NB3W800LMNGEVB

NB3W800LMNGEVB GUI Evaluation Board User's Manual

ON Semiconductor®

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EVAL BOARD USER'S MANUAL

Devices Supported:
NB3W800L (QFN48)

Introduction

The NB3W800L is a low−power 8−output differential buffer that meets all the performance requirements of the DB800ZL specification. The NB3W800L is capable of distributing the reference clocks for Intel® QuickPath Interconnect (Intel QPI), PCIe Gen1/Gen2/Gen3, SAS, SATA, and Intel Scalable Memory Interconnect (Intel SMI) applications. A fixed, internal feedback path maintains low drift for critical QPI applications.

ON Semiconductor has developed a GUI that can be used with the device Eval Board NB3W800LMNGEVB to control NB3W800L device register parameters. Its operation is covered in this manual.

Software Installation

- Unzip the distribution archive "DB800_GUI_revC.zip"
  - All files are contained in the parent folder DB800_GUI_revC which you can un−zip anywhere on your PC
- Look in the parent folder
  - You will see a file "NB3W800L_Programming_GUI.exe"
- Make a short cut to that file and place it on your desktop, start menu etc.
- That's it
  - There is no manipulation of the registry or path variables
  - To un−install just delete the files

Software Use and Initialization

- Connect the Eval Board NB3W800LMNGEVB to a USB port of a PC
- Allow Windows® to install the necessary drivers for the Evaluation board USB interface hardware .. it will go out to the web to find them
- Start the program using the short cut you made earlier

SMBus Activities

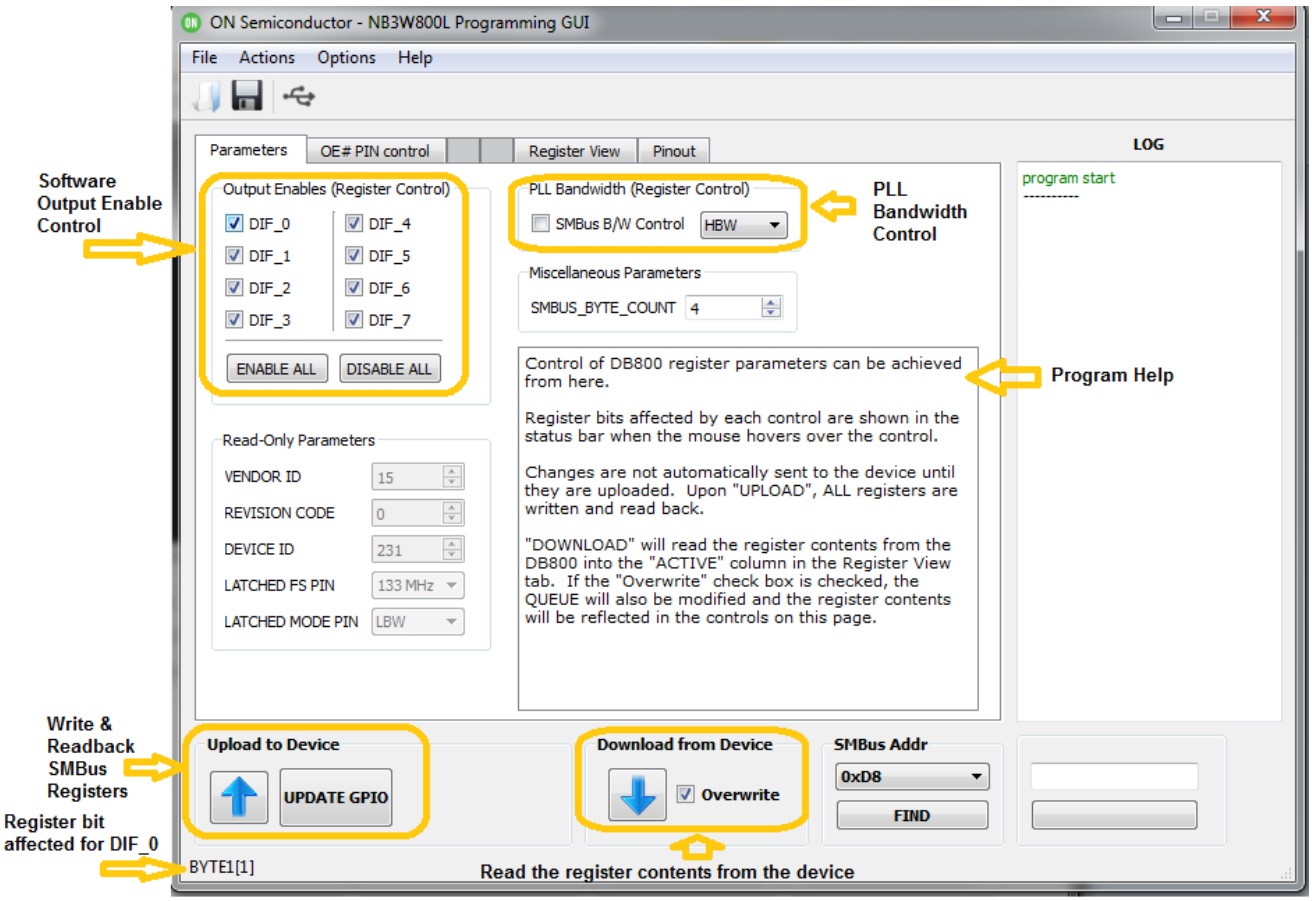

Figure 1.

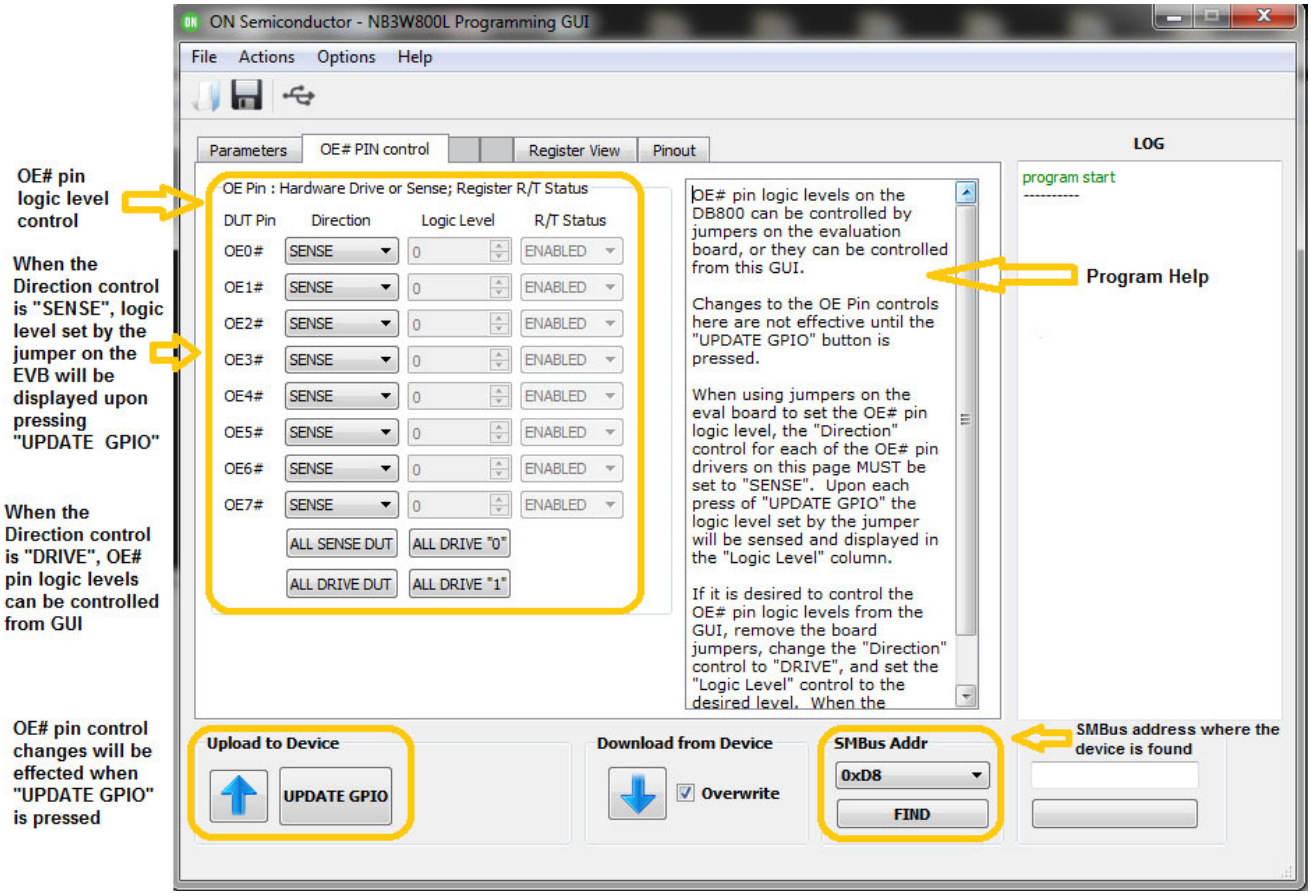
ON Semiconductor - NB3W800L Programming GUI
File Actions Options Help
Parameters
OE# PIN control
Register View
Pinout
LOG
program start
OE# pin logic level control
When the Direction control is "SENSE", logic level set by the jumper on the EVB will be displayed upon pressing "UPDATE GPIO"
When the Direction control is "DRIVE", OE# pin logic levels can be controlled from GUI
OE# pin control changes will be effected when "UPDATE GPIO" is pressed
OE Pin : Hardware Drive or Sense; Register R/T Status
DUT Pin
Direction
Logic Level
R/T Status
OE0#
OE1#
OE2#
OE3#
OE4#
OE5#
OE6#
OE7#
SENSE
ENABLED
ALL SENSE DUT
ALL DRIVE "0"
ALL DRIVE DUT
ALL DRIVE "1"
OE# pin logic levels on the DB800 can be controlled by jumpers on the evaluation board, or they can be controlled from this GUI.
Changes to the OE Pin controls here are not effective until the "UPDATE GPIO" button is pressed.
When using jumpers on the eval board to set the OE# pin logic level, the "Direction" control for each of the OE# pin drivers on this page MUST be set to "SENSE". Upon each press of "UPDATE GPIO" the logic level set by the jumper will be sensed and displayed in the "Logic Level" column.
If it is desired to control the OE# pin logic levels from the GUI, remove the board jumpers, change the "Direction" control to "DRIVE", and set the "Logic Level" control to the desired level. When the
Program Help
Upload to Device
UPDATE GPIO
Download from Device
Overwrite
SMBus Addr
0xD8
FIND
SMBus address where the device is found

Figure 2.

Menu Options

- File Menu

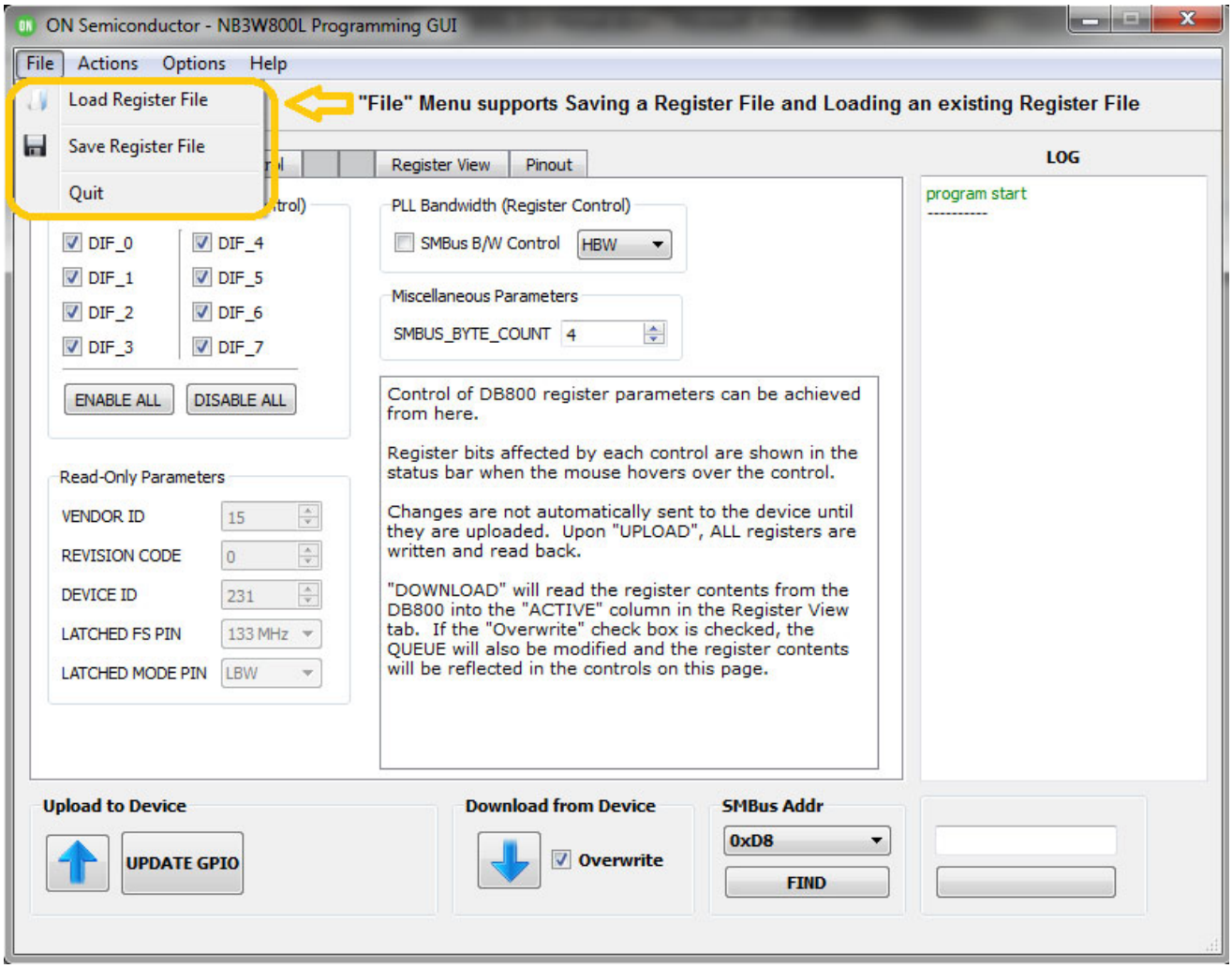

Figure 3.File Menu

- Actions Menu

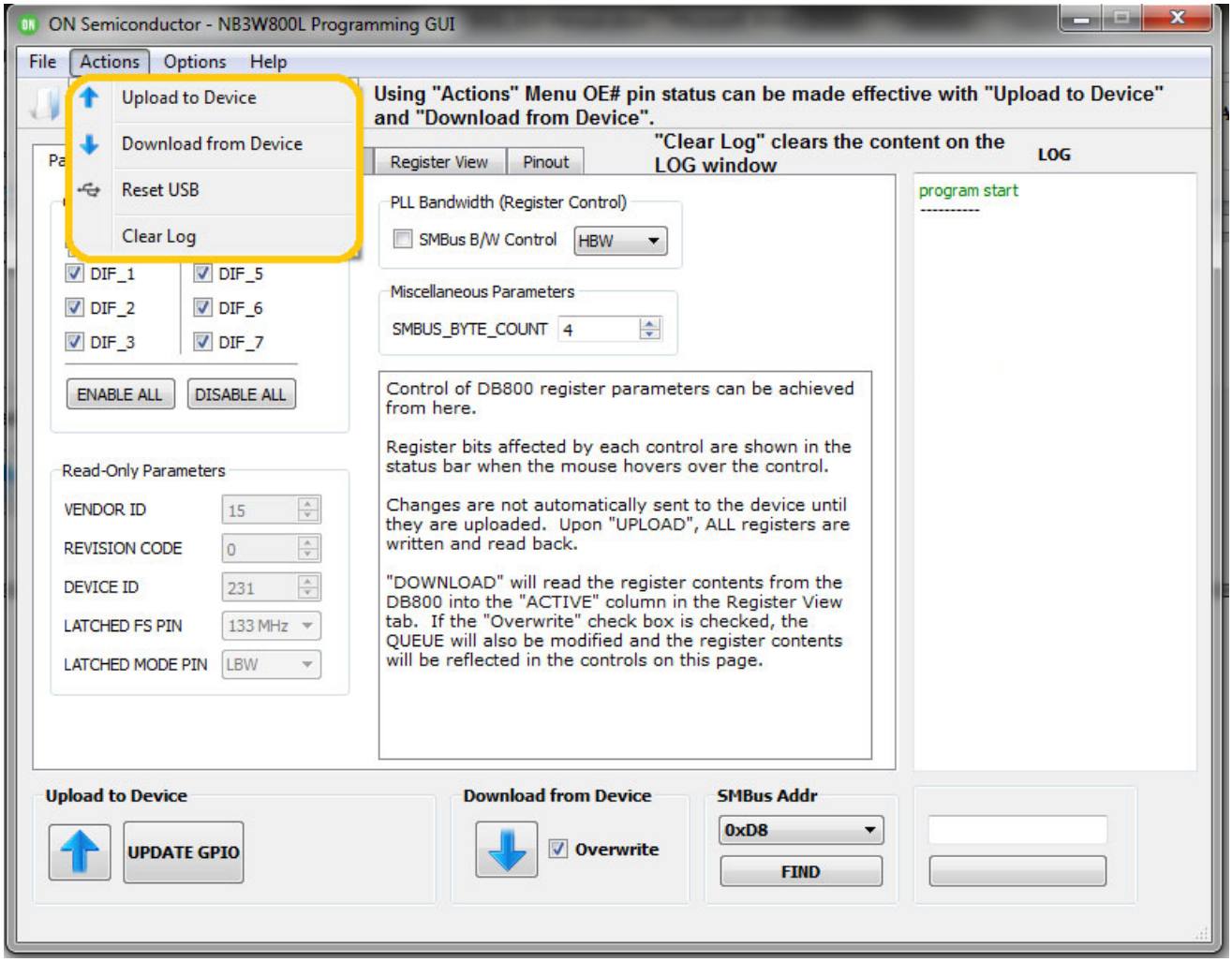

Figure 4.Actions Menu

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