  The MLX90632 is factory calibrated at 2Hz.

  Changing the refresh rate will affect the noise performance of the device.

  Due to hardware limitations of the EVB, the refresh rates 32Hz and 64Hz are limited to 50ms readout speed.

  The sensor itself will update at the selected refresh rate.

- ▪ *Emissivity: 1.000*

  Emissivity parameter is directly linked to the object temperature calculation as described in the datasheet
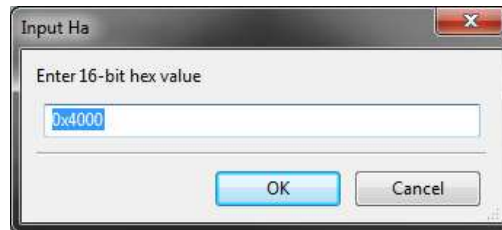
- ❑ *EEPROM*

  - ▪ *Export to file*

    Exports the EEPROM data to .bin file

  - ▪ *Application calibration parameters*

    Double click the desired parameter in order to change it

    - • *Ha 0x4000*

    - • *Hb 0x0000*

  The parameters are used in the object calculation formula for post calibration.

  Melexis provides a tool for easy Ha and Hb calculation.

 Please contact your distributor for more information on post calibration.

- ❑ *Upload firmware*

  Possibility to upload firmware for Evaluation board

  Please do not use this function unless Melexis specifically asks to upload new firmware

3.2.2. Log

- *Activated/Deactivated*

  Double click to activate or deactivate logging

- *Open*

  Opens the current log file

- *Clear*

  Clears the current log file

- *Separator ,*

  Separator to be used for logging

  By default the tab separator (|) is used

  For Excel processing, the comma separator (,) is advised

  The separator can be changed by double clicking
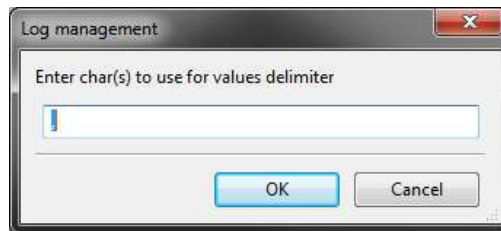
- *Location C:\...\xxxxx.csv*

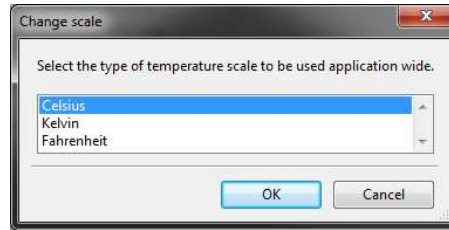 Location of the log file can be set here

3.2.3. Application

- *Range [auto]*

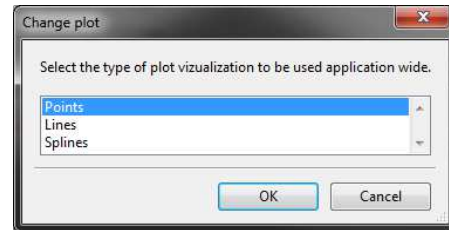 Temperature scale during measurement can be set to manual or automatic
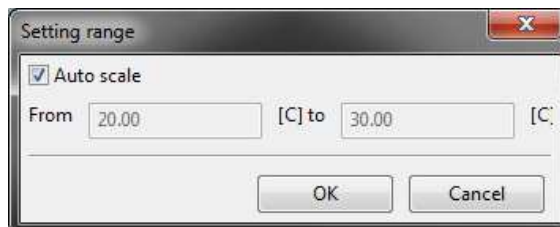
- *Scale Celsius*

  Unit for temperature value

- *Plot Lines*

  Type of plot for measurement graph

3.2.4. Console

Melexis internal use only.

3.2.5. Exit

Closes the application.

4. Disclaimer

Devices sold by Melexis are covered by the warranty and patent indemnification provisions appearing in its Term of Sale. Melexis makes no warranty, express, statutory, implied, or by description regarding the information set forth herein or regarding the freedom of the described devices from patent infringement. Melexis reserves the right to change specifications and prices at any time and without notice. Therefore, prior to designing this product into a system, it is necessary to check with Melexis for current information. This product is intended for use in normal commercial applications. Applications requiring extended temperature range, unusual environmental requirements, or high reliability applications, such as military, medical life-support or life-sustaining equipment are specifically not recommended without additional processing by Melexis for each application.

The information furnished by Melexis is believed to be correct and accurate. However, this User Manual is intended as an aid to enable a user to install engineering parts of the MLX90632 into his own application for evaluation. While Melexis intends for the final production part of the MLX90632 to be comparable to the engineering parts, it is highly probable that changes will still be implemented.

Melexis shall not be liable to recipient or any third party for any damages, including but not limited to personal injury, property damage, loss of profits, loss of use, interrupt of business or indirect, special incidental or consequential damages, of any kind, in connection with or arising out of the furnishing, performance or use of the technical data herein. No obligation or liability to recipient or any third party shall arise or flow out of Melexis' rendering of technical or other services.

5. Contact Information

For the latest version of this document, go to our website at
www.melexis.com

Or for additional information contact Melexis Direct:

Europe, Africa, Asia: **America:**

Phone: +32 1367 0495   Phone: +1 248 306 5400

E-mail: sales_europe@melexis.com   E-mail: sales_usa@melexis.com

ISO/TS 16949 and ISO14001 Certified