

Interface Software for Alternator Control ICs

How to use **QuickRun**

Application Note Excerpt (Updated 10.06.2014)

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QuickRun background

- QuickRun enables the user to use the Interface Software in the terminal (command line)
- With QuickRun, the following can be achieved
 - Batch processing in command line
 - Continuous EEPROM processing in assembly line
 - Automated EEPROM handling
- As of version 1.3, QuickRun supports EEPROM only

Attention:

QuickRun is not verified and tested for robust and reliable processing in assembly line.

How to start

- The Interface Software consists of two dedicated executable:
 - GUI version
 - QuickRun version
- QuickRun is enabled in a dedicated executable inside the program directory,
e.g. "C:\Program Files\Infineon\Interface Software for Alternator Control ICs**InterfaceSoftware-QuickRun.exe**"
- QuickRun needs to be started from shell/terminal:
 - For Windows, press  +R
 - Type in: "cmd"
 - In shell, type:
"cd C:\Program Files\Infineon\Interface Software for Alternator Control ICs"

Parameters / Command arguments

- As of version 1.3, QuickRun supports EEPROM-related parameters only
- Parameters need to be appended to executable in shell
- Depending on parameter set, the Interface Software executes the desired action and right after feed backs the respective results
- For EEPROM read-out, content of the EEPROM can be piped to dedicated file
- Logging can be enabled for debugging purposes

Parameter description (1)

--device="<device>" / --get-device-names

Mandatory

- Indicates the device to be used
- For TLE888x, use: --device="TLE888x"
- List up all available device profiles by using --get-device-names

--device-step="<device-step>" / --get-device-steps

Mandatory

- Indicates the device step to be used
- If unknown, list up most recent available design step by using --get-device-steps

--lin-config="<LIN configuration>"

Optional

- Sets the LIN configuration to be used
- Only relevant for performing LIN configuration specific actions
- Not necessary for EEPROM-relevant operations with TLE8880/TLE8886

--lin-version="<LIN version>"

Mandatory

- Specifies LIN version for multi-version devices, e.g. LIN1.3 in parallel to LIN2.1
- If needed, specify like this (for LIN1.3): --lin-version="1.3"
- Not necessary for EEPROM-relevant operations with TLE8880/TLE8886

Parameter description (2)

--log / --log-console / --log-file

Optional

- Enable logging for debugging purposes
- "--log" only enables both console and file logging
- "--log-file" stores log file into program directory (requires privileges to write files)

--quickrun-eeeprom / --file="*<file>*" / --eeeprom-verify

Mandatory switch

- Activates QuickRun with EEPROM read-out/write-in
- If *<file>* is given via "--file" argument, EEPROM will be written with previously deposited EEPROM content (Current workflow: You have to start GUI version, read-out the EEPROM content and deposit the EEPROM content into a csv-file, which is needed for --file="*<file>*")
- If "--file" argument is not given, EEPROM will be read and printed with previously defined EEPROM content
- Use --eeeprom-verify to perform verification after programming (needs more time)

--alternator-num=*<number>*

Mandatory

- Indicate previously set number of regulator in LIN network
- Default value: 1
- Value can be changed in EEPROM (NVM-ALT)

Parameter description (3)

Mandatory

--comm-profile="<comm profile>" / --get-comm-profiles

- Indicates the communication profile to be used, if more than one is available
- List up all available profiles by using --get-comm-profiles instead
- For the *Interface Board*, use --comm-profile="USB-LIN-C"

Optional

--comm-channel="<comm channel>" / --get-comm-channels

- Indicates the communication channel to be used, if more than one is available
- This argument is only necessary, if multiple boards (e.g. Interface Board) are connected to the PC
- List up all available channels by using --get-comm-channels instead

EEPROM exit codes

- Each QuickRun process is exited with a specific exit code
- Exit code will be piped to "cerr"-pipe
- Following codes and meanings are available:
 - **0** = No failure
 - **1** = Wrong or missing input parameters (command args)
 - **2** = Failure on loading plugins and interfaces
(e.g. suitable plugins are not available)
 - **3** = Failure on connecting to board
(e.g. GUI version is already running)
 - **4** = Failure on finding right mapping for chosen device(-step)
(e.g. input parameters do not fit to device profiles)
 - **5** = Failure on writing the EEPROM
 - **6** = Failure on EEPROM read-out

EEPROM content format

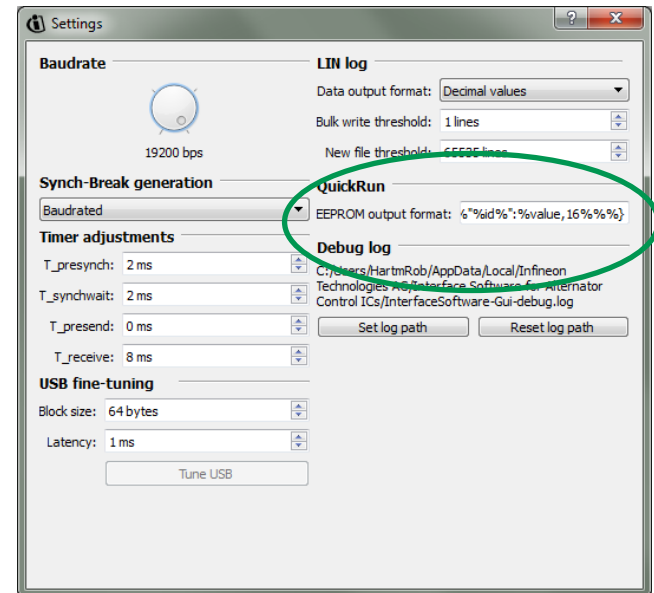
- While reading-out the EEPROM content, a specific format can be chosen via Settings dialog (in GUI version):

- Default output format:

```
{field1%"%id%":%value,10%,%%field2%"%id%":%value,10%,%%field3%"%id%":%value,10%,%% field4%"%id%":%value,10%%}
```

- Syntax:

- One EEPROM field (high and low byte – 16bit value) is enclosed with: **field<row>%%<content>%%**
- User content of EEPROM is in <row>=[1..4]
- <content> can be replaced with any desired character as well as with %id% (row number) and %value% (row content)
- Numbering system of row content can be given with %value,<numerative>%, e.g. <numerative>=16 for Hex values



Examples for EEPROM handling

■ Example for EEPROM read-out of TLE8880:

```
InterfaceSoftware-QuickRun.exe --quickrun-EEPROM --alternator-num=1 --device="TLE8880"
--device-step="B12" --comm-profile="USB-LIN-C"
```

■ Example for EEPROM programming of TLE8880:

```
InterfaceSoftware-QuickRun.exe --quickrun-EEPROM
--file="C:\Users\HartmRob\Desktop\nvm_dump.csv" --EEPROM-verify --alternator-num=1
--device="TLE8880" --device-step="B12" --comm-profile="USB-LIN-C"
```

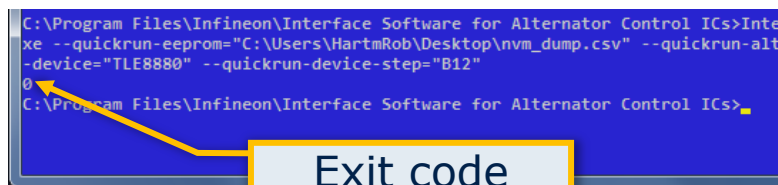
■ Example for EEPROM read-out of TLE8886:

```
InterfaceSoftware-QuickRun.exe --quickrun-EEPROM --alternator-num=1 --device="TLE8886"
--device-step="B11" --comm-profile="USB-LIN-C"
```

■ Example for EEPROM programming of TLE8886:

```
InterfaceSoftware-QuickRun.exe --quickrun-EEPROM
--file="C:\Users\HartmRob\Desktop\nvm_dump.csv" --EEPROM-verify --alternator-num=1
--device="TLE8886" --device-step="B11" --comm-profile="USB-LIN-C"
```

■ Exit code:

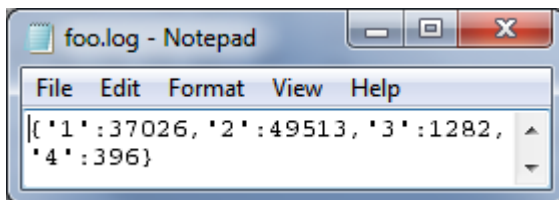


```
C:\Program Files\Infineon\Interface Software for Alternator Control ICs>Inte
xe --quickrun-EEPROM="C:\Users\HartmRob\Desktop\nvm_dump.csv" --quickrun-alt
-device="TLE8880" --quickrun-device-step="B12"
0
C:\Program Files\Infineon\Interface Software for Alternator Control ICs>
```

Shell output piping

- Logging information and EEPROM output content can be piped into files using the Window command terminal
- Logging/EEPROM content is returned to cerr-pipe → can be piped
- Exit code is returned to cout-pipe → cannot be piped
- Usage: Append ">>" to shell command, e.g. <QuickRun commands>>><file>
- Example for EEPROM read-out of TLE8880 with piping:

```
InterfaceSoftware-QuickRun.exe --quickrun-eeeprom --alternator-num=1 --device="TLE8880" --device-step="B12" --comm-profile="USB-LIN-C">>>C:\Users\HartmRob\Desktop\foo.log
```





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