Introduction:

DPCD tool is a PC utility which allows user to access the product number, firmware as well as hardware version number of PTN3355BS in NXP DP to VGA dongle. DPCD tool also allows user to access the DPCD (DisplayPort Configuration Data) registers which are embedded in PTN3355BS. For more details information of DPCD registers, please refer to VESA DisplayPort Standard specification V1.1a as reference.

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

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

Operation:

1. Connect a monitor to VGA side of NXP DP to VGA dongle, and then plug in NXP DP to VGA dongle into DP connector of a DisplayPort source with Windows XP, 7 or 8 OS.

2. Use Graphics properties to select extended mode, and monitor (DELL ST2420L) is connected to VGA side of DP-VGA dongle as primary (main) display as shown in below figure.
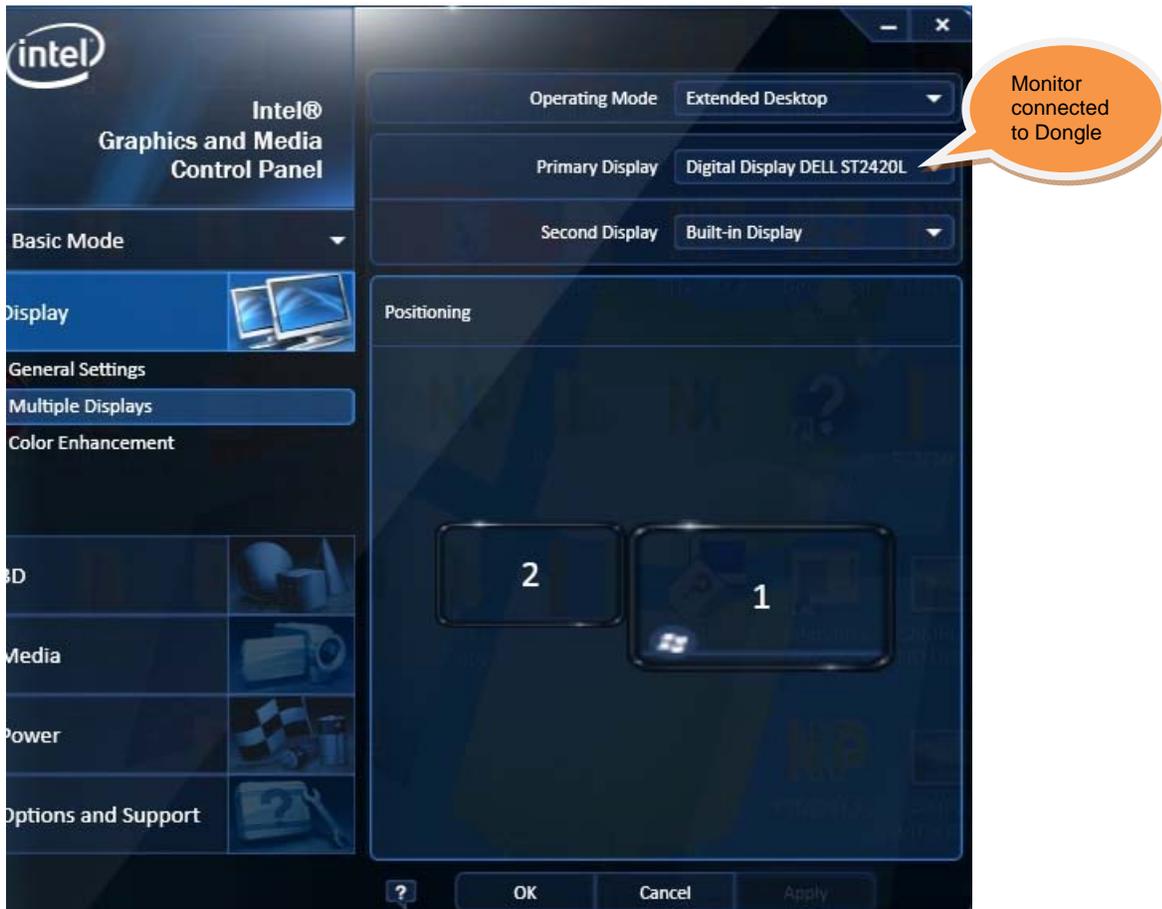
3. Click the NXP DPCD tool v0.5 icon, the following control panel will pop up.
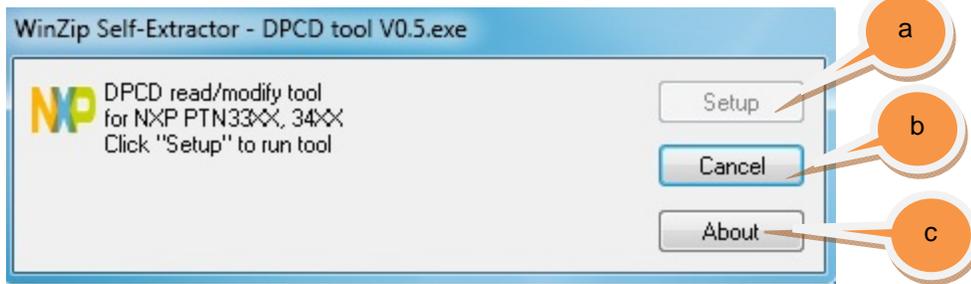
a) Use "Setup" button to check the version (software, hardware) of the NXP DP-VGA dongle.

b) Use "Cancel" button to close the program.

c) Use "About" button to read some detail about the DPCD tool.

4. After click the "Setup", it shows the product number, software and hardware version number of the NXP DP to VGA dongle on screen.
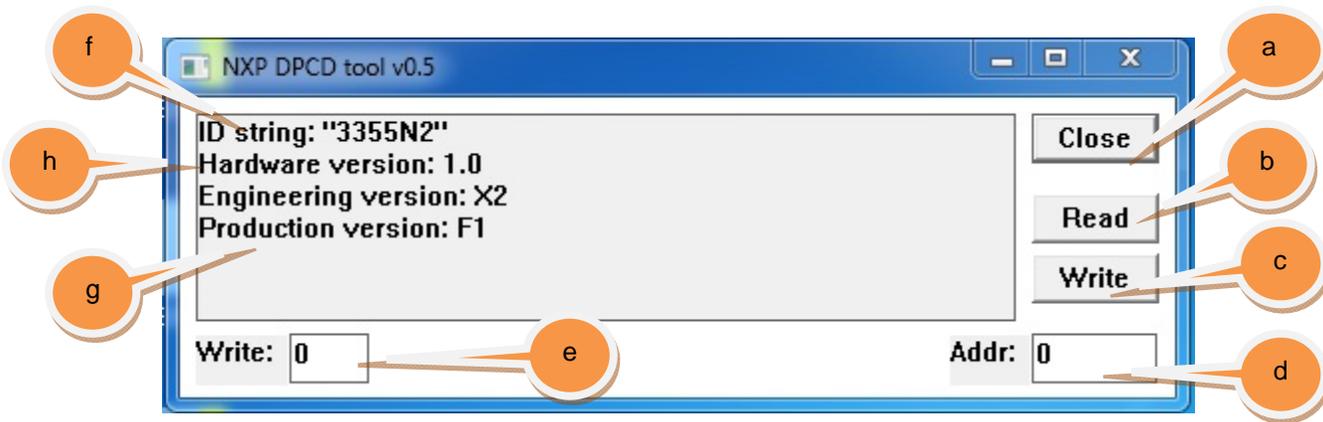
a) Use "Close" button to terminate the DPCD tool.

b) 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.

c) 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.

d) Number in the 'Addr' block can be either read out 64 bytes register data from the register address or the writable register address. .

e) Number in the 'Write' block is the specific value which is used to be written in the register address in 'Addr' block.

f) The product number of the chip in NXP DP-VGA dongle

g) The software version number of the chip in NXP DP-VGA dongle.

h) The hardware version number of the chip in NXP DP-VGA dongle.

5. The procedure of reading 64 bytes registers from register 100 (hex format) is shown in below figure as an example.
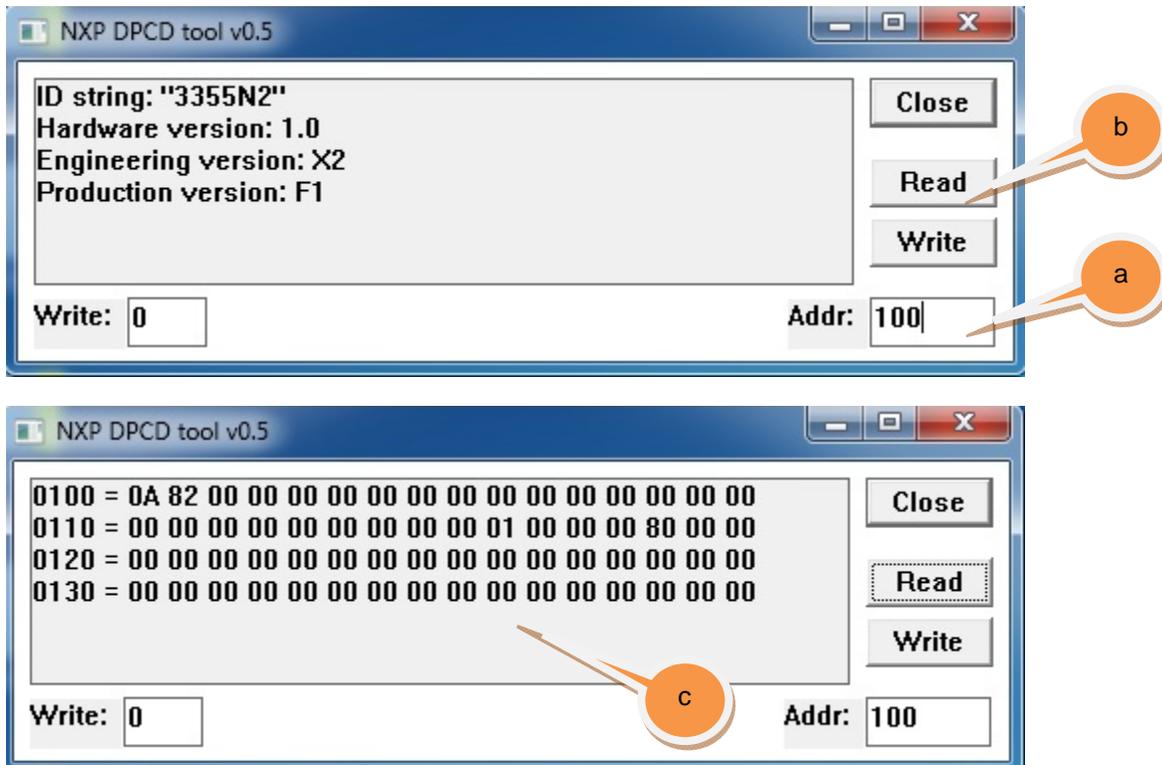
a) Type in value (100) in the 'Addr' block for reading out 64 bytes register data starting from the register address.

b) Click "Read" button to read out 64 bytes data.

c) The 64 bytes data is shown on screen.

6. The procedure of writing on byte data into register address "103" (all number below is in hex format). Not all registers can support both read and write. Please refer to DisplayPort Specification V1.1a for the details.
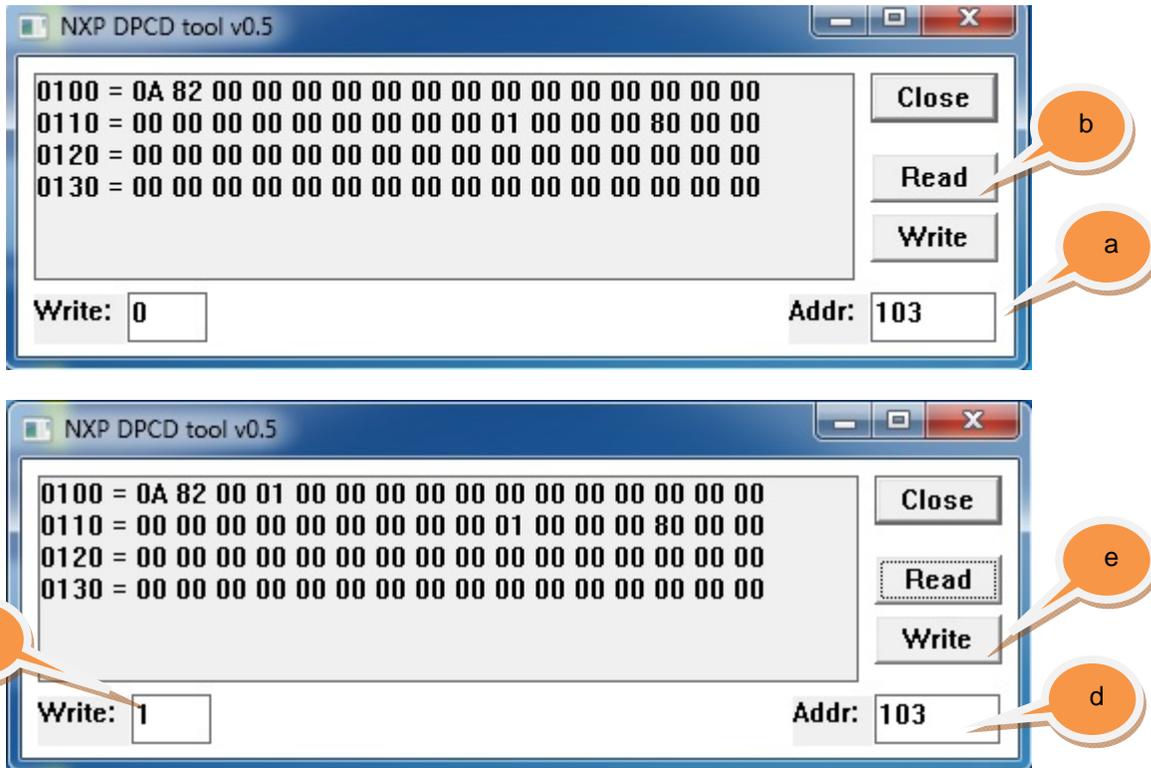
a) Type in 103 in "Addr" block which means the register address to be read or written with value.

b) Use "Read" button to read out 64 bytes data from register address 103.

c) Type '01' in the 'Write' block and 103 "Addr" block.

d) Click "Write" button, so "01" is written into register address 261

e) Click "Read" button to read out 64 bytes, and see the value of register address 103 has changed to 01.