

DALI BRIDGE DEMO KIT TINY

This document has the main info about the use of the Bridge IC and its demo board. It allows connecting a UART port to a Dali bus network, and tests its Dali slave devices by useful software. This board has the function of Dali power and Dali Master.

With the software *DaliChipSW* it's able to drive a Dali network and do the entire slave tests according to the Dali requirements.

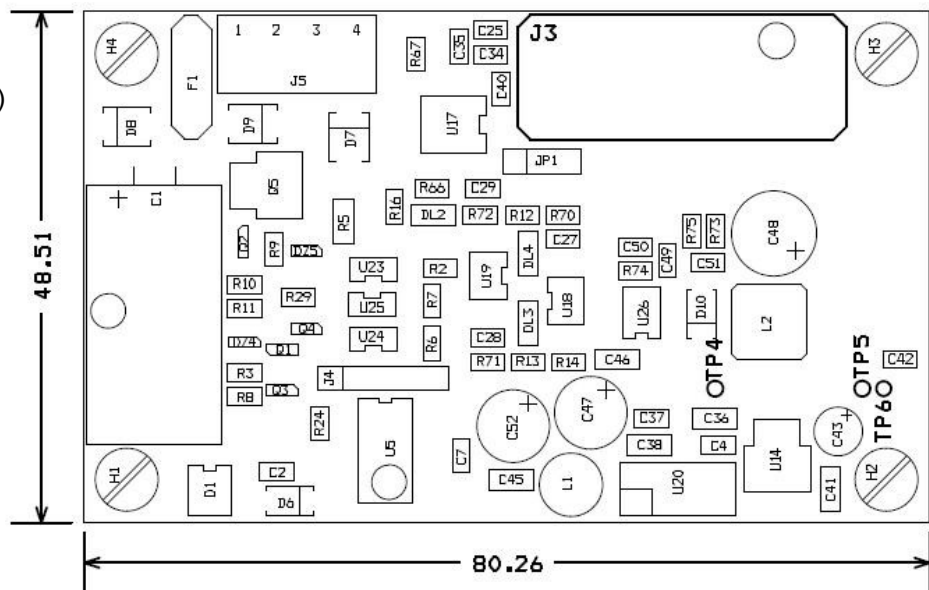
We suppose that the user has based knowledge on the Dali systems. Description and working of Dali bus isn't matter of this manual.

Demo kit contents

- N.1 board UART-DALI
- N.1 power supply 220-12Vdc or 12Vac
- N.1 cable UART 9 pin
- N.1 CD Software *DaliChipSW*

Layout

- J5.1 and J5.2 power (10/22 Vdc or 7/15 Vac, 400mA)
- J5.3 and J5.4 Dali bus
- J3 UART RS232 level (pcb bottom side)
- TP4, TP5, TP6 solder point to connect UART TTL



Connections

- Connect with a twisted pair cable the connector J5.3 and J5.4 to the Dali network
- Connect the power supply to J5.1 and J5.2 without switch on

Software install

Insert the CD

Install Software DaliChipSW running Setup in the main folder.

Finish the install.

Start the application

In Program, start the software *DaliChipSW*.

Switch on the power supply board.

From main panel select: Setup -> Program Setting to select the right comm port.

Make Dali Network

In the Main panel of *DaliChipSW* select:

Advanced -> Make Network–Random Address Allocation

Select then the START button.

At this point the software will look for the Dali slave devices present in the network. The results will be show on the panel during the procedure.

At the end you can redraw the network (erasing all the existing addresses) or saving the actual network configuration and add only the new slaves.

There are two other mode of making network:

1. Physical Selection use the fault input to manually select a slave and a new address
2. Single Address swaps between old and new short address

Main functions

We have now a quick explanation of the software main function.

On – Off single slave

From main panel insert the Dali single slave address (short address), and then click ON or OFF button.

Change single slave brightness

From main panel insert the Dali single slave address (short address), and then change the rotary slide "power".

Make a group

From main panel select:

Tool -> Groups

- In the new panel insert the slave address.
- Check the group to enable for this Slave (Group 0-15).
- Click on WRITE to update the slave.
- Replay this operation (changing the address) for the entire slave where the user wants create groups.

On – Off group

From main panel insert the Dali group address (group address), and then click ON or OFF button.

Change group address brightness

From main panel insert the Dali group address (group address), and then change the rotary slide "power".

Broadcast address

From main panel insert the Dali broadcast address; at this point the commands are for the entire slave in the network.

Make a scene

From main panel select:

Tools -> Scenes

- In the boxes (Scene0 .. Scene15) insert the brightness value desired from 00h to FEh (FFh disable the scene)
- Insert the slave address (short, group or broadcast)
- Select which scene you want configure ("All Scenes" send the command to all scene)
- Click WRITE to update the slave
- Replay this operation for the other slave where the you want make scene

If you want test the scene, select the desired number of scene, then click in "GO TO".

Test procedure

From main panel select:

Advanced -> Test Procedure

This phase, only for expert user, allows testing the slave performance according to the Dali requirements. A Dali manual can help to understand each single test.

Attention: the execution of a test erases all the information stored in the slave, like address, scenes, groups... At the end of the test the user needs to update all the slave information by the previous info.

It is possible to make one test at time (single test mode), or select and execute a lot of test (continuous test mode, checking the test to be executed).

Logger

This feature allows showing on the screen all the packets running on the Dali bus.

From main panel select:

Advanced -> Dali Logger

In the new panel enable the logger.

There are two modes: "No Run Time" e "Run Time".

- Run Time: it shows immediately the packet on the screen.
- No Run Time: it stores the packets without show them, then by the "UPDATE" button it's possible to show them. This mode is useful to check the packet in the "test procedure"; because during the test it's important have not effect in speed or timing to have a good result.

Ballast Setting

Set or read main slave values.

From main panel select:

Setup -> Ballast Setting

There are others features in the software. Here there isn't the description of all of them. It's better to consult the help of the software.

The next page has the electrical schematic of the demo kit.

Connect jumper JP1 in position 1-2 to have UART RS232 level.

Connect jumper JP1 in position 2-3 to have UART TTL level (+ISO = 3.3V)

