

## Operating Environment Guide for TMUSB

### 1. Operating System

#### Support OS for TMUSB Ver.8.00b

	Full Speed	High Speed
Microsoft Windows 10 (32bit) *12	Supported	Supported *2
Microsoft Windows 10 (64bit) *12	Supported	Supported *2
Microsoft Windows Server 2016 (64bit)	Supported	Supported *2
Microsoft Windows Server 2019 (64bit)	Supported	Supported *2

#### Support OS for TMUSB Ver.7.10b

	Full Speed	High Speed
Microsoft Windows XP Professional	Supported	Not supported
Microsoft Windows XP Professional Service Pack 1 or later *5	Supported	Supported *2
Microsoft Windows Vista (32bit) *4 *5	Supported	Supported *2
Microsoft Windows Vista (64bit) *3 *4	Supported	Supported *2
Microsoft Windows 7 (32bit) *9	Supported	Supported *2
Microsoft Windows 7 (64bit) *9	Supported	Supported *2
Microsoft Windows 8 (32bit) *10	Supported	Supported *2
Microsoft Windows 8 (64bit) *10	Supported	Supported *2
Microsoft Windows 8.1 (32bit) *11	Supported	Supported *2
Microsoft Windows 8.1 (64bit) *11	Supported	Supported *2
Microsoft Windows Server 2003 (32bit)	Supported	Supported *2
Microsoft Windows Server 2003 (64bit) *8	Supported	Supported *2
Microsoft Windows Server 2008 (32bit) *7	Supported	Supported *2
Microsoft Windows Server 2008 (64bit) *6	Supported	Supported *2
Microsoft Windows Server 2008 R2 (64bit) *9	Supported	Supported *2
Microsoft Windows Server 2012 (64bit)	Supported	Supported *2
Microsoft Windows Server 2012 R2 (64bit)	Supported	Supported *2

#### Unsupported OS

	Full Speed	High Speed
Microsoft Windows 98 Second Edition *1	Not supported	Not supported
Microsoft Windows 2000 Professional	Not supported	Not supported
Microsoft Windows 2000 Professional Service Pack 4 or later	Not supported	Not supported

\*1 Microsoft Windows 98 Second Edition does not support USB 2.0 High speed mode connection. We stopped supporting TMUSB Ver.3.10a or later.

\*2 High Speed connection requires a designated Microsoft USB driver stack. See "3 Support USB driver stack" to be described.

\*3 Microsoft Windows Vista (64bit) and Microsoft Windows Vista Service Pack 1(64bit) are supported by "TM-J9000/J9100 Driver", "TM-S1000 Driver", "APD ver.4.03Ex64", "APD ver.4.03Ex64a" and "APD ver.4.03Ex64b"

\*4 Microsoft Windows Vista Service Pack 2(32bit) is supported by only "TM-J9000/J9100 Driver", "TM-S1000 Driver" and "APD ver.4.02aE or later and Ver5.00 or later".

\*5 Microsoft Windows XP Professional Service Pack 3 is supported by "APD ver.4.02aE or later and Ver5.00 or later" and "TM-J9000/J9100 Driver".

\*6 Microsoft Windows Server 2008 (64bit) are supported by "APD ver.4.03Ex64", "APD ver.4.03Ex64a", "APD ver.4.03Ex64b" and "APD ver.4.07 or later and Ver5.00 or later".

\*7 Microsoft Windows Server 2008 (32bit) is supported by "APD ver.4.07 or later and Ver5.00 or later".

\*8 Microsoft Windows Server 2003 (64bit) is supported by "APD ver.4.07 or later and Ver5.00 or later".

\*9 Microsoft Windows Server 2008 R2 and Microsoft Windows 7 Service Pack 1(32bit/64bit) are supported by "APD ver.4.08 or later and Ver5.00 or later".

\*10 Microsoft Windows Server 2012 R2 and Microsoft Windows 8(32bit/64bit) are supported by "APD ver.4.54 or later and Ver5.00 or later".

\*11 Microsoft Windows Server 2012 R2 and Microsoft Windows 8.1(32bit/64bit) are supported by "APD ver.4.55b or later and Ver5.00 or later".

\*12 Microsoft Windows 10(32bit/64bit) are supported by "APD ver.4.56 or later and Ver5.04 or later".

\*Embedded of the Microsoft Windows XP/7 base is supported.

### 2. Operating USB Host Controllers

Intel USB Host controller with a built-in chip set
NEC EHCI USB Host controller

NOTE: TMUSB does not support NEC OHCI host controller for USB1.1.

### 3. Operating USB Driver Stacks

Use the Microsoft USB driver stack that is included in the OS.

It is recommended to use the latest version of Microsoft USB driver stack.

NOTE: TMUSB does not support any third-party manufacturer's driver stacks.

NOTE: About "USB 3.0" Port. TMUSB support only Microsoft(R) USB3.0 driver stack which is included in Windows 8 and later OS.

- When the printer is connected via USB 2.0 High Speed connection

Check the version of your Microsoft USB driver stack usbehci.sys. The operating file versions are as follows.

(As of 05/2007)

Microsoft Windows 2000 Professional Service Pack 4	Version 5.00.2195.6709 or later
Microsoft Windows XP Professional Service Pack 1	Version 5.1.2600.1243 or later
Microsoft Windows XP Professional Service Pack 2	Version 5.1.2600.2180 or later
Microsoft Windows Server 2003	Version 5.2.3790.1830 or later
Microsoft Windows Vista	Version 6.0.6000.16386 or later
Microsoft Windows Server 2008	First version or later
Microsoft Windows Server 2008 R2	First version or later
Microsoft Windows 7	First version or later

- How to upgrade a Microsoft USB driver stack to the latest version

- 1) Connect your PC to the Internet server.
- 2) Double click System in the Control Panel.
- 3) Select Hardware tab.
- 4) Click Device Manager.
- 5) Open Universal Serial Bus controllers.
- 6) Double click "XXX USB Enhanced Host Controller."
- 7) Press Update Driver within the Driver tab to upgrade the driver.
  - < Windows 2000 >
    - In Upgrade Wizard of Device Driver.
    - (1) Select [Search for suitable driver for my device (recommended)] and click Next.
    - (2) Select [Microsoft Windows Update] and click Next.
  - < Windows XP and Windows Server 2003 >
    - In Upgrade Wizard of Device Driver
    - (1)Select [Install the software automatically(Recommended)].
  - < Windows Vista >
    - In Upgrade Wizard of Device Driver
    - (1)Select [Search automatically for updated driver software].

- How to check the version of the driver stack (usbehci.sys)

- 1-1) Double click "XXX USB Enhanced Host Controller" within Device Manager.
  - 1-2) Click Driver Details within Driver tab.
- Or
- 2-1) Right-click on system32\drivers\usbehci.sys in Windows System Directory.
  - 2-2) Select property tab and confirm the version information.

### 4. Operating Printers

EPSON USB TM/EU/BA printers

## 5. Connecting USB

Use a USB Cable and a USB HUB that comply with the USB 2.0 standard.  
To use USB 2.0 HUB, see Notes on USB 2.0 HUB to be described.

Max. cable length	5 meter
Max. stage of USB hub	5 stages

NOTE: To use high speed device, max. cable length is 3 meter.  
NOTE: TMUSB does not support USB1.0 HUB. Please use USB1.1HUB or USB2.0HUB.  
Please do not use the HUB on UB-U01/U01II connecting to USB2.0 HUB.  
If you need to use the HUB on UB-U01/U01II, please connect UB-UXX to PC directly. (Using UB-U01III does not have any problem.)

## 6. Maximum Number of Printers Connectable

OPOS/JPOS	10 units
APD	8 units
Other drivers, tools	8 units

## 7 Combination to enable power saving

USB power saving function of the printer becomes effective under the following combination.

- The application doesn't access the device.  
OS: Microsoft Windows XP Professional Service Pack 2/ Windows Server 2003  
Printer: TM-T88IV 10.00 ESC/POS
- The application accesses the device by using OPOS.  
OS: Microsoft Windows XP Professional Service Pack 2/ Windows Server 2003  
Printer: TM-T88IV 10.01 ESC/POS or later / TM-T70 1.00 ESC/POS or later.

- \* When you connect the printer by using USB 2.0 HUB, please connect it directly with PC so that the power saving function becomes effective.
- \* When you connect the printer by using USB 1.0/1.1 HUB, please connect it directly with PC because it is likely not to operate normally depend on the type of USB HUB due to the limitation of OS.
- \* This Power Saving function is OFF in Windows Vista.  
When you want to ON it, you install TMUSB Driver with -p1 option.  
You must set Power Management setting of the USB Root hub which "Allow the computer to turn off this device to save power" is ON.

## Other notes

### 1. When you turn off/on the printer power

When you cycle the power of printer, USB may not be initialized. Please turn on the power after turning off the power about 10 seconds.

### 2. USB2.0 HUB

High Speed connection becomes available when a Full Speed printer is connected via the USB 2.0 HUB, even if your EPSON TM/EU/BA printer does not support USB 2.0 High Speed (only when your host PC has an EHCI host controller).  
Again, see the requirements in "When the printer is connected via USB 2.0 High Speed connection" described earlier.

### 3. When "USB Printing Support" is installed

In case you connect TMUSB to PC without installing TMUSB device driver, TMUSB may not be operated because "USB Printing Support" is installed  
When "EPSON USB Controller for TM/BA/EU Printers" is not displayed on Device Manager although you connect TM-C100 to PC and turn on the power, please return with following procedures.

- Connect TM-C100 to PC and turn on the power supply.
- If "USB Printing Support" is displayed in the Device Manager, right-click "USB Printing Support" and select "Delete".
- Turn the power for the TM-C100 off and then back on again.
- Confirm if "EPSON USB Controller for TM/BA/EU Printers" is displayed in the Device Manager.

### 4. If printer is not recognized because of the reset processing or the power off/on

If you reset the printer from program or cycle the power quickly, the printer may not be recognized because of the problem of Microsoft such as the selective suspend function, etc.

- Update to the latest USB driver stuck from Microsoft.  
Please refer to 3. for procedure.
- Refer to the information from Microsoft even if the problem is not solved.  
L Set Selective suspend function not valid. (English edition)  
<https://support.microsoft.com/en-us/help/817900/usb-port-may-stop-working-after-you-remove-or-insert-a-usb-device>

### 5. Notes when shifting to PC standby or hibernation mode

The computer might not be shifted to the standby or hibernation mode while the printer is working due to the limitation of OS.  
Also, the system might become unstable when the power supply of the printer is turned off while shifting the computer to standby or hibernation mode or when you pull out the cable of USB, due to the limitation of OS.  
Please make the computer standby or hibernation mode after closing the print application or turning off the power supply of the printer.

### 6. The order of installing driver

TMUSB might be replaced old TMUSB version when you install the driver that old TMUSB version is bundled after you install the driver that new TMUSB version is bundled.  
In that case, please install new TMUSB version.  
Please use Ver.2.20a in the Windows 98 environment.

### 7. Notes for the installation of the TM/BA/EU driver:

Before performing the installation or upgrade of the driver, turn off the device of the TM/BA/EU, and cancel "Found New Hardware Wizard" if the dialog box of it is displayed in the PC.

## Version History

Version	Description
8.00b	Supported Device Guard of Windows 10. Changed support OS to Windows 10 or later.
7.10b	Changed to not install on Windows 10 or later.
7.10a	Fixed an issue where when an offline event happens during printing and also happens the printer's buffer become full, the transmission may be terminated on Hi-Speed mode devices. Target devices: TM-S2000MJ, TM-S9000MJ, TM-S2000II-MJ, TM-S9000II-MJ
7.00a	Supports USBFilter
6.10a	The problem that cannot communicate with a device after PC return, when forcibly make PC a standby while communicating with the device. (With some PCs and Windows 7)
6.00a	1) Supports TM-S9000MJ/S2000MJ 2) Fixed for blue screen problem relating to USB power saving function.
5.10a	The problem of failing in the scanner image reception is corrected. (TM-S1000, TM-J9000/J9100, TM-H6000I/III with Scanner) *This problem occurs only by 5.00a.
5.00a	Supports Windows 7 (32bit/64bit), Windows Server 2008 R2 (64bit)
4.00c	Support Windows Server 2003 (64bit)
4.00b	In the 64bit OS, if the power of device is turned on, the TMUSB is newly installed (after "Found New Hardware Wizard" is cancelled and install it) or is upgraded version, and the power is restored, the TMUSB, from then, will not be recognized by system and cannot communicate with the device.
4.00a	1) Addition of the process so that other driver (OPOS, OPOS.Net, Java POS, Advanced Printer Driver, TM-J9000/J9100 Driver, TM-S1000 Driver) could be available even when TMCOMUSB is used. 2) Modification of the operation that temporary COM port is used whenever new printer (with the different serial # of the USB) is connected while the TMCOMUSB is used. 3) Phenomenon correction for that: When two or more applications try to open a USB port at the same time, the USB port might be opened more than two applications.
3.20d	We revise the installation of the OPOS, OPOS.NET, APD, JavaPOS, TM-J9000/J9100 Driver, TM-S1000 Driver, TM-S1000 Utility, TMNetWinConfig, TMFlago, Memory Switch Setting Utility and TMFontRunner becomes the error problem. Due to the faulty of the program to detect OEM files. While the TMUSB installation was performed, the access violation occurred and the installation. We corresponded to this phenomenon.
3.20c	When you install an old driver (OPOS, OPOS.NET, JavaPOS, APD, TM-J9000/J9100 Driver, TM-S1000 Driver) that TMUSB Ver.2.10a or Ver.2.20a is bundled after installing the driver (OPOS, OPOS.NET, JavaPOS, APD, TM-J9000/J9100 Driver, TM-S1000 Driver) that TMUSB Ver.3.10a or Ver.3.20b is bundled, TMUSB might replace Ver.2.10a or Ver.2.20a. We corresponded to this phenomenon.

3.20b	1) For Windows XP, when two or more TM-S1000, TM-T88IV, and TM-T70 tie by the USB2.0 High Speed connection, and when you turn off the power supply or cut the cable, it is likely to become the blue screen. We corresponded to this problem. 2) For Windows Vista, when you do PC in the standby while the driver is operating, the application might hang up. We corresponded to this phenomenon. 3) In Windows XP, TM-S1000, TM-T88IV, and TM-T70, when the events that the USB cutting and the device shifts to the power saving mode are executed in synchronized timing, the application might hang up. We corresponded to this phenomenon. 4) In Windows XP, TM-S1000, TM-T88IV, and TM-T70, when the timing that the OS shift to the power saving mode and the timing that the device returns from the power saving mode are synchronized, it is not possible to communicate with the device. We corresponded to this phenomenon. 5) When you start the TMUSB installer specifying the absolute path, the installer might not work normally. We corresponded to this phenomenon and the Unicode. 6) When you install and overwrite TMUSB before Ver.3.10a after installing the driver that TMUSB Ver.3.10a is bundled, it is not possible to return it to new TMUSB Ver.3.10a. We corresponded to this phenomenon. 7) When you install an old driver that TMUSB before Ver.3.10a is bundled after installing the driver that TMUSB Ver.3.10a is bundled, TMUSB might replace Ver.3.10a. We corresponded to this phenomenon.
3.10b	This version is Ver.3.10a for TM-S1000 Utility, and doesn't change in the main body of the device driver.
3.10a	Corresponding to TM-S1000 and Windows Vista (32bit,64bit (Only TM-J9000/J9100 and TM-S1000 supports 64 bit.)) The support of Windows 98 is discontinued. The uninstallation function is added to the installer of TMUSB.
2.20a	1) The received data changes to the abnormal value or it becomes a blue screen when the traffic of communication between PC and the printer is busy. This problem is corrected. 2) When you quickly connect and disconnect the USB cable of the printer for USB2.0 HighSpeed, it becomes a blue screen. We corrected this problem. 3) The problem that a note PC might not be shifted to the standby when the printer is connected with the note PC is corrected. 4) When the printer for USB2.0 HighSpeed is connected with PC, it cannot return from the standby mode. The problem is corrected. 5) For TM-T88IV and TM-T70, notification of the power supply OFF/ON of OPOS is issued even though the power supply is not turned off or on. The problem is corrected.
2.10a	Support power saving for TM-T88IV/T70
2.00a	Support High Speed device (J9000) and TMCOMUSB
1.91a	Response for the phenomenon that the data is lacked due to the connection of USB2.0.
1.81a	Response for the phenomenon that OS gets hosed at Windows SP4.
1.75a	Win2000/XP takes driver signature.
1.60a	Only WinXP takes driver signature.
1.52	Response for the phenomenon that it leaks the SystemPTE resource and becomes a blue screen.
1.5	Support for TM-H6000I/BA-T500U/TM-C100 on-board USB.
1.1	Support WDM. (for Win98SE/2000)
1.01	First Edition (only for Win98SE)

Update History

- 12 November, 2019
- 1. Operating System
    - Added OS
  - Version History
    - Added 8.00b description
    - Added 7.10b description
- 5 March, 2018
- 1. Operating System
    - Added OS
  - 3. Operating USB Driver Stacks
    - Added about USB3.0
  - 5. Connecting USB
    - Added about high speed device.
  - Version History
    - Added 7.10a description
- 29 March, 2016
- 1. Operating System
    - Added OS
  - Version History
    - Added 7.00a description
- 21 March, 2012
- Version History
    - Added 6.10a description
- 10 February, 2012
- 1. Operating System
    - Added comment : \*
  - 3. Operating USB Driver Stacks - How to upgrade a Microsoft USB driver stack to the latest version
    - Added Microsoft Windows Vista
  - Version History
    - Added 6.00a description
- 28 December, 2009
- 1. Operating System
    - Added Microsoft Windows Server 2008 R2
    - Added Microsoft Windows 7 (32bit)
    - Added Microsoft Windows 7 (64bit)
    - Added comment : \*9
  - 3. Operating USB Driver Stacks - When the printer is connected via USB 2.0 High Speed
    - Added Microsoft Windows Server 2008 R2
    - Added Microsoft Windows 7
  - Version History
    - Added 5.00a description
    - Added 5.10a description
- 06 July, 2009
- 1. Operating System
    - Added Microsoft Windows Server 2003 (32bit)
    - Added Microsoft Windows Server 2003 (64bit)
    - Added Microsoft Windows Server 2008 (64bit)
    - Added comment : \*3, \*6, \*7 and \*8
  - Version History
    - Added 4.00c description