# 1. How to install CDM driver on PC for Lambda devices

This installation guide is based on Window XP. Different systems may require different actions on some steps.

All Lambda devices (Lambda 10-3, 10B, XL SC) share the same CDM driver. After the CDM driver files are installed on the PC and a new Lambda device is added on, the device will be installed automatically. By default, the VCP driver (Virtual COM Port) will be loaded, and you can follow the next chapter "How to configure D2XX driver for Lambda device" to load D2XX driver (USB).

1) Connect the Lambda device with the PC through the USB port and power on the device. The "Found New Hardware Wizard" will appear and you should then select "Advanced" and click <Next>.

Found New Hardware Wizard	
	Welcome to the Found New Hardware Wizard
	This wizard helps you install software for:
	Sutter Instrument Lambda 10-3
	If your hardware came with an installation CD or floppy disk, insert it now.
	What do you want the wizard to do?
	<ul> <li>Install the software automatically (Recommended)</li> <li>Install from a list or specific location (Advanced)</li> </ul>
	Click Next to continue.
	< Back Next > Cancel

2) Select "Don't Search. I will choose the driver to install." and click next.

Found New Hardware Wizard
Please choose your search and installation options.
Search for the best driver in these locations. Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM)
Include this location in the search:
C:\MyProject\Product\USB_driver\CDM Driver\v2_(  Browse Browse
<ul> <li>Don't search. I will choose the driver to install.</li> </ul>
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< Back Next > Cancel

3) Choose "Show All Devices" and highlight "Computer" then	click next.
Found New Hardware Wizard	
Hardware Type.	¢\$
Select a hardware type, and then click Next. Common hardware types:	
Show All Devices \$\vee\$1394 Debugger Device \$\vee\$61883 Device Class \$\vee\$AVC Device Class \$\vee\$Batteries \$\vee\$Batteries \$\vee\$Bluetooth Radios \$\vee\$Bluetooth Radios \$\vee\$Discless devices \$\vee\$Discless devices \$\vee\$Discless devices	
< Back Next >	Cancel

## 4) Click <Have Disk>.

Found New Hardware Wizard
Select the device driver you want to install for this hardware.
Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.
(Unable to find any drivers for this device)
Have Disk
< Back Next > Cancel

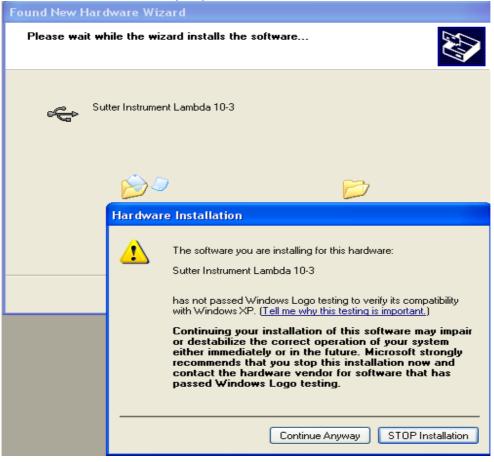
# Found New Hardware Wizard Select the device driver you want to install for this hardware. Install From Disk Install From Disk Image: Colspan="2">Image: Colspan="2" Image: Colspan="2" Image:

### 5) Browse to the folder including the CDM driver file and click <OK>.

### 6) Click <Next>.

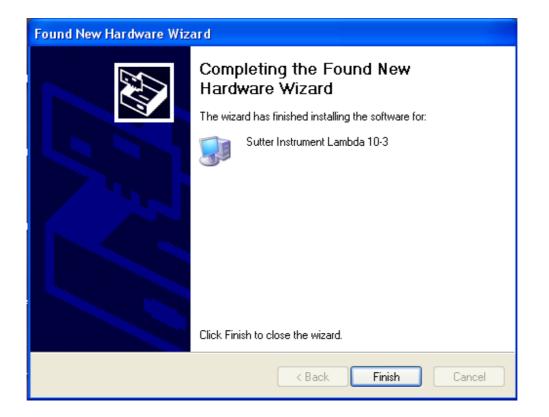
Found New Hardware Wizard
Select the device driver you want to install for this hardware.
Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.
Model
Sutter Instrument Lambda 10-3
This driver is not digitally signed!     Have Disk Have Disk
< Back Next > Cancel

### 7) Click <Continue Anyway>.



8) Once the bus has been installed click <Finish>.

Found New Hardware Wizard	
Please wait while the wizard installs the	software
Sutter Instrument Lambda 10-3	
FTLang.dll To C:\WINDOWS\system32	
	<pre></pre>



9) Found New Hardware Wizard pop up for installing the USB Serial Port. Refer to the description of step 1) to 8) and go through 9) to 16) to install the port.



10)
Found New Hardware Wizard
Please choose your search and installation options.
Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM)
Include this location in the search:
E:\USB_driver\CDM Driver\v2_04_14\SI CDM Drive 🗸 Browse
Oon't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< Back Next > Cancel

# 11)

Found New Hardware Wizard	
Hardware Type.	
Select a hardware type, and then click Next. Common hardware types:	
Show All Devices Show All Devices Show All Device Device Solution of the second states Solution of the second states So	
< Back Next >	Cancel

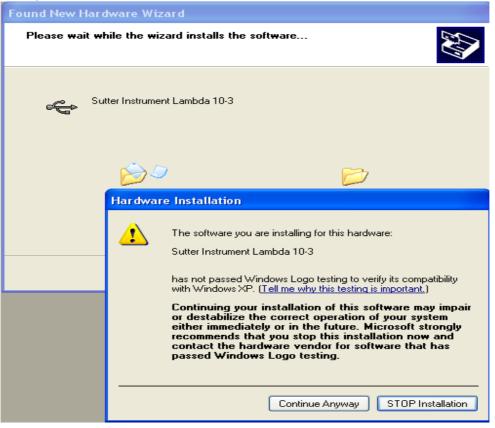
12)
Found New Hardware Wizard
Select the device driver you want to install for this hardware.
Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.
(Unable to find any drivers for this device)
Have Disk
<pre></pre>

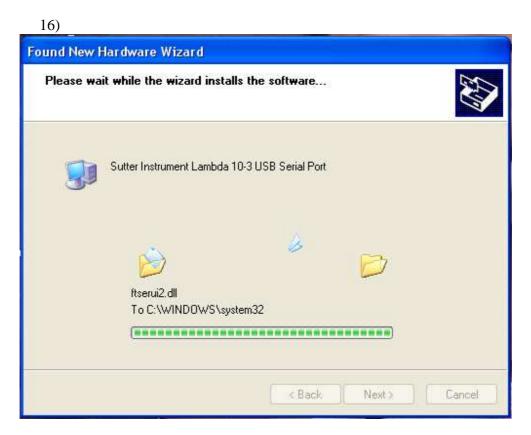
# 13)

Found New Ha	ardware Wizard
Select the o	levice driver you want to install for this hardware.
Install F	rom Disk
(Una	Insert the manufacturer's installation disk, and then OK make sure that the correct drive is selected below. Cancel
	Copy manufacturer's files from:
	E:\USB_driver\CDM Driver\v2_04_14\SI CDM Dri Browse
	CBack Next> Cancel

14)
Found New Hardware Wizard
Select the device driver you want to install for this hardware.
Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.
Show compatible hardware
Model
Sutter Instrument Lambda 10-3 USB Serial Port
This driver is not digitally signed!     Have Disk      Have Disk
< Back Next > Cancel

### 15)

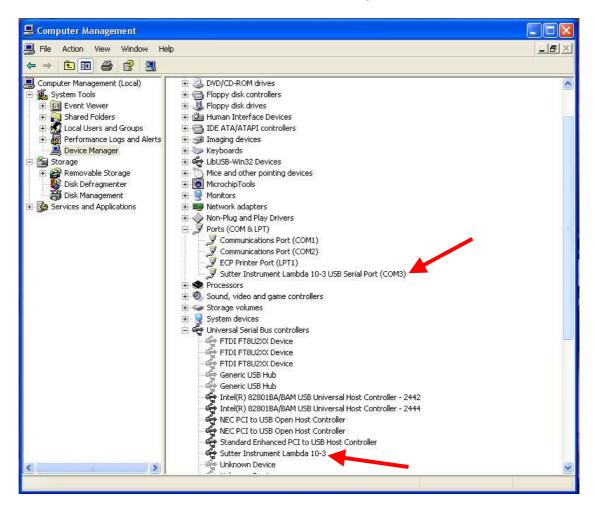






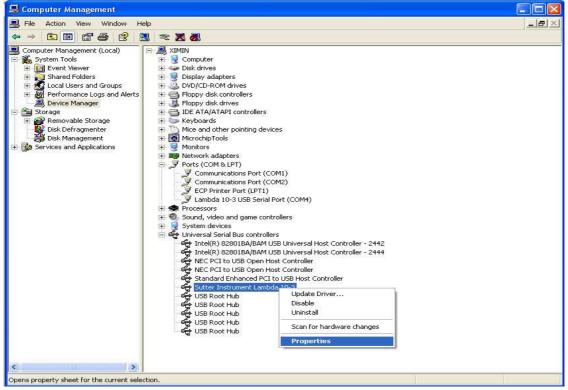
After installing the driver successfully open <Device Manager> and you will see the device shown in the Bus and Ports folder.

\*\* If the Lambda device (e.g. 10-3) is required to work with the computer on the VCP driver (Virtual COM Port), then all the installation has been completed. If the Lambda device (e.g. 10-3) is required to work with computer using the D2XX driver (USB), continue with the next section to configure D2XX driver.



# 2. How to configure D2XX driver for Lambda devices

1) Make sure the Lambda device power is on, then open <Device Manager>. Right click the Lambda device under "Universal Serial Bus controllers" then select <Properties>.



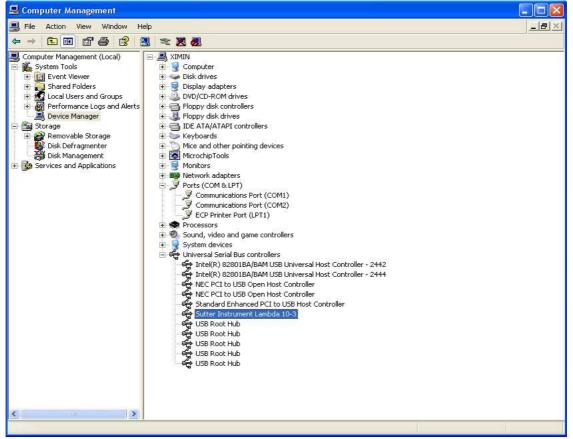
2) On the device properties page, select <Advanced> tab.

Sutter Instrument Lambda 10-3 Properties 🛛 🔹 💽
General Advanced Driver Details
Sutter Instrument Lambda 10-3
Configuration
Use these settings to override normal device behaviour.
OK Cancel Help

3) Uncheck "Load VCP", then press <OK>.

Sutter Instrument Lambda 10-3 Properties	? 🔀
General Advanced Driver Details	
Sutter Instrument Lambda 10-3	
Configuration	
Use these settings to override normal device behaviour.	
	_
OK Cancel	Help

4) Reboot the Lambda device and check <Device Manager>, you will see that configured Lambda device has been removed from "Ports (COM & LPT)". The Lambda device is then ready to work with the PC using the D2XX driver (USB).



# 3. How to uninstall CDM driver on PC for Lambda devices

Lambda device can be removed using the <Device Manager> by simply right-clicking on the device and selecting "Uninstall". This will delete the associated registry entries for that device only.

Under Vista64, if you select <Delete the driver software for this device> when you uninstall the Lambda device, all the driver files will be removed from the PC. Under Windows XP, driver files and OEM INF and PNF files must be removed manually or by a custom application. OEM INF and PNF files are located in the "Windows\inf" directory and can be identified by searching for a VID and PID string matching the device installed e.g. VID\_1342 & PID \_1001. Once the matching OEM INF files are found (e.g. oem10.inf for SICDMBUS.INF and oem11.pnf for SICDMPORT.INF), the corresponding PNF files must also be removed (e.g. oem10.pnf and oem11.pnf). Driver files are located in the Windows\System32 and Windows\System32\Drivers directories.

### Some points to note about this un-installation method:

- If the VCP driver has been installed for this device, the COM port driver should be removed before the bus driver. If the bus is removed first, the COM port will no longer appear in the <Device Manager>.
- If Lambda CDM driver files are deleted when you uninstall one Lambda device (e.g. Lambda 10-3) while other installed Lambda devices (e.g. Lambda SC, Lambda 10B) still require them, those devices will not work correctly. This can be fixed by right clicking the device and selecting "Reinstall Driver" which will replace the missing files.
- If a device to be uninstalled is not connected to the PC, the device can still be removed by setting the device manager to show phantom devices. This can also allow a virtual COM port to be uninstalled if the bus layer has been removed first. To display phantom devices in <Device Manager>, a new system variable is required. Open "Control Panel > System" then select the "Advanced " tab and click "Environment Variables". In the System Variables section (NOT THE USER VARIABLES SECTION), click "New" to display the following window and create a new System Variable called "DevMgr\_Show\_NonPresent\_Devices" and set the value to 1, then click OK.

Edit System Varia	ble 🛛 🛛 🔀
Variable name:	DevMgr_Show_NonPresent_Devices
Variable value:	1
	OK Cancel

Open the <Device Manager> and select "View > Show Hidden Devices". <Device Manager> will then show all hidden and phantom devices available on that PC as shaded.

