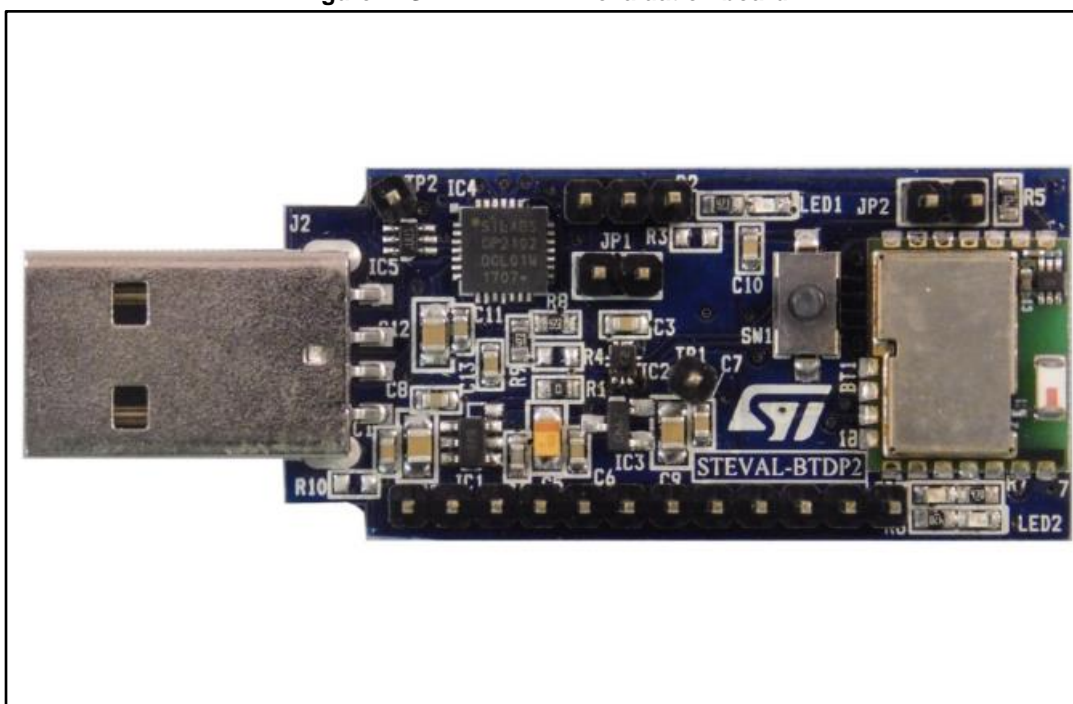Getting started with the STEVAL-BTDP2 USB dongle

## Introduction

The STEVAL-BTDP2 evaluation board (dongle) has an embedded Bluetooth® class SPBT3.0DP2 module and includes a USB connector. The USB connector allows PC access to the Bluetooth module and supplies power to the dongle.

The STEVAL-BTDP2 allows testing and working with the SPBT3.0DP2 module, so users can familiarize themselves with the firmware and create Bluetooth links with simple AT commands.[a]

**Figure 1: STEVAL-BTDP2 evaluation board**



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[a] The AT command list is detailed in user manual UM2077 on www.st.com

# Contents

# List of figures

# 1 Overview

The SPBT3.0DP2 features:

- SPBT3.0DP2 V3.0 Bluetooth class 2 module
  - with embedded antenna
- USB interface and power supply
- Reprogramming support via USB interface
- Reset button
- RoHS compliant

The default settings are:

- UART: 115200 baud rate, no parity, 1 stop bit, 8 data bits
- Local name: "ST BTC3.0 Module"
- Profile: SPP (serial port profile)
- Deep sleep: disabled
- Page and inquiry scan: 1.28 s interval, 11 ms duration
- Security: disabled
- Bonding PIN: "1234"
- Bonding allowed: always enabled

# 2        Getting started

## 2.1       Installing the drivers on host PC

To install the drivers on your PC, follow the procedure shown below.
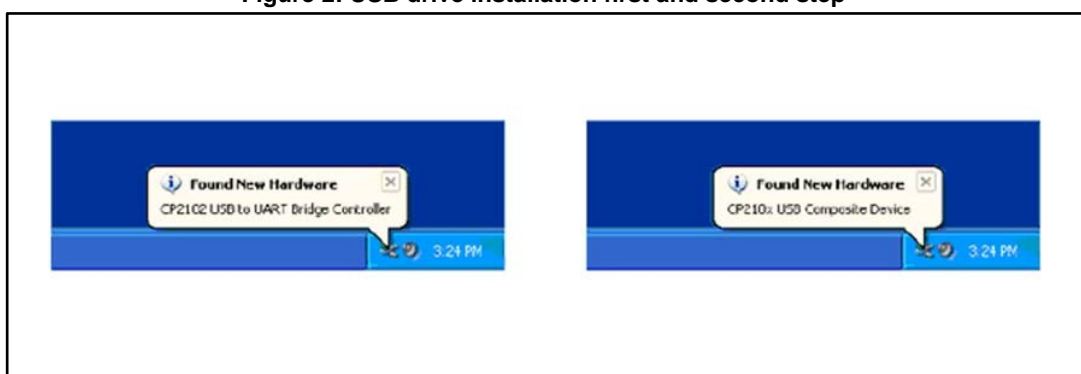
> No drivers need to be installed on the Bluetooth SPBT3.0DP2 module or the evaluation board.

Step 1

- Plug the STEVAL-BTDP2 into any available USB port: the computer will automatically find the devices shown below.

**Figure 2: USB drive installation first and second step**



Step 2

- A Found New Hardware Wizard installation window opens:
  - select **Yes, this time only** to locate the drivers from the Microsoft® website
  - click **Next** to confirm the installation of the identified STEVAL-BTDP2 USB to UART controller and virtual COM port driver

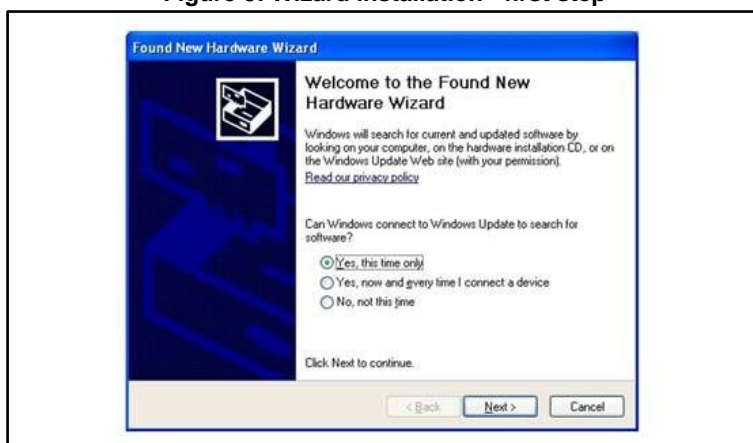**Figure 3: Wizard installation - first step**

**Figure 4: Wizard installation - second step**



Step 3

- The Found New Hardware Wizard opens again to install the USB device driver:
  - select **Yes, this time only** to locate the drivers from the Microsoft website

**Figure 5: Wizard installation third step**



**Figure 6: Wizard installation completed**



- Step 4:
  - Open the Windows® device manager application to verify correct installation and check which COM port is assigned to the STEVAL-BTDP2 Bluetooth serial device[b].The STEVAL-BTDP2 is usually assigned the same virtual COM port each time it is inserted (unless there are other virtual COM devices altering port assignments).

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[b] If the USB driver wizard installation fails, find the alternative installation procedure in the Appendix.

- check that **two device drivers** for the STEVAL-BTDP2 Bluetooth are shown here.

**Figure 7: Windows device manager**
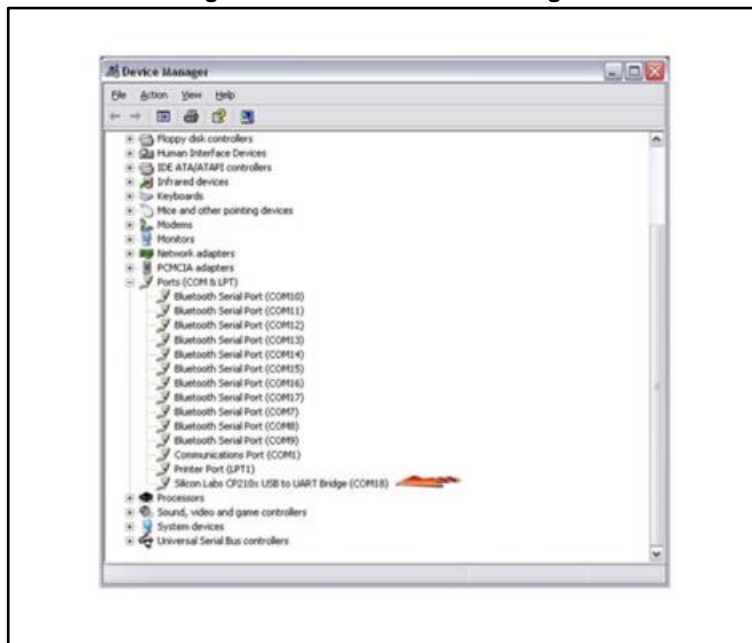


The CP2102 chip ensures standard UART serial communication from the computer via the universal serial bus and interfaces directly with the Bluetooth module in the Bluetooth serial adapter.

## 2.2 Two dongle communication

Two Bluetooth STEVAL-BTDP2 dongles on separate PCs can be implemented for the development of applications involving cable-free communication.

**Figure 8: Two dongle communication setup**
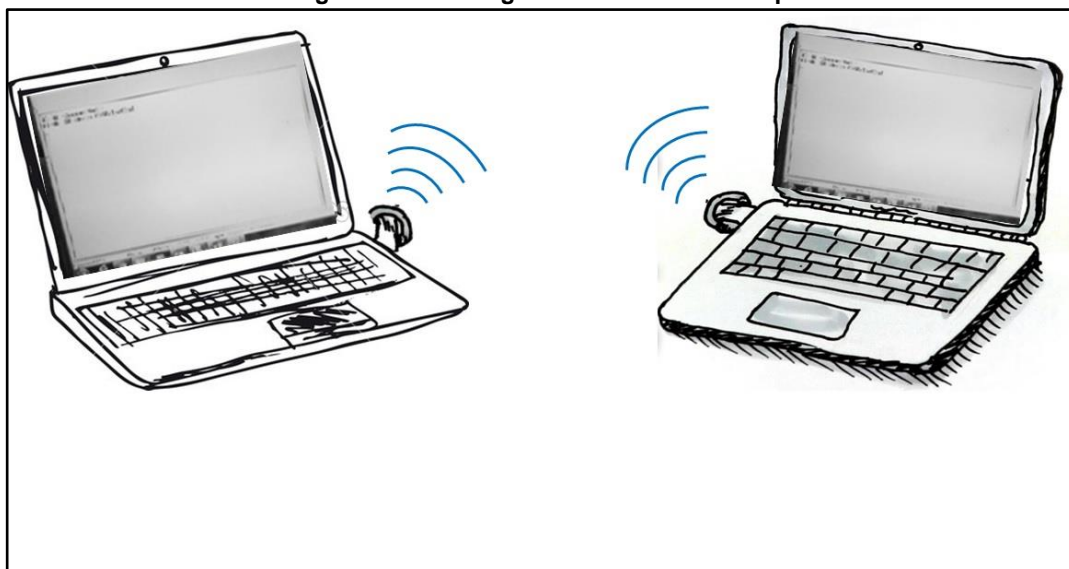
### 2.2.1        Connection procedure

The dongles used in the connection have separate BD addresses. In our example they are 0080e1f00001 (dongle2) and 0080e1f00002 (dongle2).

**Two dongle connection procedure**

Step 1

• Plug each dongle into a PC using the USB connector

Step 2

• Open the HyperTerminal program on both PCs and create a new connection and configure it as shown below.
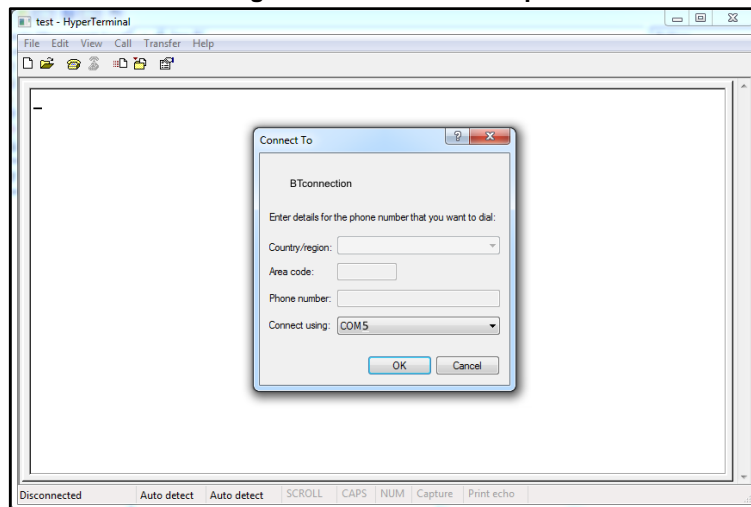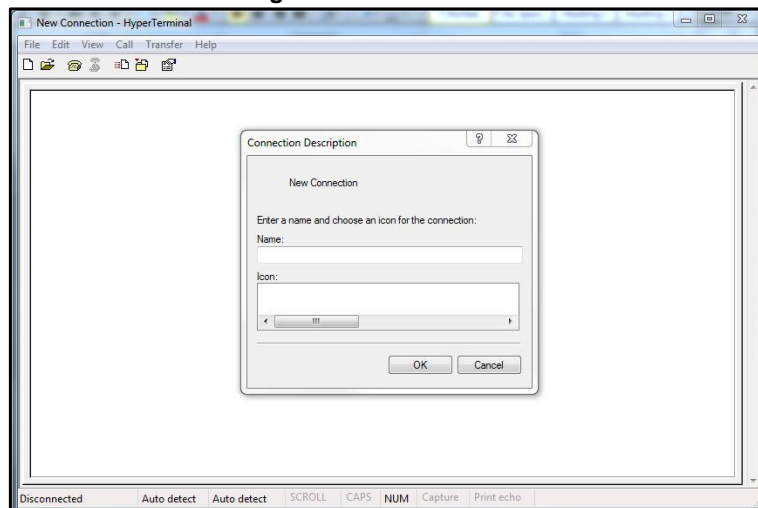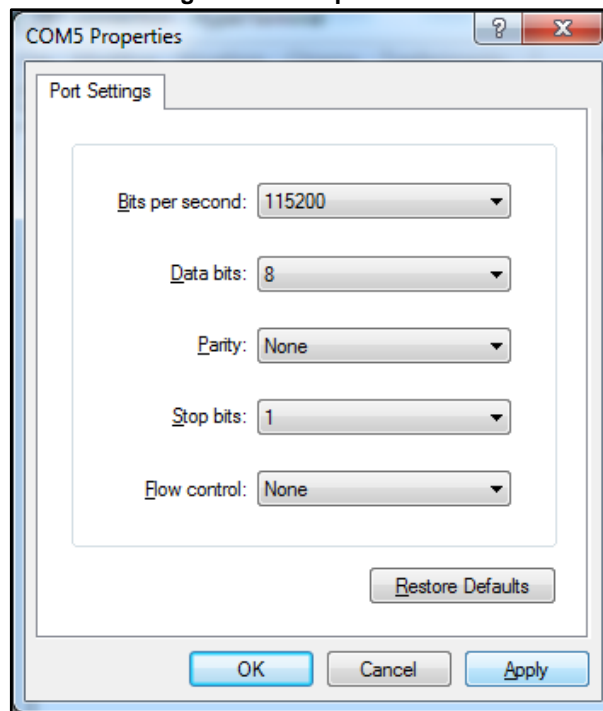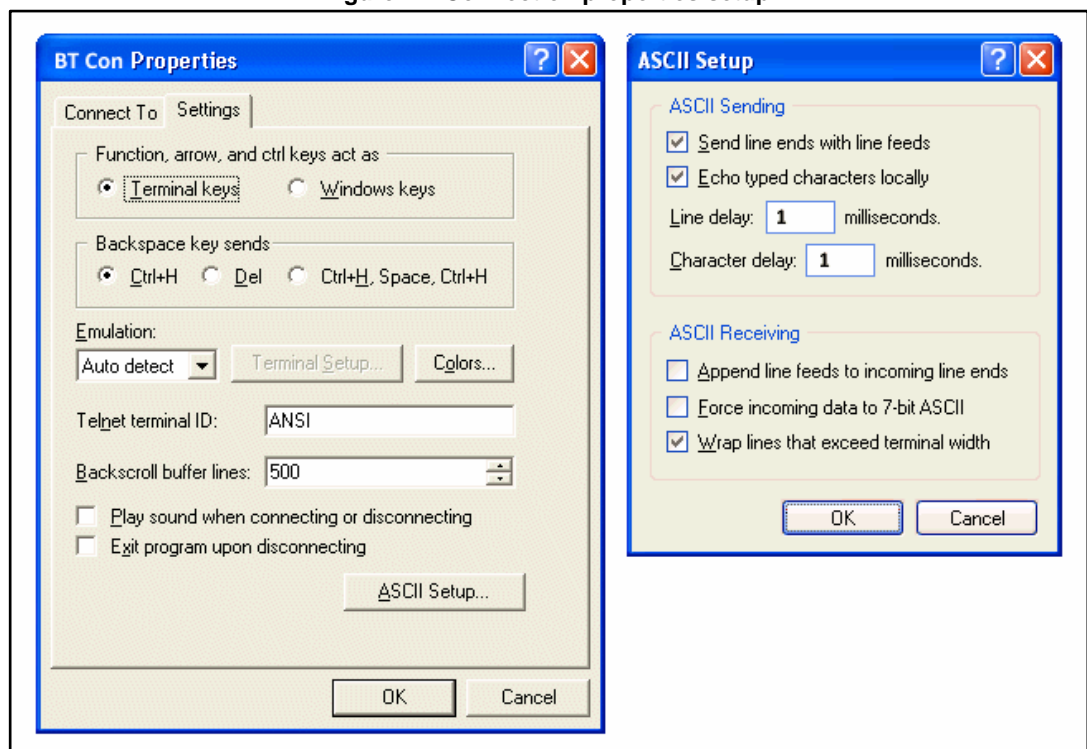
**Figure 9: Connection setup**



**Figure 10: Port selection**

**Figure 11: Port parameters**



Step 3

- From the menu file set the AT command connection properties.

**Figure 12: Connection properties setup**



- The dongle is ready to use.

Step 4

- Press the reset switch on the dongle: on the screen, the prompt followed by the module Bluetooth address should appear:
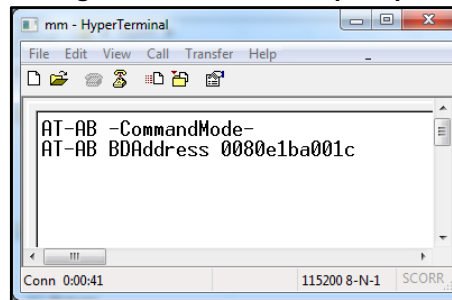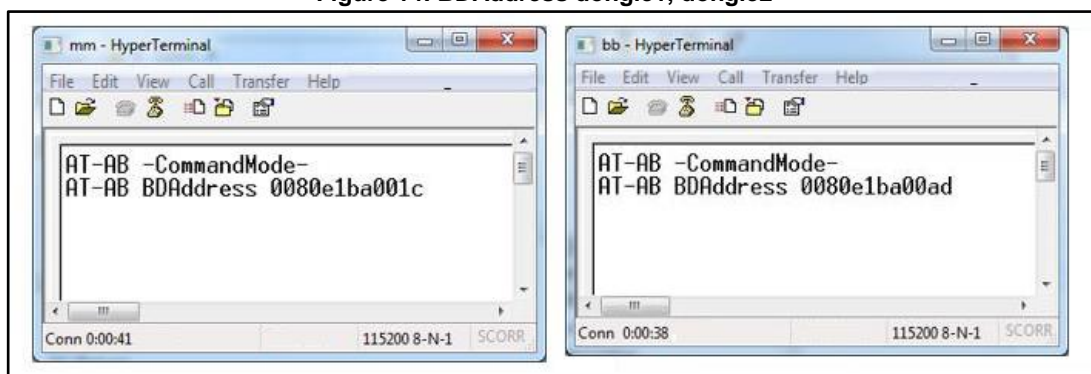
**Figure 13: AT command prompt**



**Figure 14: BDAddress dongle1, dongle2**



The user can now operate the dongle through the AT commands.

# 3 Revision history

**Table 1: Document revision history**

| Date | Version | Changes |
|---|---|---|
| 05-Jun-2017 | 1 | Initial release. |

# Appendix A    USB driver installation

If USB driver wizard installation fails, the dongle can be installed using the driver available on the silicon lab website at
*https://www.silabs.com/products/mcu/Pages/USBtoUARTBridgeVCPDrivers.aspx*

Insert the dongle into a USB port on the PC and follow the sequence shown in the images below.

**Figure 15: USB driver installation launch**



**Figure 16: License agreement**
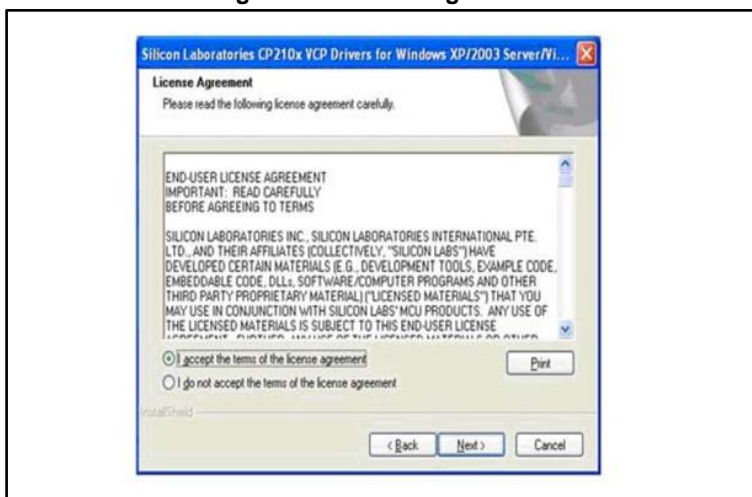
**Figure 17: Wizard installation - 1**
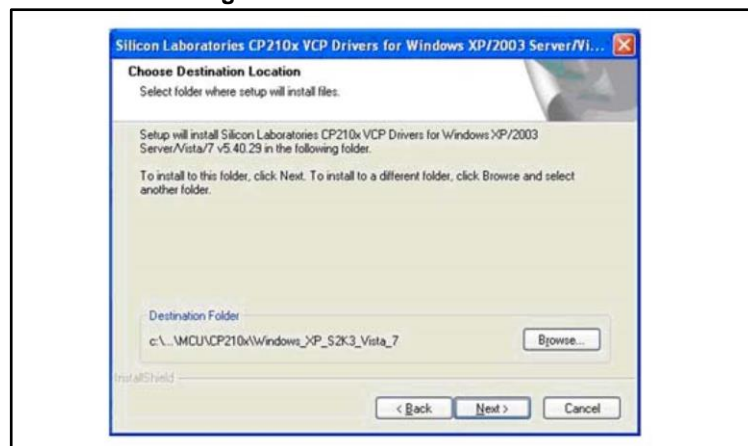


**Figure 18: Wizard installation - 2**
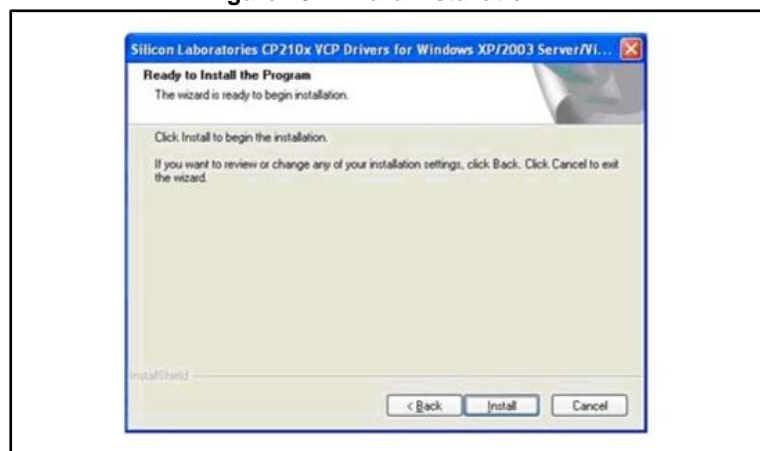


**Figure 19: Wizard installation - 3**

**Figure 20: Wizard installation terminated**
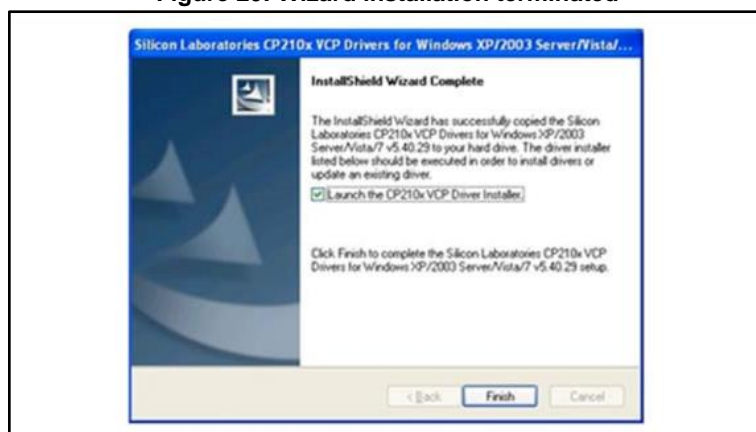


**Figure 21: Installation completed**
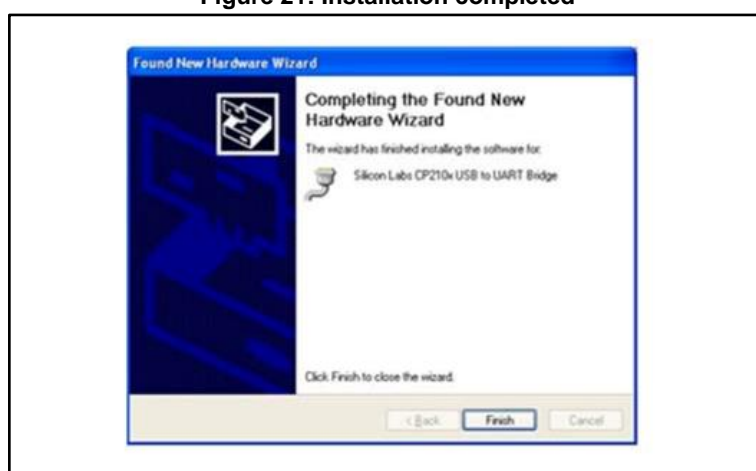


The USB driver installation is now complete

## IMPORTANT NOTICE – PLEASE READ CAREFULLY