

Test Procedure for the NCV78703R1GEVK

Required Equipment:

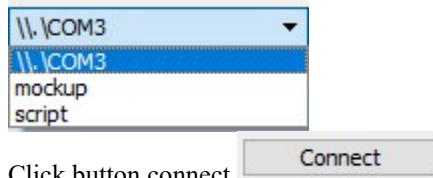
- Bench power supply with current limitation of 3A minimum or with huge output capacitor
- Complete set of boards NCV78703R1GEVK evaluation kit is consisting of:
 - NCV78703R1DAGEVB: NCV78703 Daughter Board
 - NCV78XXXDRVR1GEVB: LED Driver Mother Board
 - ONCTRLDILR1GEVB: MCU Control Board
- GUI SW LED Driver EVK installed on PC

Initial setup:

1. Put all boards together, connect voltmeter to booster output
2. Connect power supply to VBAT (positive) and GND (negative) 4mm bananas, set voltage to 13 V with current limitation app. 2 A and switched it on
3. Connect USB mini cable to ONMCU_DIL control board

4. Start GUI SW LED Driver EVK. In status bar click icon  to refresh information about available virtual COM ports.

Select port where EVK is connected:

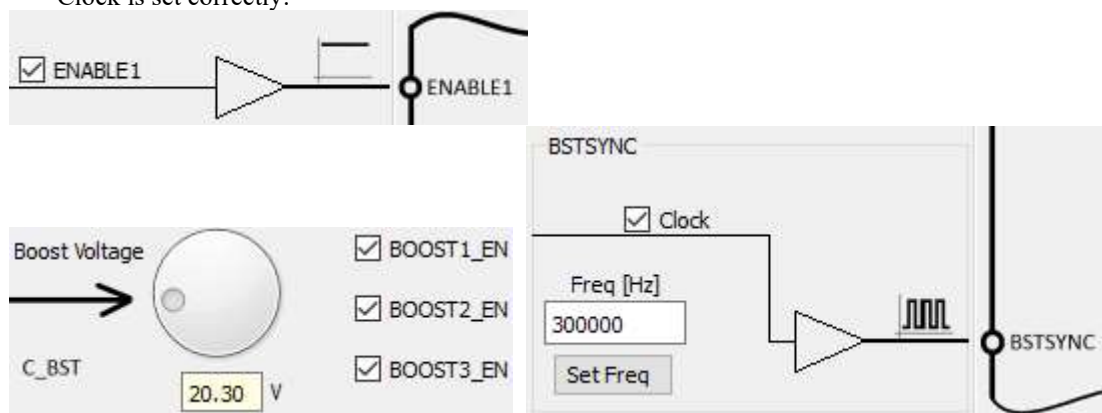


Click button connect

5. The detected boards should appear automatically in GUI SW.
6. Click on graphical representation of NCV78703 daughter board or select it in menu “Application” via “NCV78703 (BOOSTER)” item. Window allowing high level control of application and access to all registers will appear.

Test procedure

7. Check whether SPI communication is working correctly:
 - a. Go to “Status registers” tab and click “Read all” button. In the register REVID (Address 0Dhex) the REVID corresponding to used device on daughter board should appear.
8. Check whether boosted output voltage is present:
 - a. Default configuration of the board in GUI SW should ensure that 20 V output voltage is present, check and measure it with voltmeter on booster output testpoint (VBST).
 - b. If boosted voltage is not present (and only battery voltage is visible on VBST testpoint) check in “Application” tab whether ENABLE1 checkbox is set, whether Boost Voltage control is set to 20.3 V, checkboxes BOOST1_EN, BOOST2_EN and BOOST3_EN are enabled and BSTSYNC Clock is set correctly:



- c. Switch off the booster by unchecking BSTSYNC clock and BOOST1_EN, BOOST2_EN and BOOST3_EN checkboxes (booster output voltage should drop to battery level) and click “Disconnect” in status bar, disconnect mini USB cable and switch off power supply.