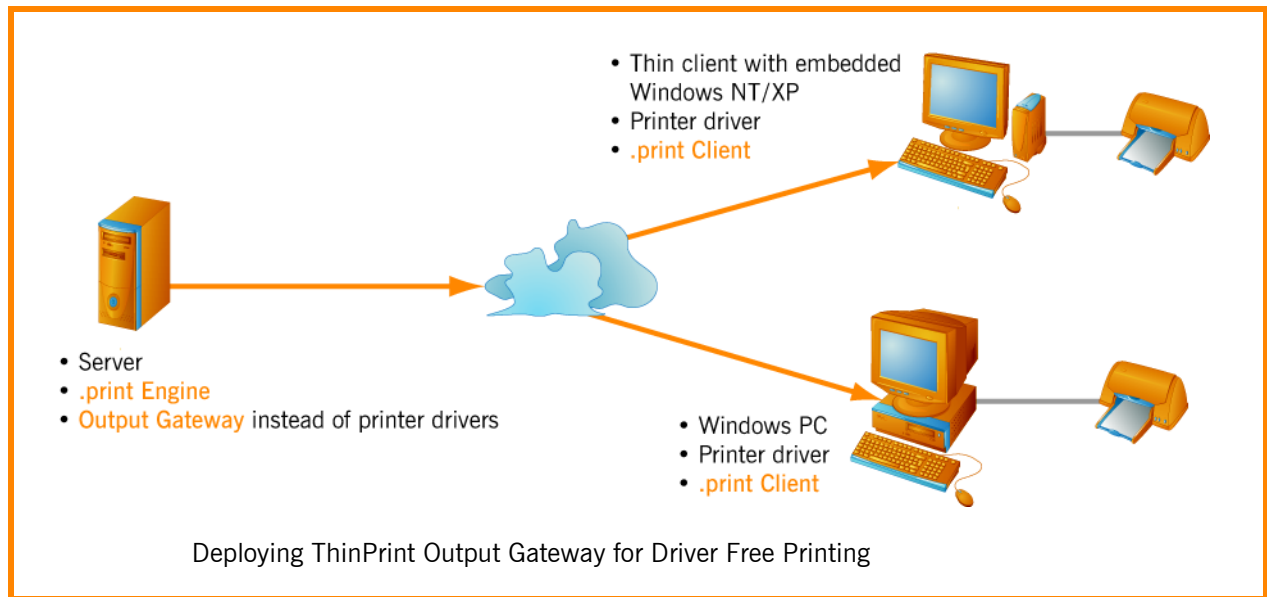


## Adaption of ThinPrint Output Gateway options

### Editing and redefining paper trays and formats



**Driver Free Printing** with ThinPrint Output Gateway simulates a printer driver on the printing Windows computer so that the printer driver does not have to be installed there. Print data is sent from the server to the client in meta format (EMF); the transmission is also compressed, bandwidth optimized, and, if desired, encrypted.

The properties of the printers installed on the client must also be available for selection on the server even though the relevant printer driver is not present there. Printer properties can be uploaded from the client to the server by the .print component, AutoConnect. Only in cases where .print AutoConnect is not or should not be used is it necessary to set properties in ThinPrint Output Gateway manually. This applies to all Output Gateway printers manually installed on the server, including templates. A description of the necessary steps follows separately after each released version of ThinPrint .print.

#### Foreword

- Driver Free Printing
- About this White Paper

#### System requirements

- Clients
- Servers
- Dedicated print servers

#### Configuration file TPOGeng.gpd (up to Version 6.5)

- Paper sources
- Paper formats

#### Windows Registry (version 7.0 and later)

- Introduction
- Step-by-step

#### Appendix

- Output Gateway's GPD file
- Microsoft GPD specifications
- Windows paper formats

**© Copyright**

This document is the intellectual property of ThinPrint AG. This document may be copied in whole or in part, provided this Copyright notice is included in every copy.

**® Registered Trade Marks**

All hardware and software names mentioned in this document are the registered trademarks of their respective companies or should be regarded as such.

---

ThinPrint AG  
Alt-Moabit 91 a/b  
10559 Berlin  
Germany/Alemania

ThinPrint Pty. Ltd.  
L 10, 275 Alfred Street  
North Sydney/NSW/2060  
Australia

ThinPrint, Inc.  
20006 Detroit Road, Suite 303  
Cleveland, OH 44116  
USA/EEUU

ThinPrint, Inc.  
7600 Grandview Avenue, Suite 200  
Denver, Colorado 80002  
USA/EEUU



E-mail: [info@thinprint.com](mailto:info@thinprint.com)  
Web: [www.thinprint.com](http://www.thinprint.com)  
Issued: August 12, 2009 (v24)



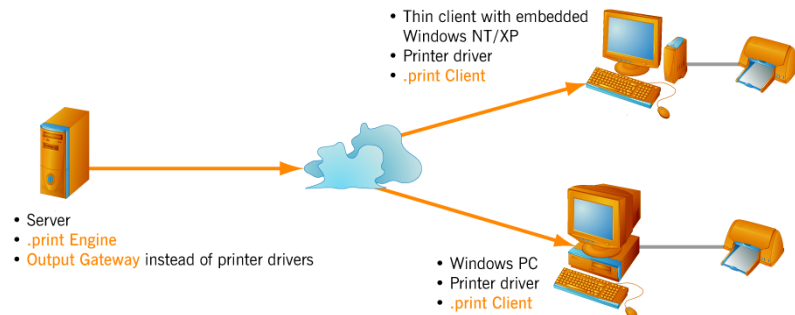
- Foreword** ..... 4
  - Driver Free Printing ..... 4
  - About this White Paper ..... 5
  
- System requirements** ..... 8
  - Clients ..... 8
  - Servers ..... 8
  - Dedicated print servers ..... 9
  
- Configuration file TPOGeng.gpd (up to version 6.5)** ..... 9
  - Paper sources ..... 10
    - Definition ..... 10
    - Adding paper trays ..... 10
  - Paper formats ..... 12
    - Definition ..... 12
    - Modifying margins in existing paper formats ..... 13
    - Adding new paper formats ..... 14
    - Step-by-step ..... 16
    - Defining A1 as paper format ..... 16
  
- Windows registry (version 7.0 and later)** ..... 18
  - Introduction ..... 18
  - Procedure ..... 20
    - TrayData ..... 20
    - FormData ..... 21
  
- Appendix** ..... 22
  - Customer service and technical support ..... 22
  - Possible paper trays in the Output Gateway's GPD file ..... 22
  - Standard paper trays conforming to Microsoft GPD specifications ..... 22
  - Possible paper trays in the GPD-file of ThinPrint Output Gateway ..... 22
  - Standard paper formats in ThinPrint Output Gateway (Windows 2000, 2003, XP) ..... 24
  - Windows paper formats ..... 24

## Foreword

### Driver Free Printing

Print jobs can be generated without printer drivers being installed on the server. To do so, *ThinPrint Output Gateway* simulates a printer driver on the printing Windows computer and sends the compressed print data in a printer independent format to the local print system. There, the data is processed appropriately with the local printer driver.

There are many advantages to this technology. No changes to printer drivers are necessary in central administration when client printers are added or changed. Printer driver conflicts with the software platform in use become a thing of the past. CPU load is reduced because print data rendering, which creates such a heavy load on resources, doesn't take place on the central server. Using ThinPrint Output Gateway (Driver Free Printing) is helpful, for instance, where users work in different offices and the administrators do not want to worry about which printer is installed in what office.



**Illus. 1** Deploying ThinPrint Output Gateway for Driver Free Printing

#### *ThinPrint Output Gateway properties:*

- Printing to Windows clients possible via TCP/IP, ICA, and RDP
- 100% color support, high resolution
- Wide selection of formats
- Reduced administration
- Support for any printer (including bi-directional, GDI and USB printers)
- Lower demand on server and client resources
- Deployment possible on all Windows servers incl. dedicated print servers
- Only 1 MB small client component
- Client-side print preview possible (.print Viewture)

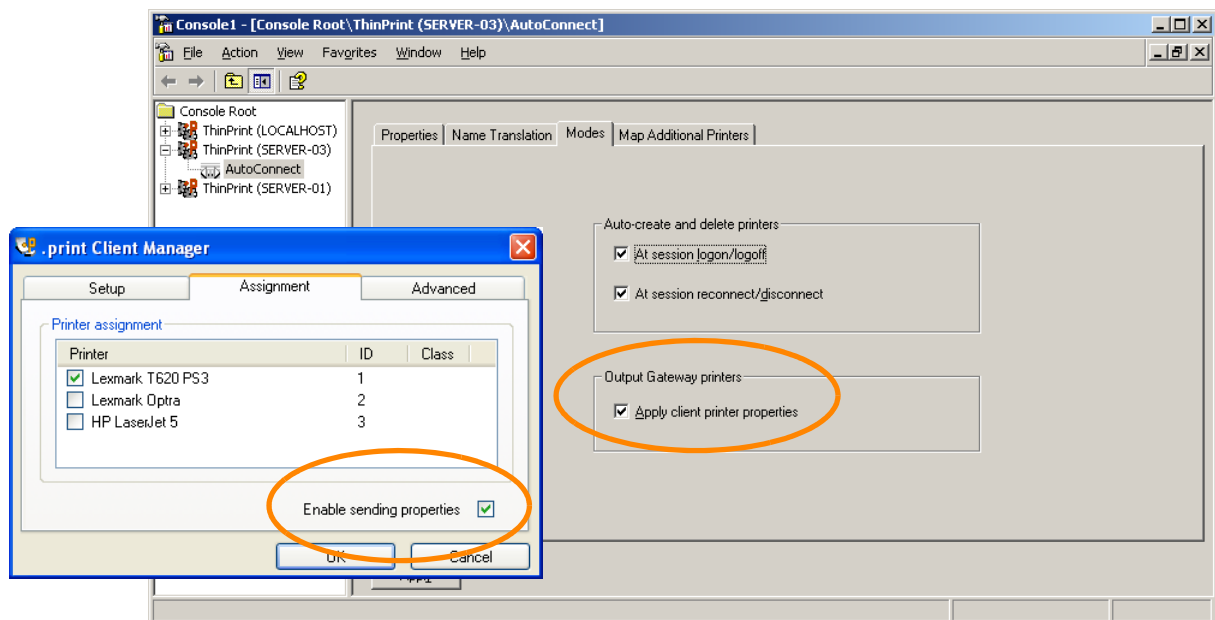
Output Gateway is only available for applications that conform to Windows print standards.

## About this White Paper

This white paper describes how to adjust both paper trays<sup>1</sup> and paper formats individually in ThinPrint Output Gateway.

- Adding new paper trays
- Modification of the margins in existing paper formats
- Addition of new paper formats

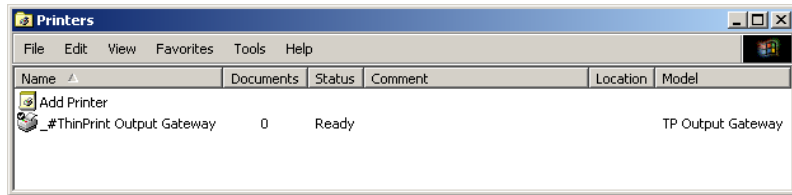
The manual adaption, described below, of Output Gateway printer objects on the printing server is not mandatory because the properties of printers installed on the client machines can be sent from the client to the server with the .print AutoConnect component (Illus. 2). Only where printers are created on the server without .print AutoConnect – i. e., **manually** – could it be useful to make specific paper sources and formats available this way<sup>2</sup>.



Illus. 2 Enabling printer properties on client and server

Older .print versions do not or only partially support sending printer properties from client to server with .print AutoConnect. In such cases, you can add paper sources and/or formats to your Output Gateway **templates**. The default template created during installation of .print Engine is named `_#ThinPrint Output Gateway` (Illus. 3).

1 "Paper source" can mean manual or tractor feeds in addition to paper trays.  
2 Another alternative is printing with client-side preview. This option also allows use of all paper sources and formats of the client driver.



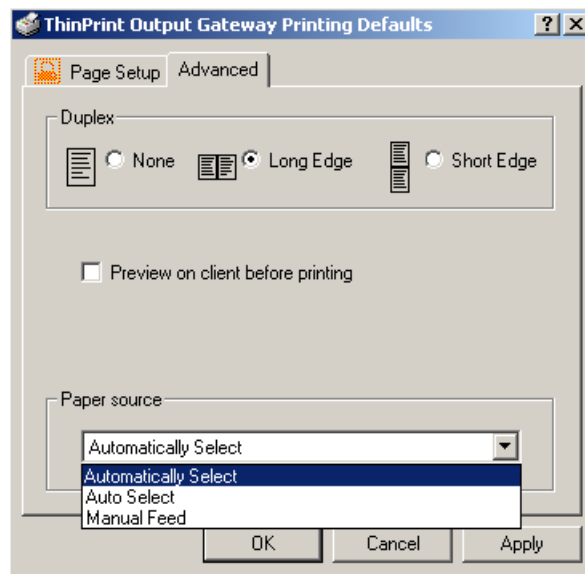
**Illus. 3** \_#ThinPrint Output Gateway template in the server's printers folder

The following table shows the .print version with which printer properties can be configured on the server and/or sent to the server from .print Client.

.print version	Client printer properties ...	
	... which can be configured in the .gpd file or registry	... which can be uploaded by .print AutoConnect
5.5	<ul style="list-style-type: none"> <li>• Paper formats</li> </ul>	—
6.0	<ul style="list-style-type: none"> <li>• Paper formats</li> <li>• Paper sources</li> </ul>	—
6.2 and 6.5	<ul style="list-style-type: none"> <li>• Paper formats</li> <li>• Paper sources</li> </ul>	<ul style="list-style-type: none"> <li>• Paper sources</li> <li>• Duplex settings</li> </ul>
7.0	<ul style="list-style-type: none"> <li>• Paper formats</li> <li>• Paper sources</li> </ul>	<ul style="list-style-type: none"> <li>• Paper formats</li> <li>• Paper sources</li> <li>• Print resolution</li> <li>• Color/grayscale</li> <li>• Duplex settings</li> </ul>

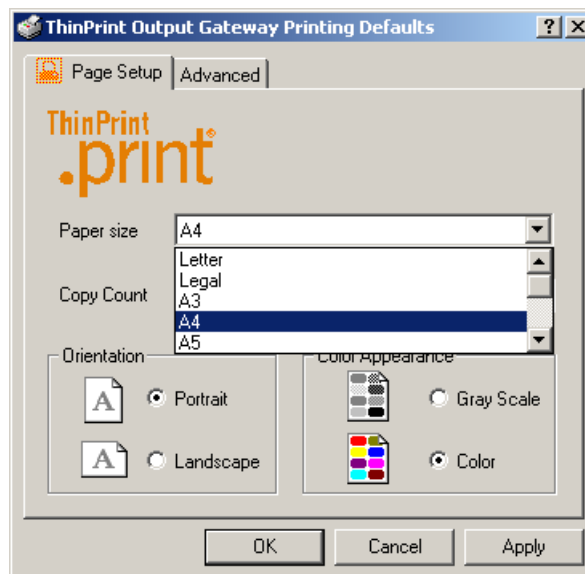
*Paper sources* Illus. 4 shows the default paper sources in Output Gateway<sup>3</sup>. Additional paper sources can be added manually if they are available on the client printer.

<sup>3</sup> The selection of paper trays is only displayed if the relevant option is enabled on the DEVICE SETUP tab of the ThinPrint Output Gateway printer properties.



Illus. 4 Default paper sources in ThinPrint Output Gateways

*Paper formats* Standard paper formats in ThinPrint Output Gateway are displayed in Illus. 5. Here again, you should only manually add paper formats that are supported by the specific client printer.



Illus. 5 Default paper formats in ThinPrint Output Gateway

ThinPrint Output Gateway is a feature of the .print Engine. Installation and configuration of an Output Gateway – regardless of the .print Engine version in use – are described in the following manuals:

- “.print Application Server Engine” manual
- “.print Server Engine” manual
- “.print Desktop Engine” manual
- “.print RDP Engine” manual
- “.print RDP Engine XP” manual

This white paper is intended to describe the possible methods of manually adapting ThinPrint Output Gateway to specific, individual requirements. These adaptations can be made with ThinPrint .print up to **version 6.5** by editing the TPOGeng.gpd (German: TPOGger.gpd) configuration file and in **versions 7.0** and later by editing the Windows registry.

**Tip!** Only make the changes to the GPD file and Windows registry that are described in this white paper. Errors in the GPD file structure or registry structure may disable certain options in the Output Gateway GUI or result in program failure when applications attempt to print using the incorrect settings.

## System requirements

### Clients

- Windows 9x, ME, NT 4, 2000, XP or Server 2003
- One of the following .print Clients:
  - .print Client Windows for TCP/IP, ICA or RDP
  - .print Client Service Windows
  - .print Client ActiveX Windows
- Printer drivers that support the format definition in ThinPrint Output Gateway

### Servers

- Windows 2000 (Service Pack 4 or later), Windows XP (Service Pack 2 or later) or Windows Server 2003 and installed applications that print conforming to Windows print standards
- A .print Engine as component of one of the following products:
  - .print Application Server Engine
  - .print Server Engine
  - .print Remote Desktop Printing Engine
  - Remote Desktop Suite Standard
  - Remote Desktop Suite Premium
  - .print Desktop Engine
  - .print Desktop Blade Engine

## Dedicated print servers

Adaptation of a ThinPrint Output Gateway is possible in the following operating system constellations:

Terminal or application server	dedicated print server
Windows 2000 Server →	Windows 2000 Server
Windows Server 2003 →	Windows Server 2003

The operating systems on the terminal/application server on one side and dedicated print server on the other must be running the same Service Pack version.

**Tip!** If ThinPrint Output Gateway is run on a dedicated print server, the “TP Output Gateway” driver must also be installed on the associated terminal servers. The GPD file or the registry entries for Output Gateway must therefore also be modified on all print servers as well as on all terminal servers.

## Configuration file TPOGeng.gpd (up to version 6.5)

ThinPrint Output Gateway settings are found in the file TPOGeng.gpd (German: TPOGger.gpd) in the directory:

```
%windir%\system32\spool\drivers\w32x86\3
```

### Tipp!

1. Make a backup copy of the original before modifying the GPD file.
2. Make sure that the following registry key does **not** exist:  
hkey\_local\_machine\system\CurrentControlSet\Control\Print\Printers\  
<printer name>\PrinterDriverData\TrayData  
If this key exists, entries in the GPD file will be ignored.
3. Before modifying, make sure that the printer driver on the client also supports the new paper formats or sources defined in the GPD file.
4. In the event that the GPD file has been modified and later technical support from ThinPrint becomes necessary, inform the ThinPrint Support Team that the file was modified and, if possible, what changes have been made.

To modify paper trays which can be chosen:

1. Create a backup copy of **TPOGeng.gpd** (German: TPOGger.gpd).
2. Open the file TPOGeng.gpd (German: TPOGger.gpd) with a text editor; e.g., *Notepad*.

## Paper sources

### Definition

Supported paper formats are listed under **\*FEATURE: INPUTBIN**. For example, the following is set for **Auto** paper tray:

```
*Feature: InputBin
{
  *rcNameID: =PAPER_SOURCE_DISPLAY
  *DefaultOption: AUTO
  *Option: AUTO
  {
    *rcNameID: =AUTO_DISPLAY
    *Command: CmdSelect
    {
      *Order: DOC_SETUP.4
      *Cmd: "<1B>"
    }
  }
}
```

Section for paper trays

Default setting "Auto"

The AUTOMATICALLY SELECT tray is set as default tray. AUTOMATICALLY SELECT indicates that the paper trays set up on the printer are inherited. With this setting, if a paper tray becomes empty, the document can be printed from another tray.

### Adding paper trays

*Foreword* The default paper trays in ThinPrint Output Gateway are listed in the Appendix ([Page 22](#); see also Illus. 5).

**Tip!** Before printing, make sure that the printer driver on the client also supports the new formats defined in the GPD file.

*Adding entries to the GPD-file*

1. Now open the TPOGeng.gpd (German: TPOGger.gpd) and add the new paper tray with the following entries in the section **\*FEATURE: INPUTBIN**. For example, the paper tray "LOWER" requires the following settings<sup>4</sup>:

```
*Option: LOWER
{
  *rcNameID: =LOWER_TRAY_DISPLAY
  *Command: CmdSelect
  {
    *Order: DOC_SETUP.4
    *Cmd: "<1B>"
  }
}
```

Option name

Constant for the option name (always in capital letters)

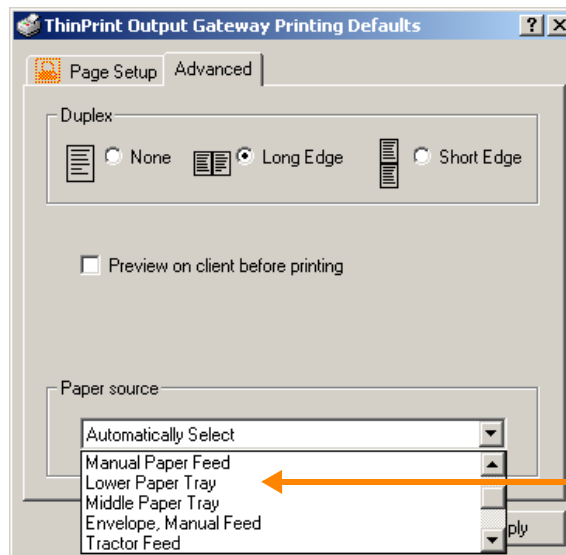
<sup>4</sup> To avoid typos, copy the command line from this white paper with the Text Select Tool in Adobe Reader into the TPOGeng.gpd file (German: TPOGger.gpd).

Other examples of entries are found in the appendix on [Page 22](#). Find in this list the entry that is appropriate for the desired paper tray and apply it. If it does not function with your printer, simply try a different entry.

2. Lastly delete **TPOGeng.bud** (German: TPOGger.bud) in:

**%windir%\system32\spool\drivers\w32x86\3**

3. Open the ThinPrint Output Gateway PROPERTIES in the Printers folder with FILE→ PROPERTIES→ ADVANCED→ PRINTING DEFAULTS. A new .bud file is created automatically.
4. Restart the print spooler (e.g., with NET STOP SPOOLER and NET START SPOOLER from the command prompt).
5. Check that the new formats are displayed in the Output Gateway properties (PROPERTIES→ ADVANCED→ PRINTING DEFAULTS→ ADVANCED; Illus. 6)



**Illus. 6** New paper source LOWER PAPER TRAY in ThinPrint Output Gateway

## Paper formats

### Definition

Supported paper formats are listed under **\*FEATURE: PAPER SIZE**. For example, the following is set for **Letter** format:

```

*Option: LETTER ← Section for paper format
                LETTER
{
    *rcNameID:
=RCID_DMPAPER_SYSTEM_NAME
    *PrintableArea: PAIR(4800, 6150) ← Printable area
    *PrintableOrigin: PAIR(150, 150) ← Distance of top left corner of printable area
                                        from paper edge
    *Command: CmdSelect
    {
        *Order: DOC_SETUP.5
        *Cmd: "<00>"
    }
}

```

All numeric input is given in dots. \*MasterUnits: PAIR(600, 600) specifies the horizontal and vertical resolution in dpi (dots per inch):

Default value:        600 dpi = 600 dpi or 2.54 cm

This creates a printable area for Letter format (Illus. 7) with \*PrintableArea: PAIR(4800, 6150):

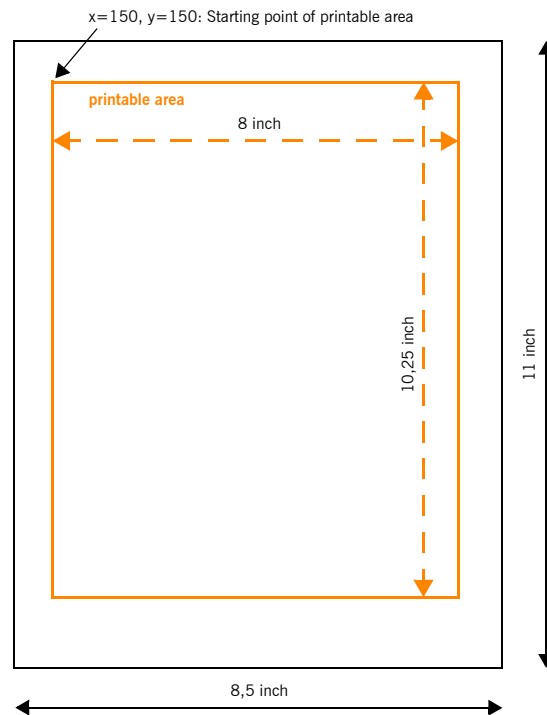
4800 / 600        = 8 inch  
 6150 / 600       = 10.25 inch

The distance to the paper's edge is specified vertically and horizontally with \*PrintableOrigin:

150 / 600        = 0.25 inch

With the settings that a margin of 0.25 inches is set to the left and right of the printable area, above the printable area also 0.25 inches and below it 0.5 inches, Letter has the following paper size:

horizontal: 8 + 2x0.25        = 8.5 inch  
 vertical: 10.25 + 0.25 + 0.5 = 11.0 inch



Illus. 7 Letter format

### Modifying margins in existing paper formats

Changing the printable area of an existing paper format will be demonstrated with the Letter format as example. The Letter format will be modified so that the paper's edge and the edge of the printable meet (Illus. 8). The printable area is then about the same as the page size and the margin of the top left corner of the printable area is set to one dot in the x and y tangents. With the mode of calculation detailed in the previous chapter, the numbers in *PrintableArea* and *PrintableOrigin* must then be adjusted as follows:

```
*PrintableArea: PAIR(5099, 6599)
*PrintableOrigin: PAIR(1, 1)
```

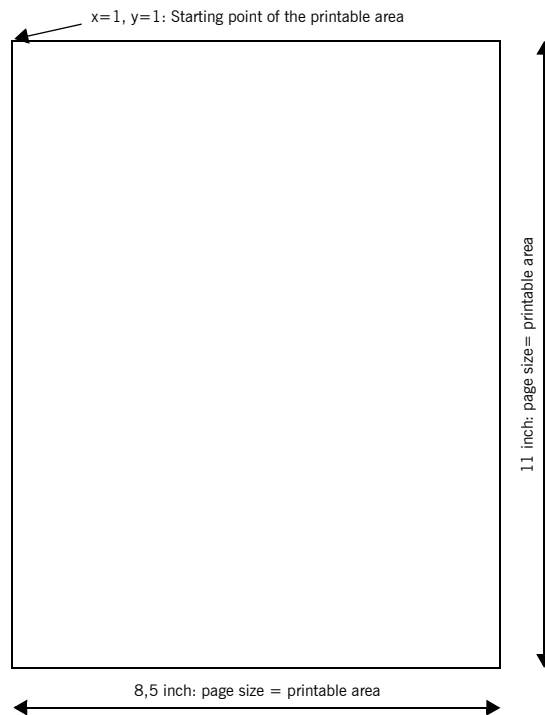
The Letter format in the modified .gpd file then looks like this:

```
*Option: LETTER
{
    *rcNameID:
    =RCID_DMPAPER_SYSTEM_NAME
    *PrintableArea: PAIR(5099, 6599)
    *PrintableOrigin: PAIR(1, 1)
    *Command: CmdSelect
    {
        *Order: DOC_SETUP.5
        *Cmd: "<00>"
    }
}
```

Section for paper format LETTER

Printable area = page size

Top left corner of printable area from paper edge meets the page edge



**Illus. 8** Modified margins in Letter format

- Lastly delete the file **TPOGeng.bud** (German: TPOGger.bud) in:

**%windir%\system32\spool\drivers\w32x86\3**

- OPEN THE THINPRINT OUTPUT GATEWAY PROPERTIES IN THE PRINTERS FOLDER WITH FILE→ PROPERTIES→ ADVANCED→ PRINTING DEFAULTS. A new .bud-file is created automatically.
- Restart the print spooler (e.g., with NET STOP SPOOLER and NET START SPOOLER in the command prompt).

### Adding new paper formats

*Foreword* The default paper formats in ThinPrint Output Gateway are listed in the Appendix ([Page 22](#); see also Illus. 5). In the following example, two new paper formats will be added to these: **A2** and **A1**. Each of these formats represents a group of paper formats:

- Standard paper formats conforming to Microsoft GPD specifications ([Page 24](#))
- Non-standard formats

The format **A2** is a **standard format**. This format therefore only has to be entered in the file TPOGeng.gpd (German: TPOGger.gpd).

In contrast, format **A1** is a **non-standard format**. Therefore, two steps are needed here:

1. The format A1 must be added to the Windows print server forms.
2. It must also then be entered in TPOGeng.gpd (German: TPOGger.gpd).

**Tipp!** The entry for formats that do not conform to Microsoft GPD specifications in the GPD file is fundamentally different than that for standard formats.

The format name (A1 or A2) is entered differently in the GPD file for both formats:

A2	A1
*Option: A2 <sup>a</sup>	*Option: xyz <sup>b</sup> { *Name: "A1" <sup>c</sup>

- a Description must conform to Microsoft GPD specifications ([Page 24](#))
- b Here, xyz represents any name, which may only occur once per GPD file.
- c Description must match the entry in the print server form (Illus. 10)

With the mode of calculation described in "Paper formats" ([Page 12](#)), the numbers in PrintableArea and PrintableOrigin must be adjusted as follows:

A2	A1
	*PageDimensions: PAIR(14034, 19842)
*PrintableArea: PAIR(9474, 13128)	*PrintableArea: PAIR(13734, 19392)
*PrintableOrigin: PAIR(150, 150)	*PrintableOrigin: PAIR(150, 150)

#### *Paper format A1*

In addition, the page dimensions must be given for non-standard formats. For the format A1:

$$59.40 \times 84.00 \text{ cm} = 23.39 \text{ inch} \times 33.07 \text{ inch}$$

the mode of calculation creates:

$$23.39 \times 600 = 14034 \text{ pixel}$$

$$33.07 \times 600 = 19842 \text{ pixel}$$

Enter page dimensions in the GPD file as follows:

\*PageDimensions: PAIR(14034, 19842)

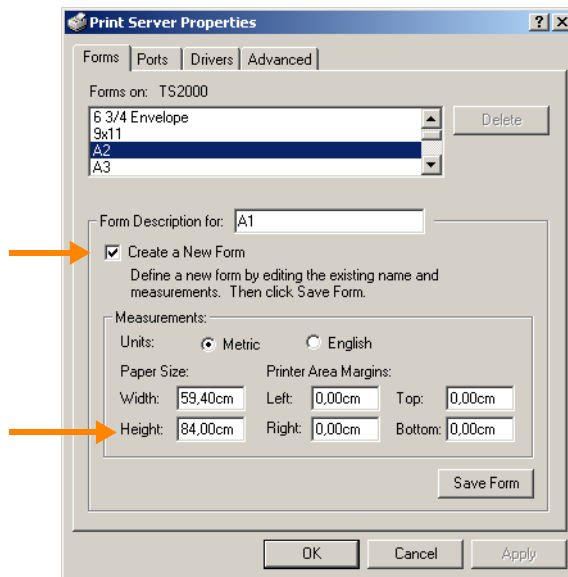
**Tipp!** Enter the page dimensions in the GPD file to the exact dot. In contrast, the values for PrintableOrigin and PrintableArea are variable (see Page 13), as long as the resulting position and size of the printable area are within the limits of the paper format. Otherwise, the program will ignore the entry.

### Step-by-step

Top set up the paper formats A2 and A1:

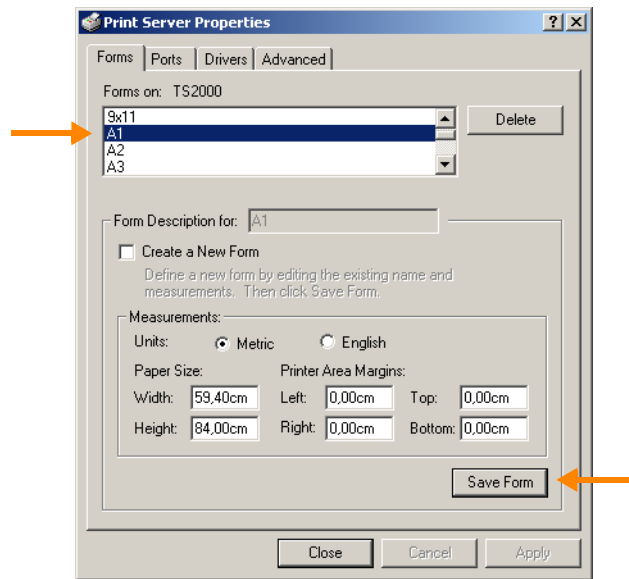
#### Defining A1 as paper format

1. Open the printers folder.
2. Select FILE → SERVER PROPERTIES → FORMS.
3. Select CREATE A NEW FORM, and enter the A1 page dimensions: 59.4 cm x 84 cm or 23.39 inches x 33.07 inches (Illus. 9).  
The printable area margins must all have a value of 0.00!



Illus. 9 Defining format A1

4. . Select OK. The new format A1 appears in the list of forms (Illus. 10).



Illus. 10 Added format A1

Adding entries to the GPD-file

1. Now open TPOGeng.gpd (German: TPOGger.gpd) and add the formats A2 and A1 with the following entries:<sup>5</sup>

```

*Option: A2
{
    *rcNameID:
    =RCID_DMPAPER_SYSTEM_NAME
    *PrintableArea: PAIR(9474, 13128)
    *PrintableOrigin: PAIR(150, 150)
    *Command: CmdSelect
    {
        *Order: DOC_SETUP.5
        *Cmd: "<00>"
    }
}

*Option: Option20
{
    *Name: "A1"
    *PageDimensions: PAIR(14034, 19842)
    *PrintableArea: PAIR(13734, 19392)
    *PrintableOrigin: PAIR(150, 150)
    *Command: CmdSelect
    {
        *Order: DOC_SETUP.5
        *Cmd: "<00>"
    }
}
    
```

Annotations for the GPD file:

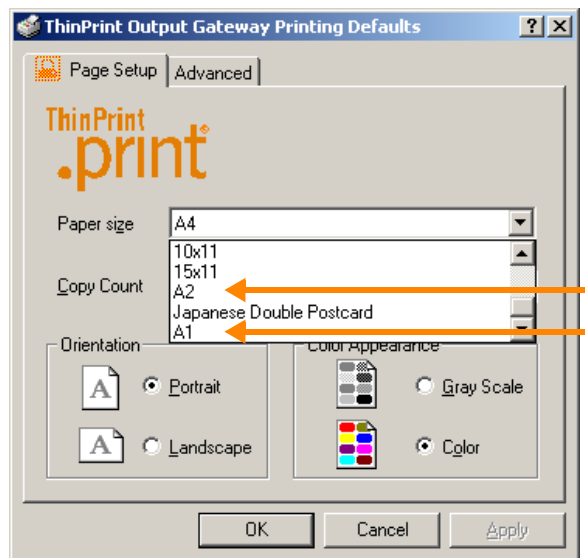
- \*Option: A2**: Section for paper format A2 (name same as form name; Illus. 10)
- \*PrintableArea: PAIR(9474, 13128)**: printable area A2
- \*PrintableOrigin: PAIR(150, 150)**: Top left corner of printable area for A2
- \*Option: Option20**: Paper format section A1 (any name possible, but only once per GPD file)
- \*Name: "A1"**: Enter format (Illus. 10)
- \*PageDimensions: PAIR(14034, 19842)**: Paper size A1
- \*PrintableArea: PAIR(13734, 19392)**: Printable area A1
- \*PrintableOrigin: PAIR(150, 150)**: Top left corner of printable area for A1

**Tipp!** Note that the definition of standard formats like A2 is different than for new formats like A1.

2. Lastly delete **TPOGeng.bud** (German: TPOGger.bud) in:

**%windir%\system32\spool\drivers\w32x86\3**

3. Open the ThinPrint Output Gateway PROPERTIES in the Printers folder with FILE→ PROPERTIES→ ADVANCED→ PRINTING DEFAULTS. A new .bud file is created automatically.
4. Restart the print spooler (e.g., with NET STOP SPOOLER and NET START SPOOLER from the command prompt).
5. Check that the new formats are displayed in the Output Gateway properties (PROPERTIES→ ADVANCED→ PRINTING DEFAULTS; Illus. 11)



**Illus. 11** New paper formats A2 and A1 in the ThinPrint Output Gateway

## Windows registry (version 7.0 and later)

### Introduction

When an Output Gateway printer or template has been created, certain default settings are available for paper formats (Illus. 4) and paper sources<sup>6</sup> (Illus. 5). It is possible to add others – provided the printer driver on the client supports them. You have the following options of doing so:

- For printers created by .print AutoConnect:  
Automatically loading printer properties from .print Client to .print Engine
- For manually created printers:  
Specifying paper formats and sources in the server registry (below)

5 To avoid typos, copy the command line from this white paper with the Text Select Tool in Adobe Reader into the TPOGeng.gpd file (German: TPOGger.gpd).

6 = Selection of paper trays or manual feed

**Tip!**

1. Make a backup copy of the original before modifying the Windows registry.
2. Before modifying, make sure that the printer driver on the client also supports the new paper formats or sources defined in the GPD file.
3. In the event that the Windows registry has been modified and later technical support from ThinPrint becomes necessary, inform the ThinPrint Support Team that the registry was modified and, if possible, what changes have been made.

*Registry* Paper formats and sources can be defined or modified for each printer in the Windows registry. All necessary changes can be made in the following registry key:  
hkey\_local\_machine\system\CurrentControlSet\Control\Print\Printers\  
<printer\_name>\PrinterDriverData

This registry key contains the values TRAYDATA for paper sources and FORMDATA for paper formats:

**TrayData** (reg\_multi\_sz)

Line structure:

TrayIndex,TrayName

**FormData** (reg\_multi\_sz)

Line structure (Illus. 12):

PaperIndex,  
width (1/10 mm),  
height (1/10 mm),  
PaperName  
[¶left and right margin (1/10 mm),  
Upper and lower margin (1/10 mm),  
printable width (1/10 mm),  
printable height (1/10 mm)]

The name of the paper format (PAPERNAME) begins after the third comma and ends with the indent symbol: ¶ (Unicode: 0x00B6 or key combination: Alt-0182; Illus. 12).

**Tip!** 10 mm = 0,394 inch; 1/10 mm = 0,004 inch

## Procedure

*Limitations and snares* Note the following when adding new paper formats:

1. PAPERINDEX is standardized up to the number 118 ([Page 24](#)). Therefore, use only higher numbers – it is best to start with 1000.
2. PAPERNAME must end with the indent symbol (§; see above).
3. When you add paper formats under FORMDATA or paper sources under TRAYDATA, **only** these formats will be available for the relevant printer. If you also wish to continue using the previous formats, you must add them manually as well.
4. If you want to make your changes apply to more than one printer, you must copy the registry entries manually.
5. The paper dimensions should be entered in portrait format (height > width).
6. Changes can be used after the print spooler has been restarted (for example, by entering the commands `net stop spooler` and `net start spooler` in the command prompt).

**Tip!** Please note that under Windows 2000, `reg_mult_sz` registry entries must be edited with the registry editor (`regedt32.exe`).

### TrayData

Enter a line in TRAYDATA for each paper source using the following formula:

`<TrayIndex>, <tray name>`

Example:

```
1, upper_tray
2, middle_tray
3, lower_tray
```

**Tip!** Tray names may not contain blank spaces, and may only be 24 characters long.

The **index** for a specific paper source (TRAYINDEX) depends on the specific printer driver on the client machine. Different printer manufacturers use different indexes for specific paper sources. The upper, middle, and lower paper trays are often defined with the indexes 1 to 3.

To find out which paper source is defined for a printer installed on the client machine, you can use the PrinterTrayInfo.exe tool<sup>7</sup>.

---

<sup>7</sup> [www.it-con.com/thinprint/](http://www.it-con.com/thinprint/)

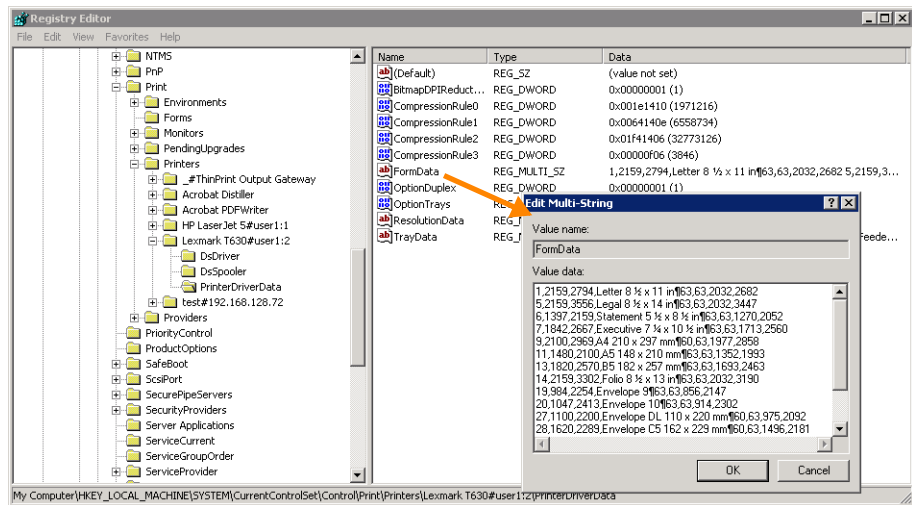
**FormData**

Below is an example for the FORMDATA value. The content was copied from the Output Gateway printer **Lexmark T630** created by .print AutoConnect (Illus. 12):

---- copy from here ----

```
1,2159,2794,Letter 8 1/2 x 11 in¶63,63,2032,2682
5,2159,3556,Legal 8 1/2 x 14 in¶63,63,2032,3447
6,1397,2159,Statement 5 1/2 x 8 1/2 in¶63,63,1270,2052
7,1842,2667,Executive 7 1/4 x 10 1/2 in¶63,63,1713,2560
9,2100,2969,A4 210 x 297 mm¶60,63,1977,2858
11,1480,2100,A5 148 x 210 mm¶63,63,1352,1993
13,1820,2570,B5 182 x 257 mm¶63,63,1693,2463
14,2159,3302,Folio 8 1/2 x 13 in¶63,63,2032,3190
19,984,2254,Envelope 9¶63,63,856,2147
20,1047,2413,Envelope 10¶63,63,914,2302
27,1100,2200,Envelope DL 110 x 220 mm¶60,63,975,2092
28,1620,2289,Envelope C5 162 x 229 mm¶60,63,1496,2181
34,1759,2499,Envelope B5 176 x 250 mm¶60,63,1637,2390
37,984,1905,Envelope 7 3/4¶63,63,853,1794
257,2159,3556,Universal¶63,63,2032,3447
```

---- copy to here ----



**Illus. 12** FormData of the Output Gateway for the Lexmark T630 in the Windows registry on the server

PAPERINDEX is defined in “Microsoft Windows Platform SDK”<sup>8</sup>. If you want to define your own paper formats, it is best to use numbers beginning with 1000 to ensure that the index is not already defined in .print Client. The dimensions of paper formats recognized by Windows can be seen in the **wingdi.h** file (Page 24); all formats deviating from these must be defined manually in the Windows registry under FORMDATA – for example, A1 and A0.

To make it easier to determine the required data, check whether it is possible to create the desired printer in a specific environment with .print AutoConnect. If so,

<sup>8</sup> [msdn.microsoft.com/library/default.asp?url=/library/en-us/sdkintro/sdkintro/devdoc\\_platform\\_software\\_development\\_kit\\_start\\_page.asp](http://msdn.microsoft.com/library/default.asp?url=/library/en-us/sdkintro/sdkintro/devdoc_platform_software_development_kit_start_page.asp)

you only need to copy the registry values FORMDATA and TRAYDATA from the automatically created printers to the printers that are to be created manually (Illus. 12).

## Appendix

### Customer service and technical support

Customer Service [www.thinprint.com/](http://www.thinprint.com/) → SUPPORT  
[support@thinprint.com](mailto:support@thinprint.com)

ThinPrint website [www.thinprint.com/](http://www.thinprint.com/) → SUPPORT

### Possible paper trays in the Output Gateway's GPD file

Automatically, Auto, Manual feed

### Standard paper trays conforming to Microsoft GPD specifications

AUTO, CASSETTE, ENVFEED, ENVMANUAL, FORMSOURCE, LARGECAPACITY, LARGEFORMAT, LOWER, MANUAL, MIDDLE, SMALLFORMAT, TRACTOR, UPPER

See also: [msdn2.microsoft.com/en-us/library/](http://msdn2.microsoft.com/en-us/library/)

### Possible paper trays in the GPD-file of ThinPrint Output Gateway

```
*Option: AUTO
{
  *rcNameID: =AUTO_DISPLAY
  *Command: CmdSelect
  {
    *Order: DOC_SETUP.4
    *Cmd: "<1B>"
  }
}
*Option: MANUAL
{
  *rcNameID: =MANUAL_FEED_DISPLAY
  *Command: CmdSelect
  {
    *Order: DOC_SETUP.4
    *Cmd: "<1B>"
  }
}
*Option: LOWER
{
  *rcNameID: =LOWER_TRAY_DISPLAY
  *Command: CmdSelect
  {
    *Order: DOC_SETUP.4
    *Cmd: "<1B>"
  }
}
```

```
*Option: MIDDLE
{
  *rcNameID: =MIDDLE_TRAY_DISPLAY
  *Command: CmdSelect
  {
    *Order: DOC_SETUP.4
    *Cmd: "<1B>"
  }
}
*Option: UPPER
{
  *rcNameID: =UPPER_TRAY_DISPLAY
  *Command: CmdSelect
  {
    *Order: DOC_SETUP.4
    *Cmd: "<1B>"
  }
}
*Option: ENVFEED
{
  *rcNameID: =ENV_FEED_DISPLAY
  *Command: CmdSelect
  {
    *Order: DOC_SETUP.4
    *Cmd: "<1B>"
  }
}
*Option: ENVMANUAL
{
  *rcNameID: =ENV_MANUAL_DISPLAY
  *Command: CmdSelect
  {
    *Order: DOC_SETUP.4
    *Cmd: "<1B>"
  }
}
*Option: TRACTOR
{
  *rcNameID: =TRACTOR_DISPLAY
  *Command: CmdSelect
  {
    *Order: DOC_SETUP.4
    *Cmd: "<1B>"
  }
}
*Option: SMALLFMT
{
  *rcNameID: =SMALL_FORMAT_DISPLAY
  *Command: CmdSelect
  {
    *Order: DOC_SETUP.4
    *Cmd: "<1B>"
  }
}
*Option: LARGEFMT
{
  *rcNameID: =LARGE_FORMAT_DISPLAY
  *Command: CmdSelect
  {
    *Order: DOC_SETUP.4
    *Cmd: "<1B>"
  }
}
*Option: LARGECAPACITY
```

```

{
    *rcNameID: =LARGE_CAP_DISPLAY
    *Command: CmdSelect
    {
        *Order: DOC_SETUP.4
        *Cmd: "<1B>"
    }
}
*Option: CASSETTE
{
    *rcNameID: =CASSETTE_DISPLAY
    *Command: CmdSelect
    {
        *Order: DOC_SETUP.4
        *Cmd: "<1B>"
    }
}
}

```

## Standard paper formats in ThinPrint Output Gateway (Windows 2000, 2003, XP)

Letter, Legal, A3, A4, A5, B4 (JIS), B4 (ISO), Japanese Postcard, 10x11, 15x11, Double Japanese Postcard

## Windows paper formats

Windows paper formats and their dimensions are defined in the **wingdi.h** file; additional paper formats can be defined for ThinPrint Output Gateway in the Windows registry ([Page 18](#)). Windows paper formats are defined in wingdi.h as follows:

	PaperIndex	Description	
/* paper selections */			
#define DMPAPER_LETTER	1	/* Letter 8 1/2 x 11 in	*/
#define DMPAPER_LETTERSMALL	2	/* Letter Small 8 1/2 x 11 in	*/
#define DMPAPER_TABLOID	3	/* Tabloid 11 x 17 in	*/
#define DMPAPER_LEDGER	4	/* Ledger 17 x 11 in	*/
#define DMPAPER_LEGAL	5	/* Legal 8 1/2 x 14 in	*/
#define DMPAPER_STATEMENT	6	/* Statement 5 1/2 x 8 1/2 in	*/
#define DMPAPER_EXECUTIVE	7	/* Executive 7 1/4 x 10 1/2 in	*/
#define DMPAPER_A3	8	/* A3 297 x 420 mm	*/
#define DMPAPER_A4	9	/* A4 210 x 297 mm	*/
#define DMPAPER_A4SMALL	10	/* A4 Small 210 x 297 mm	*/
#define DMPAPER_A5	11	/* A5 148 x 210 mm	*/
#define DMPAPER_B4	12	/* B4 (JIS) 250 x 354	*/
#define DMPAPER_B5	13	/* B5 (JIS) 182 x 257 mm	*/
#define DMPAPER_FOLIO	14	/* Folio 8 1/2 x 13 in	*/
#define DMPAPER_QUARTO	15	/* Quarto 215 x 275 mm	*/
#define DMPAPER_10X14	16	/* 10x14 in	*/
#define DMPAPER_11X17	17	/* 11x17 in	*/
#define DMPAPER_NOTE	18	/* Note 8 1/2 x 11 in	*/
#define DMPAPER_ENV_9	19	/* Envelope #9 3 7/8 x 8 7/8	*/
#define DMPAPER_ENV_10	20	/* Envelope #10 4 1/8 x 9 1/2	*/
#define DMPAPER_ENV_11	21	/* Envelope #11 4 1/2 x 10 3/8	*/
#define DMPAPER_ENV_12	22	/* Envelope #12 4 1/2 x 11	*/
#define DMPAPER_ENV_14	23	/* Envelope #14 5 x 11 1/2	*/
#define DMPAPER_CSHEET	24	/* C size sheet	*/
#define DMPAPER_DSHEET	25	/* D size sheet	*/
#define DMPAPER_ESHEET	26	/* E size sheet	*/
#define DMPAPER_ENV_DL	27	/* Envelope DL 110 x 220mm	*/
#define DMPAPER_ENV_C5	28	/* Envelope C5 162 x 229 mm	*/

```

#define DMPAPER_ENV_C3          29 /* Envelope C3 324 x 458 mm */
#define DMPAPER_ENV_C4          30 /* Envelope C4 229 x 324 mm */
#define DMPAPER_ENV_C6          31 /* Envelope C6 114 x 162 mm */
#define DMPAPER_ENV_C65        32 /* Envelope C65 114 x 229 mm */
#define DMPAPER_ENV_B4          33 /* Envelope B4 250 x 353 mm */
#define DMPAPER_ENV_B5          34 /* Envelope B5 176 x 250 mm */
#define DMPAPER_ENV_B6          35 /* Envelope B6 176 x 125 mm */
#define DMPAPER_ENV_ITALY      36 /* Envelope 110 x 230 mm */
#define DMPAPER_ENV_MONARCH    37 /* Envelope Monarch 3.875 x 7.5 in */
#define DMPAPER_ENV_PERSONAL   38 /* 6 3/4 Envelope 3 5/8 x 6 1/2 in */
#define DMPAPER_FANFOLD_US      39 /* US Std Fanfold 14 7/8 x 11 in */
#define DMPAPER_FANFOLD_STD_GERMAN 40 /* German Std Fanfold 8 1/2 x 12 in */
#define DMPAPER_FANFOLD_LGL_GERMAN 41 /* German Legal Fanfold 8 1/2 x 13 in */
#define DMPAPER_ISO_B4          42 /* B4 (ISO) 250 x 353 mm */
#define DMPAPER_JAPANESE_POSTCARD 43 /* Japanese Postcard 100 x 148 mm */
#define DMPAPER_9X11           44 /* 9 x 11 in */
#define DMPAPER_10X11          45 /* 10 x 11 in */
#define DMPAPER_15X11          46 /* 15 x 11 in */
#define DMPAPER_ENV_INVITE      47 /* Envelope Invite 220 x 220 mm */
#define DMPAPER_RESERVED_48    48 /* RESERVED--DO NOT USE */
#define DMPAPER_RESERVED_49    49 /* RESERVED--DO NOT USE */
#define DMPAPER_LETTER_EXTRA    50 /* Letter Extra 9 \275 x 12 in */
#define DMPAPER_LEGAL_EXTRA     51 /* Legal Extra 9 \275 x 15 in */
#define DMPAPER_TABLOID_EXTRA   52 /* Tabloid Extra 11.69 x 18 in */
#define DMPAPER_A4_EXTRA        53 /* A4 Extra 9.27 x 12.69 in */
#define DMPAPER_LETTER_TRANSVERSE 54 /* Letter Transverse 8 \275 x 11 in */
#define DMPAPER_A4_TRANSVERSE   55 /* A4 Transverse 210 x 297 mm */
#define DMPAPER_LETTER_EXTRA_TRANSVERSE 56 /* Letter Extra Transverse 9\275 x 12 in */
#define DMPAPER_A_PLUS          57 /* SuperA/SuperA/A4 227 x 356 mm */
#define DMPAPER_B_PLUS          58 /* SuperB/SuperB/A3 305 x 487 mm */
#define DMPAPER_LETTER_PLUS     59 /* Letter Plus 8.5 x 12.69 in */
#define DMPAPER_A4_PLUS         60 /* A4 Plus 210 x 330 mm */
#define DMPAPER_A5_TRANSVERSE   61 /* A5 Transverse 148 x 210 mm */
#define DMPAPER_B5_TRANSVERSE   62 /* B5 (JIS) Transverse 182 x 257 mm */
#define DMPAPER_A3_EXTRA        63 /* A3 Extra 322 x 445 mm */
#define DMPAPER_A5_EXTRA        64 /* A5 Extra 174 x 235 mm */
#define DMPAPER_B5_EXTRA        65 /* B5 (ISO) Extra 201 x 276 mm */
#define DMPAPER_A2              66 /* A2 420 x 594 mm */
#define DMPAPER_A3_TRANSVERSE   67 /* A3 Transverse 297 x 420 mm */
#define DMPAPER_A3_EXTRA_TRANSVERSE 68 /* A3 Extra Transverse 322 x 445 mm */
#define DMPAPER_DBL_JAPANESE_POSTCARD 69 /* Japanese Double Postcard 200x148 mm */
#define DMPAPER_A6              70 /* A6 105 x 148 mm */
#define DMPAPER_JENV_KAKU2      71 /* Japanese Envelope Kaku #2 */
#define DMPAPER_JENV_KAKU3      72 /* Japanese Envelope Kaku #3 */
#define DMPAPER_JENV_CHOU3      73 /* Japanese Envelope Chou #3 */
#define DMPAPER_JENV_CHOU4      74 /* Japanese Envelope Chou #4 */
#define DMPAPER_LETTER_ROTATED  75 /* Letter Rotated 11 x 8 1/2 11 in */
#define DMPAPER_A3_ROTATED      76 /* A3 Rotated 420 x 297 mm */
#define DMPAPER_A4_ROTATED      77 /* A4 Rotated 297 x 210 mm */
#define DMPAPER_A5_ROTATED      78 /* A5 Rotated 210 x 148 mm */
#define DMPAPER_B4_JIS_ROTATED  79 /* B4 (JIS) Rotated 364 x 257 mm */
#define DMPAPER_B5_JIS_ROTATED  80 /* B5 (JIS) Rotated 257 x 182 mm */
#define DMPAPER_JAPANESE_POSTCARD_ROTATED 81
/* Japanese Postcard Rotated 148 x 100 mm */
#define DMPAPER_DBL_JAPANESE_POSTCARD_ROTATED 82
/* Double Japanese Postcard Rotated 148 x 200 mm */
#define DMPAPER_A6_ROTATED      83 /* A6 Rotated 148 x 105 mm */
#define DMPAPER_JENV_KAKU2_ROTATED 84 /* Japanese Envelope Kaku #2 Rotated */
#define DMPAPER_JENV_KAKU3_ROTATED 85 /* Japanese Envelope Kaku #3 Rotated */
#define DMPAPER_JENV_CHOU3_ROTATED 86 /* Japanese Envelope Chou #3 Rotated */
#define DMPAPER_JENV_CHOU4_ROTATED 87 /* Japanese Envelope Chou #4 Rotated */
#define DMPAPER_B6_JIS          88 /* B6 (JIS) 128 x 182 mm */
#define DMPAPER_B6_JIS_ROTATED  89 /* B6 (JIS) Rotated 182 x 128 mm */
#define DMPAPER_12X11          90 /* 12 x 11 in */
#define DMPAPER_JENV_YOU4       91 /* Japanese Envelope You #4 */
#define DMPAPER_JENV_YOU4_ROTATED 92 /* Japanese Envelope You #4 Rotated */
#define DMPAPER_P16K           93 /* PRC 16K 146 x 215 mm */
#define DMPAPER_P32K           94 /* PRC 32K 97 x 151 mm */
#define DMPAPER_P32KBIG        95 /* PRC 32K(Big) 97 x 151 mm */
#define DMPAPER_PENV_1         96 /* PRC Envelope #1 102 x 165 mm */

```

```
#define DMPAPER_PENV_2          97 /* PRC Envelope #2 102 x 176 mm */
#define DMPAPER_PENV_3          98 /* PRC Envelope #3 125 x 176 mm */
#define DMPAPER_PENV_4          99 /* PRC Envelope #4 110 x 208 mm */
#define DMPAPER_PENV_5         100 /* PRC Envelope #5 110 x 220 mm */
#define DMPAPER_PENV_6         101 /* PRC Envelope #6 120 x 230 mm */
#define DMPAPER_PENV_7         102 /* PRC Envelope #7 160 x 230 mm */
#define DMPAPER_PENV_8         103 /* PRC Envelope #8 120 x 309 mm */
#define DMPAPER_PENV_9         104 /* PRC Envelope #9 229 x 324 mm */
#define DMPAPER_PENV_10        105 /* PRC Envelope #10 324 x 458 mm */
#define DMPAPER_P16K_ROTATED    106 /* PRC 16K Rotated */
#define DMPAPER_P32K_ROTATED    107 /* PRC 32K Rotated */
#define DMPAPER_P32KBIG_ROTATED 108 /* PRC 32K(Big) Rotated */
#define DMPAPER_PENV_1_ROTATED  109 /* PRC Envelope #1 Rotated 165x102 mm*/
#define DMPAPER_PENV_2_ROTATED  110 /* PRC Envelope #2 Rotated 176x102 mm*/
#define DMPAPER_PENV_3_ROTATED  111 /* PRC Envelope #3 Rotated 176x125 mm*/
#define DMPAPER_PENV_4_ROTATED  112 /* PRC Envelope #4 Rotated 208x110 mm*/
#define DMPAPER_PENV_5_ROTATED  113 /* PRC Envelope #5 Rotated 220x110 mm*/
#define DMPAPER_PENV_6_ROTATED  114 /* PRC Envelope #6 Rotated 230x120 mm*/
#define DMPAPER_PENV_7_ROTATED  115 /* PRC Envelope #7 Rotated 230x160 mm*/
#define DMPAPER_PENV_8_ROTATED  116 /* PRC Envelope #8 Rotated 309x120 mm*/
#define DMPAPER_PENV_9_ROTATED  117 /* PRC Envelope #9 Rotated 324x229 mm*/
#define DMPAPER_PENV_10_ROTATED 118 /* PRC Envelope #10 Rotated 458x324 mm*/
```

See also: [msdn.microsoft.com/library/](http://msdn.microsoft.com/library/)