

# **METAPACE**

## **Software Manual Virtual Com for USB Driver**

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**Rev. 1.03**

**Metapace T-3**

**Metapace T-3II**

**Metapace L-1**

**Metapace L-2**

**Metapace L-22D/23D**

**Metapace L-42D/43D**

**Metapace L-42T/43T**

## ■ Table of Contents

<b>1. Manual Information</b> .....	<b>3</b>
<b>2. Operating Environment</b> .....	<b>3</b>
2-1 Recommended Specifications .....	3
2-2 Virtual COM Driver Supported Models.....	3
<b>3. Software Installation &amp; Deletion</b> .....	<b>4</b>
3-1 Installation.....	4
3-2 Deletion .....	7
<b>4. Configuration Tool Usage</b> .....	<b>8</b>
4-1 Configuration Tool Functions .....	8
4-2 Virtual COM Port Addition .....	10
4-3 Printer Port Connection .....	12
4-4 Printer Port Disconnection .....	13
4-5 Print Test.....	13
4-6 Virtual Serial Port Deletion.....	13
<b>5. Virtual Serial Port Management</b> .....	<b>14</b>
5-1 Port Deletion Via the Device Manager .....	14
5-2 Port Setting/Number Modification Via the Device Manager .....	15
<b>6. Win32 API</b> .....	<b>17</b>
6-1 File I/O API .....	17
6-2 Communication API .....	17
6-3 Precautions for Serial Communication Programming .....	17

## 1. Manual Information

This manual contains the instructions for using “Virtual COM for USB Driver” software for Metapace printers.

You can set USB interfaces to serial communication type using this software.

※ Latest version can be downloaded from the Metapace home page.  
([www.metapace.com](http://www.metapace.com))

We at Metapace maintain ongoing efforts to enhance and upgrade the functions and quality of all our products. In following, product specifications and/or user manual content may be changed without prior notice.

## 2. Operating Environment

The “Virtual COM for USB Driver” and “Configuration Tool” programs operate under the following conditions.

### 2-1 Recommended Specifications

Hardware	IBM PC/AT or compatible devices
Supported Operating Systems	Windows XP / Windows Server 2003 / Windows VISTA/ Windows Server 2008 / Windows 7 / Windows 8 / Windows Server 2012
Hard Disk Capacity	Minimum 1Mbyte of free space
Memory Capacity	Over 128Mbytes of memory

### 2-2 Virtual COM Driver Supported Models

“Virtual COM Driver” can be used for the printers using USB / Ethernet interfaces. The following printers can be used.

Model	USB 1.1	USB 2.0	Wired Lan	Wireless Lan
Metapace T-3	O	O	O	X
Metapace T-3II	O	O	O	X

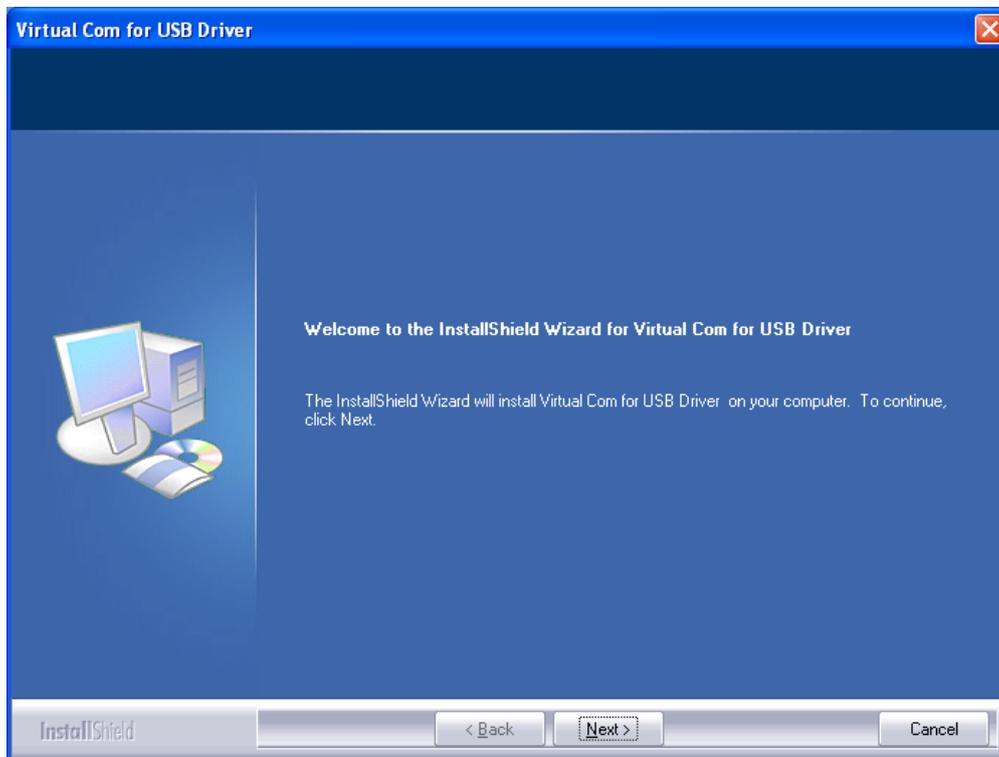
### 3. Software Installation & Deletion

#### 3-1 Installation

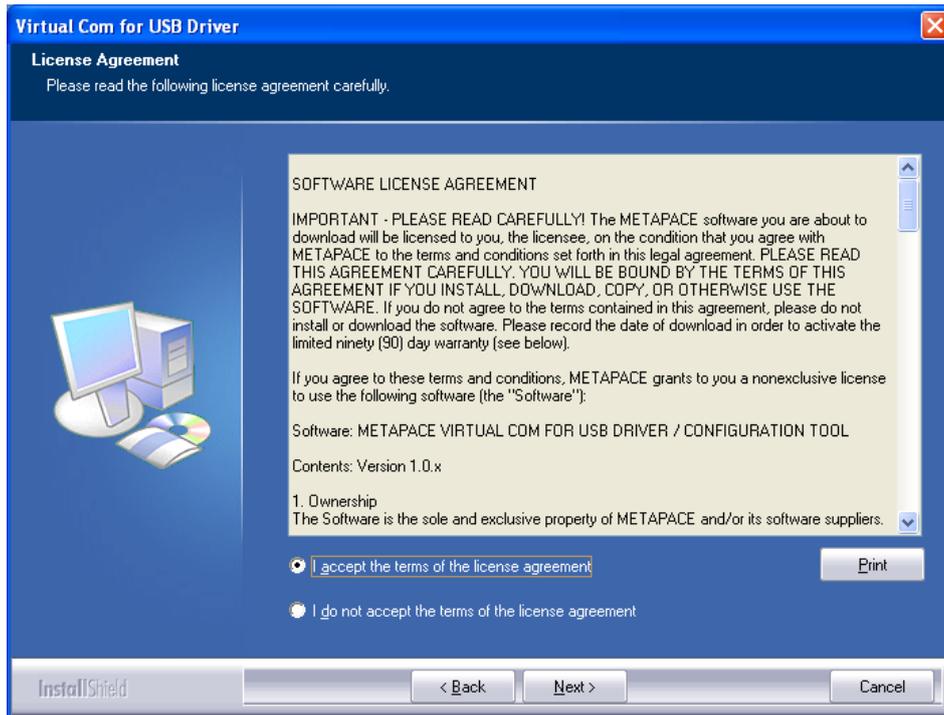
- 1) Execute the “Metapace VCOM4USB Installer V1.x.x.exe” file.  
(This file must first be downloaded.)



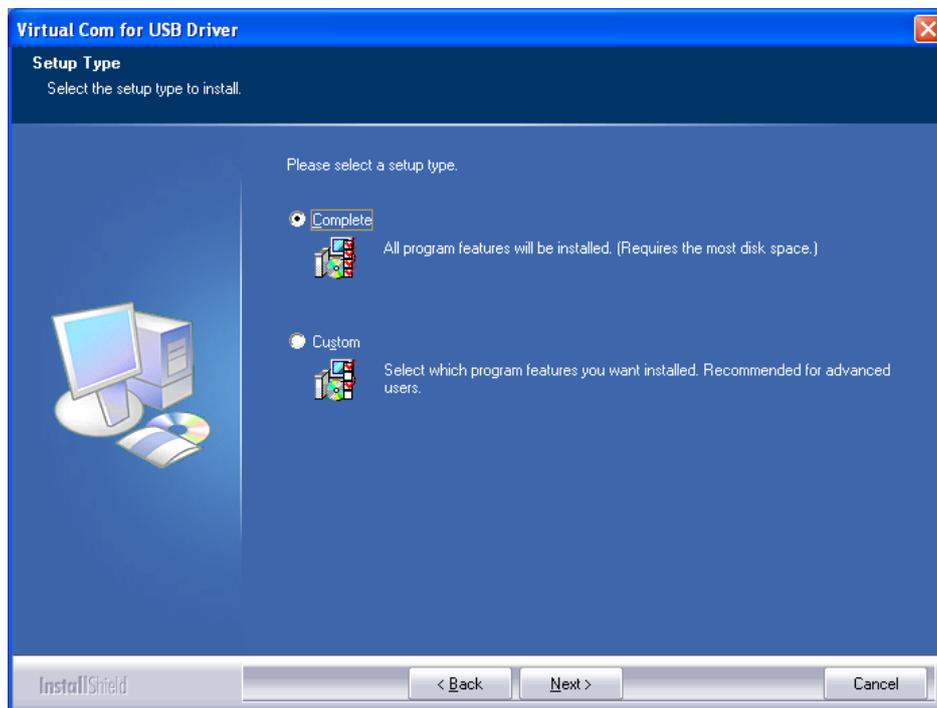
- 2) Click the “Next” button.



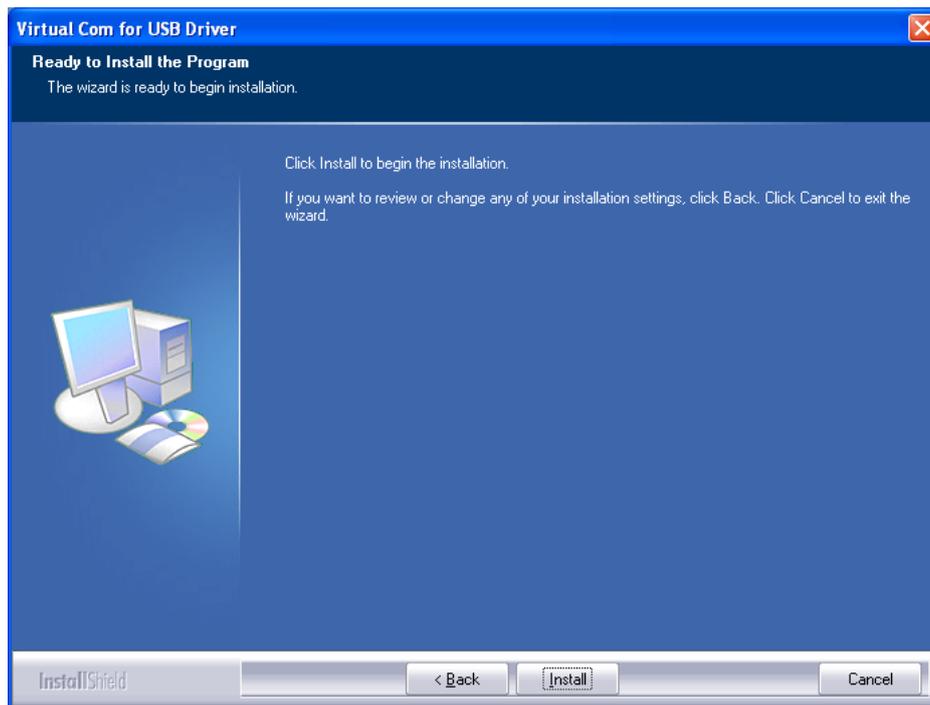
- 3) Accept the terms of the software license, and click the “Next” button.



- 4) Select between complete installation (Complete) and user-defined installation (Custom), and click the “Next” button.



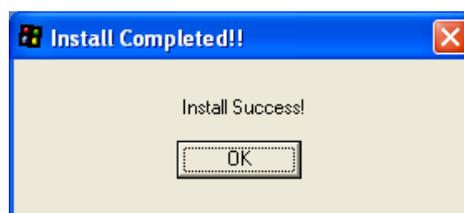
- 5) Clicking the “Install” button begins the installation process.  
(Install to: C:\Program Files\Metapace\VCOM4USB Driver\)



- 6) During installation, the following message will appear.  
Click the “Continue Anyway” button.

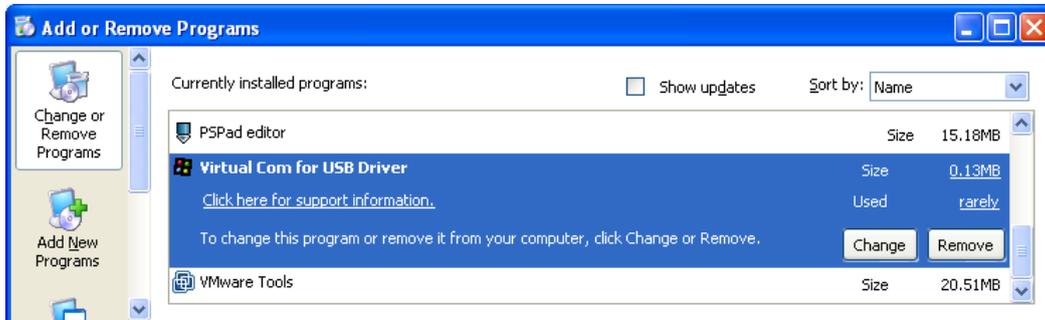


- 7) The following message appears upon the successful completion of installation.

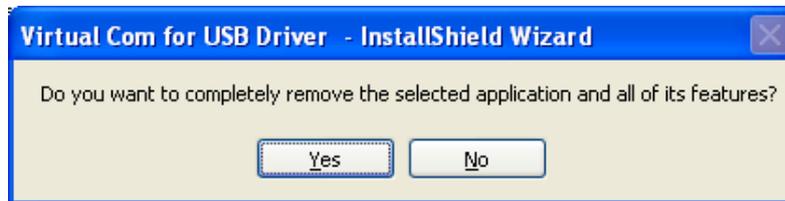


### 3-2 Deletion

- 1) Click and activate the “Add/Remove Programs” icon in the Control Panel.
- 2) Select “Metapace Virtual Com for USB Driver ” and click the “Change/Remove” button.



- 3) Click the “Yes” button to completely remove the application.



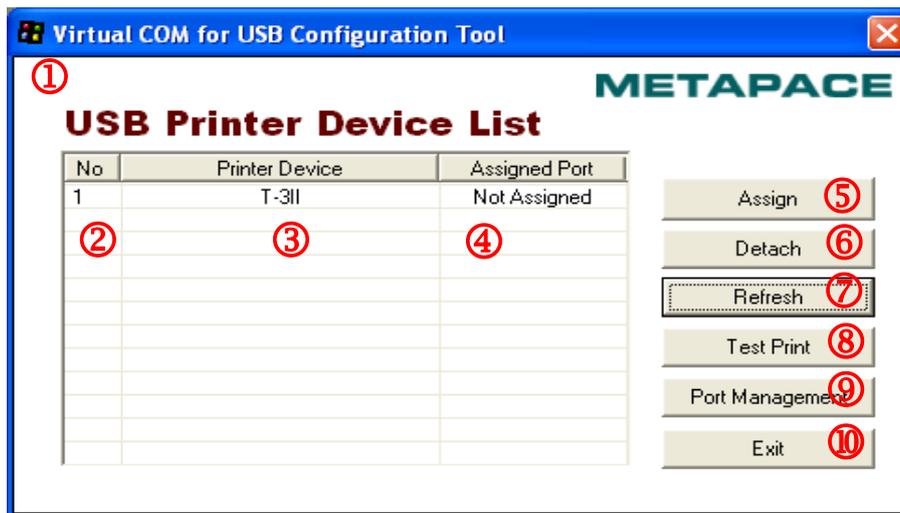
## 4. Configuration Tool Usage

The “Configuration Tool” program can be used to create a serial port, and set and/or delete printer devices.

### 4-1 Configuration Tool Functions

After completing installation via the “VCOM4USB Installer.exe” file, run the “Configuration Tool” program. The program location is indicated as follows.

(Start Program Menu-> Metapace -> Virtual Com for USB Driver-> Click the “VCOM4USB Configuration Tool” shortcut icon.)



The “Configuration Tool” functions are described as follows.

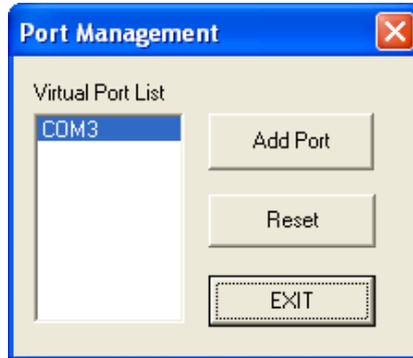
- ① Main Screen
  - This is the main screen of the “Virtual COM for USB Configuration Tool” program.
- ② Printer Device Sequence Number
  - This function displays the connection sequence of printer devices.
- ③ Printer Device Name
  - This function displays the printer device models that are turned on and connected via the USB interface.
- ④ Assigned Port
  - This function displays the currently set virtual serial port number. If one is not set, the status is shown as “Not Assigned”.

- ⑤ Assign
  - This function is used to establish a connection between a printer selected from the list box and a registered virtual serial port.
- ⑥ Detach
  - This function is used to disconnect a connection between a printer selected from the list box and a virtual serial port.
- ⑦ Refresh
  - This function is used to update the USB printer device list shown in the list box and set port information.
- ⑧ Test Print
  - This function is used to perform a print test on the printer selected from the list box. The serial port must be set in order to perform a print test.
- ⑨ Port Management
  - This function is used to add/remove virtual serial ports.
- ⑩ Exit
  - This function is used to exit the “Configuration Tool” program.

#### 4-2 Virtual COM Port Addition

The “Configuration Tool” program is used to add a virtual COM port. To create a port, click the “Port Management” button in the “Configuration Tool”.

- 1) Clicking the “Port Management” button of the “Configuration Tool” brings up the following dialog box.



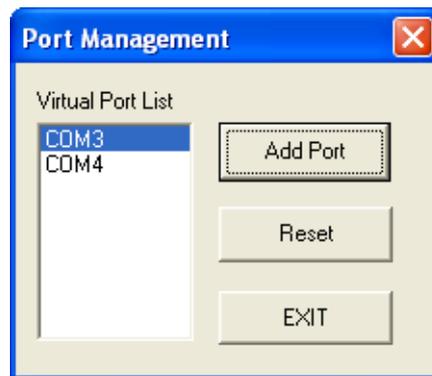
- 2) Click the “Add Port” button to add a port. The following warning message appears when adding a port if using a Windows XP or higher operating system.



- 3) Click “Continue Anyway” on the warning message, and the following message will appear upon port addition success.



4) If the port has been added successfully, the virtual serial port added will appear as follows.

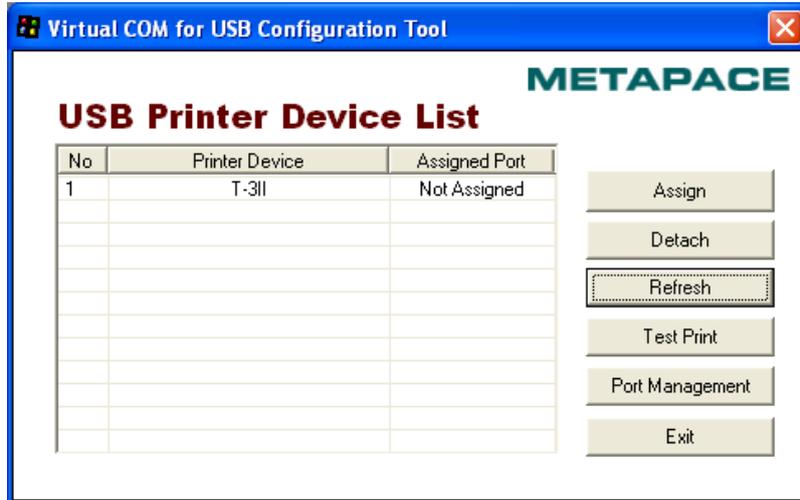


**※ NOTE**

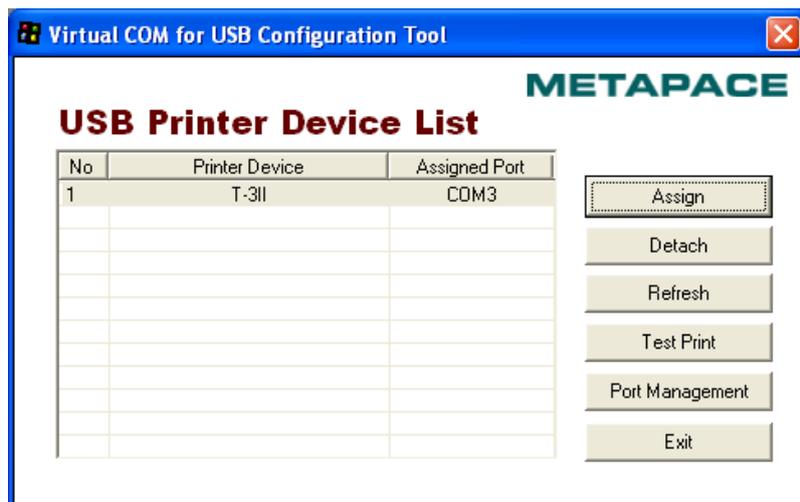
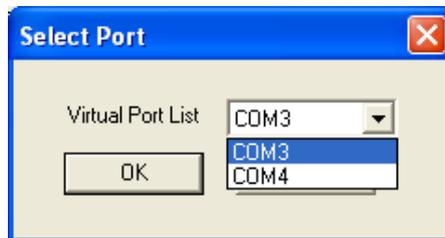
When adding a virtual serial port via the “Add Port” function, the port number indicated in “COM#” is determined according to the operating system. Refer to section 5 (Virtual Serial Port Management) of this manual for information on modifying the virtual serial port number. In addition, the warning message appears once for each virtual serial port added.

### 4-3 Printer Port Connection

To use the added serial port and printer, click the “Assign” button and set the connection.



- 1) Select the printer to be connected from the list, and click the “Assign” button to bring up a dialog box.
- 2) Select the port number to be used among the virtual serial ports added via “Port Management” and click the “OK” button to automatically update the “Assigned Port” section of the main screen.

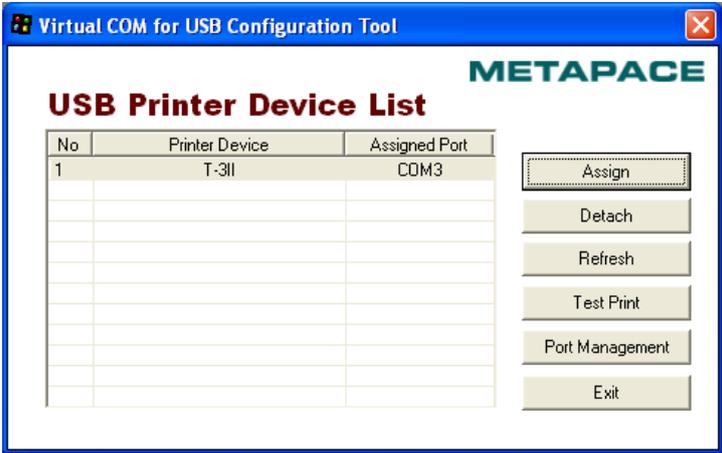


**※ NOTE**

When connecting a virtual serial port, if another printer is connected to the corresponding port, that existing connection is automatically disconnected, and the connection is established with the selected printer.

**4-4 Printer Port Disconnection**

Select the printer to be disconnected from the list of printers connected via virtual serial ports. Click the “Detach” button to disconnect the previously connected virtual serial port. This will result in reversion of the “Assigned Port” status of the printer to “Not Assigned”.



**※ NOTE**

Although the port setting of the printer has been disconnected, the virtual serial port is not deleted. The “Port Management” function can be used to delete all ports, or the Device Manager can be used to manually delete select ports.

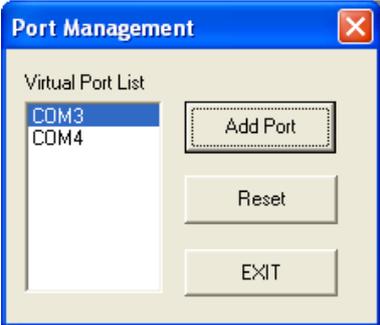
**4-5 Print Test**

The “Test Print” button can be used to check the communication status between the printer and the virtual serial port. Upon a successful print test, a message indicating success along with information on communication settings is printed as follows.

```
=====  
Virtual COM for USB Test  
Test is OK  
T-311<->COM3  
Copyright(C) Metapace Co. Ltd.  
=====
```

**4-6 Virtual Serial Port Deletion**

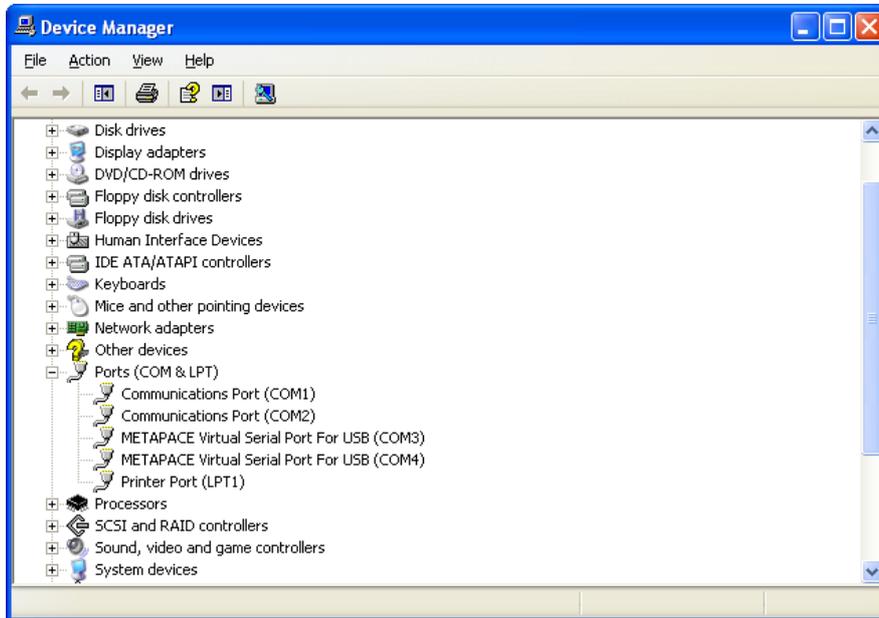
Click the “Port Management” button to delete the connection settings of virtual serial ports. The “Reset” button can be used to delete all virtual serial ports and connected printer information.



## 5. Virtual Serial Port Management

Port number modification, port deletion, and serial communication setting are done via the Device Manager.

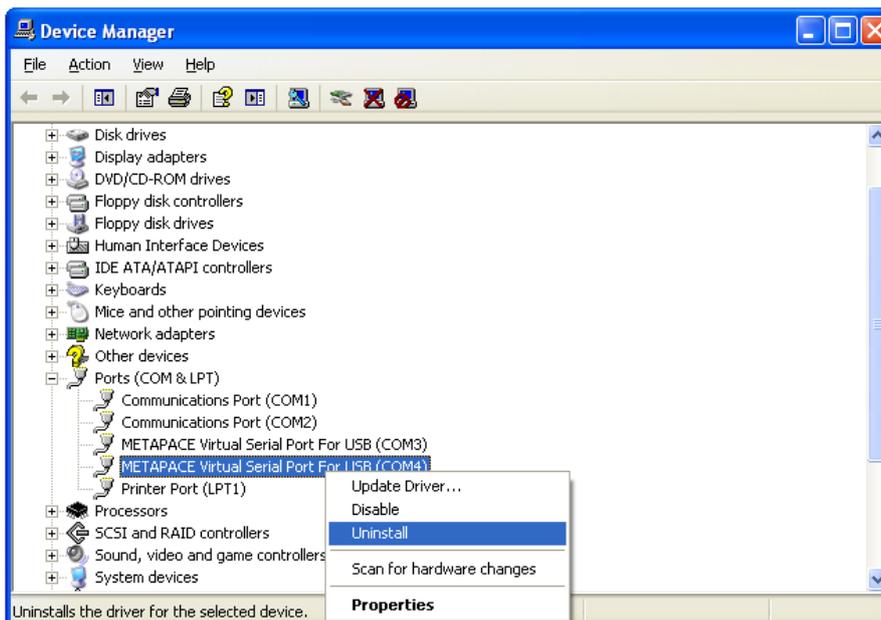
Control Panel -> System -> Device Manager: Upon examination of the ports (COM & LPT) section, the port(s) added previously via the “Configuration Tool” program can be seen.



### 5-1 Port Deletion Via the Device Manager

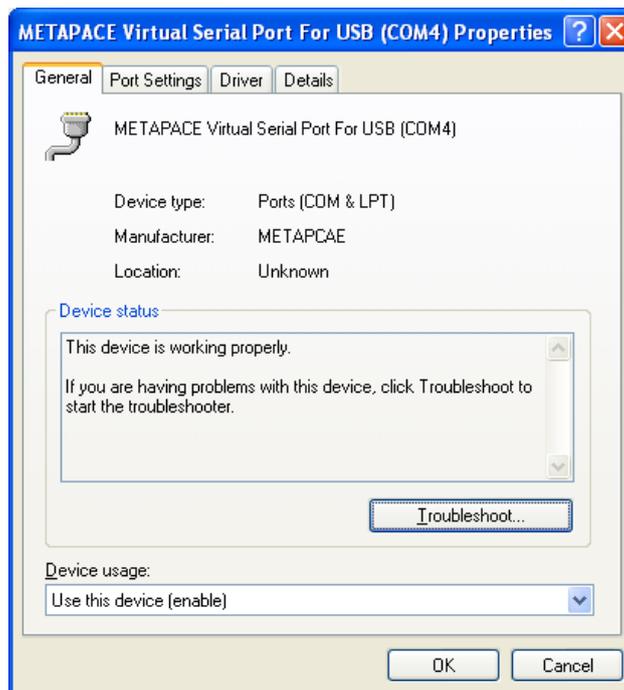
Select the virtual serial port to be deleted and click the right mouse button. On the popup menu, select “Uninstall” to delete the port.

Following deletion, the “Configuration Tool” program must be executed, and the changes must be updated.

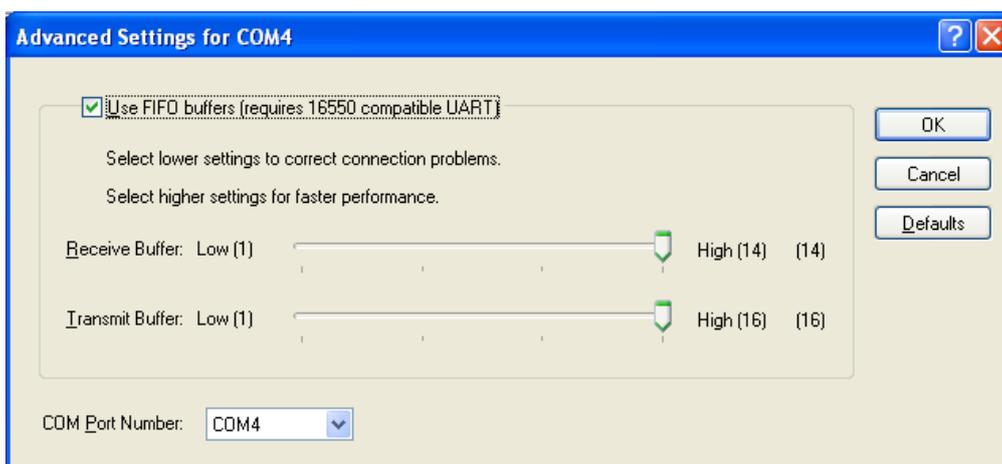


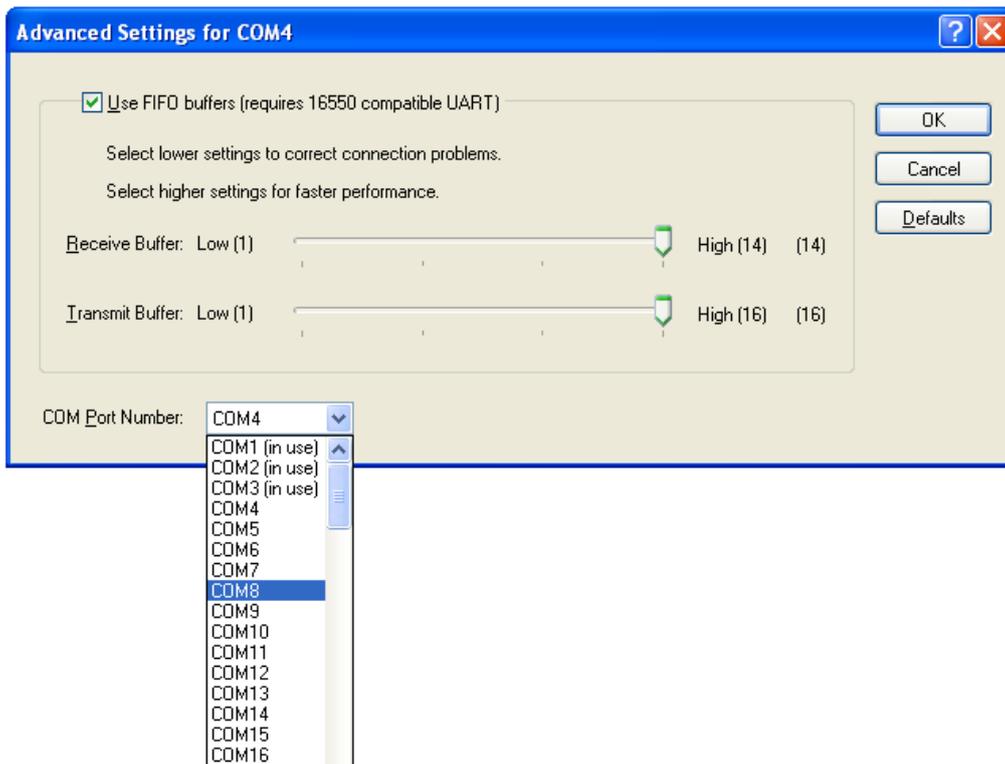
### 5-2 Port Setting/Number Modification Via the Device Manager

- 1) Select the desired virtual serial port and click the right mouse button. On the popup menu, select “Properties”.
- 2) In the “Properties” window, click the “Port Settings” tab.
- 3) The “Port Settings” tab can be used to set the baud rate, data bits, parity, stop bits, and flow control of a port.



- 4) Click the “Advanced” button to modify the port number and/or designate buffer settings. Modification of buffer settings is not recommended. The COM port number is changed by selecting a number in the combo box.





Following port modifications, the settings utility must be run to update changes. If a printer was connected previously, the connection setting must be disconnected.

### ※ CAUTION

The selecting port must not already be in use.

Following port modification, clicking the “Yes” button can result in the appearance of a warning message. Click the “Yes” button to finalize and set the modified information and settings. Port modification on certain operating systems will require the repeat opening of the Device Manager to confirm changes.

**After deleting a virtual serial port, the “Configuration Tool” program must be executed to update the Virtual COM for USB Driver, and directly deleted connection information must be removed.**

## **6. Win32 API**

The “Virtual COM for USB Driver” program can be used in serial communication programming. Refer to Microsoft MSDN regarding the Win32 API for serial communication.

### **※ NOTE**

Currently, only basic serial communication APIs are supported. In the future, additional APIs suited to user needs are set to be added.

### **6-1 File I/O API**

- 1) CreateFile(): Supported
- 2) WriteFile():Supported
- 3) ReadFile():Supported
- 4) CloseHandle():Supported

### **6-2 Communication API**

- 1) BuildCommDCB():Supported
- 2) BuildCommDCBAndTimeouts():Supported
- 3) CommConfigDialog():Supported
- 4) DeviceIoControl():Supported
- 5) GetCommModemStatus():Supported
- 6) GetCommState():Supported
- 7) GetCommTimeouts():Supported
- 8) PurgeComm():Supported
- 9) SetCommState():Supported
- 10)SetCommTimeouts():Supported

### **6-3 Precautions for Serial Communication Programming**

- 1) With CreateFile, any port name ranging from 1 to 9 may be used as “COM1” to “COM9”. To use ports 10 to 256, the following format must be used, “\\\\.\\COM10” to “\\\\.\\COM256”.