Never stop thinking

TLE9273QX Evaluation Board

DCDC SBC Family

Getting Started

Rev 1.0, Dec 2018

Automotive Power

Revision History: 1

Previous Version: none

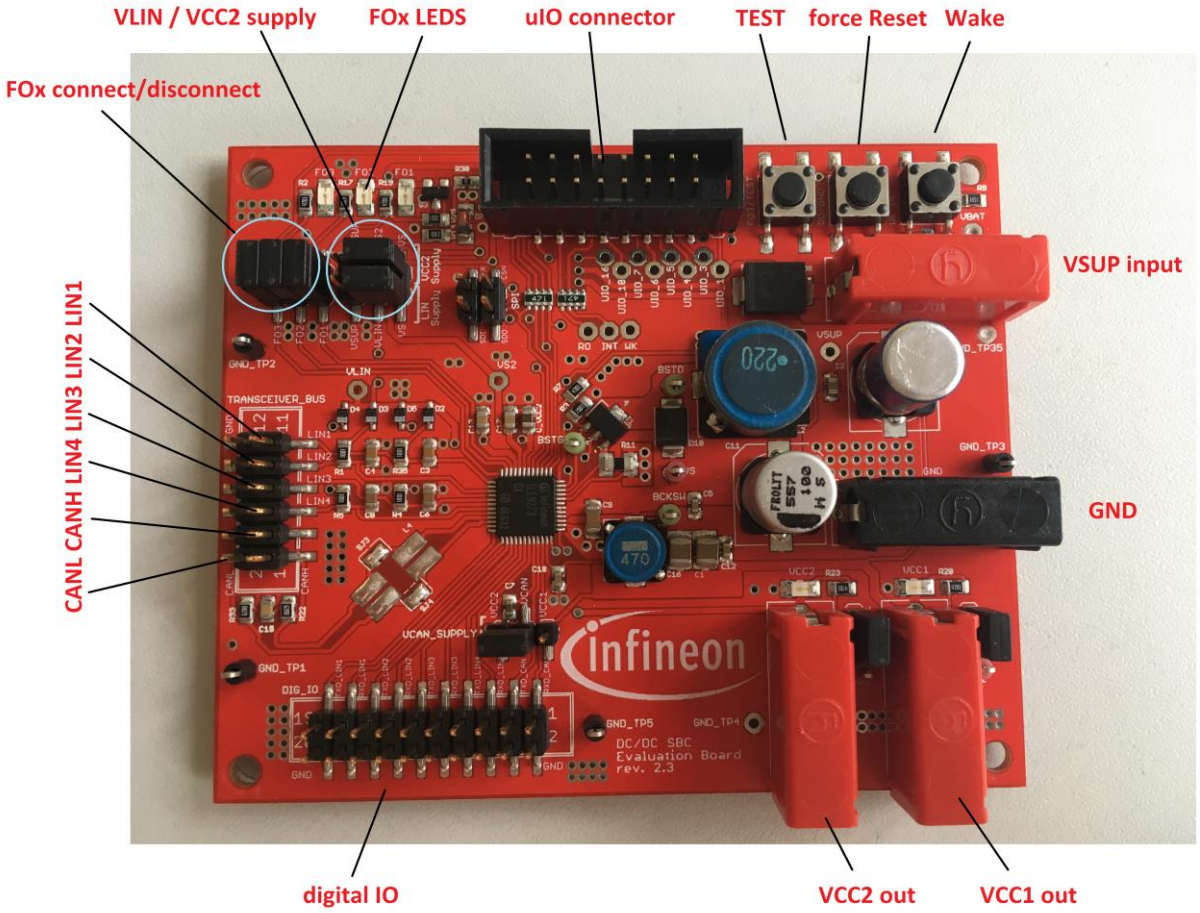
Page	Subjects (major changes since last revision)
1.0	Initial Release, All.

Table of Contents

Schematic and Layout can be seen on the last pages of this PDF document.

1. Evaluation Board Overview

There are 4 banana sockets, 5 LEDs, three buttons, one connector for the uIO and a set of headers for jumper configuration in the evaluation board. The functionalites will be explained in the next chapters. The distribution of these elements in the board can be observed in the following figure:



2. Banana Sockets

The SBC is usually supplied through the VSUP input and GND banana sockets.
The VCC1 output (5 V or 3.3 V, depending on the SBC's version) and VCC2 (5 V) banana sockets provide the regulated voltages from the SBC. The voltages VCC1 and VCC2 are used to supply the VCC1 and VCC2 supply indication LEDs which can be disconnected via the jumpers directly next to the banana outputs of VCC1 and VCC2.

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3. Buttons

In the upper right corner there are three buttons.

- **Test Button** for enabling test mode (press during SBC Init-Mode when sending arbitrary SPI command)
- **Reset Force** this button is connected in parallel to RO output of SBC and will connect RO line to GND when pressing to force a low signal on RO
- **Wake** this buttons will do a voltage transition on the wake input of SBC to trigger an external wake

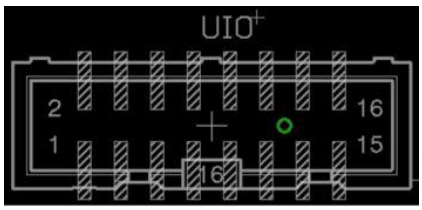
4. LEDs

In the upper left corner are 3 LEDs to indicate the state of the Fail-Outputs. The LEDs can be disconnected via the jumper directly under the LEDs. There are also two indication LEDs for the status of VCC1 and VCC2 (see behind the banana sockets for VCC1 and VCC2) which can be also disconnected via the jumpers directly next to the banana connectors of VCC1 and VCC2

5. Connectors

5.1. uIO Connector

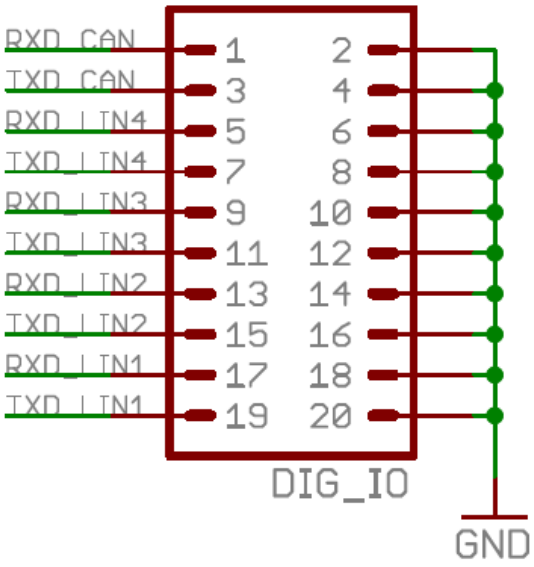
The uIO Connector is used for connecting to the uIO stick, but can be also used to access the uC interfacing pins. The pin distribution of the connector is shown in the following figure:



Pin	Functionality	Pin	Functionality
1	NC	2	GND
3	NC	4	NC
5	NC	6	VS_UIO
7	NC	8	INTN
9	CSN	10	NC
11	CLK	12	FO_UC
13	SDO	14	RSTN
15	SDI	16	ADC_UIO

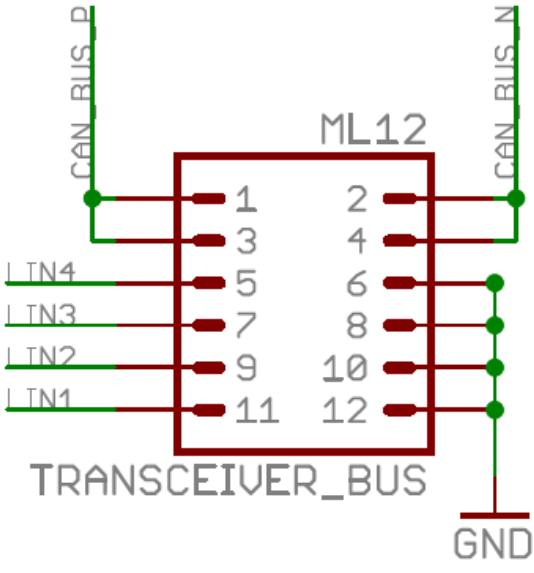
5.2. Digital IO Connectors

This connector can be used to access the RXD and TXD pins of the appropriate CAN and LIN transceivers



5.3. Transceiver Connectors

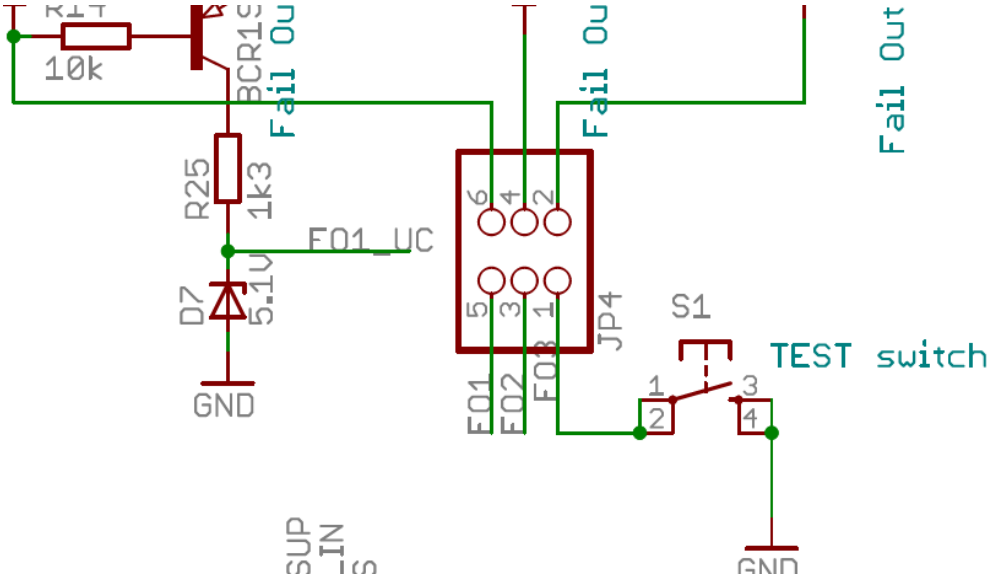
Those connectors can be used to connect to the transceiver outputs LIN1-LIN4 and to CAN.



6. Jumper Configurations

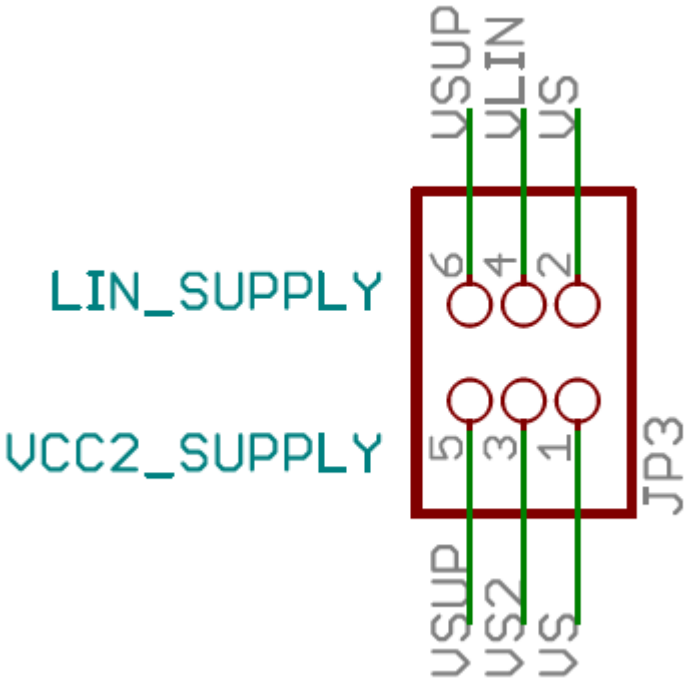
6.1. FO connect / disconnect jumpers

The approbriate FOx LEDs can be connected / disconnected from / to the FOx pins to indicate its status. Also the jumpers can be used to connect an external fail circuitry.



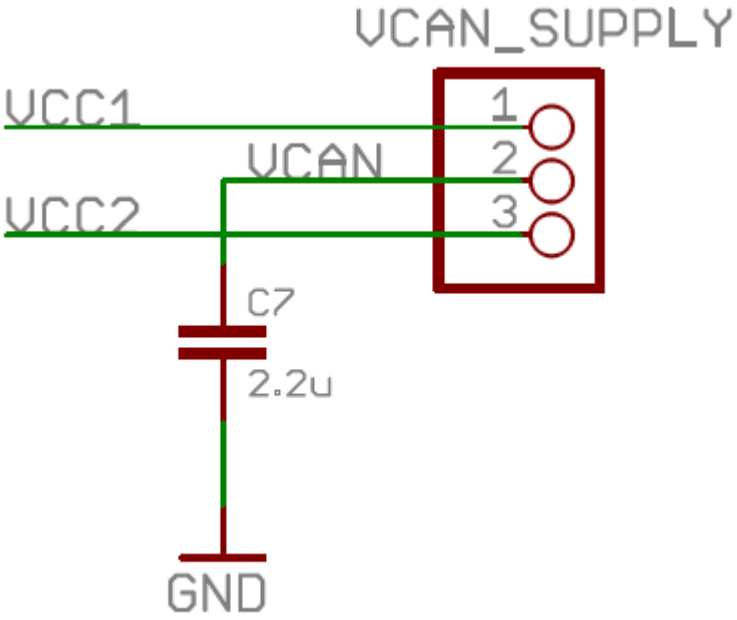
6.2. VCC2 / VLIN jumpers

Those jumpers are located directly next to the jumpers of the fail outputs LEDs (see overview picture). Depending on the configuration you can select the input supply of VCC2 regulator and the VLIN supply to either VSUP (which is directly the banana socket input) or to VS (which is the ouput of boost-converter).



6.3. VCAN jumper

This jumper can be used to select the supply of the VCAN input. It can be connected either to VCC1 or VCC2. VCAN must be supplied with 5V. Therefore – in case of DCDC SBC V33 type, this jumper must be connected to VCC2.



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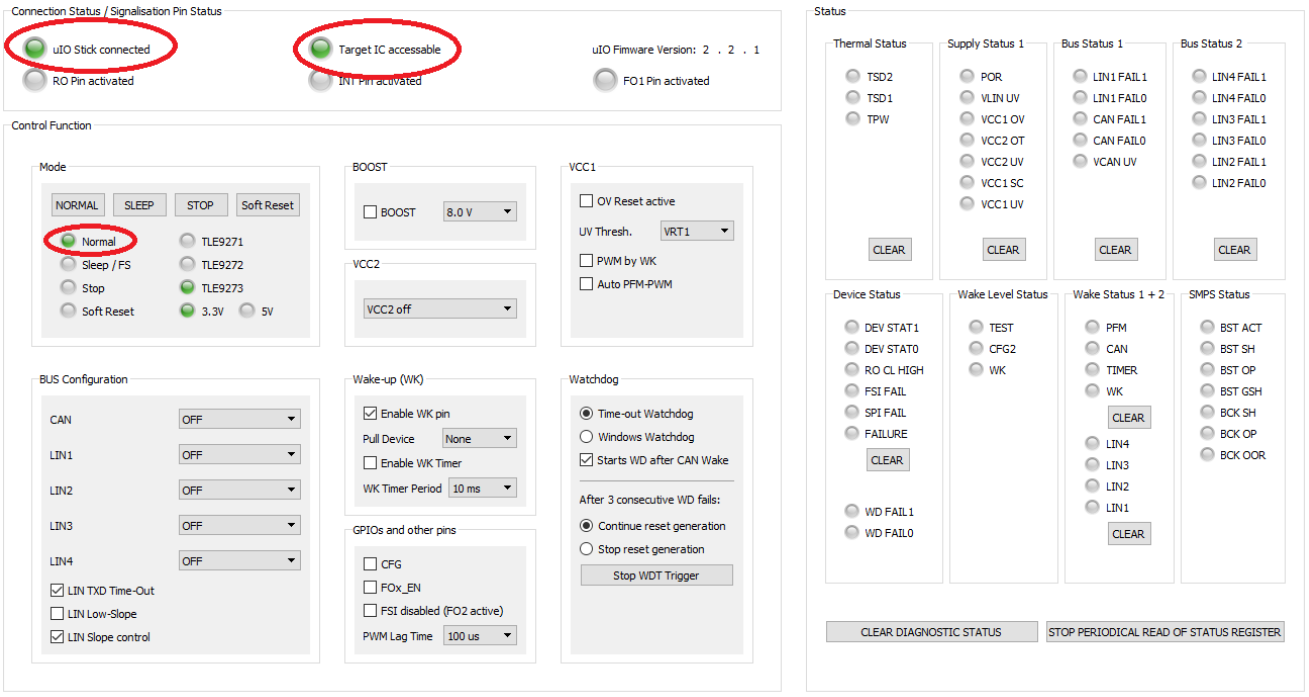
7 Usage of ConfigWizard

Please connect your uIO stick to the uIO interface header and supply the evaluation board with e.g. 12V.

After this, please open “Config Wizard for SBC” inside Infineon Toolbox and select “TLE9273”. In case it has problems to connect please refer to the uIO stick user manual which can be also downloaded under http://www.infineon.com/SBC

After this, when the user interface is opening, then the SBC should be in SBC normal mode and SPI should be accessable. This is indicated by green status flags.



All functionalities of the SBC are live controllable then by just clicking or selecting the appropriate functions.

8 Additional Information

For further information you may contact **http://www.infineon.com** or your regional FAE.

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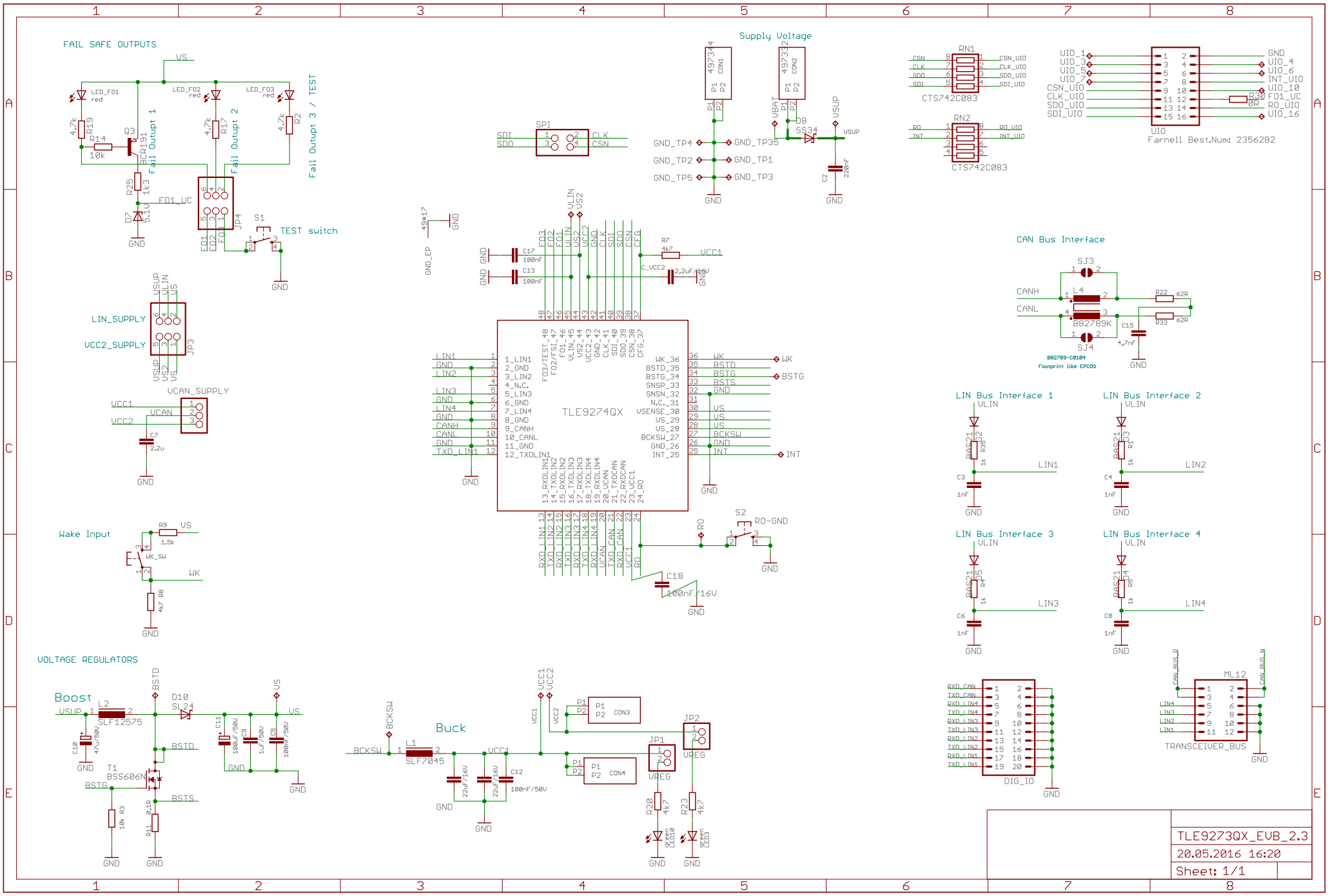
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Supply Voltage
CAN Bus Interface
LIN Bus Interface 1
LIN Bus Interface 2
LIN Bus Interface 3
LIN Bus Interface 4
VOLTAGE REGULATORS
Wake Input
Boost
Buck
TLE9274QX
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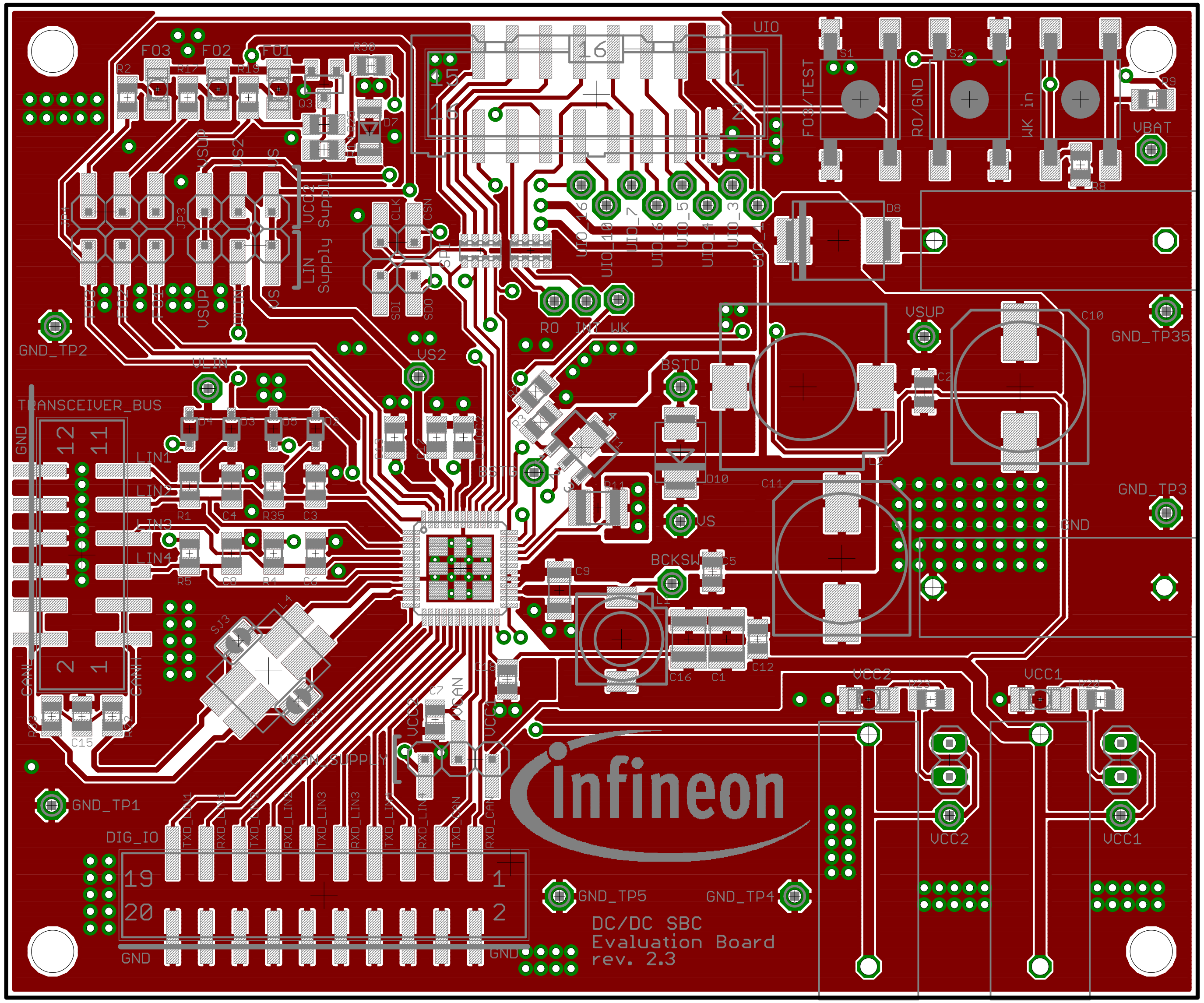
DC/DC SBC
Evaluation Board
rev. 2.3
infineon
UIO
FO3
FO2
FO1
FO3/TEST
RO/GND
WK in
VBAT
VSUP
GND_TP35
GND_TP2
GND_TP3
GND_TP1
GND_TP5
GND_TP4
TRANSCEIVER_BUS
LIN1
LIN2
LIN3
LIN4
VLIN
VS2
BSTD
BCKSW
VS
GND
VCC2
VCC1
DIG_IO
VCAN_SUPPLY
LIN Supply
VCC1 Supply
RO
INT
WK
UIO_1
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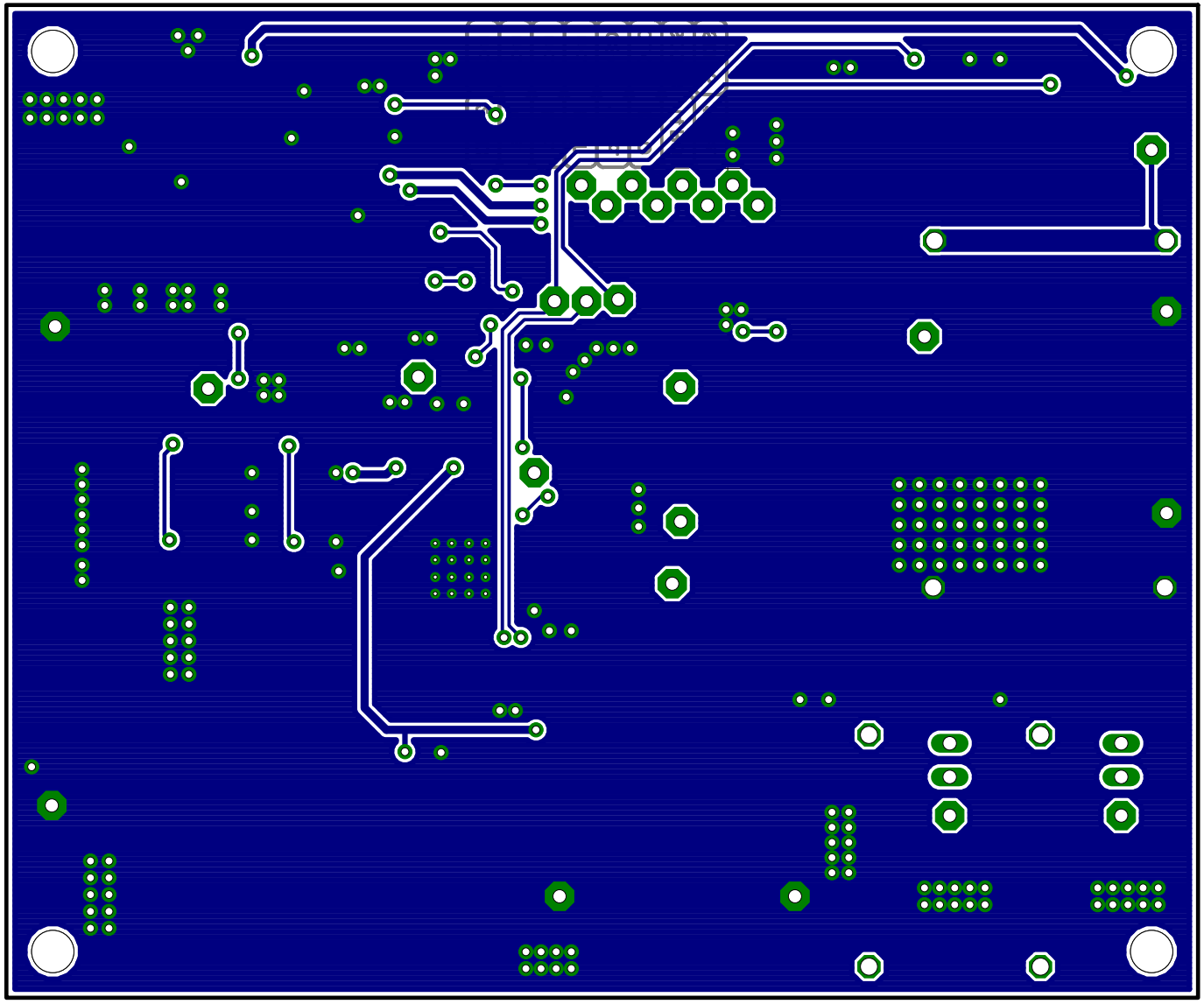

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