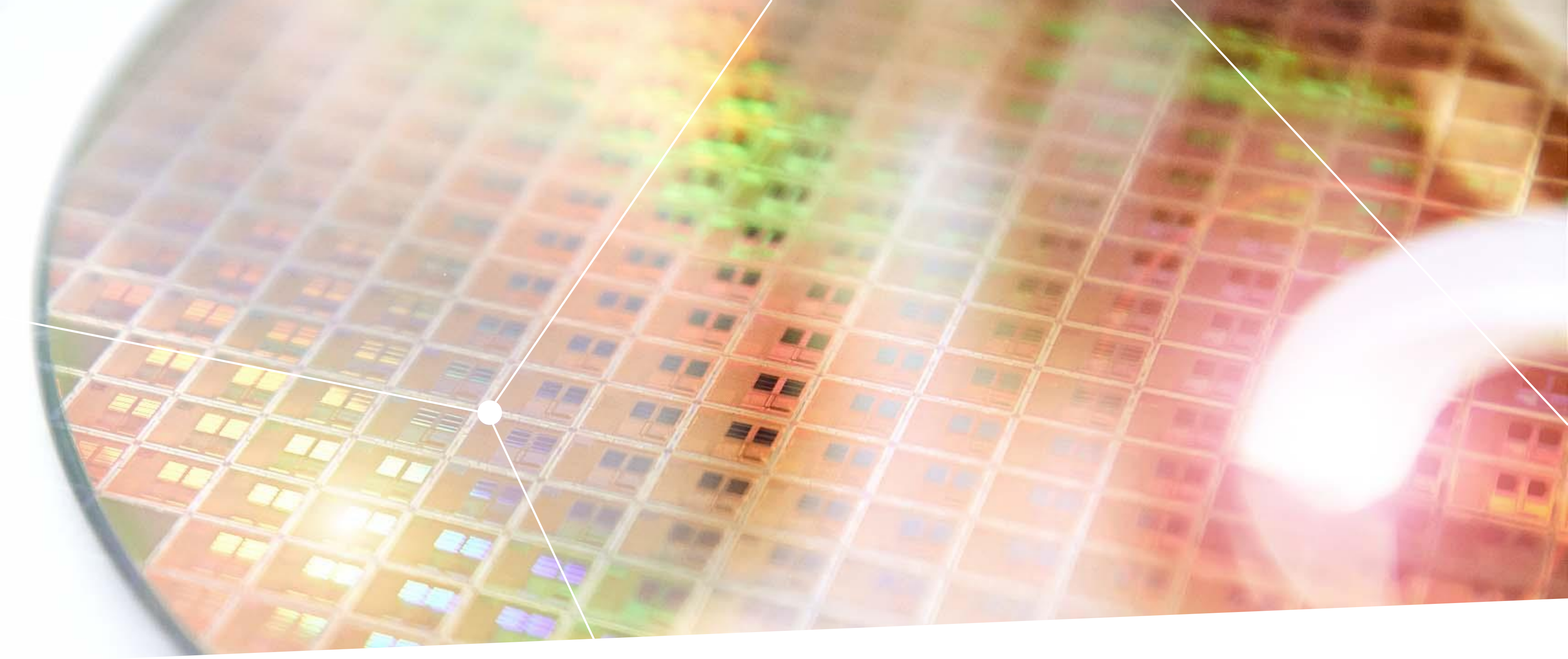


Interface Tool for Alternator Control ICs

Easy and convenient Design-In and Debugging

Alexis Schindler (IFX ATV PTS MDS AE)

Interface Tool
Overview

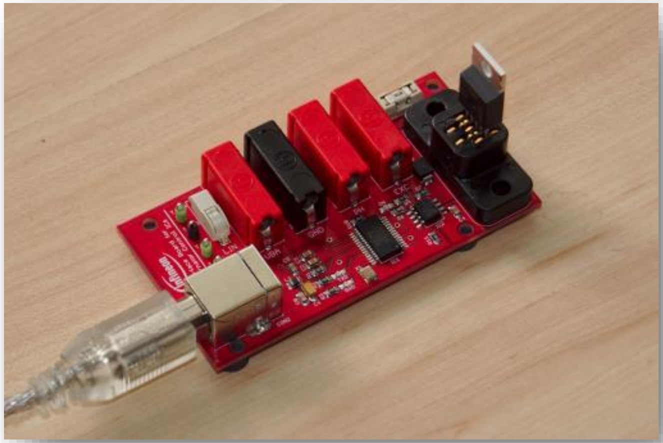
- IFX decides to provide a reliable and handy programming board to its customers
  - Fast design-in
  - Easy NVM programming
  - Strong customer support
- The decision to bundle board+software into one tool should lead to *global and fast support*
  - Guarantee no failures of connecting IC interface
  - Neglect mistakes in programming sequence
  - Get in touch with the IC as fast as possible

- Overall:
  Quick and convenient workflow to catch the project milestones

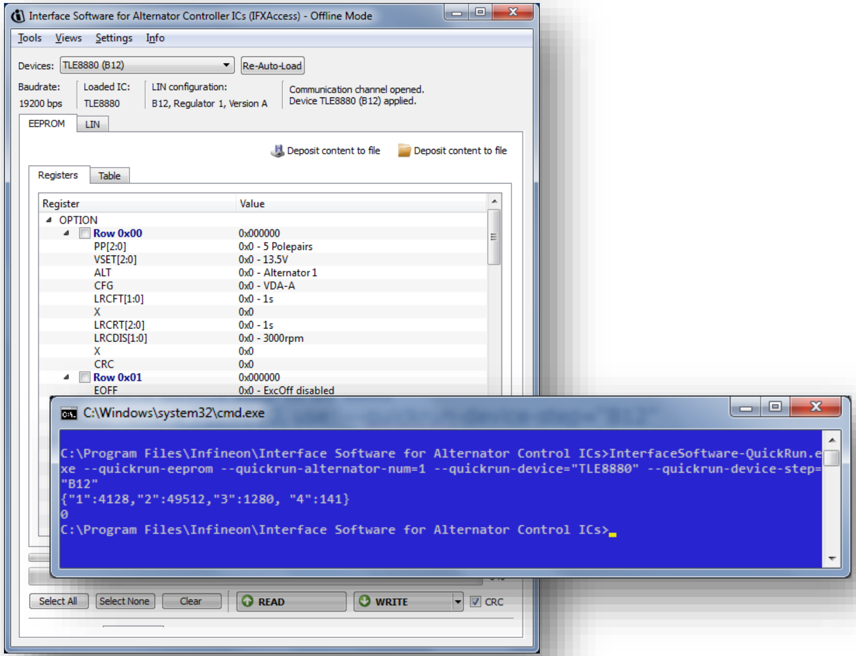
Interface Tool Bundle

Interface Tool for Alternator Control ICs

1. Interface Board



2. Interface Software



Interface Software Overview

EEPROM

- Read-out EEPROM content
- Write EEPROM map
- Change specific bits
- Mapping for all EEPROM bits including descriptions

Use a **Graphical User Interface** to modify the NVM

LIN

- Mapping for all LIN RX/TX frames
- Send single frames with desired content
- Send frames in the loop
- Merge a set of frames into a sequence batch

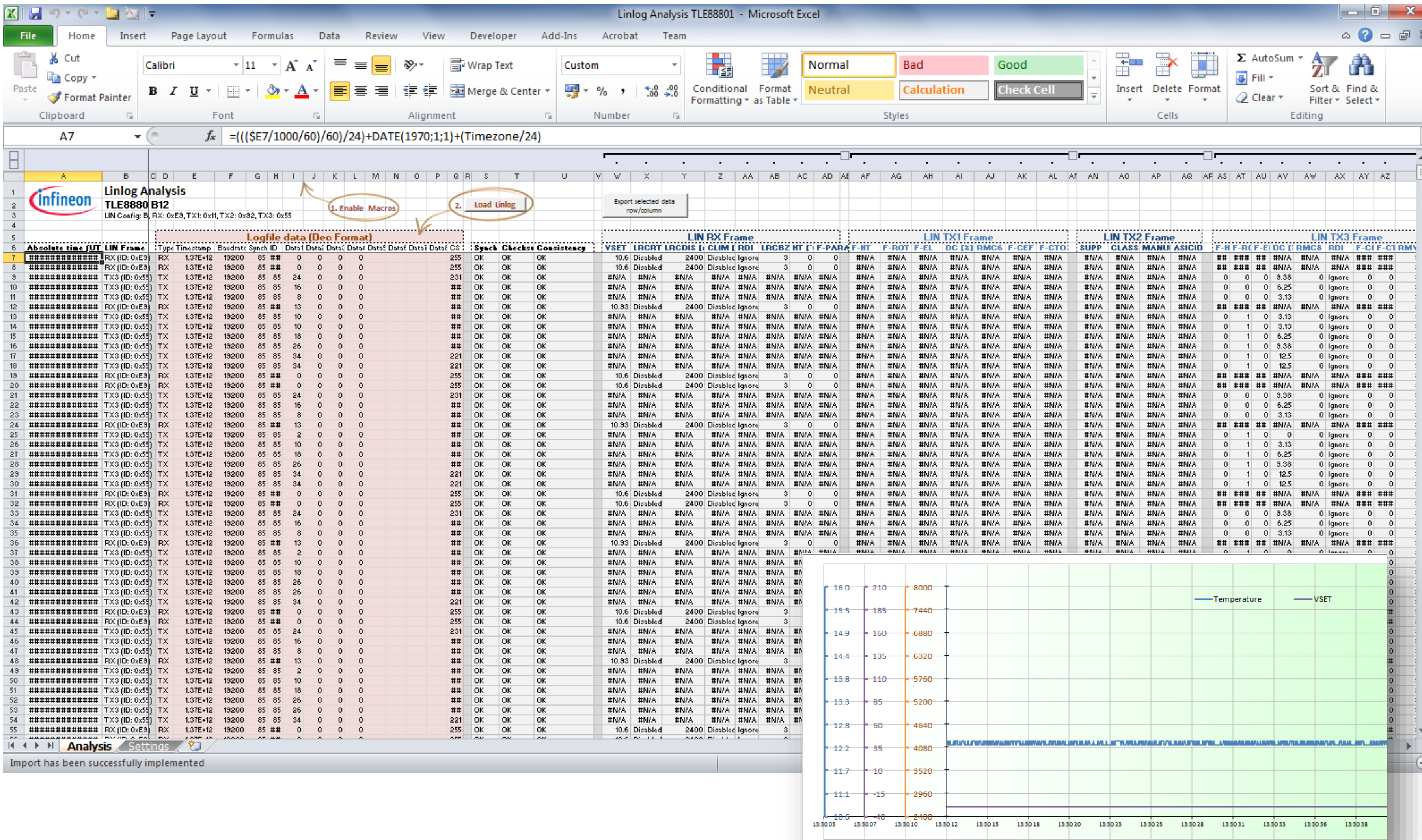
Use a **Graphical User Interface** to send LIN frames

Automation

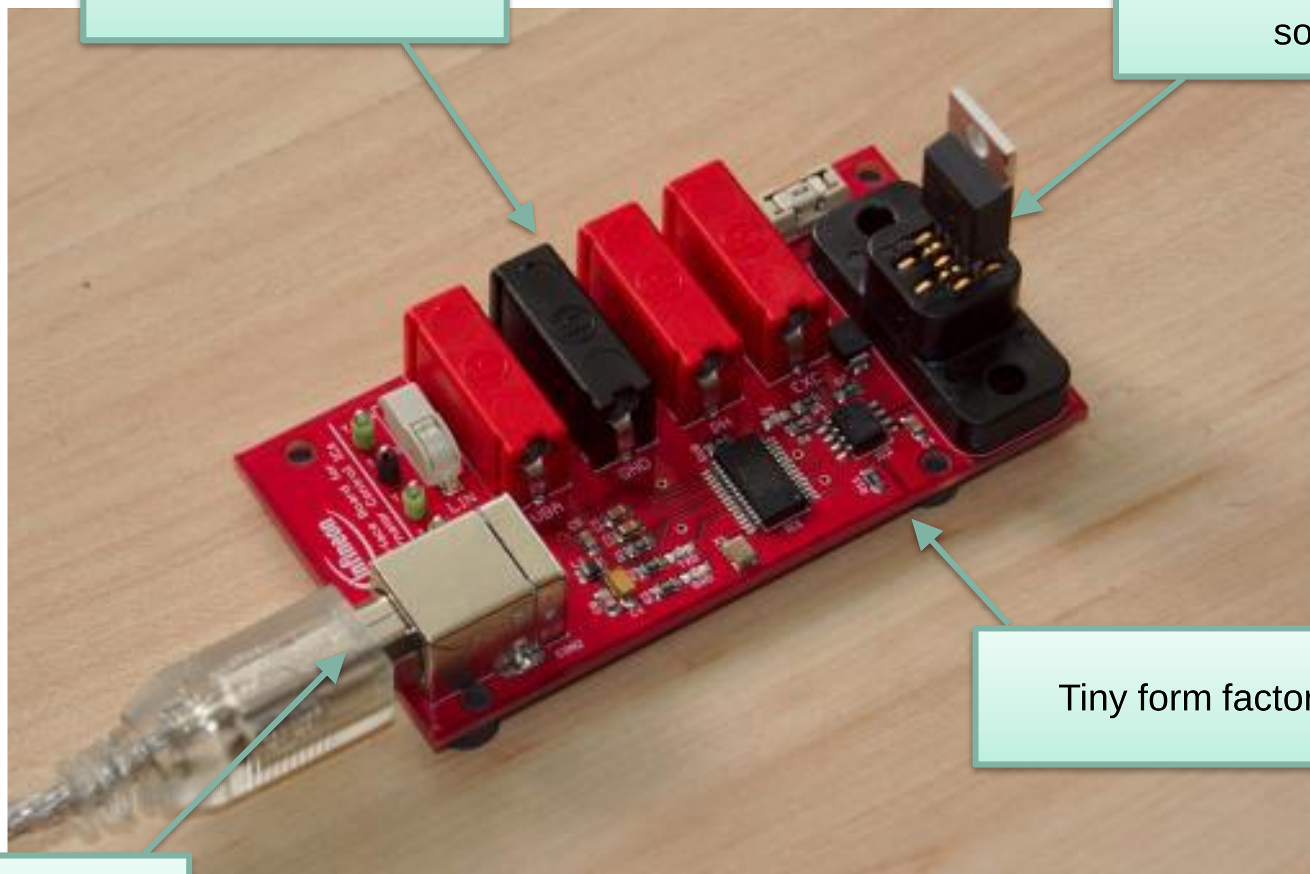
- Command line tool for automation processes
- Trigger EEPROM write/read-out and get the result
- Trigger LIN batch

Use a **Command Line mode** to automate

Interface Software
Deep LIN debugging

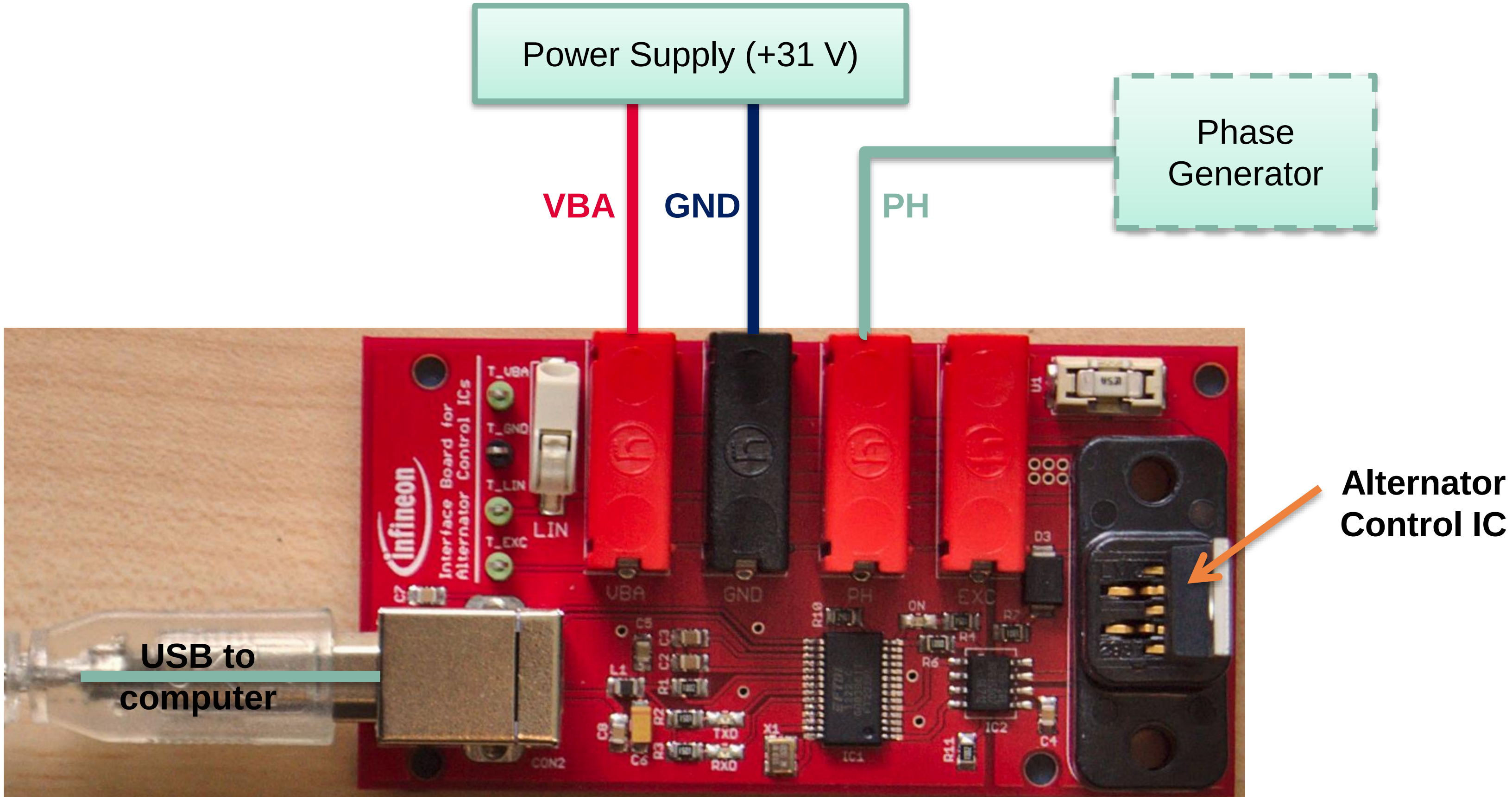


Interface Board Overview



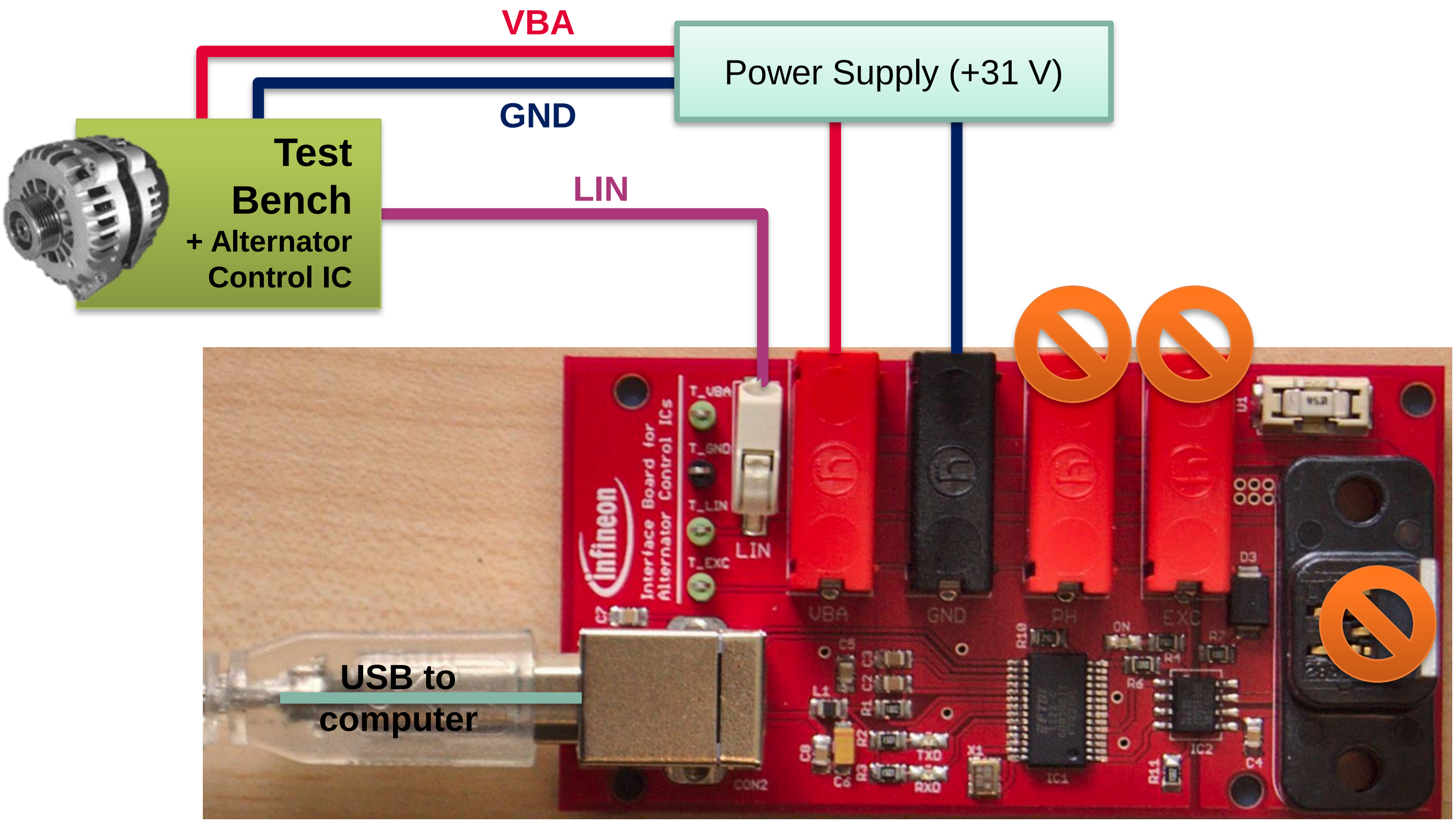
Interface Board
EEPROM Programming w/ chip on top

› Set-up for Interface Board and in the socket:



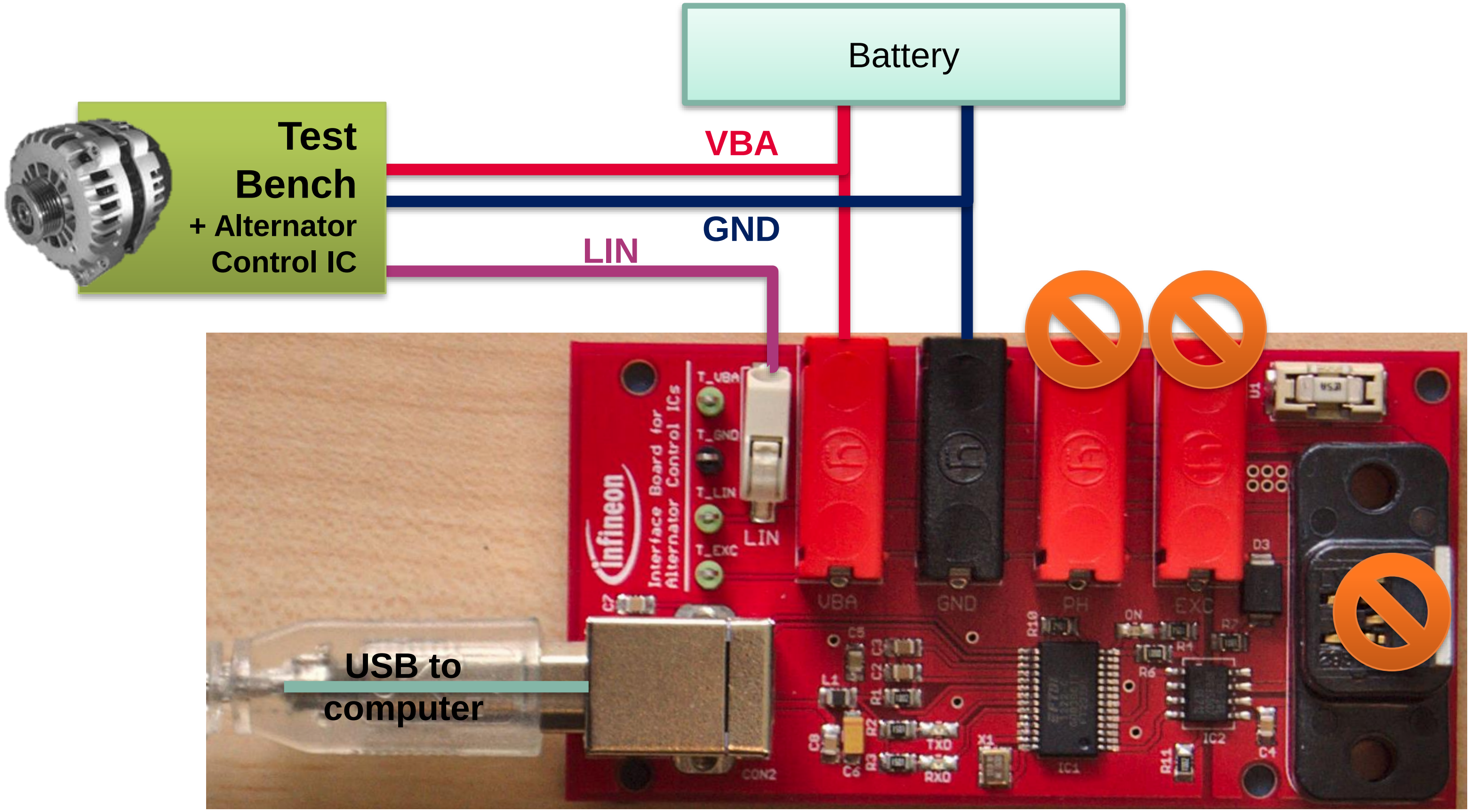
Interface Board
EEPROM Programming on test bench

› Possible connections between Interface Board and Test Bench:



Interface Board
Regular LIN communication on test bench

› Possible connections between Interface Board and Test Bench:



Interface Software
First Steps

1. Connect Interface Board with battery@12V (and alternator)
2. Start Interface Software, select the regulator
   and press "Auto Load" (during Auto Load, <u>both</u> LEDs on the Interface Board shall blink)
3. If failed, check connections or select "Manual Load" as alternative way
4. Select your actions
   A. Tab "EEPROM" for re-programming purposes
   B. Tab "LIN" for LIN communication purposes

Part of your life. Part of tomorrow.