

PCL V4 Printer Driver Manual

For printer model:

LP 100R Laser



Table of Contents

Before You Start	3
About the SATO PCL LP 100R V4 Driver	4
Type 3 or 4	5
Printer Driver Installation	6
Where to find the driver	6
Installing the LP 100R driver	6
Manage or add a port	11
LPR Port	13
Test Page	15
Upgrading the LP 100R Driver	16
Manually Remove the Driver	18
Using the LP 100R Driver	19
Information Panel	19
Managing Printer Settings	20
Displaying Printer Preferences	20
Driver Version	21
Printer Properties	
	22
Printer Properties	22 23
Printer Properties See What's Printing	22 23 25
Printer Properties See What's Printing Mange Printer Status and Jobs	22 23 25 26
Printer Properties See What's Printing Mange Printer Status and Jobs Matching the Driver and Printer settings	22 23 25 26 26
Printer Properties See What's Printing Mange Printer Status and Jobs Matching the Driver and Printer settings Emulation	22 23 25 26 26 26
Printer Properties See What's Printing Mange Printer Status and Jobs Matching the Driver and Printer settings Emulation Paper Source	22 23 25 26 26 26 26
Printer Properties See What's Printing Mange Printer Status and Jobs Matching the Driver and Printer settings Emulation Paper Source Resolution	22 23 25 26 26 26 26 26 26
Printer Properties See What's Printing Mange Printer Status and Jobs Matching the Driver and Printer settings Emulation Paper Source Resolution Orientation	22 23 25 26 26 26 26 26 26 27
Printer Properties See What's Printing Mange Printer Status and Jobs Matching the Driver and Printer settings Emulation Paper Source Resolution Orientation Page Size	22 23 25 26 26 26 26 26 26 26 28
Printer Properties See What's Printing Mange Printer Status and Jobs Matching the Driver and Printer settings Emulation Paper Source Resolution Orientation Page Size Custom Form Sizes	22 23 25 26 26 26 26 26 26 26 26 28 27 28
Printer Properties See What's Printing Mange Printer Status and Jobs Matching the Driver and Printer settings Emulation Paper Source Resolution Orientation Page Size Custom Form Sizes Manage Custom Forms	22 23 25 26
Printer Properties See What's Printing Mange Printer Status and Jobs Matching the Driver and Printer settings Emulation Paper Source Resolution Orientation Page Size Custom Form Sizes Manage Custom Forms Modify a Form Definition	22 23 25 26 26 26 26 26 27 28 29 29 30 31

General Properties
Ports Tab
Advanced Tab34
Device Tab34
Printing from the Application
Sending a File to the Printer
SATO LP 100R Printer Settings
Emulation
Form size
Resolution
Emulation settings
Extended Margins
PCL Idle Delay
Resolution Support
Communications
LPR Queue Name
Differences / Advantages
Sending Output Files from the Driver
Unexplained Output
Output File Differs

Before You Start

A printer driver is a software that sends data created on a computer (documents and illustrations) to the printer using native printer language commands. The LP 100R Printer Driver Manual (hereinafter, "this manual") describes how to obtain and install the printer driver for the LP 100R (hereinafter, "the product"). The manual also explains how to configure various settings after installing the printer driver and how to uninstall and update the printer driver.

Printer Driver Screenshots Used in This Manual

This manual mainly uses screenshots of the printer driver for the product captured on Windows 10. Therefore, the screen layout may differ depending on the OS that you are using. Please note, your driver may vary; the manual was created when driver version 1.0.03 was active.

Limitation of Liability

Specifications and contents in this manual are subject to change without notice.

Trademarks

- SATO is a registered trademark of SATO Holdings Corporation.
- Windows is a registered trademark of Microsoft Corporation in the United States and/or other countries.

All other trademarks are the property of their respective owners.

Copyrights / Other Matters

Any unauthorized reproduction of the contents of this document, in part or whole, is strictly prohibited.

First Edition May 2020

© 2020SATO Corporation. All rights reserved.

About the SATO PCL LP 100R V4 Driver

Created for the SATO LP 100R laser printer, this is a Microsoft Windows 8 and above-certified Type 4 PCL printer driver. The driver is suited for both 32 and 64-bit Windows Operating Systems. As a refinement of v3 drivers, v4 drivers are optimized for UWP (Universal Windows Platform) applications, making this driver the choice to utilize UI (User Interface) behavior and print preferences from UWP apps. Other improvements with Type 4 printer drivers is to eliminate strange behavior of memory leaks and associated DDL's interference because of the advances in isolation in the Type 4 architecture.

While Windows continues to support v3 drivers, the v4 drivers improve the interface between the application and printer. Printer sharing is easier in Windows Servers with v4 driver types. The SATO LP 100R v4 driver is a logical upgrade from v3 and has been found to work with most existing applications currently using the v3 driver.



Type 3 or 4

The printer type and version can be found in the Windows Print Management utility. From the detailed view of Print Management (located in Control Panel\System and Security\Administrative Tools), you can view the details and manage the printer driver.

Print Management File Action View Help						– 🗆 X
⊨ ⇒ 2 📰 🗙 📑 I	?					
🖶 Print Management	Driver Name	Environment	Driver Version	Driver Isolation	^	Actions
Custom Filters	😹 Microsoft Print To PDF	Windows x64	10.0.18362.1	None		All Drivers (31)
All Printers (37)	🔹 Microsoft Shared Fax Driver	Windows x64	10.0.18362.752	None		More Actions
 All Drivers (31) Printers Not Ready 	🔹 Microsoft XPS Document Writer v4	Windows x64	10.0.18362.1	None	1	
Printers With Jobs	ATO LP100R	Windows x64	7.4.10.11816	None		SATO PCL LP100R V4
Print Servers	🔹 SATO LP100R 240dpi	Windows x64	5.3.3.7327	None		More Actions
Deployed Printers	🔹 SATO LP100R 300dpi	Windows x64	5.3.3.7327	None	4	\$
, u <u>m</u> upy	🔹 SATO LP100R 400dpi	Windows x64	5.3.3.7327	None		
	🔹 SATO LP100R 600dpi	Windows x64	5.3.3.7327	None		
	BATO PCL	Windows x64	0.0.08	None		
	SATO PCL LP100R V4	Windows x64	12.15.50.687	None		
	🔹 Send to Microsoft OneNote 16 Driver	Windows x64	16.0.1626.4000	None		
	🔹 Snagit 18 Printer	Windows x64		None	\mathbf{v}	
	<			>		

Printer Driver Installation

Where to find the driver

The LP 100R driver, along with the latest SATO-Logic controller software, is available on the SATO America website: <u>https://www.satoamerica.com/resources/software/laser-driver-and-software</u>

Installing the LP 100R driver

The driver is distributed as an executable, which will extract and launch the installer. Locate and launch the "SATOV4_setup_x.x.x. exe" file to begin the Windows driver installation.

You should use this procedure to update the existing instance of the driver with a later version.

NOTE: Do not use with Add a printer option unless you have added the driver files separately.

You will need to have the printer on your network and know the IP address of the LP 100R printer before beginning the driver setup.

Launch the installer with administrator rights. When the Setup Wizard launches, follow the prompts in the appropriate dialog box:



When first installing or <u>during an upgrade</u> (after the previous version has been removed), you will see a dialog box to select the model. Chose the SATO PCL LP100R V4 on the list. Select **Next >** to continue.

SATO Printer Driver Installer	×
Printer Installation Please select the printer that you will be using: Model:	
SATO PCL LP 100R V4	
< Back Next >	Exit

You will need to define the data communication connection in which the printer will receive data. You will need to know the IP address of the LP 100R printer.

SATO Printer Driver Installer	×		
Printer Installation			
Please select the connection that you will be using:			
Port:			
192.168.3.140			
Network			
Port Number: 9100			
Add Network Port			
< Back Next > Exit			

If the connection has not been defined, you can select **Add Network Port....** It the printer is set to an IP, powered up and connected, enter the IP and choose **Next** > to continue. If you are adding an <u>LPR port</u>, Create a new port, and then after the printer installation is complete, go to the port settings in the printer properties and define the LPR port.

SATO Printer Driver Installer	×
Printer Installation	
Please enter the required IP address in the form xxx.xxx.xxx.xxx (e.g. 192.168.1.254):	
192.168.3.140	
	1
<back next=""> Exit</back>	

After adding a network port, you will be returned to the dialog box to select the printer's connection.

Select the connection and continue by selecting Next >.

SATO Printer Driver Installer	Х
Printer Installation	
Please select the connection that you will be using:	
Port:	
192.168.3.140	
Port Number: 9100	
Port Number: 19100	
Add Network Rort	
< Back Next > Exit	



You will receive confirmation the printer is about to be installed. Select next to continue.

The progress bar will indicate the installation progress.



When complete select exit.



Congratulations! You have now successfully installed the SATO PCL LP 100R v4 Printer Driver and may now use it to print from Windows applications.

Open the printer in Printers and Devices.

A <u>test print</u> to confirm can be sent from the General tab of the Printer Properties.

You can travel to Devices and Printers to view the newly installed printer's settings.

Manage or add a port. Use the port settings in Print Server Properties to manage the port settings.

🖶 Print	Server Properties		×
Forms	Ports Erivers Se	curity Advanced	
	CLT-PDEV-007		
Ports	on this server		2
Port	Description	Printer	^
LPT1	: Printer Por	t Microsoft O	penXPS Class Drive
LPT2	: Printer Por	:	
LPT3	Printer Por	t	
CON	11: Serial Port		
CON	12: Serial Port		
CON	13: Serial Port		
CON	14: Serial Port		
FILE:	Print to File	SATO PCL L	P100R V4, SATO PC Y
\subset	Add Port	Delete Port	Configure Port
	Change Port Sett	ngs	
		ОК	Cancel Apply

To add a port, select the **Add Port** button.

Select Standard TCP/IP port and New Port ... button.

Printer Ports		×
Available port types:		
Adobe PDF Port Monitor HP Universal Print Monitor Local Port		
Standard TCP/IP Port		
	2	
New Port Type	New Port	Cancel

This will launch the Add Standard Port wizard.



Follow the wizard entering the IP address. You may edit Port Name to reflect something more meaningful.

nt?	
and a port name for the desired device.	
92.168.3.140	
92.168.3.140_3	
< Back Next >	Cancel
;);	and a port name for the desired device. 2.168.3.140 2.168.3.140_3

Be sure the printer IP is configured, powered up, and connected. Select Next > to continue

Select Finish to complete the add port wizard.

Add Standard TCP/IP Printer Port	Wizard			
	Completing the Add Standard TCP/IP Printer Port Wizard			
	You have selected a port with the following characteristics.			
	SNMP:	No		
	Protocol:	RAW, Port 9100		
	Device:	192.168.3.140		
	Port Name:	192.168.3.140_3		
	Adapter Type:	Generic Network Card		
		R		
	To complete this wizard,	click Finish.		
		< Back Finish Cancel		

LPR Port

The LP100R can act as a print server and receive many pages ahead of printing. When you wish to send data through an LPR or CUPS connection, you will need to configure the Port to LPR.

From the Ports tab of Printer Server Properties, highlight the port and select Configure Port

🖶 Print Server Properties			×
Forms Ports Drivers S	ecurity Advanced		
CLT-PDEV-00	7		
Ports on this server			
Port	Description	Printer	^
192.168.3.140_2 192.168.3.140_raw	Standard TCP/IP Port Standard TCP/IP Port		
external IP	Standard TCP/IP Port	Generic / Text Only on	
IP_192.168.1.206	Standard TCP/IP Port	Brother PC-FAX v.3.1	
romeoville srv tst .83	Standard TCP/IP Port		
192.168.3.140_3	Standard TCP/IP Port		
PORTPROMPT:	Local Port	Microsoft XPS Docum	×
Add Port	Delete Port	Configure Port	
		\$	
Change Port Settings			
	Close	Cancel Ap	ply

To create a Printer server queue, change the protocol to LPR, enter a Queue name, and enable LPR Byte counting. The LP100R queue name default is LIS_SATO. The IP address and the queue name must match in both the printer and the driver. The LPR queue name within the physical LP100R printer may be defined through the communications setting menu at the printer.

Configure Standard TCP/IP Port Moni	tor X
Port Settings	
Port Name:	192.168.3.140_2
Printer Name or IP Address:	192.168.3.140
Protocol O Raw	() LPR
Raw Settings	
Port Number: 9100	
LPR Settings Queue Name: LIS_SA	470
LPR Byte Counting Enabled	
SNMP Status Enabled	
Community Name: public	c
SNMP Device Index: 1	
	Cancel

Test Page

Once the driver settings and communications connections are configured, a test page can be sent to confirm the settings are correct. To print a test page, go to the General tab of the Printer properties.

🖶 SATO PCL LP	100R V4 P	roperties	Ν		×
General Sharing	g Ports	Advanced	Color Management	Security	Device Settings
8	SATO PO	CL LP100R V4			
Location:					
Comment:					
Model:	SATO PC	L LP100R V4			
Features Color: No			Paper availab	le:	
Double-side	ed: No		Letter	10.	~
Staple: No			Letter		
Speed: 100	ppm				
Maximum	resolution	: 600 dpi			\sim
		Pre	eferences	Print	Test Page
			ОК	Cancel	Apply

When printing a test page from the driver, be sure the LP 100R Printer is set to PCL emulation in the active configuration. Refer to <u>Printer Settings</u> (page 36) for more details.

You ve succe	SATO PCL LP100R V4	×
	A test page has been sen	t to your printer
☐ Set as the	This test page briefly demonstra to print graphics and text, and it information about the printer. U troubleshooter if the test page d <u>Get help with printing</u>	provides technical se the printer
To check if your test page.	printer is working properly, or to see trout	Close
Print a test	D206	

Upgrading the LP 100R Driver

To upgrade an existing instance of the driver, you must remove the existing instance. The driver installer will guide you through this process.

<u>Launch the installer package</u> as if you were installing the driver. If an existing installation is found, you will receive a prompt to uninstall or install a copy. To upgrade, you must first uninstall the current driver. You will have restart Windows after the removal. After uninstalling the current driver and restarting Windows, you can relaunch the installer and install the upgraded version driver.

Select Uninstall and Next. >.

SATO Printer Driver	Installer	×
	2	
NOTE	: An existing driver installation has been detected.	
	Select from the following options:	
ΘU	ninstall existing driver (RECOMMENDED)	
C Ir	nstall another printer model or printer model (Copy n)	
	Next > Exit	

You will be prompted to disconnect the printer, be sure all the jobs are completed and select continue.



After removing the driver, a restart is required.

Driver fil	es in use	\times
<u>^</u>	A restart is required to successfully remove the existing driver. Select "OK" to restart Windows. On restart, please run the installer again.	
	OK Cancel	

After restarting windows, launch the installer again to install the upgraded version.

Manually Remove the Driver

You may also remove the driver through the Drivers tab of the Print Server Properties.

oms	Ports	Drivers	Securit	α Δ	dvanced			
UIIIS	TOILS	2	Jecuni	, ,	avanceu			
	G	LT-PDEV-	007					
Insta	lled prin	ter driver	S:					
Nar	me			Proc	essor	Туре		^
Mic	rosoft P	rint To Pl	DF	х64		Type 4	- User Mode	
Mic	rosoft X	PS Docu	men	х64		Type 4	- User Mode	
SAT	O LP100	R		х64		Type 3 ·	- User Mode	
SAT	O LP100	R 240dpi		х64		Type 3 -	- User Mode	
SAT	O LP100	R 300dpi		x64		Type 3 -	- User Mode	
SAT	O LP100	R 400dpi		х64		Type 3 ·	- User Mode	- 14
SAT	O LP100	R 600dpi		х64		Type 3 -	- User Mode	
SAT	TO PCL			х64		Type 3 ·	- User Mode	
		P100R V4		x64		Type 4	- User Mode	
Sen	d to Mid	crosoft O	n [J	х64		Type 4 ·	- User Mode	
Sna	igit 18 Pi	rinter		x64		Type 3 ·	- User Mode	
Sna	igit 19 Pi	rinter		x64		Type 3	- User Mode	~
	Add				Remove		Proper	ties
	Chan	ige Driver	Setting	s				

When removing to upgrade to a new version, remove the driver and the driver package.

Remove Driver And Package
Do you want to remove the driver(s) only, or remove the driver(s) and driver package(s) from your system?
○ Remove driver only.
Remove driver and driver \ckage.
OK Cancel

Once removed, relaunch the driver installer to continue with the installation of the upgrade.

Using the LP 100R Driver

Information Panel

After the driver has been <u>installed</u>, you can see and manage the jobs submitted for printing by selecting <u>See What's Printing</u> from the information panel of the driver. To launch the information panel, go to **Devices and Printers** and double click on the LP 100R printer driver.



When you double click the driver icon, the information panel will be displayed.

Control Panel/Hardware and Sound/Devices and Printers/SATO Printers/SATO Printers + SATO PCL LP100R		0	Search SATO I	-CL LP1	D DOR V4	× o
File Edit View Tools	Portrat.		/			-
Display Printer Preferences After printer settings Contact Contact us	See what's printing View, pause, or cance Customice your print Change the name, see	ter		n biobe	rties	-

You can also manage the settings or the jobs from Printer and Scanners in Settings. When you select a printer in the list, you will be presented with Open Queue, Manage or Remove Device options.

← Settings		1000	×
ŵ Home	Printers & scanners មា		
Find a setting	SATO PCL LP100R V4		
Bluetooth & other devices	SATO PCL_type3_ Romoe85		
品 Printers & scanners	Send To OneNote 16		

Managing Printer Settings

There are two panels to manage the settings of the driver: <u>Printer Preferences</u> and <u>Printer Properties</u>. Depending on the Windows application being used to print to the LP 100R, these setting groups work differently. Later <u>Windows applications</u> can interact with the <u>Printer Preferences</u> settings and change the driver settings from the print window within the application. In earlier applications, you use the <u>Printer</u> <u>Properties</u> to manage the settings.

Displaying Printer Preferences

The Preferences panel is used to make changes related to particular print jobs. This panel is also displayed when printer properties are selected from within a Windows application. After a driver is installed and configured, this will be the primary panel used to change the job parameters.

LP 100R L Print 🖾 Image	X Advanced	
	Print Quality Page Size Paper source Resolution Orientation Copies	Continuous v 300 x 300 dots per inch v Portrait v Rotate 180° 1 + -
About		OK Cancel

You must ensure the <u>driver settings</u> and <u>printer settings</u> match to achieve the desired output. Comments about related settings as they apply to the LP100R printer are available in the <u>SATO LP100R Printer</u> <u>Settings</u> section.

Users familiar with the SATO version 3 SATO PCL (LP 100R) driver will notice the settings; Page size, Paper source, Resolution, Orientation, and Copies are all contained in one panel referred to as the Printers Preferences. In a type 4 driver, these settings are not found in the Printer Properties.

Driver Version

Select the <u>About</u> button in the Printer Preferences panel to see the version of the driver. The About button is useful when troubleshooting output issues to verify the correct/updated driver is being used.



Printer Properties

The Printer Properties dialog box allows you to change the name, security settings, communication port, and other related properties. Select *Customize your printer* from the information panel and then choose *Printer Properties* from the Settings menu.

Control Panel Hardware and Sound Devices and Printers/SATO PCL LP100R V4 - X C	\leftarrow Settings $ \Box$ \times
File Edit View Tools	命 SATO PCL LP100R V4
SATO PCL LP100R V4	Manage your device
🔡 🛛 document(s) in 💷 📓 Letter, Fortnak	Printer status: Idle
	Open print queue Set as default
	Print a test page
Display Printer Preferences	Run the troubleshooter
Alter printer settings	Printer properties
See what's printing View, pause, or cancel your print jobs	Printing preferences
Contact Contact un	Hardware properties
Customize your printer	Have a question?
Change the name, security settings, or other properties	Get help

Click the tabs in the Properties window to make changes to the applicable parameters.

UT INT	ing Ports	Advanced	Color Management	Security	Device Setting
3	SATO PO	CL LP100R V	0		
Location:					
Comment:					
Model:	SATO PC	L LP100R V4			
Features Color: No			Paper availabl	e:	
	ded: No		Paper availabl 17in x 11in (S		r) ^
Color: No Double-si Staple: No Speed: 10	ided: No	: 600 dpi			n) ^ _

Refer to the <u>Customize the LP 100R Printer Driver</u> section (page 30) for more detail.

See What's Printing

The status and jobs sent to your printer can be viewed and managed in the Windows spooler. There are a few ways to open or view the spooler for the LP100R V4 Printer Driver.

Double click on the printer to open the information panel and from the information panel select **See What's Printing.**



From the settings panel, you can select an *Open print queue* from the Settings window to display the list of print jobs spooled to the printer.

← Settings - □ ×
 ☆ Printers & scanners
 SATO PCL LP100R V4
 Open queue Manage Remove device
 SATO PCL_type3_ Romoe_.85
 Send To OneNote 16

From the Devices and Printers, highlight the printer and right-click or select the See what's printing.



From the spooler view, you can see the status of the printer and the jobs. You can also pause or cancel the jobs.

Mange Printer Status and Jobs

From the spooler view, you can see and manage the status of the printer and the jobs in the Queue. You can control the jobs individually or as a pool.

The spooler shows the jobs queued to be processed. The printer menu in the spooler will give the options to pause printing or cancel all jobs. The Document menu or Right-click on a job, and you be presented with options to Pause, Restart, or Cancel the job.

📾 SATO PCL	LP100R V4					_		×
Printer Docu	ment View							
Document Nar	me	Status	Owner	Pages	Size	Sub	mitted	~
🖻 Test Page		Printing		1	222 KB	1:25	5:44 PM	7/22/20
	Pause							
	Restart							
	Cancel							
	Properties							
<								>
Restarts the sele	cted documents.							

From the Printer Menu pause or restart the jobs or cancel them all.

Print Queue Example and Applicable Actions

Matching the Driver and Printer settings

The printer settings, found in the active configuration, <u>must</u> match the parameters of the printer driver for the intended job sent to the printer. These settings include form size, orientation, and resolution. The resulting output may be too small or too large, clipped, or out of registration from page to page if any of these settings are mismatched. Use the <u>Printer Preferences</u> panel to set these values for the driver.

Emulation

The printer must be using the PCL Emulation when receiving files from the driver. If this is incorrect, you may observe the printer hang-up requiring a reboot, or no output will be generated.

Print 🎦 Image	X Advanced	
	Page Size Paper source Resolution Orientation Copies	Continuous v 300 x 300 dots per inch v Portrait v Rotate 180° 1 + -

Paper Source

The Paper source will always be set to Continuous when sending to a SATO LP 100R.

Resolution

The resolution is selected from 240, 300, 400, 480 or 600 Dots per Inch (DPI).

Orientation

The Orientation is either Portrait or Landscape. To achieve reverse portrait or reverse landscape, select the "Rotate 180°" checkbox.

Page Size

The page size is a dynamic drop-down based on all the forms defined on the Windows Print Server (workstation).

Many standard forms sizes are included in the installation of the Windows driver, including several wide forms (beyond the traditional 11" width). These will provide some possible form sizes for testing or an initial start to create a new one based on these sizes by modifying one of your own.

Included with the form definition of width and height are the margins. Margins will reduce the print size. e.g., an 11" wide page defined with a 0.5" margin on either side will effectively be a 10" print width. Because the print size is critical to the LP100R, SATO recommends using 0.00" margins so the page size and print size will be the same. You can view the margins defined by viewing the form definitions in the Forms tab of the Print Server Properties. To check and modify the sizes and margins, refer to the <u>Custom Form Sizes</u> section found on page 26.

🖶 Prin	t Server	Propertie	S				×	<
Forms	Ports	Drivers	Security	Advanced				
Forms	on:	CLT-PE	DEV-007					
	-	ATO Las ATO Lase				^	Delete	
16in >	(12in (S	ATO Lase	er)				Save Form	
loin	(13in (S)	ATO Lase	er)			*	Saveronni	
Form	name:	17	ïn x 11in	(SATO Lase	er)		1	
Cr	eate a n	ew form					- N	
				ie existing	name and		1	
meas	urement	ts. Then o	lick Save:	Form.				
- Forn	n descrip	otion (me	easureme	nts)				
Unit	S:	ОМ	etric	● E	nglish			
Pape	er size:		Print	er area ma	rgins:			
Wid	th:	17.00in	Left:	().00in	Тор:	0.00in	
Heig	jht:	11.00in	Righ	t: ().00in	Bottom:	0.00in	
	-							
	Chang	je Form S	Settings					
					Close	Cancel	Apply	

If the page size defined in the printer is not listed, then you must add it to the print server. See the <u>Custom Form Sizes</u> section (page 27) to define and add new form sizes.

Custom Form Sizes

The SATO PCL LP 100R V4 driver will install several common form sizes applicable to the wide web laser. If these default sizes do not work for the forms you are printing, you can create custom form sizes to define the specifics of your forms. These default sizes include the following:

15 in x 8.5 in (SATO Laser) 15.5 in x 13 in (SATO Laser) 16 in x 11 in (SATO Laser) 16 in x 12 in (SATO Laser) 17 in x 11 in (SATO Laser)

🖶 Print Server	Properties			×
Forms Ports	Drivers Security	Advanced		
<u>F</u> orms on:	CLT-PDEV-007			
17in x 11in (S 17w x 12h (SA			^	<u>D</u> elete
17w x 22h (SA 17w x 22h (SA 17w x 24h (SA	ATO Laser)		~	Save Form
Form <u>n</u> ame:	17w x 12h (S	ATO Laser)		
Create a n	ew form		2	
	form by editing the ts. Then click Save F		d	
-Form descrip	ption (measuremen	its)		
Units:	○ <u>M</u> etric	● English		
Paper size:	Printe	er area margins:		
<u>W</u> idth:	17.00in <u>L</u> eft:	0.00in	<u>T</u> op:	0.00in
<u>H</u> eight:	12.00in <u>R</u> ight	: 0.00in	Bottom:	0.00in
		_		
Chang	ge Form Settings			
		ОК	Cancel	Apply

Manage Custom Forms

To add or revise a custom form.

From the Windows Control Panel, select Hardware and Sound\Devices and Printers to view the installed printer drivers.



Select the Print Server Properties and then select the Forms tab

Forms Ports	Drivers S	ecurity Advi	anced		
Forms on:	CLT-PDE	V-007			
10×11 10×14				^	Delete
10x15cm					Save Form
11 x 17				~	Saveronn
Form nam		11			
Create a Define a n measurem	a new form ow form by ed ents. Then cli	iting the exi ck Save Form		rd	
Create a Define a n measurem	new form	iting the exi ck Save Form surements) -		nd	
Create a Define a n measurem	a new form sw form by ed ents. Then clin cription (meas	iting the exi ck Save Form surements) ric	n	ıd	
Create a ni measurem Form des Units:	a new form sw form by ed ents. Then clin cription (meas	iting the exi ck Save Form surements) ric	 English 	nd Top:	0.00in
Create a Define a ni measurem Form des Units: Paper size	a new form sw form by ed ents. Then clin cription (meas O Met s	iting the exi ck Save Form surements) ric Printer are	English a margins:		0.00in 0.00in

From this list, you can browse through all the forms defined on the work station/print server where the printer is defined.

Modify a Form Definition

To modify the form definition, select **Change Form Settings**. Then select a form from the list, and the form description (measurements) will be highlighted. *Note: If the measures are not highlighted, then that form definition is standard within windows and not editable. You will need to create a <u>new custom form</u>.*

	t server	Properti	es					>
oms	Ports	Drivers	Security	Advan	ced	45		
Forms	on:	CLT-PI	DEV-007					
16 x 1		SATO Las	or)			^	Delete	
16in)	c 12in (S	SATO Las	er)				0.5	
16in >	c 13in (S	SATO Las	er)			¥	Save Form	
Form	name:	10	5 x 13					
		ew form						
	eate a n	iew form						
					ing name	and		
meas	uremen	its. Then	click Sav	e Form.	ing name	and		
meas	uremen		click Sav	e Form.	ing name	and		
meas	uremen n descri	its. Then	click Sav	e Form. ents) —	ing name	and		
meas Forn Unit	uremen n descri	its. Then	click Sav easurem 1etric	e Form. ents) —	_	and		
meas Forn Unit	uremen n descri s: er size:	its. Then	click Sav easurem 1etric Prir	e Form. ents) — (enter area	English	and	0.00in	
Forn Unit Pape	uremen n descri s: er size: th:	its. Then iption (m O N	elick Sav easurem 1etric Prir Lef	e Form. ents) — (inter area t:	English			
Forn Unit Pape Widt	uremen n descri s: er size: th:	iption (m O N	elick Sav easurem 1etric Prir	e Form. ents) — (inter area t:	English margins: 0.00in	Тор:		
meas Form Unit Pape Widt Heig	uremen n descri s: er size: th: jht:	iption (m O N	easurem letric Prir Lef Rig	e Form. ents) — (inter area t:	English margins: 0.00in	Тор:		

Then edit the measurements and select Save Form

🖶 Print Serv	er Properties				×
Forms Ports	Drivers S	Security Ad	vanced		
Forms on:	CLT-PDE	V-007			
10×11 10×14				^	Delete
10x15cm 11 wide x 8	3.5 high				Save Form
Define a no measurem	a new form	ck Save For surements)	visting name an m.	d	
Paper size	5	Printer a	rea margins:		
Width:	11.00in	Left:	0.00in	Тор:	0.00in
Height:	8.50in	Right:	0.00in	Bottom:	0.00in
			Вк	Cancel	Apply

Close the dialog box to complete.

Create a New Form Definition

To add a new custom form definition, select the Create a new form checkbox. Select a form from the list which similar in the name of dimensions. Edit the name and measurements when the settings match your intent, select Save Form.

🖶 Print Server I	Properties			×
Forms Ports	Drivers Security A	dvanced		
Forms on:	CLT-PDEV-007			
14w × 11h 14w ×24h			^	Delete
15 x 8.5		A		
15.5 x 13		45	~	Save Form
Form name:	15 x 8.5 (copy)		
Create a ne	ew form			
measurement	form by editing the s. Then click Save Fo ption (measurement	orm.	d	
	cion (measurement	3)		
Units:	○ Metric	English		1
Paper size:	Printer	area margins:	_	
Width:	15.00in Left:	0.00in	Тор:	0.00in
Height:	8.50in Right:	0.00in	Bottom:	0.00in
		Close	Cancel	Apply

When the form is shown in the list, close the dialog box to complete.

Delete a Form Definition

You can also clean up unused custom forms by highlighting and selecting Delete. Close the dialog box to complete.

Customizing the LP 100R Printer Driver

Select Printer Properties from the Settings window to open this panel. Below is an explanation of the various tabs and applicable parameters you can customize.

General Properties

The General tab displays the Printer Preferences or Print a Test Page button. You can also edit/specify the Printer Name, include a Location or Comment.

General	Sharing	Ports	Advanced	Color Management	Coourity	Device Settin
achora	Snanny	Foits	Auvanceu	Color Management	Security	Device Settin
\$	[SATO P	CL LP100R V	⁴ edit	the n	ame
Locatio	n: [wareho	use	include a	a loca	ition
Comm	ent:	Use for	demo printi	ng		
				Add	any	
				comn	nent	
Model:		SATO PO	CL LP100R V4	4		
- Featu Colo	res r: No			Paper availab	le:	
Doul	ole-side	d: No		15.5in x 13in	(SATO La	ser) \land
Stap	le: No			form	selecte	ad in
Spee	d: 100 p	pm			e sett	
Maxi	mum re	solution	: 600 dpi	20110		
			Pr	eferences	Print	Test Page

Ports Tab

The Ports tab selects the port used to communicate with the printer. Only select one port per printer instance to prevent confusion of settings matching the printer and where jobs are being sent.

^
)
2
В
, I
۵.,

Selecting a port and clicking the *Configure Port* button will open the <u>configure ports</u> panel, allowing you to modify/specify the specific settings applicable to the communication protocol using either Raw or LPR.

Configure Standard TCP/IP Port Monito	r	× Co	onfigure Standard TCP/IP Po	ort Monitor		
Port Settings		P	ort Settings			
Port Name:	10.27.131.85_2		Port Name:	10.27.131.8	3	
Printer Name or IP Address:	10.27.131.85		Printer Name or IP Address:	10.27.131.8	3	
Protocol			Protocol			
Raw	C LPR		◯ Raw		LPR	
Raw Settings			Raw Settings			
Port Number: 9100			Port Number:	9100		
- LPR Settings			LPR Settings			
Queue Name:			Queue Name:	LIS_SATO		
🗖 LPR Byte Counting Enabled			└ LPR Byte Counting Ena	abled		
SNMP Status Enabled			SNMP Status Enabled			
Community Name: public			Community Name:	public		
SNMP Device Index: 1			SNMP Device Index:	1		
,						
	ОК	Cancel			ОК	Cancel

NOTE: The default for RAW protocol is port 9100.

LPR Protocol (port 515) is also an option. The queue name must match that of the LP 100R printer. The default printer queue name is **LIS_SATO**. The queue name can be changed in the <u>communications</u> <u>menu</u> on the printer. Always enable the LPR Byte Counting option.

Advanced Tab

The Advanced tab defines how jobs are managed.

Start printing immediately will send data to the spooler and printer as the pages are rendered.

Printing Defaults will open the <u>Printer Preferences</u> that are to be used to define the default parameters when printing within Windows applications.

🖶 SATO	PCL LP1	OOR V4 P	roperties			×
General	Sharing	Ports	Advanced	Color Management	Security	Device Settings
Alway	ays availa	able		,	,	
	ila <u>b</u> le fro		12:00 AM	÷ To	12:00	AM 🔹
Priority	; [1		•			
Driver:	S	ATO PCI	LP100R V4		~	Ne <u>w</u> Driver
•	S <u>t</u> art prin	ting aft ting <u>i</u> m	er last page mediately	am finishes printin is spooled	g faster	
<u>Hold</u>	d mismat	tched do	ocuments			
✓ Print	t spooled	docum	nents first			
<u>K</u> ee	p printed	docum	ents			
✓ Enal	ole advar	nced pri	nting featur	es		
Prir	nting De <u>f</u>	aults	Pri <u>n</u>	t Processor	Separa	at <u>o</u> r Page
				ОК	Cancel	Apply

Device Tab

The Device Settings tab defines specifics relative to the device.

The drop-down list of form sizes listed here is not directly related to the Printer Preferences settings. You should use the Printer Preferences when selecting the form size for printing. However, in some applications, you may have to make the form size selection from this menu to get the application to recognize the desired form size.

🖶 SATO PCL LP100R V4 Pro	operties			×	<
General Sharing Ports	Advanced	Color Management	Security	Device Settings	
General Sharing Ports /	4 Device S signment 17in x 11 17in x 11 17in x 11 17in x 11 17in x 11 17in	ettings in (SATO Laser) Available x 11h n X 13in (SATO Laser) x 24 long x 24 long y 5 shelf talker x 11in (SATO Laser) x 12h x 22L S)	r)	Device Settings	
	E Lega		el	Apply	

Printing from the Application

Changes at the application or at the Driver Preferences are interactive and specific when printing from later Windows Applications. Note: Not all applications have connections to the driver preferences, thus the reason you may need to make changes from the Printer Properties window, as previously stated.

New	Copies: 1	SATO PCL LP100R V4	_
Open	Print	LP 100R Laser Printer	
Save Save As	Printer	📕 Print 🖾 Image 🔀 Advanced	
Save as Adobe PDF	SATO PCL LP100R V4 Ready	Print Quality	
Print	Settings	Page Size	15wx10_fineline ×
Share	Print All Pages	Paper source	Continuous v
Export	Pages:	Resolution	300 x 300 dots per inch v
Close	Print One Sided Only print on one side of th		Rotate 180°
Account	Collated 1,2,3 1,2,3 1,2,3	Copies	1 + -
Options	Landscape Orientation		
	Custom Page Size		
	Normal Margins	About	OK Cancel

Settings in the Printer Preferences panel will override the Printer Properties panel.

SATO PCL LP100R V4 Properties X	SATO PCL LP100R V4		×
General Sharing Ports Advanced Color Management Security Device Settings	LP 100R Lase	r Printer	
Location:	📕 Print 🛛 Image 🔀	Advanced	
Model: SATO PCL LP100R V4		Print Quality	
Features Color: No Paper available:		Page Size	Letter ×
Double-sided: No Staple: No	-	Paper source	Continuous v
Speed: 100 ppm Maximum resolution: 600 dpi			300 x 300 dots per inch Y
Preferences Print Test Page	The application will use this page setting from	orientation	Portrait v
OK Cancel Con	Preferences panel.		Rotate 180°
us SATO PCL LP100R V4 Properties X		Copies	1 + -
General Sharing Ports Advanced Color Management Security Device Settings			
en SATO PCL LP100R V4 Device Settings			
	About		OK Cancel

Sending a File to the Printer

The Advanced tab of the Printer Preferences panel provides the ability to select and send a job file directly to the printer. This option sends the file data through the port settings defined in <u>Printer</u> <u>Properties</u> (page 31). This is a useful feature to send a print job (data stream) after it has been captured or printed to a file. No changes to the file content are imposed via other settings within the driver. Note: It is recommended to use this option as opposed to utilities such as PrintFile or PrintBin, which send files directly to a printer selected from your list of installed drivers. Files sent from these utilities, appear in the spooler but do not communicate to the type 4 printer due to the windows subsystem used with type 4.

The file sent must be intended for (created to match) the settings of the printer, such as the emulation language, the resolution, and the page size defined in the active configuration on the LP 100R printer. The settings in the Print tab of the <u>Printer Preferences</u> will have no impact. The file and printer configuration must match to avoid incorrect output.



Select the Send file to printer button. You will be prompted with a file explorer window. Navigate to the *.PRN file you would like to send to the printer, and click the Open button. The file will be transferred to the printer.

ew	older				lite -	
	Name	Date modified	Type	Size		
	🛞 DT Print File.prn	1/5/2015 11:10 AM	PRN File	22,653 KB		
1	HT.prn	9/28/2015 3:05 PM	PRN File	1,025 KB		No preview
	G IFDA Show Print File Ver 2.pm	10/2/2015 3:01 PM	PRN File	21,920 KB		available.
	(IFDA Show Print File.prn	9/28/2015 2:27 PM	PRN File	21,964 KB		
	S WAW Print File.pm	9/28/2015 2:50 PM	PRN File	79 KB		
				1.	Printer file (.pm) (*.p	

You can view and manage the jobs in the print queue (spooler) from See What's Printing.

SATO LP 100R Printer Settings

The settings in the LP100R printer must match the data from the driver. The printer's configuration menu allows the user to edit the configuration for a unique type of job and store it for recall.

Emulation

The LP 100R v4 driver generates HP PCL5e[®] commands and sends the data stream to the defined printer to be interpreted and create the output. Be sure the configuration on the LP 100R printer is set to PCL emulation. This will be listed on the operator panel on the printer.

Form size

The size of the form loaded in the printer is defined in the active configuration of the printer. The settings used in the driver for the application and print job, must match those dimensions set in the printer. The width of the page defined in the printer is the print width, which is 1" less than the physical form width because of the pin feed (0.5") on each side. The active form size is shown on the printer's operator panel.

Resolution

The resolution of the printer is defined in the active configuration on the LP 100R printer. This is indicated on the operator panel. Be sure the active printer resolution matches the resolution used by the driver. Refer to the <u>printer preferences</u> (page 20).

Emulation settings

The LP 100R has additional settings for the PCL emulation to manage unique settings related to PCL.

Extended Margins

An added benefit of the continuous feed of the LP 100R is its capability of printing to the end of a page. Typically, a cut sheet printer is not able to do this, and traditionally margins on forms defined in windows are very generous. Extended margins or reduced margins are typical of continuous forms designed for the LP 100R. The Margins setting in the emu settings by default is Standard. In order to print to the edge, change this setting to Reduced, indicating the smallest margins.

PCL Idle Delay

The Idle Delay is a time interval setting which causes the printer to wait before going from Print to Idle state. The purpose is to prevent the printer from pausing when jobs are delayed while being sent to the printer. If the printer does not detect the next job before completing the current job, it will prepare to go into Idle mode. If the next job is delayed in getting to the printer before the present job completes, then the idle down process is begun, resulting in a delay where the printer will actually pause printing. When in Idle, the printer must first stop printing before it can start the next job. This results in a delay where the printer will pause (stop then restart printing). The delay setting, as an extra period of waiting after a job, completes before the printer idles. The idle delay can also balance jobs that are small in print time (minimum number of printed pages) created by large file sizes which take a longer time to be created and transmitted, than the actual time to print. The setting is arbitrary and is determined by experimentation to find a setting that will balance performance in a unique scenario.

Resolution Support

Enabling resolution support within emulation settings allows the LP 100R printer to change the resolution of the emulation if the data steam includes the resolution command.

Communications

The IP address is set in the communications menu. It is recommended you use a Static IP address in place of a Dynamic IP address, which could change upon restarting the printer.

The LP 100R Printer will listen on both Raw and LPR ports. When a job is detected on one of the ports, the printer will change from Idle to Print status. This is seen on the Operator Panel on the LP 100R printer. As long as the port continues to receive data, the printer will continue to use that port and not process data from other ports until the current port becomes idle again. The printer's operator panel will indicate which port the job is received on: <u>On TCP/IP</u> means the job is via Raw protocol on port 9100. <u>On Ethernet</u> indicates the jobs are received via LPR on port 515.

LPR Queue Name

LPR protocol requires a queue name. It is "**LIS-SATO**" by default. It can be set in the communications menu on the LP 100R printer to match the name defined in the host (driver).

Differences / Advantages

Windows 8 and later support Type 3 and Type 4 drivers. Prior Windows operating systems only supported the Type 3 drivers.

To determine if a driver is Type 3 or 4, you can view details from <u>Print Management</u>, or you can also find the Driver type under Print Server Properties \ Drivers.



Sending Output Files from the Driver

You may notice when attempting to send output files from a Windows GUI utility direct to a printer; the file appears in the spooler, but never seems to reach the printer. The SATO Type 4 Driver has a feature that will allow you to <u>send output files directly</u> (page 34) to the printer at the port defined in the printer properties.

Unexplained Output

The improved isolation in the Type 4 architecture between windows DDL's used by other drivers and applications will possibly improve memory leaks and DLL's stepping on each other, which are known to occur in Type 3. Some LP 100R users who saw occasional small black boxes in a barcode or dots misplaced within a single dot row of the print when using the Type 3 driver have reported improvement when switching to the Type 4 driver.

Output File Differs

The SATO Type 4 driver will have some noticeable differences from Type 3. Beyond the differences in the User Interface, the Type 4 driver will possibly create an output file larger than might have been experienced through a model-specific driver (Type3). The larger size is a result of the PCL commands utilized in the Windows Type 4 architecture. Files are now more common with other printers and, as such, use a command set, which is PCL, but differs from those of the SATO Type 3. When changing driver types from a v3 to a v4, the resulting output file size may have a noticeable difference in the time to create and send a file to the printer. This will be perceived by a longer time to the first page printed.



May 2020 Version 1