

AN11134

PTN3460 DPCD utility user's guide

Rev. 1 — 15 December 2011

Application note

Document information

Info	Content
Keywords	DisplayPort, PTN3460, DP to LVDS Bridge
Abstract	This document describes the DPCD utility operations.



Revision history

Rev	Date	Description
v.1	20111215	application note; initial version

Contact information

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1. Introduction

The DPCD utility is a PC utility that allows the user to access the product number, firmware as well as hardware version number of PTN3460BS on NXP eDP to LVDS bridge application board or customer's motherboard. DPCD utility also allows user to access the DPCD (DisplayPort Configuration Data) registers which are embedded in PTN3460. For more details information of DPCD registers, please refer to 'VESA DisplayPort Standard specification V1.2' as reference.

This user guide is mainly focused on the operation of DPCD utility. In the operation section, it uses the actual operation panel to guide the user step-by-step. The details of each function is explained and listed in order.

The NXP DPCD utility supports Windows 7, XP and Vista operation system in all platforms. Please install the latest version of graphics card driver before the start of running DPCD utility.

2. Operation

1. Connect an LCD panel to LVDS connector on PTN3460 eDP to LVDS bridge application board, and then plug in a DP cable between PTN3460 eDP to LVDS bridge application board and a DisplayPort source with Windows 7, XP or Vista OS.
2. Use control panel of graphics utility to select 'Single Display', as shown below.



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3. Select the primary (main) display as 'Digital Display PTN3460', as shown below.



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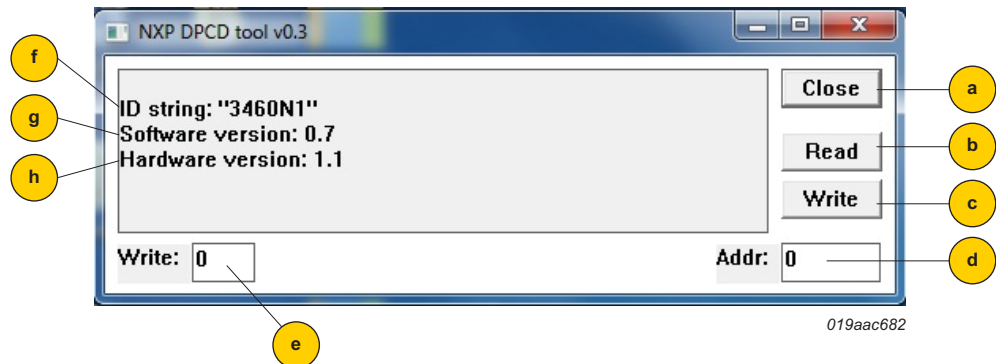
4. Click the NXP DPCD tool v0.3 icon, the following control panel will pop up.



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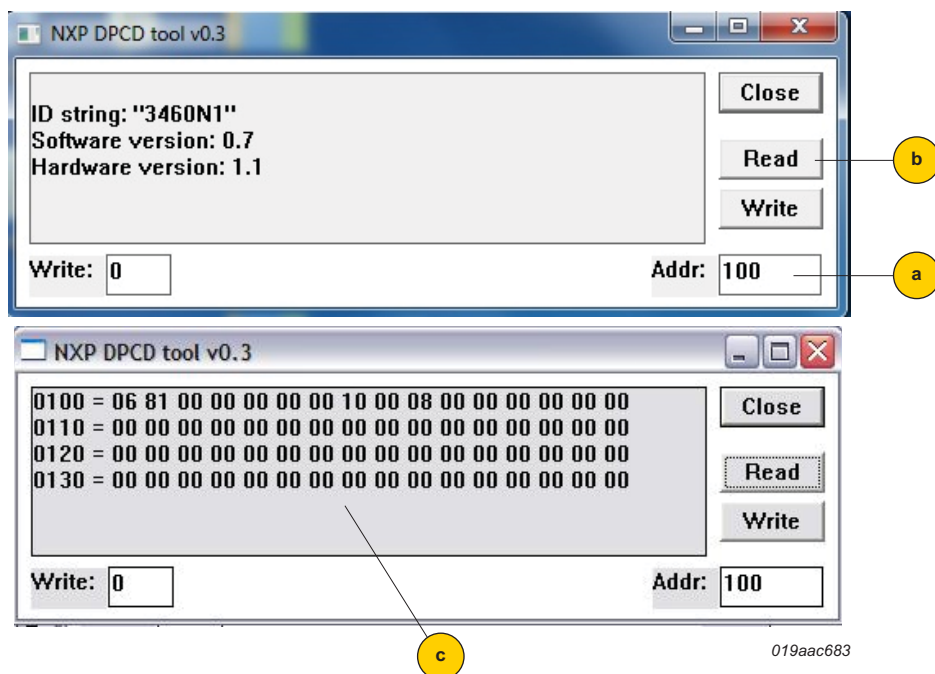
- a. Use 'Setup' button to check the version (software, hardware) of the NXP DP-VGA dongle.
- b. Use 'Cancel' button to close the program.
- c. Use 'About' button to read some detail about the DPCD tool.

5. After clicking the 'Setup' button, it shows the product number, software and hardware version number of the NXP DP to VGA dongle on screen.



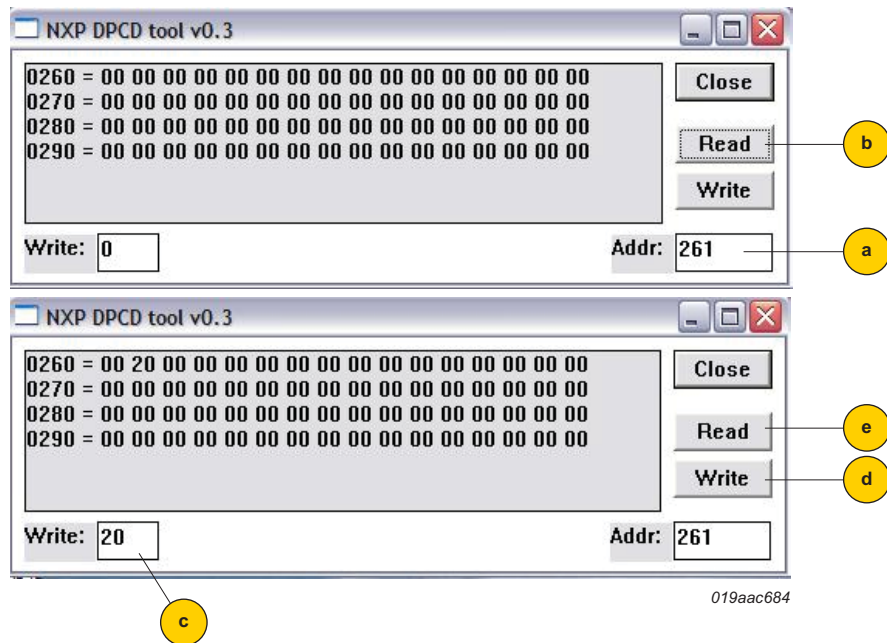
- Use 'Close' button to terminate the DPCD tool.
- Use 'Read' button and type in value into the 'Addr' block to read out 64 bytes register data from the specific register address in 'Addr' block.
- Use 'Write' button and type in value into the 'Write' block to write value into the register in the specific register address in 'Addr' block.
- Number in the 'Addr' block can either read out 64 bytes register data from the register address or the writable register address.
- Number in the 'Write' block is the specific value that is used to be written in the register address in 'Addr' block.
- The product number of the chip in NXP PTN3460 eDP-LVDS bridge application board.
- The software version number of the chip in NXP PTN3460 eDP-LVDS bridge application board.
- The hardware version number of the chip in NXP PTN3460 eDP-LVDS bridge application board.

6. The procedure of reading 64 bytes register data from register 100 (hex format) is shown here as an example.



- Type in value (100) in the 'Addr' block for reading out 64 bytes register data starting from the register address.
- Click 'Read' button to read out 64 bytes data.
- The 64 bytes data is shown on screen.

7. The procedure of writing one byte data into register address '261' (all numbers below are in hex format). Not all registers can support both read and write. Please refer to *DisplayPort Specification V1.1a* for the details.



- Type in 261 in 'Addr' block, which means the register address to be read or written with value.
- Use 'Read' button to read out 64 bytes data from register address 260.
- Type 20 in the 'Write' block and 261 in the 'Addr' block.
- Click 'Write' button so '20' is written into register address 261.
- Click 'Read' button to read out 64 bytes, and see the value of register address 261 has changed to '20'.

3. Abbreviations

Table 1. Abbreviations

Acronym	Description
DP	DisplayPort
DPCD	DisplayPort Configuration Data
eDP	embedded DisplayPort
LVDS	Low-Voltage Differential Signaling
PC	Personal Computer
OS	Operating System
VESA	Video Electronics Standards Association
VGA	Video Graphics Array

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