

Transact Windows Driver Install Manual

For POSjet[®], BANKjet[®], iTherm[®], and EPIC[®] Printers

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Change History

Rev A	First Release	September 2007
Rev B	Updated for Driver Version 1.2.0.0	November 2007
Rev C	Added Eject Page with FF option and BankJet 2500 Support	t
	For Driver Version 1.2.0.1	January 2008
Rev D	Added information for using default parameter settings	August 2008
	and for the new features of Driver Version 2.0.0.0	
Rev E	Added information about install choices,	
	Information about unsigned drivers, and	
	expanded list of operating systems and printer models	July 2009
Rev F	Restructured and added screen shots for simplest install	August 2009

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1. Introduction

This document describes the procedures for installing Transact Windows drivers. General familiarity with using Windows and installing software is required and is not covered herein.

1.1. Hardware and Software Requirements

To use the Windows drivers, the host PC and Transact printer is expected to meet these hardware and software requirements:

1.1.1. Host PC

The host PC must be equipped with the interface required to attach your Transact printer:

- A serial port,
- A parallel port,
- A USB port, or
- An Ethernet port.

The host PC should be running one of the following supported Windows operating systems; (latest OS versions are fist supported by field test driver versions):

- Windows 2000,
- Windows Server 2003,
- Windows XP
- Windows Vista
- Windows Server 2008
- Windows 7.

1.1.2. Transact Printer

Transact Windows drivers support the following models of Transact printers. The drivers contain a language monitor which can use a Period Status Back feature in Transact printers for advanced printer status monitoring. The printer should have the specified or later firmware revisions. Older firmware revisions are supported with reduced status monitoring features. For more information on the language monitor and the Periodic Status Back feature, see Chapter 3.

Supported Model	Minimum Firmware Revision with built-in Periodic Status Back Support
iTherm 280	PE2800-1.56
Epic 430	PE-4303-1.14
POSjet 1500	PE1600-2.42
BANKjet 1500	PE1600-2.42
BANKjet 1580	PE1680-1.10

BANKjet 2500	Any
Epic 880	Any
New 2009+ models	Any, as released

Table 1 Supported Transact Printer Models

2. Driver Installation

This chapter describes the procedures for installing the Windows driver and configuring the printer for use with the Windows driver.

The printer driver software directory and its content must be accessible as a permanent place (copied) or temporary place(removable storage plug-in) seen in Windows Explorer at the time of installation. In Windows Vista and later, many actions will require administrative mode to succeed. Because Windows hardware install sequences can take many routes, only several common sequences are described with screen shots. See Appendix A for more information.

2.1. Configure the Printer

Before connecting the printer to the host PC, make sure the printer is configured correctly to work with the Windows driver. Depending on how the printer was acquired this may already been done for you. If not then make sure you verify your printer's configuration against a known good configuration for your intended use. Please refer to your printer's manual for instructions on how to verify and possibly manually set the configurations for your Transact printer.

Parameter	Correct Configuration
Emulation Mode	
Emulation Mode	Ithaca PcOS
RS232 Serial Interface	
Windows PnP	Disabled
Offline Option	Buffer Full Only
USB Interface	
Windows PnP	Enabled
USB PnP Mode	Printer Only
USB Disconnect When Offline	No
Offline Option	Buffer Full Only

In particular, pay particular attention to these configuration parameters:

Table 2 Printer Configurations

Now you are ready to add your Transact printer to the host PC.

2.2. Connect a Printer

Connect the printer to the computer and power up the printer if not already on. Windows should automatically find the printer:



Choosing No, not this time is appropriate as the driver will be copied from the install media / location. If the found new hardware wizard does not appear then use the add a printer method shown in section 2.3

Choose install from a list or specific location on the next screen; this will speed up Windows searching:



On the next screen choose Don't search to positively direct Windows to the driver that you wish to install:

Found New Hardware Wizard
Please choose your search and installation options.
○ <u>S</u> earch for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM)
✓ Include this location in the search:
C:\temp\IThermInstall\ITherm-576
Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< <u>B</u> ack <u>N</u> ext> Cancel

On the hardware type screen, choose printers:

Found New Hardware Wizard	
Hardware Type.	E)
Select a hardware type, and then click Next. Common <u>h</u> ardware types:	
Non-Plug and Play Drivers NT Apm/Legacy Support PCMCIA adapters PCMCIA and Flash memory devices POrts (COM & LPT) Frinters Processors SP2 IEEE 1394 Devices CSL and BAID, controllers	
< <u>B</u> ack <u>N</u> ext >	Cancel

On the next screen, choose have disk:



On the next screen, browse to the driver install directory and choose the directory file name that matches the printer configuration that you want to use. The example shows a 576 pixel wide series 280 printer; hit open and on the next screen click ok:

Locate File			? 🛛
Look jn: 📄	Therm-576	Solution	⊳ 🖽
amd64			
ia64 MactITherm	n-576.INF		
File <u>n</u> ame:	TactITherm-576.INF	*	<u>O</u> pen
Files of <u>t</u> ype:	Setup Information (*.inf)	~	Cancel

The next screen will show the default printer name, click next, and a file progress screen will track the installation. (Windows 2000 and test releases on Win XP will show an unsigned driver warning – click continue anyway). You should then arrive at the completion screen, hit Finish:



2.3. Add a Printer

For serial printers or if Windows did not automatically launch the found new hardware wizard, choose "**Printers and Faxes**" from the Start menu or Control panel. Click on the "**Next**" button on the "Welcome to Add Printer Wizard" screen.



Select "**Local printer attached to this computer**." *Uncheck* the "Automatically detect and install my Plug and Play printer" option. Click on the "**Next**" button.

Add Printer Wizard
Local or Network Printer The wizard needs to know which type of printer to set up.
Select the option that describes the printer you want to use:
< <u>B</u> ack <u>N</u> ext > Cancel

On the "Select a Printer Port" screen, select the port to which the Transact printer is connected. Click on the "**Next**" button.

Add Printer Wizard	
Select a Printer Port Computers communicate with printers through ports.	
Select the port you want your printer to use. If the port is not listed, you can create a new port.	
O Use the following port: COM1: (Serial Port)	
Note: Most computers use the LPT1: port to communicate with a local printer. The connector for this port should look something like this:	
O Greate a new port: Type of port: Adobe PDF Port	
< <u>B</u> ack <u>N</u> ext > Cancel	

If this is the first time a particular printer model driver is being added to the PC, on the next screen click the "Have Disk…" button and locate the INF file of the Windows driver for your Transact printer.



Otherwise, if this is a case where the driver already has been installed on the PC, then on the next screen, scroll down the "Manufacturer" list to select "**Transact Technologies**." Choose the model of your Transact printer. Click on the "**Next**" button.

Add Printer Wizard
Install Printer Software The manufacturer and model determine which printer software to use.
Select the manufacturer and model of your printer. If your printer came with an installation disk, click Have Disk. If your printer is not listed, consult your printer documentation for compatible printer software.
Manufacturer Printers Tektronix SE1500 Texas Instruments SE1500 (Receipt) TransAct Technologies Se1500 (Slip) Unisys Se1500 (Slip) This driver is digitally signed. Undows Update Tell me why driver signing is important Undows Update
< <u>B</u> ack Next > Cancel

Select the "**Keep existing driver** (**recommended**)" option (if not upgrading the driver). Click on the "**Next**" button.

Add Printer Wizard	
Use Existing Driver A driver is already installed for this printer. You can use or replace the existing driver.	
SE1500	
Do you want to keep the existing driver or use the new one?	
Keep existing driver (recommended)	
○ <u>R</u> eplace existing driver	
< Back Next > C	ancel

On the next screen, name the Transact printer you are adding and choose whether you want to use it as the default printer on the host PC. Click on the "**Next**" button.

Add Printer Wizard
Name Your Printer You must assign a name to this printer.
Type a name for this printer. Because some programs do not support printer and server name combinations of more than 31 characters, it is best to keep the name as short as possible.
Einter name:
Do you want to use this printer as the default printer?
<u>O No</u>
< <u>B</u> ack <u>N</u> ext > Cancel

On the next two screens, choose if you want to share the printer and print a test page. On the "Completing Add Printer Wizard" screen, click on the "Finish" button to complete adding the printer. The printer can print the standard Windows test page if you chose to print a test page. That page contains a Windows logo and some text.

Note: For printers configured at small widths, such as 304 pixels, the test page prints only the Windows logo symbol with no following text.

3. The Language Monitor

3.1. Overview

Windows printer drivers automatically use a component to the Windows print spooler called the Language Monitor to provide advanced printer status monitoring features. Transact Windows driver has a language monitor (LM) that can be configured for your application's needs.

LM reports printer status in two ways. It reports the following error conditions in the printer's Status field in the "Printer and Faxes" window:

- Door Open
- Out Of Paper
- Paper Jam (if the printer has a paper jam sensor)
- Output Bin Full (on ticket printers if there is a ticket in transport)
- Paper Problem (if paper is low or out on printers with paper low sensor), and
- Requires User Intervention (if the printer is in error and printing is stopped).



In addition, applications can also call GetPrinterData() with the appropriate parameters to obtain raw status data reported by the printer. Please refer to the *Ithaca Printer Windows Driver API* document for the complete API.

LM uses the **Periodic Status Back (PSB)** feature in newer Transact printers for advanced printer status monitoring if the printer firmware supports PSB. See Table 1 for the minimum firmware revisions with built-in PSB support. If the printer's PSB feature is enabled by the LM, it automatically reports its status back to the host PC at specified intervals. The LM can then update Windows print spooler or applications via Windows driver API accordingly. If the printer does not support PSB, the LM can be configured to poll printer status. However, if the printer is in error conditions such that it can no longer accept print data or commands from the host PC, LM will not be able to detect the error using polling. Polling could also decrease the printer's performance as polling and print data compete for bandwidth.

3.2. Configuration Parameters

The language monitor uses 2 parameters that are shared among all Transact Windows Printer Drivers installed on this PC and also holds the default values for per-printer parameters that are used up to the time that at least one of these is changed. The interface to view and set these values is shown next:

💑 Transact Windows Driver Defaults Configuration Utility	×
File	
Language Monitor (Shared) Periodic Status Back OFF Cycle Time 10000 ms	
Printer Control Shared Defaults	
Start Of Doc Commands	
Start Of Page Commands	
End Of Doc Commands followed by optional Feed, Cut, Drawer opens	
EndDoc Line Feeds [ESC]d# 0 EOD Knife Cut [ESC]v NO 💌	
Fire Cash Drawer1: FALSE ▼ Fire Cash Drawer2: FALSE ▼ [ESC]x<1> ND [ESC]x<2> YES FALSE	
OK Cancel Apply	

PeriodicStatusBack			
OFF	LM is in printer by <i>This is th</i>	active and does not monitor printer status. Any PSB status received from the y the host PC is not processed.	
AUTO	If printer received If the pri	's firmware supports PSB, LM will enable PSB and monitor the status from the printer. nter does not support PSB, LM will not monitor its status.	
ENABLE	If printer's firmware supports PSB, LM will enable PSB and monitor the status received from the printer. If the printer does not support PSB, LM will monitor its status using polling.		
DISABLE	LM will actively disable PSB on all printers. <i>Note</i> : In this setting, erroneous 'P' or 'p' characters could be printed if the firmware version does not support PSB during boot up or whenever the Windows spooler is restarted.		
TransactStatusInterval			
Any integer between 1000 and 30000 Frequency of polling for p		Frequency of the printer reporting its status to LM (using PSB) or LM polling for printer status in milliseconds.	

	This value is a tradeoff between the frequency of printer status update and printer performance. Default Setting: 10,000 (10 seconds)
Defaults for per-print	er properties
Text Edit Boxes	These 3 edit boxes accept text in the format described by the Input heading and provide the following three printer control actions:
Start of Doc	Sends the held text to the printer before document printing starts
Start of Page	Sends the held text to the printer before starting to print each document page
End of Doc	Sends the held text to the printer after completing the last document page
EndDoc Line Feeds	Sends the specified number of line feeds after finishing printing. The maximum value is limited to 10000.
EOD Knife Cut	If YES sends a knife cut command after finishing printing and feeding lines.
Fire Cash Drawer1,2	If the printer model has the cash drawer feature, a YES will send an open cash drawer command after finishing printing and optional line feeds and cut. A selection of FALSE will not disable the cash drawer selection in the per- printer properties GUI.

Table 3 Language Monitor Configuration Parameters

Click on the "Apply" or "OK" button for your changes to take effect. The printer driver will restart the Windows print spooler to use the new configurations. Active print jobs might be disrupted briefly.

The "Apply" button saves the settings and the window remains active, while the "OK" button saves the settings and exits the window.

You will be asked to confirm the stopping and starting of the spooler since that will interrupt all in-process print jobs on this PC.

The "Cancel" button exits the window without saving any changes.

Note: In Microsoft VISTA you must run this utility in administrative mode for the changes to take effect.

4. Operations

4.1. General Printer Configurations

You can access Transact printer driver's configurable features by right-clicking on the Transact printer in Printers and Faxes window and select "Properties."

File Edit	Open	Help	
Back	Set as Default Printer Printing Preferences	rch 😥 Folders 🕼	> × <>>
Address 🍳	Pause Printing		💌 🔁 Go
Name	Sharing	Documents	Status
Unspecif	Use Printer Offline		
Add Print	Create Shortcut		
Xerox W	Delete	0	Ready
Microsof	Rename	0	Ready
Microsof	Properties	0	Ready
iTherm 280		- 0	Door Open
HP Laser Je	et 8000 Series PCL	0	Ready
실 Adobe PDF	=	0	Ready

Under the General tab, click on the "Printing Preference" button.

Security Device Set	ttings Transact Printer Properties
General Sharing Port	ts Advanced Color Management
iTherm280	
ocation:	
Comment:	
Model: iTherm280 Features	Paper available:
Double-sided: No	Receipt (576 Pixels)
Stapie: No Speed: Unknown Maximum resolution: 208 dpi	×
	Proferences Print Test Page

In the Printing Preferences window, you can select paper source (receipt or slip, if your printer is equipped with slip printing) and configure the printer to print in monochrome or color (if the color feature is available).

a iTherm280 Prin	nting Preferences	? 🛛
Layout Paper/Quali	У	
Tray Selection		
Paper <u>S</u> ource:	Automatically Select	*
Color	Automatically Select Receipt	
	Black & White Color Color	
	Ady	anced
	OK Cancel	Apply

Click on the "Advanced" button, you can further configure more features such as printing resolutions.

iTherm280 Advanced Options	? 🗙
 Therm280 Advanced Document Settings Paper /Output Paper Size: Receipt (576 Pixels) Copy Count: 1 Copy Copy Count: 1 Od x 96 dots per inch Tod x 104 x 192 dots per inch Tod x 192 dots per inch Tod x 192 dots per inch Tod x 192 dots per inch Color Printing Mode: Monochrome Halftoning: Auto Select Print Optimizations: Enabled 	
OK Cano	zel

4.2. Paper Length Control

Optionally, the Windows driver can send a form feed to the printer at the end of each print job to produce a fixed-length receipt. If variable-length receipts with minimal trailing white space are not desired, set "Eject Page with FF?" to Yes (default value is No) under the "Device Settings" tab in the printer's Properties window. Click on the "Apply" button for the change to take effect.

🛓 iTherm280 Ethernet Properties 🔹 💽
General Sharing Ports Advanced Color Management Security Device Settings Transact Printer Properties
Therm280 Device Settings Form To Tray Assignment Receipt: Receipt (576 Pixels)
Eject Page with FF?: No

4.3. Transact-specific Configurations

Go back to the printer's Properties window. More Transact-specific configurations are available under the Transact Printer Properties tab.

Epic430 Properties	?
General Sharing Ports Advanced	
Color Management Device Settings Transact Printer Properti	es
- Driver Info	
Driver Version: 1.2.0.2 LM Version: 1.0.2.6	
_ Lenguege Monitor (Shered)	
Periodic Status Back: OPP	
Input: Use ? for Decimal, <0x??> for Hex, [???] for Symbol. e.g. [ESC]<5>	
Printer Control	
Start Of Doc Commands:	
Start Of Page Commands:	
End Of Doc Commands followed by optional Feed, Cut, Drawer opens	
	_
	1
Fire Cash Drawer1: [ESC]x<1> Fire Cash Drawer2?	2
Restore to use Save to use	
Default Values Shown Values Refresh	
OK Cancel App	ply

You can identify the version numbers of the Windows driver and the accompanying Transact Language Monitor here. You can also modify the LM's behavior configuration. Please note:

- 1. The LM configuration is global. If more than one Transact printers is attached to the host PC, any changes to the configuration will affect all connected Transact printers.
- 2. If a new Transact printer is added to the host PC, the LM configuration will revert back to its default value. The default value will take effect on all connected Transact printers.

In the Printer Control section, you can add printer commands to be sent at the beginning (StartDoc commands), at the top of each page (StartPage commands), and end (EndDoc commands) of each document. Please consult the printer's Programmer's Manual for the available printer commands. Unlike LM configuration, StartDoc, StartPage and EndDoc command configurations are per printer. You can enter different commands in each printer's Properties window.

You can also specify the number of line feeds to add after a document has finished printing and whether or not a knife cut should then be performed.

Also you may be able to specify whether or not to fire the cash drawers; this selection will be unavailable if the defaults for your printer allow the setting.

Click on the "Save to use Shown Values" button for your changes to take effect. The printer driver will restart the Windows print spooler to use the new configurations. Active print jobs might be disrupted briefly.

You can also reset all values to instead use the current defaults by hitting the "Restore to Default Values" button. You will be asked to confirm this selection.

The "Refresh" button will discard all the changes made so far. You will be asked to confirm this action.

Note: In Microsoft VISTA you must run printer properties in administrative mode for the changes on this tab window to take effect.

5. Appendix: Info and driver first install method

Drivers are required to be "signed" in Windows 64 bit versions and also 32 bit versions newer than Vista. Signing that works on current OS version is handled by Transact through Microsoft.

Drivers released for testing purposes that work on the newest OSes can be "developer" signed; this requires a first step of adding the developer certification to the OS – this is described in a test installation info document.

The newest versions of Transact drivers are provided to cover all the popular Windows CPU platforms: X86 (Intel compatible), AMD64, and IA64. You will need to know which platform is to be installed.

The following shows how to install a driver before plugging in or adding printer(s):

5.1. Driver Install for a Transact Windows Printer

From the Start menu in Windows, choose "Printers and Faxes" to open the "Printer and Faxes" window. Select "Server Properties" from the File menu.



Under the "Drivers" tab, click the "Add..." button.

Print Server Properties	? 🗙
Forms Ports Drivers Advanced	
IEENG7-IBM	
Name Environment Version	
Adobe PDF Converter Intel Windows 2000 or XP hp deskjet 3600 series Intel Windows 2000 or XP HP LaserJet 8000 Serie Intel Windows 2000 or XP Microsoft Office Docum Intel Windows 2000 or XP Microsoft XPS Documen Intel Windows 2000 or XP Microsoft XPS Documen Intel Windows 2000 or XP Xerox WorkCentre Pro 4 Intel Windows 2000 or XP	
Add Replace Properties	5
OK Cancel App	oly

Click on the "Next" button on "Welcome to the Add Printer Driver Wizard" screen. Then click the "Have Disk…" button and locate the INF file of the Windows driver for your Transact printer.

Add Printer Driver Wizard		
Printer Driver Selection The manufacturer and model determine which printer driver to use.		
Select the manufacturer and model of the Windows XP printer driver you want to install. If your printer driver is not listed, you can click Have Disk to select a Windows XP printer driver supplied by your printer manufacturer.		
Manufacturer Agria Alps Apollo Apple APS-PS This driver is digitally signed. Tell me why driver signing, is important	JSet v52.3 JSetSF v52.3 JSet 800 JSet 800SF v52.3 → → → → → → → → → → → → → → → → → → →	
	< <u>B</u> ack <u>N</u> ext > Cancel	

Some Transact printers may have the options such as for receipt, slip-only, etc. Select the desired option if you are prompted by the Add Printer Driver Wizard. Click on the "Next" button.

Add Printer Driver Wizard		
Printer Driver Selection The manufacturer and model determine which printer driver to use.		
Select the manufacturer and model of the Windows XP printer driver you want to install. If your printer driver is not listed, you can click Have Disk to select a Windows XP printer driver supplied by your printer manufacturer.		
Printers		
SE 1500 SE 1500 (Receipt) SE 1500 (Slip)		
This driver is digitally signed. Have Disk		
< <u>B</u> ack <u>N</u> ext > Cancel		

On the next screen, select the Windows version running on the host PC. The most used version of Transact Windows driver supports the 32-bit (i.e. the "Intel" environment listed on this screen). Select your hardware type and click on the "Next" button.

dd Pr	dd Printer Driver Wizard				
Envi I	i ronment and Op Each environment a drivers.	erating System Selection ind operating system combination use	is its own set of printer		
0 2 0	<u>S</u> elect the environm driver:	ent and operating systems of all comp	outers that will be using this		
	Environment	Version	Installed		
	🗆 Alpha	Windows NT 4.0	No		
	IA64	Windows XP	No		
	✓ Intel	Windows 2000 or XP	No		
	Intel	Windows 95, 98 and Me	No		
	Intel	Windows NT 4.0 or 2000	No		
	□ x64	Windows XP	No		
		< <u>B</u> ack	Next > Cancel		

On the "Completing Add Printer Driver Wizard" screen, verify the printer driver selected and click on the "Finish" button to complete the installation.

5.2. Add USB and Parallel Printers when driver already installed

To add a USB or parallel printer, simply connect the printer to the host PC. Windows Plug and Play should find the Transact Windows printer driver installed in the system (See section 5.12, 2.3) and add the printer on the host PC automatically without further user intervention.



If the driver you intend to install does not have a signing file [print driver name].CAT that is acceptable for your OS version, then instead of the automatic install depicted in section 2.2, the found hardware wizard will require affirmation of acceptance of the unsigned driver and may also require pointing to the DLL file in the CPU hardware type installation directory.