TOSHIBA

TOSHIBA Bar Code Printer

Printer Driver for Linux

Operating Manual

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TOSHIBA TEC CORPORATION

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Introduction

Thank you for purchasing the TOSHIBA bar code printer.

This documentation is for users of TOSHIBA TEC barcode printers with Linux-based systems. The supplied software is intended to be used in conjunction with a CUPS-compatible operating system.

System Requirements

- An i386 or x86-64 based computer
- A Linux-based operating system with CUPS v1.4 or higher

Tested Environment

- Ubuntu 14.04
- Fedora 26

Applicable Printers

Driver Name	Printer Model
TOSHIBA B-EX4T1-G	B-EX4T1-G
TOSHIBA B-EX4T1-T	B-EX4T1-T
TOSHIBA B-EX4T2-G	B-EX4T2-G, B-EX4D2-G
TOSHIBA B-EX4T2-T	B-EX4T2-T
TOSHIBA B-EX4T2-H	B-EX4T2-H
TOSHIBA B-EX6T1-G	B-EX6T1-G
TOSHIBA B-EX6T1-T	B-EX6T1-T
TOSHIBA B-EX6T3-G	B-EX6T3-G
TOSHIBA B-EX6T3-T	B-EX6T3-T
TOSHIBA BA400T-G	BA410T-G, BA420T-G
TOSHIBA BA400T-T	BA410T-T, BA420T-T

Connection Interface

USB LAN (Socket / LPR)

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1. Installation

The installation procedure of this printer driver differs depending on the printer models and the connection methods. Follow the procedure for the appropriate condition to install the printer driver.

1.1 Installation for Debian based systems

To install the TOSHIBA TEC barcode printer drivers on Debian-based systems (Debian, Ubuntu, Xandros, etc), the .deb package is used. Unless otherwise specified, all commands are to be run as root.

- 1. Copy the toshiba-tec-barcode-printer-drivers_2.xx_debian_yy.deb package to the target system, where xx is the version number of the package, and yy is the architecture. When installing the barcode printer driver package on a 32-bit OS, use the **i386** package, and when installing on a 64-bit OS, use the **amd64** package.
- 2. Run the following command in a terminal (change to the directory where the package was copied):

dpkg --install toshiba-tec-barcode-printer-drivers_2.xx_debian_i386.deb

 $\mathcal{3}$. You will be prompted to read the EULA, which must be accepted before the installation can continue. Scroll through the EULA using the up and down arrow keys.

ackage configuration							
Configuring toshiba-tec-barcode-printer-drivers							
END USER SOFTWARE LICENSE AGREEMENT							
INSTALLING OR OTHERWISE USING THIS SOFTWARE PRODUCT CONSTITUTES YOUR ACCEPTANCE OF THE FOLLOWING TERMS AND CONDITIONS (UNLESS A SEPARATE LICENSE IS PROVIDED BY THE SUPPLIER OF APPLICABLE SOFTWARE IN WHICH CASE SUCH SEPARATE LICENSE SHALL APPLY). IF YOU DO NOT ACCEPT THESE TERMS, YOU MAY NOT INSTALL OR USE THIS SOFTWARE, AND YOU MUST PROMPTLY RETURN THE SOFTWARE TO THE LOCATION WHERE YOU OBTAINED IT.							
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<0k>							

- 4. To progress to the next screen, highlight the "Ok" button by pressing the tab key, and dismiss the EULA by pressing the enter key.
- 5. To accept the EULA, highlight "Accept" using the up and down arrow keys, and then press the enter key. If "Accept" is not highlighted when.

6. Installation of the TOSHIBA TEC barcode printer drivers will commence after the EULA is accepted.

Configuring toshiba-tec-barcode-printer-drivers TOSHIBA TEC Barcode Printer Drivers EULA Agree Disagree
< <u>Ck></u>

7. CUPS should restart automatically, however, in case it doesn't, it should be restarted manually. On systemd based systems, restart CUPS by running the following command:

systemctl restart cups.service

 $8.\,$ On init.d based systems, restart CUPS by running the following command:

sbin/service cups restart

1.2 Installation for Red Hat based systems

To install the TOSHIBA TEC barcode printer drivers on Red Hat-based systems (Red Hat, RHEL, Fedora, CentOS, etc), the .rpm package is used. Unless otherwise specified, all commands are to be run as root.

- 1. Copy the toshiba-tec-barcode-printer-drivers-2.xx-1.yy.rpm file to the target system, where xx is the version number of the package, and yy is the architecture. When installing the barcode printer driver package on a 32-bit OS, use the i686 package, and when installing on a 64-bit OS, use the x86_64 package. The i686 package can also be installed on a 64-bit Red Hat based system as long as the following dependencies are also installed:
 - 1. glibc.i686
 - 2. libxml2.i686
 - 3. zlib.i686
- 2. If the target system uses yum package manager, run the following as root:

yum install toshiba-tec-barcode-printer-drivers-2.xx-1.yy.rpm

On newer Red Had-based systems that use the **DNF** package management system, use the following command (as root) instead:

dnf install toshiba-tec-barcode-printer-drivers-2.xx-1.yy.rpm

 $\mathcal{3}$. CUPS should restart automatically, however, in case it doesn't, it should be restarted manually, On system based systems, restart CUPS using the following command:

systemctl restart cups.service

On init.d based systems, restart CUPS using the following command:

/sbin/service cups restart

2. Setting up the TOSHIBA TEC Barcode Printer

Consult the documentation of the target operating system for specific instructions on how to set up a new printer. Different desktop environments provide different interfaces for adding and maintaining printers. Alternatively, most CUPS-compatible operating systems can be configured through a web interface.

2.1 Using the CUPS web interface

1. Using a web browser on the target system, browse to https://localhost:631/ (be sure use https and not http).

Typically CUPS is installed and set up using a self-signed certificate, as such, most browsers will warn that the connection is not private. If such a warning is shown when navigating to the above URI, an exception must be made to allow the CUPS web interface to be used. How this exception is made depends on the browser. Consult the browser's documentation for more information on adding SSL certificate exceptions.



2. Once the CUPS web interface is loaded, click on "Administration" at the top of the page.

						(
Home	Administration	Classes	Online Help	Jobs	Printers	Search H	lelp		
Printers			Server						
	ind New Printers		Edit Configuration F	ile View Acce	view E	rror Log			
Manage Printers Classes Add Class Manage Classes Jobs			View Page Log						
			Server Settings:						
			Advanced Advanced Advanced Advanced to this system Allow printing from the Internet Allow remote administration Use Kerberos authentication (FAQ)						
									Manage Jobs
			Change Settings						

 ${\it 3.}$ Under the "Printers" heading, click "Add Printer".

A prompt should appear requesting a username and password. If such a prompt appears, enter the root username and password.

(and the second	https://localhost:631 is requesting your username and password. The site says: "CUPS"
User Name:	
Password:	
	Cancel OK

4. Choose the TOSHIBA TEC Barcode Printer amongst the local or discovered printers and click **Continue**. If the printer was not discovered but it is connected to the network, select **AppSocket/HP JetDirect** as the protocol. If the printer is connected by USB and does not show in the list of local printers, check the USB connection and try again from step 1.

If **AppSocket/HP JetDirect** was selected, enter the URI of the printer in the following format (where **ip-or-hostname** is the IPv4 address or hostname of the printer, and port is the **port** configured on the printer):

€ Add Printer - CUPS 1.... × + (i) localhost:631/admin/ C Q Search ☆ 自 ♣ = Administration Online Help Printers Classes Jobs Search Help C Home Add Printer Local Printers: **Discovered Network Printers:** Other Network Printers: O AppSocket/HP JetDirect Internet Printing Protocol (http) Internet Printing Protocol (https) Internet Printing Protocol (ipp) Internet Printing Protocol (ipps) Windows Printer via SAMBA Continue

socket://ip-or-hostname:port/

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5. On the next screen, select a name, description, and location for the printer, and click Continue.

i) lo	calhost:631/ad	dmin		G	Q, Search		☆ 自	↓ 俞	
)	Home	Administration	Classes	Online Help	Jobs	Printers	Search	n Help	
Ac	dd Print	er							
	Name:								
De	escription:	lay contain any printable cha							
	Location:	luman-readable description s		et with Duplexer")					
Co		luman-readable location suc ocket://10.61.18.23:910							
	-	Share This Printer							

6. On the next screen, scroll down in the list of printer manufacturers and select <code>TOSHIBA</code>, and then click <code>Continue</code>.

i) localhost:631/admin		C Search	☆自	+	⋒	
Add Printer						_
Name:	TEC					
Description	Barcode printer					
Location	:					
Connection	socket://10.61.18.23:9100/					
Sharing. Make:	Do Not Share This Printer Savin Seiko Sharp Shinko Sony Star Tally Tektronix TOSHIBA Xerox Zobra Continue					
Or Provide a PPD File:	Browse No file selected.					

7. Select the TOSHIBA TEC Barcode Printer model from list and click Continue.

* "TOSHIBA DB-EA4D" is selectable, but it is not supported.

rinter		
Name: TEC		
Description: Barcode pr	inter	
Location:		
connection: socket://10	.61.18.23:9100	
Sharing: Do Not Sha	are This Printer	
•	Select Another Make/Manufacturer	
Model: TOSHIBA E	-EX411-G (en) -EX4T1-T (en)	
	-EX4T2-G (en)	1
	I-EX4T2-H (en)	
	-EX4T2-T (en)	
	-EX6T1-G (en)	
	EX6T1-T (en)	
	B-EX6T3-G (en)	
TOSHIBA	3-EX6T3-T (en)	
a PPD File:		
a PPD File: Browse	No file selected.	

 $8. \,$ On the next screen, set up the default options for the printer, and click Set Default Options.

- Under "Options Installed", be sure to check that the label orientation is set correctly. If the shortest side of the label is ejected first (or the labels are square), choose "Labels are portrait oriented", otherwise choose "Labels are landscape oriented".
- Also, ensure that the Media Size is set correctly, choosing a custom size if necessary (if the label sizes are not listed).

Set Printer Options								
Set Default Options for TEC								
Print Options Policies	Label cutting and stripping	Feed Adjustments						
Medi	General a Size: AddressLabel V							
Se	t Default Options							
	r TEC Print Options s Policies Medi	r TEC Print Options Label cutting and stripping Policies General						

3.1 **Printing from desktop applications**

The TOSHIBA TEC barcode printer drivers can be used to print from most CUPS-compatible software, including LibreOffice, GNOME and KDE software. Various print options are available, but they are set using different methods, depending on the application that is used to print. Consult the documentation of the application or target operating system. Each individual application may provide a different method to set printing options.

3.2 Printing from command line

PDF files can be printed directly from the command line using the lp command line utility supplied by CUPS. This is convenient especially for scripting. The command line utility is invoked using the following format:

lp -d <printer> -o <options> file.pdf

Options are specified using a space-separated list of settings in the form key=value. Since the options are separated by space, the entire argument must be quoted. Option names and values are case-sensitive and do not contain spaces. For example:

lp -d TEC_B_EX4T1 -o "PrintSpeed=6 PrintMethod=DirectThermal StripLabel=True" file.pdf

TPCL Models

The following options a	re defined for all TPCI	models (default value	e are underlined).
		- IIIUUEIS (UEIAUIL VAIUE	s ale unuernineu).

Option name	Values	Description
BackfeedAdjustment	-955, <u>None</u> , 5 95	Adjusts the amount of back feed, specified in 10ths of millimeters (in intervals of 5 only). Positive numbers indicate forward adjustments. To specify a custom adjustment, use the value "Custom.x" where x is a value in millimetres (not tenths of millimetres).
CommandCharacters	<u>Readable</u>	The TPCL data sent to the printer will use the readable characters, curly brackets and pipe (ASCII values 7Bh, 7Ch and 7Dh):
		Readable command characters { }
		This is useful if print data is captured, it can be read more easily within a text editor.
	Unreadable	The TPCL data sent to the printer will use the unreadable characters, NUL, ESC and LF (ASCII values 00h, 1Bh, 0Ah). These characters have no visual representation and are unlikely to occur normally within the print data. This is useful if the print data does not need to be captured for any reason or the readable command characters are used in text.
Compression	None	Bitmap data is sent to the printer uncompressed.
	Auto	Bitmap data will be compressed only if the compressed size is smaller than the uncompressed size. In certain circumstances, compression methods may result in an increase in size rather than a decrease.
	ΤΟΡΙΧ	TOPIX compression is used to send bitmap data to the printer. This compression method is best suited to bitmaps where each row is similar to the previous one.
CutInterval	<u>None</u> , 1	If this value is set to "1" then the printer will cut every label. In order to specify a custom cut interval, use the value "Custom.x" where x is the number of labels to issue before cutting.
CutStripAdjustment	-955, <u>None</u> , 5 95	Adjusts the value for the cut or strip position, specified in 10ths of millimetres (in intervals of 5 only). Positive numbers indicate forward adjustments. To specify a custom adjustment, use the value "Custom.x" where x is a value in millimetres (not tenths of millimetres).
FeedAdjustment	-955, <u>None</u> , 5 95	Adjusts the starting print position, specified in 10ths of millimetres (in intervals of 5 only). Positive numbers indicate forward adjustments. To specify a custom adjustment, use the value "Custom.x" where x is a value in millimetres (not tenths of millimetres).
LabelGap	<u>20</u> 100	Specifies the the size of the gap between labels in 10ths of millimetres (in intervals of 10 only). To specify a custom adjustment, use the value "Custom.x" where x is a value in millimetres (not tenths of millimetres).

Option name	Values	Description
PageSize	1x1.FullBleed 4x4.FullBleed, <u>4x6.FullBleed</u>	Specifies the size of the label. If the source document is of a different size to the size specified by this option, it is automatically scaled to fit (up or down). In some situations, custom page size information may not be honoured by the lp command. In such circumstances, supplying the following additional option may fix the issue, but will result in the document being automatically scaled to fit the destination page size: -o fit-to-page
	Custom.WxHin Custom.WxHcm Custom.WxHmm	If the label size is not specified directly by the PPD, the page size can be specified using the format shown. For example, a label that is 5.2in wide by 2.3in in height can be selected using: -o PageSize=Custom.5.2x2.3in
		Other supported units of measurements are centimeters (cm) and millimetres (mm). If no units are provided, the numbers provided are assumed to be represented as 72dpi. In some situations, custom page size information may not be honoured by the lp command. In such circumstances, supplying the following additional option may fix the issue, but will result in the document being automatically scaled to fit the destination page size: -o fit-to-page
PrintMethod	<u>DirectThermal</u>	Labels are printed using direct thermal. This is the default value for models that do not support thermal transfer.
	DirectThermalHeadUp	Labels are printed using direct thermal (head-up) where supported. If the head-up mechanism is not provided, this behaves the same as DirectThermal.
	ThermalTransfer	Uses thermal transfer to print the label. This is the default value for models that support thermal transfer.
PrintSpeed	ThermalTransferRibbonSaving 3, 5, 6, 8, 10, 12, 14	Uses thermal transfer with ribbon saving enabled. Sets the speed to print the document (in inches per second). Not all print speeds are available for all models, and some print speeds may not be used with certain resolutions or in conjunction with other options.
Sensor	None	Do not use a sensor to determine label boundaries.
	Reflective	Use the reflective sensor to detect black marks on the label substrate.
	Transmissive	Use the transmissive sensor to detect the gaps between the labels.
StripLabel	<u>False</u>	Labels are not stripped
	True	Labels are stripped (requires a model with a stripper module).

ToneAdjustment ThermalTransfer	None	Do not make any adjustments to the print density for thermal transfer print jobs.
	B-EX4 series:	Adjust the print density for thermal transfer print
	-20, -19,, -1, -0, 0, 1,, 9,	jobs.
	10	Negative values will decrease the print density.
		Positive values will increase the print density.
	B-EX6 series:	
	-20, -19,, -1, -0, 0, 1,, 19,	
	20	
	All other models:	
	-10, -9,, -1, -0, 0, 1,, 9, 10	
ToneAdjustment	None	Do not make any adjustments to the print density for
ToneAdjustment DirectThermal	None	Do not make any adjustments to the print density for direct thermal print jobs.
-	None B-EX4 series:	
-		direct thermal print jobs. Adjust the print density for direct thermal print jobs.
-	B-EX4 series:	direct thermal print jobs. Adjust the print density for direct thermal print jobs.
-	B-EX4 series: -20, -19,, -1, -0, 0, 1,, 9,	direct thermal print jobs. Adjust the print density for direct thermal print jobs. Negative values will decrease the print density.
-	B-EX4 series: -20, -19,, -1, -0, 0, 1,, 9,	direct thermal print jobs. Adjust the print density for direct thermal print jobs. Negative values will decrease the print density.
-	B-EX4 series: -20, -19,, -1, -0, 0, 1,, 9, 10	direct thermal print jobs. Adjust the print density for direct thermal print jobs. Negative values will decrease the print density.
-	B-EX4 series: -20, -19,, -1, -0, 0, 1,, 9, 10 B-EX6 series:	direct thermal print jobs. Adjust the print density for direct thermal print jobs. Negative values will decrease the print density.
-	B-EX4 series: -20, -19,, -1, -0, 0, 1,, 9, 10 B-EX6 series: -20, -19,, -1, -0, 0, 1,, 19,	direct thermal print jobs. Adjust the print density for direct thermal print jobs. Negative values will decrease the print density.
-	B-EX4 series: -20, -19,, -1, -0, 0, 1,, 9, 10 B-EX6 series: -20, -19,, -1, -0, 0, 1,, 19,	direct thermal print jobs. Adjust the print density for direct thermal print jobs. Negative values will decrease the print density.
-	B-EX4 series: -20, -19,, -1, -0, 0, 1,, 9, 10 B-EX6 series: -20, -19,, -1, -0, 0, 1,, 19, 20	direct thermal print jobs. Adjust the print density for direct thermal print jobs. Negative values will decrease the print density.

4. Limitations

- DB-EA4D printer is not supported.
- Even if set custom value to [Perform label cutting], it may not be possible to cut with the specified value.
- Even if set "Custom" to the following parameters, it cannot be set as default value. (If want to set as default value, please use "lpoptions" by command line.) [Label-to-label gap]
 [Feed adjustment]
 [Back feed adjustment]
 [Cut or strip adjustment]
- If set [Orientation], the printing result is as follows. Portrait --- Printing bottom first Landscape --- Printing top first Reverse landscape --- Printing bottom first Reverse Portrait --- Printing top first
- If set "Custom" to [Media Size], other settings are restored to default value. (If want to set "Custom" to [Media Size], please use "lpoptions" by command line.)
- Do not instruct printing to exceed the printer's receive buffer. The printer may occur error, or may not work properly.

5. Trouble shooting

- If cannot add printer via USB I/F,
 - ۲
 - Check if the host and printer are connected by USB cable. Turn off the printer power switch and then turn on the printer power switch again. •

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