

# NB3W800LMNGEVB

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## 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

# NB3W800LMNGEVB

## SMBus Activities

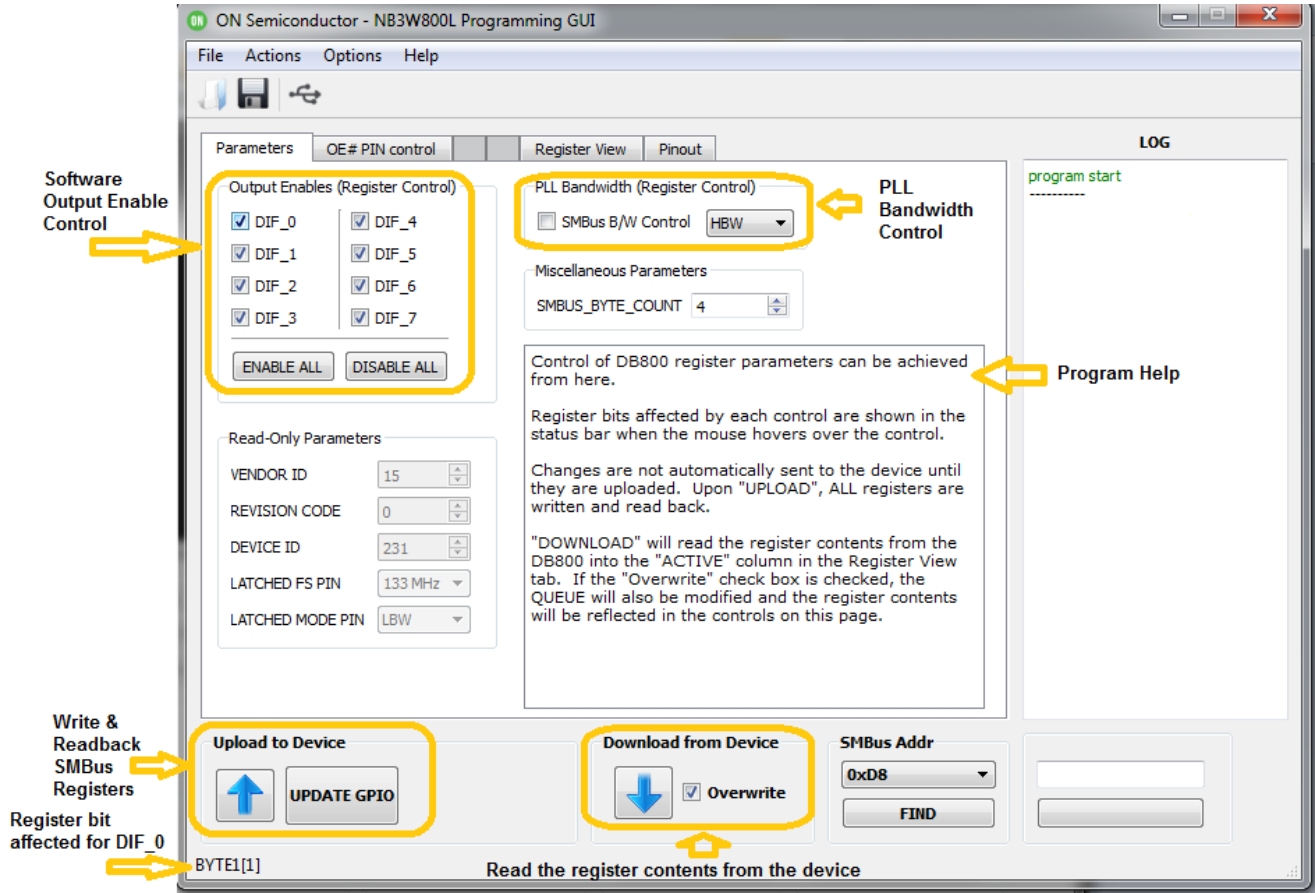


Figure 1.

# NB3W800LMNGEVB

The screenshot shows the 'ON Semiconductor - NB3W800L Programming GUI' with the 'OE# PIN control' tab selected. The interface includes a menu bar (File, Actions, Options, Help), a toolbar, and a main content area with a table of OE# pins, a help text area, and a bottom control panel.

**OE# Pin : Hardware Drive or Sense; Register R/T Status**

DUT Pin	Direction	Logic Level	R/T Status
OE0#	SENSE	0	ENABLED
OE1#	SENSE	0	ENABLED
OE2#	SENSE	0	ENABLED
OE3#	SENSE	0	ENABLED
OE4#	SENSE	0	ENABLED
OE5#	SENSE	0	ENABLED
OE6#	SENSE	0	ENABLED
OE7#	SENSE	0	ENABLED

Buttons below the table: ALL SENSE DUT, ALL DRIVE "0", ALL DRIVE DUT, ALL DRIVE "1".

**Program Help:** 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

**LOG:** program start

**Bottom Panel:** Upload to Device (with UPDATE GPIO button), Download from Device (with Overwrite checkbox), SMBus Addr (set to 0xD8), and FIND button.

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

Program Help

SMBus address where the device is found

Figure 2.

# NB3W800LMNGEVB

## Menu Options

- File Menu

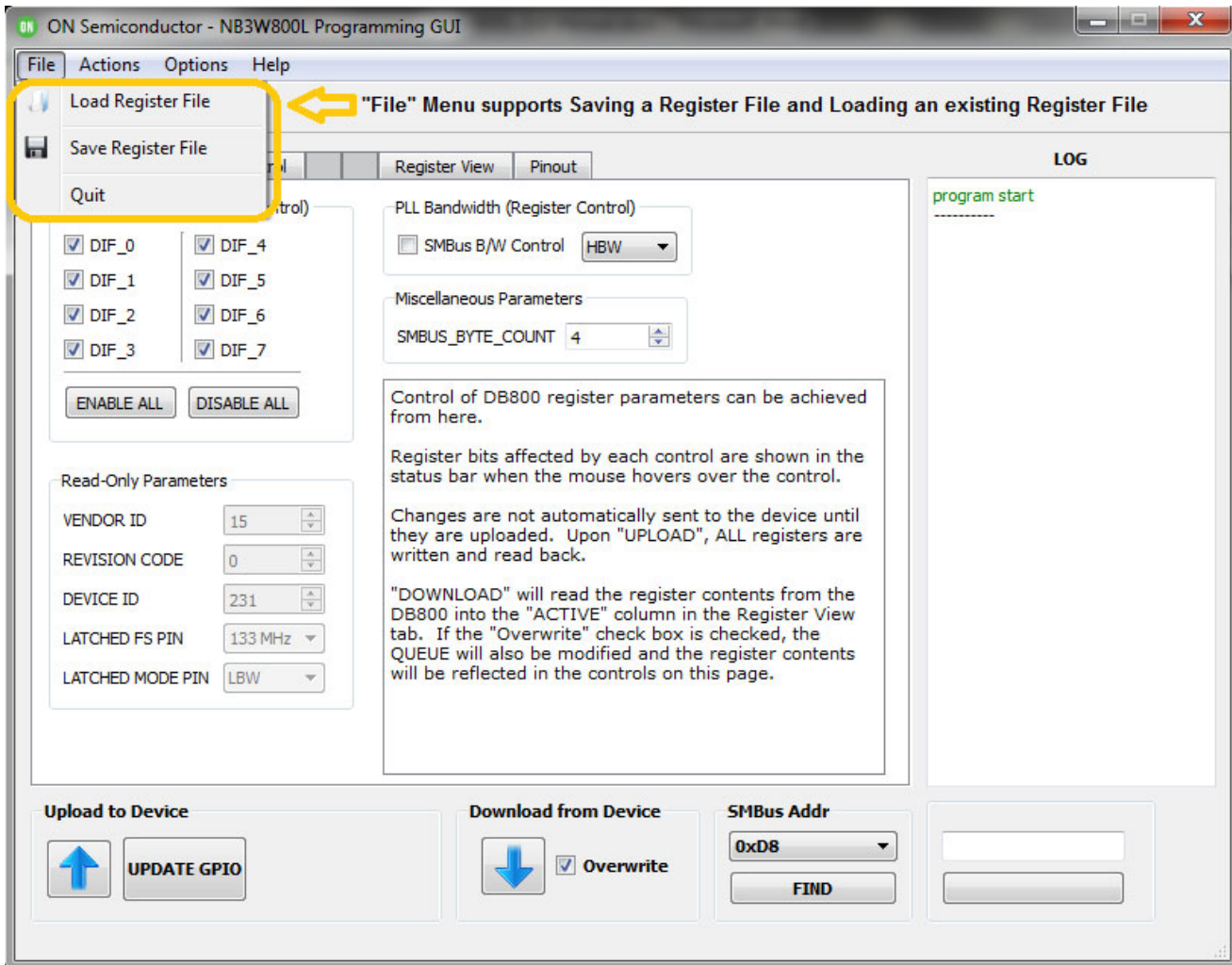


Figure 3. File Menu

# NB3W800LMNGEVB

- Actions Menu

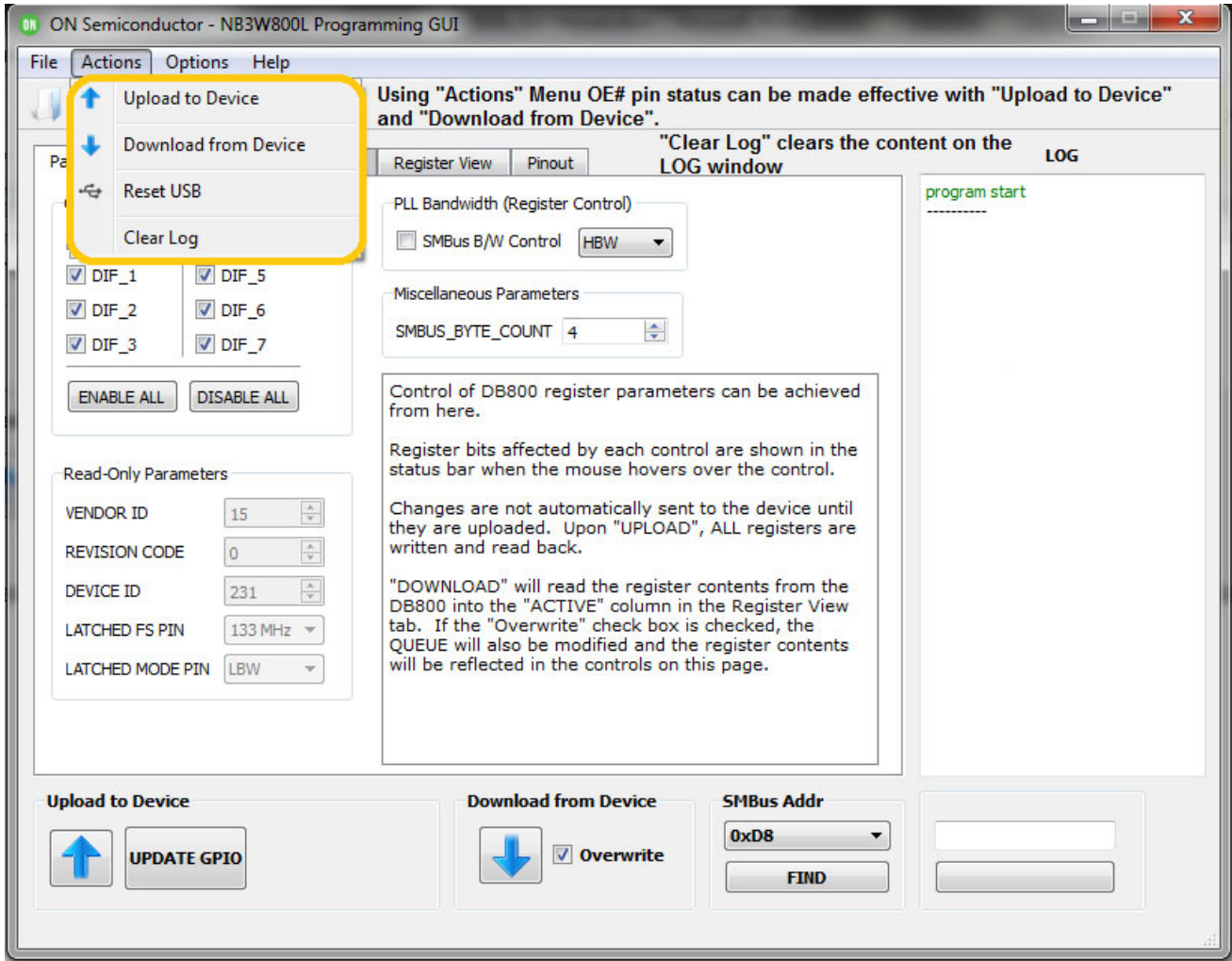


Figure 4.Actions Menu

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Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: [ocean@oceanchips.ru](mailto:ocean@oceanchips.ru)

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Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А