

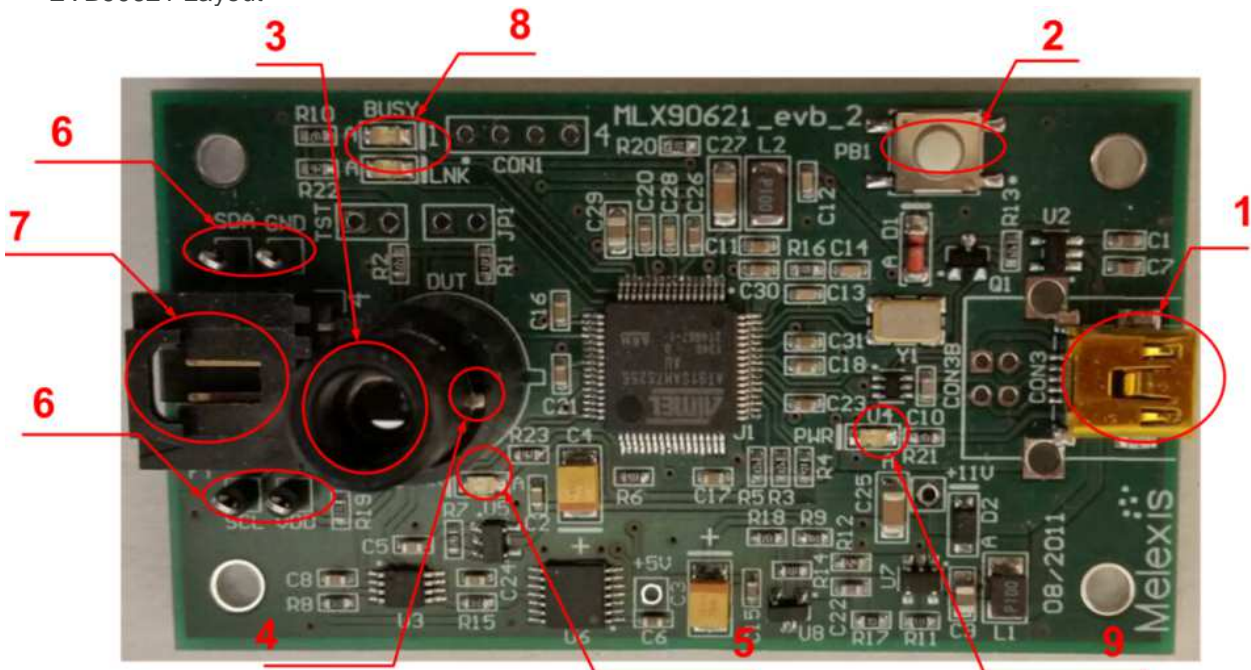
1. Scope

This document describes the design and use of the MLX90621 evaluation board (EVB) and demo software. For a general description about the functionality of the MLX90621 please refer to the MLX90621 datasheet.

2. Applications

The EVB90621 is intended to be used as an application example of the MLX90621 Low Noise High Speed FIR array. It was developed to demonstrate the features of the device with the help of the demonstration software.

- EVB90621 Layout



- 1 – USB connector;
- 2 – Reset button;
- 3 – MLX90621 device. This board is compatible with all versions of MLX90621 (40°, 60° and 100° Field of View);
- 4 – MLX90621 notch. Please mind the correct orientation of the device when putting it on the EVB;
- 5 – MLX90621 power led. When this LED is ON, the device is supplied by the EVB;
- 6 – Test points;
- 7 – Extension connector;
- 8 – Communication Busy and Link LEDs. Those LEDs indicate the status of the EVB;
- 9 – EVB power LED. When this LED is ON, the EVB is supplied by the USB.

- EVB90621 Demonstration Software

Please go to: www.melexis.com and search for the latest version of the demo software:
<https://www.melexis.com/en/documents/tools/tools-evb90621-software-exe>



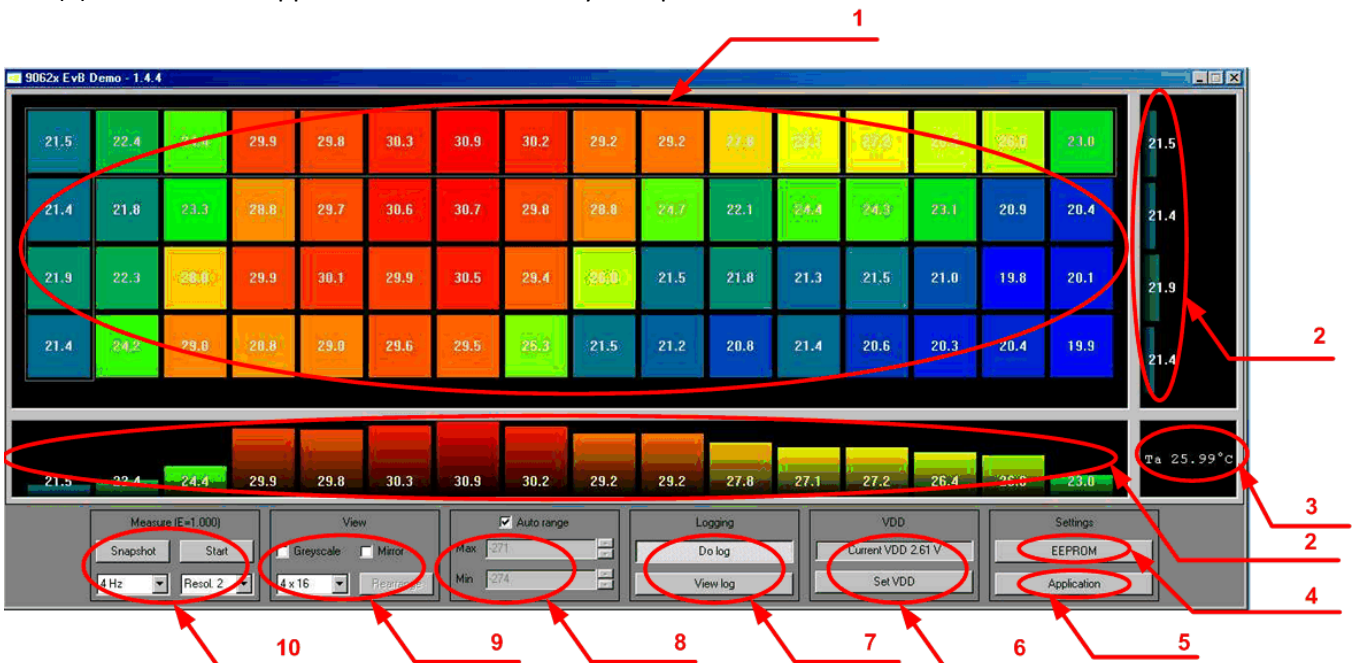
Download and install it on a Windows-based PC platform.

Normally, the installation creates a shortcut to the program on the Desktop. If this is not the case, the program can be started from C:\ > Program Files > Melexis > Mlx90621 Demo > Mlx9062x Demo.exe

3. Running the Software

Plug the EVB in a free USB port of the computer. If the connection is ok, the Power LED(9) shines and the Busy LED(8) shines for a while and stops.

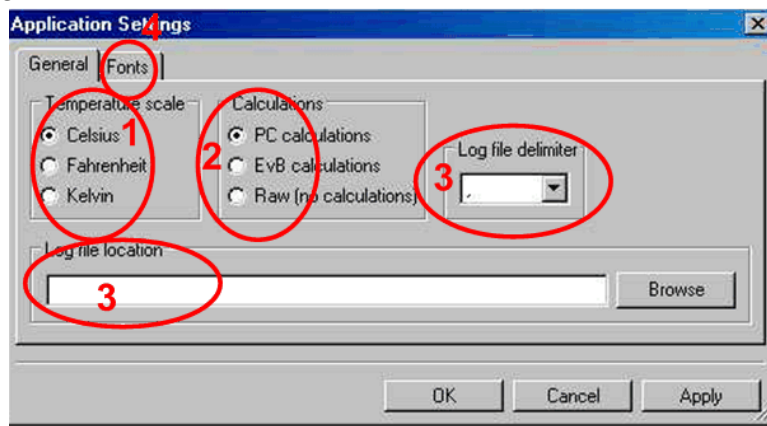
Now start the software. When the initialization procedure finishes, the Link LED (8) shines and the Device Power LED (5) is on too. The application window is ready for operation:



- 1 – Individual pixel readout. Depending on Application settings(5), those could be temperature or [LSB];
- 2 – Row and column bar graphs;
- 3 – Ambient temperature sensor readout;
- 4 – EEPROM dump button. We highly recommend that the EEPROM of the device is back-upped before further playing with the device;

- 5 – Application settings. See the description below;
- 6 – Operation voltage. Even though the EVB supports quite a wide range of voltages, please note that devices are calibrated at 2.6V;
- 7 – Enables or disables data logging;
- 8 – Configures the color scale maximum and minimum limits;
- 9 – Sets the view (grayscale or mirror) and resolution – 4x16pixels (native resolution) or the extrapolated: 8x32pixels, 16x64pix , 32x128pixels resolution.
- 10 – Sets the measurement related parameters: refresh rate (from 0.5Hz to 512Hz); single shot (snapshot) or continuous operation.

Application Settings. Clicking button 5 on the figure above opens the Application settings dialog. The following adjustments are possible:



- 1 – Selects the temperature scale used to calculate the temperature in the application.
- 2 – Selects where the temperature calculations are done: In the PC, in the processor of the EVB, or no calculations is done (the raw Infrared data is displayed). **For the MLX90621, the calculation should be done in the PC;**
- 3 – sets the path for the log file and the delimiter used to separate the data;
- 4 – sets the fonts used in the application.

4. Disclaimer

The information furnished by Melexis herein is believed to be correct and accurate. Melexis disclaims (i) any and all liability in connection with or arising out of the furnishing, performance or use of the technical data or use of the product as described herein, (ii) any and all liability, including without limitation, special, consequential or incidental damages, and (iii) any and all warranties, express, statutory, implied, or by description, including warranties of fitness for particular purpose, non-infringement and merchantability. No obligation or liability shall arise or flow out of Melexis' rendering of technical or other services.

The information contained herein is provided "as is" and Melexis reserves the right to change specifications and/or any other information contained herein at any time and without notice. Therefore, before placing orders and/or prior to designing this product into a system, users or any third party should obtain the latest version of the relevant information to verify that the information being relied upon is current. This document supersedes and replaces all prior information regarding the product(s) as described herein and/or previous versions of this document.

Users or any third party must further determine the suitability of the Melexis' product(s) described herein for its application, including the level of reliability required and determine whether it is fit for a particular purpose.

The information contained herein is proprietary and/or confidential information of Melexis. The information contained herein or any use thereof does not grant, explicitly or implicitly, to any party any patent rights, licenses, or any other intellectual property rights, whether with regard to such information itself or anything described by such information. This document as well as the product(s) described herein may be subject to export control regulations. Please be aware that export might require a prior authorization from competent authorities.

The product(s) as described herein is/are intended for use in normal commercial applications. Unless otherwise agreed upon in writing, the product(s) described herein are not designed, authorized or warranted to be suitable in applications requiring extended temperature range, unusual environmental requirements. High reliability applications, such as medical life-support or life-sustaining equipment are specifically not recommended by Melexis.

The product(s) may not be used for the following applications subject to export control regulations: the development, production, processing, operation, maintenance, storage, recognition or proliferation of 1) chemical, biological or nuclear weapons, or for the development, production, maintenance or storage of missiles for such weapons; 2) civil firearms, including spare parts or ammunition for such arms; 3) defense related products, or other material for military use or for law enforcement; 4) any applications that, alone or in combination with other goods, substances or organisms could cause serious harm to persons or goods and that can be used as a means of violence in an armed conflict or any similar violent situation.

Products sold by Melexis are subject to the terms and conditions as specified in the Terms of Sale, which can be found at <https://www.melexis.com/en/legal/terms-and-conditions>.

Melexis NV © - No part of this document may be reproduced without the prior written consent of Melexis. (2016)

ISO/TS 16949 and ISO14001 Certified