



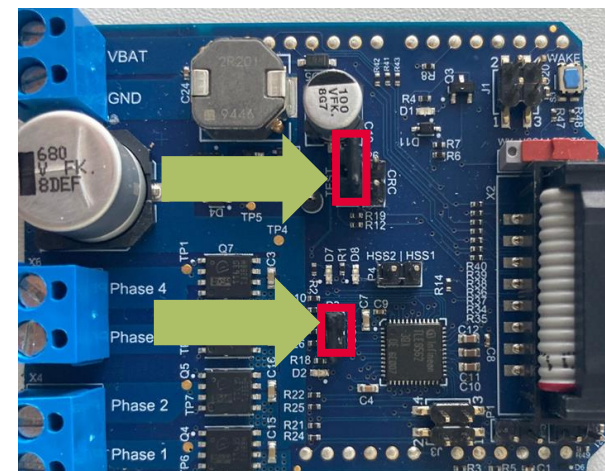
Quick-start of the TLE9562 shield with the uIO stick

2022-02-24

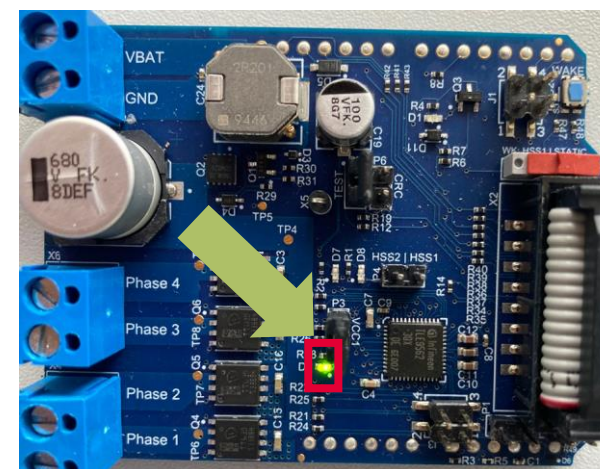


Step 1

- › Set the jumpers for the LED connected to VCC1 and to enable the software development mode

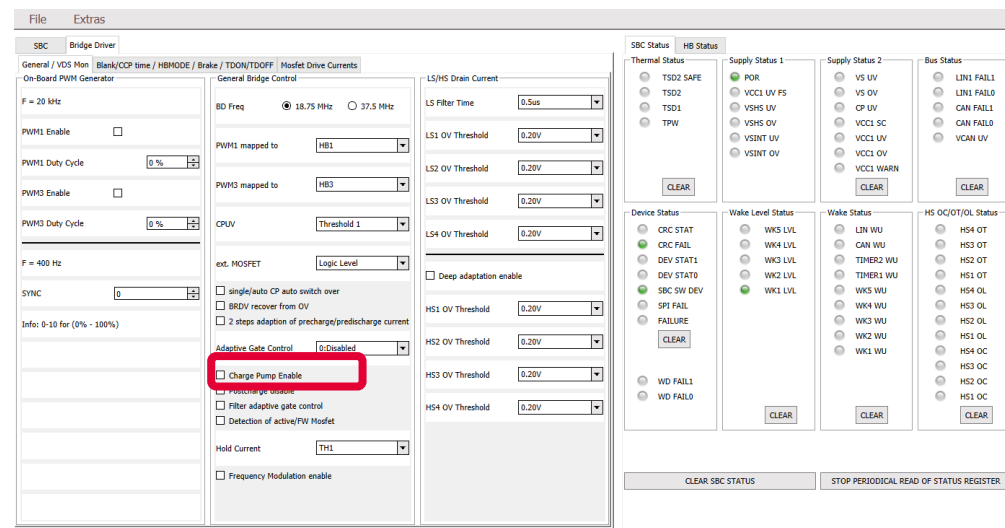
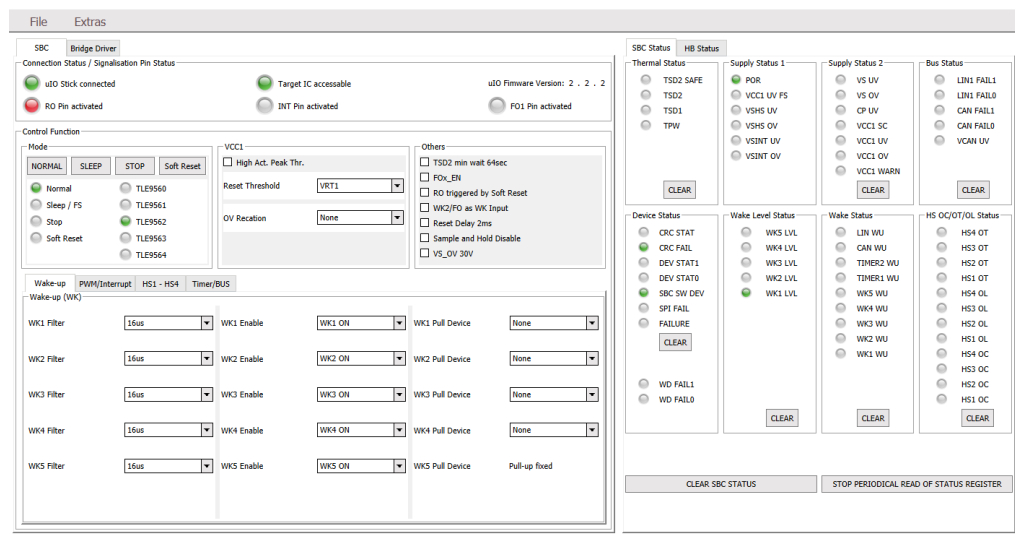
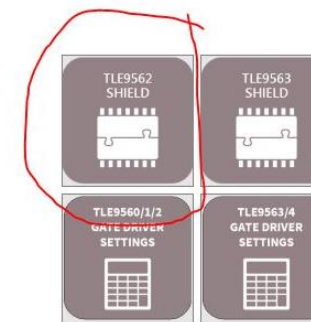


- › Connect the uIO stick to the shield and to the PC
- › Enable the 12V supply
 - The green LED should be on



Step 2

- › Start the Config Wizard for the motor system IC and start
- › The GUI should look like that: showing the that uIO stick communicate with the TLE9562



For example the charge pump is disabled

Step 3

> Clear failures (if any)

SBC Status

HB Status

<div>Thermal Status</div> <div> <input type="radio"/> TSD2 SAFE <input type="radio"/> TSD2 <input type="radio"/> TSD1 <input type="radio"/> TPW </div> <div>CLEAR</div>	<div>Supply Status 1</div> <div> <input checked="" type="radio"/> POR <input type="radio"/> VCC1 UV FS <input type="radio"/> VSHS UV <input type="radio"/> VSHS OV <input type="radio"/> VSINT UV <input type="radio"/> VSINT OV </div>	<div>Supply Status 2</div> <div> <input type="radio"/> VS UV <input type="radio"/> VS OV <input type="radio"/> CP UV <input type="radio"/> VCC1 SC <input type="radio"/> VCC1 UV <input type="radio"/> VCC1 OV <input type="radio"/> VCC1 WARN </div> <div>CLEAR</div>	<div>Bus Status</div> <div> <input type="radio"/> LIN1 FAIL1 <input type="radio"/> LIN1 FAIL0 <input type="radio"/> CAN FAIL1 <input type="radio"/> CAN FAIL0 <input type="radio"/> VCAN UV </div> <div>CLEAR</div>
<div>Device Status</div> <div> <input type="radio"/> CRC STAT <input checked="" type="radio"/> CRC FAIL <input type="radio"/> DEV STAT1 <input type="radio"/> DEV STAT0 <input checked="" type="radio"/> SBC SW DEV <input type="radio"/> SPI FAIL <input type="radio"/> FAILURE <div>CLEAR</div> <input type="radio"/> WD FAIL1 <input type="radio"/> WD FAIL0 </div>	<div>Wake Level Status</div> <div> <input type="radio"/> WK5 LVL <input type="radio"/> WK4 LVL <input type="radio"/> WK3 LVL <input type="radio"/> WK2 LVL <input checked="" type="radio"/> WK1 LVL </div> <div>CLEAR</div>	<div>Wake Status</div> <div> <input type="radio"/> LIN WU <input type="radio"/> CAN WU <input type="radio"/> TIMER2 WU <input type="radio"/> TIMER1 WU <input type="radio"/> WK5 WU <input type="radio"/> WK4 WU <input type="radio"/> WK3 WU <input type="radio"/> WK2 WU <input type="radio"/> WK1 WU </div> <div>CLEAR</div>	<div>HS OC/OT/OL Status</div> <div> <input type="radio"/> HS4 OT <input type="radio"/> HS3 OT <input type="radio"/> HS2 OT <input type="radio"/> HS1 OT <input type="radio"/> HS4 OL <input type="radio"/> HS3 OL <input type="radio"/> HS2 OL <input type="radio"/> HS1 OL <input type="radio"/> HS4 OC <input type="radio"/> HS3 OC <input type="radio"/> HS2 OC <input type="radio"/> HS1 OC </div> <div>CLEAR</div>

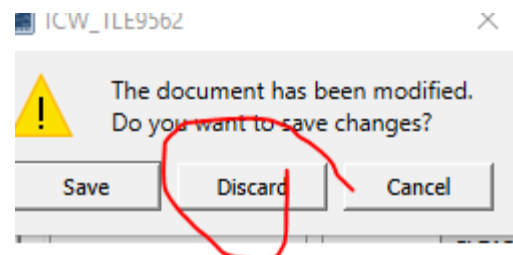
CLEAR SBC STATUS

STOP PERIODICAL READ OF STATUS REGISTER

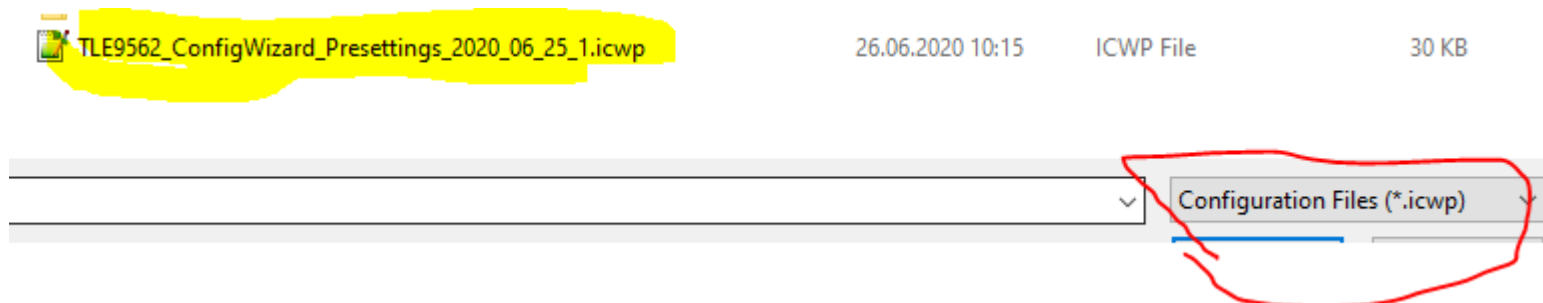
Step 3

> Load the file:

- File → Load
- A pop-up window appears → Discard

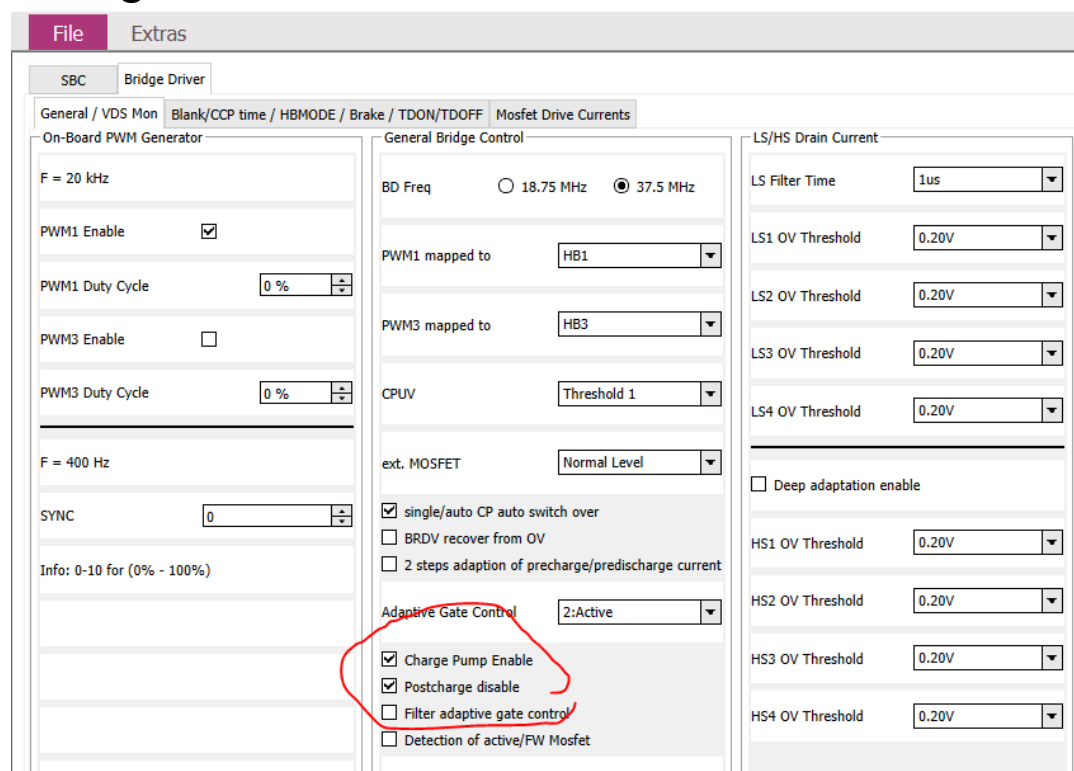


- Browse and select the file TLE9562_ConfigWizard_2020_06_25_1.icwp (unzip the file before)



Step 3

- › The pre-settings are loaded into the TLE9562, for example, the charge pump is enabled, the half-bridge 1 is set in PWM, the charge and discharge currents and timings for the gate drivers are configured



File Extras

SBC Bridge Driver

General / VDS Mon Blank/CCP time / HBMODE / Brake / TDON/TDOFF Mosfet Drive Currents

On-Board PWM Generator

F = 20 kHz

PWM1 Enable ☒

PWM1 Duty Cycle 0 %

PWM3 Enable ☐

PWM3 Duty Cycle 0 %

F = 400 Hz

SYNC 0

Info: 0-10 for (0% - 100%)

General Bridge Control

BD Freq ☐ 18.75 MHz ☒ 37.5 MHz

PWM1 mapped to HB1

PWM3 mapped to HB3

CPUV Threshold 1

ext. MOSFET Normal Level

☒ single/auto CP auto switch over

☐ BRDV recover from OV

☐ 2 steps adaption of precharge/predischarge current

Adaptive Gate Control 2:Active

☒ Charge Pump Enable

☒ Postcharge disable

☐ Filter adaptive gate control

☐ Detection of active/FW Mosfet

LS/HS Drain Current

LS Filter Time 1us

LS1 OV Threshold 0.20V

LS2 OV Threshold 0.20V

LS3 OV Threshold 0.20V

LS4 OV Threshold 0.20V

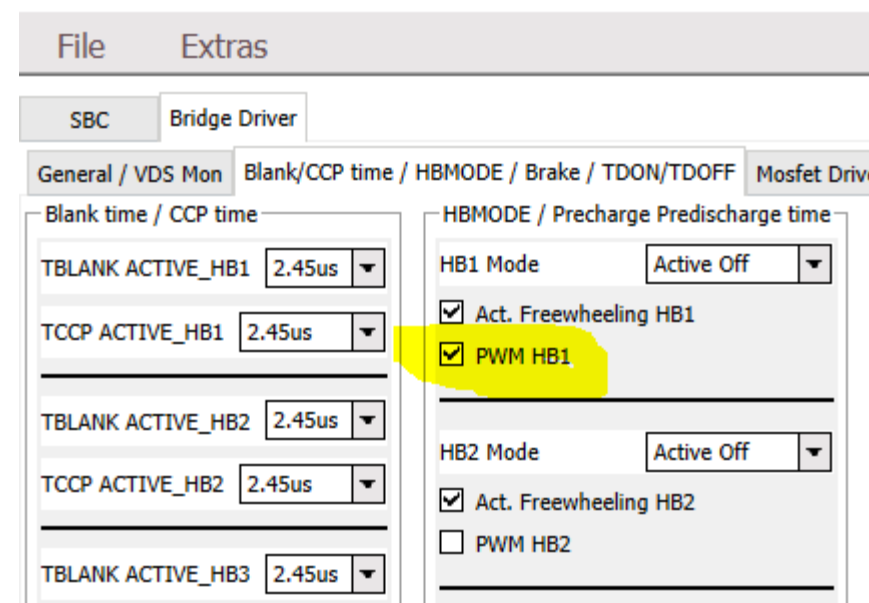
☐ Deep adaptation enable

HS1 OV Threshold 0.20V

HS2 OV Threshold 0.20V

HS3 OV Threshold 0.20V

HS4 OV Threshold 0.20V



File Extras

SBC Bridge Driver

General / VDS Mon Blank/CCP time / HBMODE / Brake / TDON/TDOFF Mosfet Drive

Blank time / CCP time

TBLANK ACTIVE_HB1 2.45us

TCCP ACTIVE_HB1 2.45us

TBLANK ACTIVE_HB2 2.45us

TCCP ACTIVE_HB2 2.45us

TBLANK ACTIVE_HB3 2.45us

HBMODE / Precharge Predischarge time

HB1 Mode Active Off

☒ Act. Freewheeling HB1

☒ PWM HB1

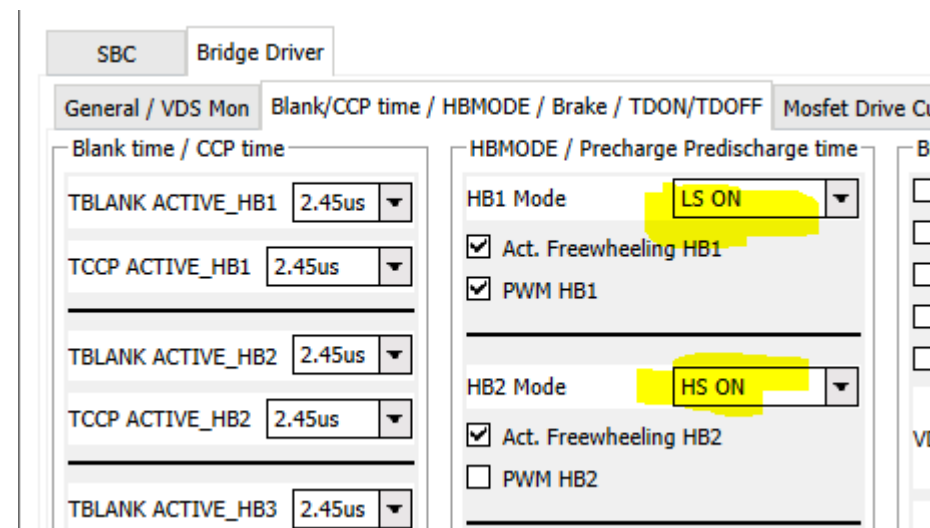
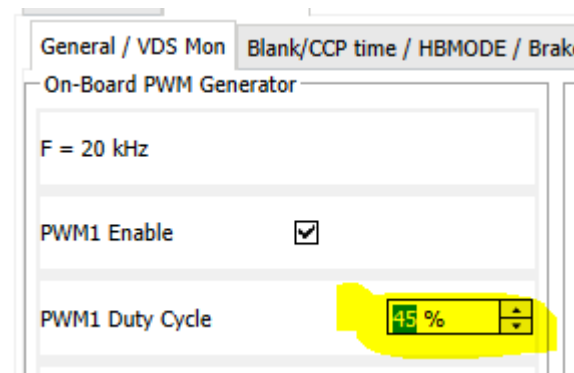
HB2 Mode Active Off

☒ Act. Freewheeling HB2

☐ PWM HB2

Step 4 – Activate the motor connected between OUT1 and OUT2

- › Enable the PWM1 generator by the uIO stick and applied to the PWM1 pin of the TLE9562, set the duty cycle
- › Turn on the low-side 1 (PWM MOSFET)
- › Turn on the high-side 2





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