



EVB81115-A2

Short Description

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1. Scope

This document is intended to give a brief introduction of the EVB81115-A2 Evaluation Board (EVB). This EVB is designed to work with the MLX81115KLQ-AAD-100 QFN20 5x5 LIN RGB Controller – Emulator Device.

Beside of this document, several other important documentation papers are necessary for a detailed understanding.

The detailed information regarding our products including all required development tools will be distributed via the Melexis Softdist server (<https://softdist.melexis.com>).

2. Melexis Softdist Server

Melexis SoftDist (<https://softdist.melexis.com>) is a software distribution system which allows customers to download documents, development software and other stuff related to Melexis products. In case updates or new items are available a notification email will be send automatically to all subscribers.

It's required to register in order to access the Melexis Softdist server.

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3. MLX81115KLQ-AAD-100 - Overview

3.1. Application Examples

- MLX81115KLQ-AAD-100 Emulator device of the MLX81112/15/20 LIN RGB Controller family

3.2. Features

- 16-bit MULAN MCU with Math Co-processor
 - MLX81115 EMU:
 - 32kB Flash
 - 16kB ROM
 - 2048 Byte RAM
 - 512 Byte NVRAM with ECC (256 Byte for customer purpose)
- LIN Protocol Controller according to LIN 2.x and SAE J2602
- LIN Transceiver according to LIN 2.x and SAE J2602
 - Support for LIN auto addressing according bus shunt method
- 6x High voltage I/O pins
 - Constant current sources (up to 48mA)
 - 16-bit PWM outputs
 - 10 bit ADC inputs
 - Diagnostic capability for connected LED
 - Interrupt capability
 - Wake up sources (LIN and IOs)
- Integrated Voltage Regulator
- Integrated RC-Oscillator
- QFN20 5x5 package
- Designed for automotive applications
- Test interface pins LV0...3

4. EVB - General Description

The EVB81115-A2 is equipped with MLX81115KLQ-AAD-100 QFN20 5x5 emulator device.

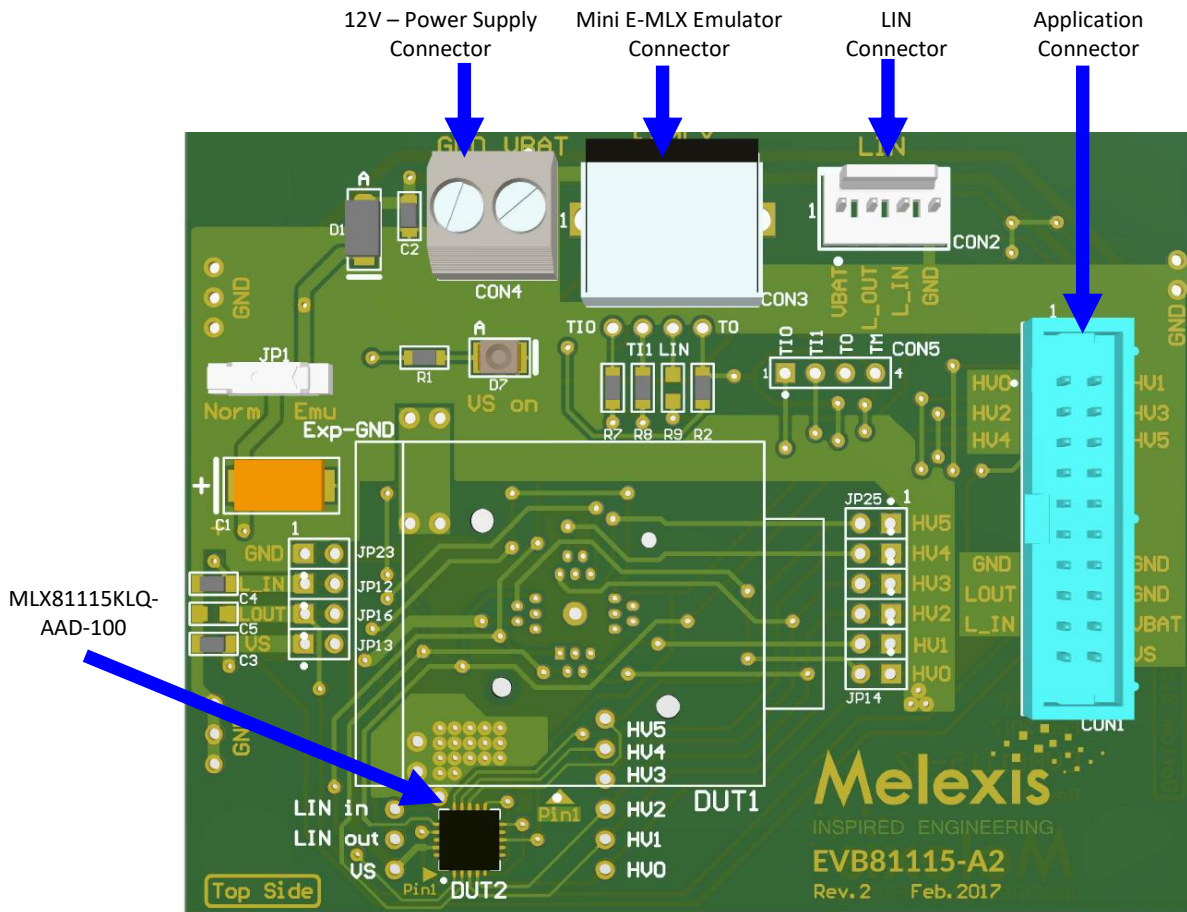
It can be used together with the Melexis Mini E-MLX emulator for:

- In-circuit debugging (**with** external components on HV0...3)
- Program FLASH and NVRAM (**with** external components on HV0...3)

After the programming the EVB81115-A2 can be run standalone without the Mini E-MLX emulator.

The MLX81115KLQ-AAD-100 is a specific emulator device for the MLX81112/15/20 LIN RGB Controller family. This device offers the possibility to connect the application components (e.g. LEDs) on the HVx pins and at the same time connect the Mini E-MLX emulator at dedicated LVx test pins.

5. EVB - Hardware overview



5.1. EVB - Application Connector CON1

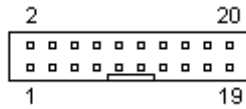


Figure 1 Application Connector - IDC MALE (Top view)

Pin	Name	Description
1	HV0	Configurable: High Voltage Input, Output, PWM, ADC
2	HV1	Configurable: High Voltage Input, Output, PWM, ADC
3	HV2	Configurable: High Voltage Input, Output, PWM, ADC
4	HV3	Configurable: High Voltage Input, Output, PWM, ADC
5	HV4	Configurable: High Voltage Input, Output, PWM, ADC
6	HV5	Configurable: High Voltage Input, Output, PWM, ADC
7	n.c.	not connected
8	n.c.	not connected
9	n.c.	not connected
10	n.c.	not connected
11	n.c.	not connected
12	n.c.	not connected
13	GND	System ground
14	GND	System ground
15	LOUT	Connection to LIN Bus (LIN OUT)
16	GND	System ground
17	L_IN	Connection to LIN Bus (LIN IN)
18	VBAT	12V Power Supply (Not Reverse Polarity Protected)
19	n.c.	not connected
20	VS	Voltage behind Polarity Protection Diode / Chip Supply Voltage

Table 1 EVB Application Connector

5.2. EVB – Available Add-on boards

Part	Picture
<p><i>EVB811xy-B1</i> (Add-on for: <i>EVB81107-A1</i> <i>EVB81112-A1</i> <i>EVB81115-A1</i> <i>EVB81115-A2</i> <i>EVB81120-A1</i> <i>EVB81113-A1</i> <i>EVB81113-A2</i> equipped with two RGB LEDs)</p>	

6. Revision History

Version	Changes	Date
003	Update for EVB81115-A2 with soldered MLX81115KLQ-AAD-100	27.04.21
002	Added chapter “5.2. EVB – Available Add-on boards”	02.08.18
001		25.07.18

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