

Two Pilots Virtual Printer

document version: 7.3

Table of contents

1. Virtual printer driver components
2. Agent settings
 - general
 - preprocessing
 - preconverting
 - application (postconverting)
3. Converter settings
 - general
 - emf2bmp
 - emf2png
 - emf2jpeg
 - emf2tiff
 - emf2pdf
 - emf2txt
 - redirect
 - POS
 - RAW
4. Watermark settings
 - graphic watermarks
 - text watermarks
5. FTP settings
6. Miscellaneous settings

Virtual printer driver components.

Component name	Description
VPDAgent.exe	Windows service for communications between virtual printer driver and other components (converter, client application and etc.).
fwproc.exe	Auxiliary unit for translating messages from «Agent» service to the client application.
svinst.exe	Installation unit for «Agent» service. Usage: svinst.exe cmd cmd: install - install Agent service. uninstall - uninstall Agent service. uninstall_force - force uninstall Agent service. start - start Agent service (install it before). stop - stop Agent service (install it before).
progress.exe	Process indicator unit.
properties.exe	A property sheet with general printer options and the conversion options.
SampleClient.exe	Sample client application used for testing and development purposes only.
setupdrv.exe	Printer driver setup unit. Adds new printer to the system. Usage: setupdrv.exe cmd cmd: install - install virtual printer driver uninstall - uninstall virtual printer driver quiet - quiet mode
unidrv_7x{32,64}.dll	Standard UNIDRV printer driver from Windows 7 x32/x64.
vpdisp.exe	Converts EMF images captured by the virtual printer to other graphics and document formats. Also implements additional feature.
*.gpd	UNIDRV plugin configuration file.
*.ini	Required driver configuration file.
*.lng	Language file for the printing preferences module.
*pm.dll	Port-monitor unit.
*ui.dll	Adds additional pages to the system «Printer and Document Properties» dialog.

Agent settings. These options can be global (HKLM hive) or local (HKCU hive).
HKCU hive prefer for current logged in user.

Option name	Type	Description	Value	Default value
Installation Directory (HKLM only)	REG_SZ	Installation directory for printer's driver components. Should be set during the installation process in the HKLM hive.		
Output Directory	REG_SZ	Output directory for generated files. You have to care about the write access right to output directory for all required user accounts.		
Timeout (optional)	REG_DWORD	This option enables timeout value for waiting some events. By default timeout is 5000 ms.		5000
Allow guest session (optional, HKLM only)	REG_DWORD	This option enables exec applications with current logged on user permission rights if Guest session was detected. HKLM hive only.	0- disable 1- enable	0
Allow domain session (optional, HKLM only)	REG_DWORD	This option enables exec applications with current logged on user permission rights if Domain session was detected. HKLM hive only. <EXPERIMENTAL>	0- disable 1- enable	0
Allow self session (optional, HKLM only)	REG_DWORD	This option enables exec application with Agent service permission rights (SYSTEM by default) even w/o any active session. HKLM hive only.	0- disable 1- enable	0

Agent settings. These options can be global (HKLM hive) or local (HKCU hive).
HKCU hive prefer for current logged in user.

Option name	Type	Description	Value	Default value
Preprocessing: Enabled (optional, HKLM only)	REG_DWORD	This option enables preprocessing. Preprocessing: Application, Preprocessing: Transfer Mode are required. ATTENTION: Agent service should be restarted to apply option changes. To continue print job render the preprocessing application should add to the INI-file next section: [Job] Status=resumed To cancel print job render the preprocessing application should add to the INI-file next section: [Job] Status=canceled	0- disable 1- enable	0
Preprocessing: Application (optional)	REG_SZ	Full path to the preprocessing application. Preprocessing: Enabled, Preprocessing: Transfer Mode are required.		
Preprocessing: Transfer Mode (optional)	REG_DWORD	Type of the communication between Agent and preprocessing application. Preprocessing: Enabled, Preprocessing: Application are required.	0- through the command line 1- through the WM_COPYDATA 2- none 3- through the named pipe	
Preprocessing: Skip (optional)	REG_DWORD	This option enable to skip preprocessing application call for EMF/RAW data.	0- allow application call for EMF/RAW 1- disable application call for EMF 2- disable application call for RAW 3- disable application call	0
Preprocessing: Target Window Title (optional)	REG_SZ	Title of the preprocessing application window. Preprocessing: Message ID is required.		
Preprocessing: Message ID (optional)		Unique numeric value to identify that the notification message has been received from the printer driver. For the WM_COPYDATA transfer mode this value represents dwData member of COPYDATASTRUCT structure. Preprocessing: Target Window Title is required.		
Preprocessing: Pipe Name (optional)	REG_SZ	Unique pipe name for ini-file transfer to the preprocessing application. Preprocessing: Pipe Size, Preprocessing: Pipe Launch Client Application, Preprocessing: Pipe Timeout are required.		
Preprocessing: Pipe Size (optional)	REG_DWORD	Pipe message size. Preprocessing: Pipe Name, Preprocessing: Pipe Launch Client Application, Preprocessing: Pipe Timeout are required		
Preprocessing: Pipe Launch Client Application (optional)	REG_DWORD	This option allow to launch the preprocessing application or skip it. Preprocessing: Pipe Name, Preprocessing: Pipe Size, Preprocessing: Pipe Timeout are required.	0- don't launch an application 1- launch an application	
Preprocessing: Pipe Timeout (optional)	REG_DWORD	Timeout value in ms after the preprocessing application launch. Preprocessing: Pipe Name, Preprocessing: Pipe Size, Preprocessing: Pipe Launch Client Application are required.		

Agent settings. These options can be global (HKLM hive) or local (HKCU hive).
HKCU hive prefer for current logged in user.

Option name	Type	Description	Value	Default value
Preconverting: Enabled (optional)	REG_DWORD	This option enables preconverting. Preconverting: Application, Preconverting: Transfer Mode are required. To continue print job render the preconverting application should add to the INI-file next section: [Preconverting] Status=resumed To cancel print job render the preconverting application should add to the INI-file next section: [Preconverting] Status=canceled	0- disable 1- enable	
Preconverting: Application (optional)	REG_SZ	Full path to the preconverting application. Preconverting: Enabled, Preconverting: Transfer Mode are required.		
Preconverting: Transfer Mode (optional)	REG_DWORD	Type of the communication between Agent and preconverting application. Preconverting: Enabled, Preconverting: Application are required.	0- through the command line 1- through the WM_COPYDATA 2- none 3- through the named pipe	
Preconverting: Skip (optional)	REG_DWORD	This option enable to skip preconverting application call for EMF/RAW data.	0- allow application call for EMF/RAW 1- disable application call for EMF 2- disable application call for RAW 3- disable application call	0
Preconverting: Target Window Title (optional)	REG_SZ	Title of the preconverting application window. Preconverting: Message ID is required.		
Preconverting: Message ID (optional)	REG_DWORD	Unique numeric value to identify that the notification message has been received from the printer driver. For the WM_COPYDATA transfer mode this value represents dwData member of COPYDATASTRUCT structure. Preconverting: Target Window Title is required.		
Preconverting: Pipe Name (optional)	REG_SZ	Unique pipe name for ini-file transfer to the preconverting application. Preconverting: Pipe Size, Preconverting: Pipe Launch Client Application, Preconverting: Pipe Timeout are required.		
Preconverting: Pipe Size (optional)	REG_DWORD	Pipe message size. Preconverting: Pipe Name, Preconverting: Pipe Launch Client Application, Preconverting: Pipe Timeout are required		
Preconverting: Pipe Launch Client Application (optional)	REG_DWORD	This option allow to launch the preconverting application or skip it. Preconverting: Pipe Name, Preconverting: Pipe Size, Preconverting: Pipe Timeout are required.	0- don't launch an application 1- launch an application	
Preconverting: Pipe Timeout (optional)	REG_DWORD	Timeout value in ms after the preconverting application launch. Preconverting: Pipe Name, Preconverting: Pipe Size, Preconverting: Pipe Launch Client Application are required.		
Client Application	REG_SZ	Full path to the client application.		
Application: Skip (optional)	REG_DWORD	This option enable to skip application call for EMF/RAW data.	0- allow application call for EMF/RAW 1- disable application call for EMF 2- disable application call for RAW 3- disable application call	0

Agent settings. These options can be global (HKLM hive) or local (HKCU hive).
HKCU hive prefer for current logged in user.

Option name	Type	Description	Value	Default value
Transfer mode	REG_DWORD	Type of the communication between Agent and client application.	0- through the command line 1- through the WM_COPYDATA 2- none 3- through the named pipe	0
Target Window Title (optional)	REG_SZ	Title of the client application window. Message ID is required.		
Message ID (optional)	REG_DWORD	Unique numeric value to identify that the notification message has been received from the printer driver. For the WM_COPYDATA transfer mode this value represents dwData member of COPYDATASTRUCT structure. Target Window Title is required.	For WM_COPYDATA transfer mode the value must be in range from 0 to 4294967295 (0xFFFFFFFF).	
Pipe: Name (optional)	REG_SZ	Unique pipe name for ini-file transfer to the client application. Pipe: Size, Pipe: Launch Client Application, Pipe: Timeout are required.		
Pipe: Size (optional)	REG_DWORD	Pipe message size. Pipe: Name, Pipe: Launch Client Application, Pipe: Timeout are required.		
Pipe: Launch Client Application (optional)	REG_DWORD	This option allow to launch client application or skip it. Pipe: Name, Pipe: Size, Pipe: Timeout are required.	0- don't launch client application 1- launch client application	
Pipe: Timeout (optional)	REG_DWORD	Timeout value in ms after the client application launch. Pipe: Name, Pipe: Size, Pipe: Launch Client Application are required.		

Converter settings. These options can be global (HKLM hive) or local (HKCU hive).

Option name	Type	Description	Value	Default value
CONVERTER: Threads (optional)	REG_DWORD	This option sets thread pool size for emf2bmp/jpeg/png/single-tiff converters.		2
CONVERTER: Show Progress	REG_DWORD	This options enables show or hide progress bar.	0- disable 1- enable	1
EMF: Enabled	REG_DWORD	This option enables producing of EMF files.	0- disable 1- enable	0
BMP: Enabled	REG_DWORD	This option enables producing of BMP files.	0- disable 1- enable	0
BMP: Bits per pixel	REG_DWORD	This option sets color quality (bits per pixel) of BMP images.	1- 1bpp (black and white) 4- 4bpp color (16 colors) 8- 8bpp color (256 colors) 24- 24bpp	24
BMP: Grayscale	REG_DWORD	This option sets BMP to 8bpp grayscale mode. If enabled BMP: Bits per pixel parameter is ignored.	0- grayscale mode off 1- grayscale mode on	0
BMP: Dithering	REG_DWORD	Dithering algorithm to use for conversion of color images to 1-bit black&white images. The algorithms differ by speed and quality.	0- Floyd-Steinberg 1- Ordered-Dithering (4x4) 2- Burkes 3- Stucki 4- Jarvis-Judice-Ninke 5- Sierra 6- Stevenson-Arce 7- Bayer (4x4 ordered dithering)	0

Converter settings. These options can be global (HKLM hive) or local (HKCU hive).

Option name	Type	Description	Value	Default value
PNG: Enabled	REG_DWORD	This option enables producing of PNG files.	0- disable 1- enable	0
PNG: Bits per pixel	REG_DWORD	This option sets the color quality (bits per pixel) of PNG images.	1- 1bpp (black and white) 4- 4bpp color (16 colors) 8- 8bpp color (256 colors) 24- 24bpp	24
PNG: Grayscale	REG_DWORD	This option sets PNG to 8bpp grayscale mode. If enabled PNG: Bits per pixel parameter is ignored.	0- grayscale mode off 1- grayscale mode on	0
PNG: Dithering	REG_DWORD	Dithering algorithm to use for conversion of color images to 1-bit black&white images. The algorithms differ by speed and quality.	0- Floyd-Steinberg 1- Ordered-Dithering (4x4) 2- Burkes 3- Stucki 4- Jarvis-Judice-Ninke 5- Sierra 6- Stevenson-Arce 7- Bayer (4x4 ordered dithering)	0
JPEG: Enabled	REG_DWORD	This option enables producing of JPEG files.	0- disable 1- enable	0
JPEG: Quality	REG_DWORD	This option sets the JPEG quality.	Must be in range from 0 (min size) to 255 (max quality)	80
JPEG: Grayscale	REG_DWORD	This option sets JPEG to the grayscale mode.	0- grayscale mode off 1- grayscale mode on	0
TIFF: Enabled	REG_DWORD	This option enables producing of TIFF files.	0- disable 1- enable	0
TIFF: Bits per pixel	REG_DWORD	This option sets the color quality (bits per pixel) of TIFF images.	1- 1bpp (black and white) 4- 4bpp color (16 colors) 8- 8bpp color (256 colors) 24- 24bpp	24
TIFF: Grayscale	REG_DWORD	This option sets TIFF to 8bpp grayscale mode. If enabled TIFF: Bits per pixel parameter is ignored.	0- grayscale mode off 1- grayscale mode on	0
TIFF: Dithering	REG_DWORD	Dithering algorithm to use for conversion of color images to 1-bit black&white images. The algorithms differ by speed and quality.	0- Floyd-Steinberg 1- Ordered-Dithering (4x4) 2- Burkes 3- Stucki 4- Jarvis-Judice-Ninke 5- Sierra 6- Stevenson-Arce 7- Bayer (4x4 ordered dithering)	0
TIFF: Multipage	REG_DWORD	This option enables generation of multipage TIFF file.	0- separate TIFF file for every printed page 1- multipage TIFF file	1
TIFF: Compression	REG_DWORD	This option sets TIFF compression.	0- Automatic 1- None 2- CCITT modified Huffman RLE 3- CCITT Group 3 fax encoding 4- CCITT Group 4 fax encoding 5- Lempel-Ziv & Welch 7- JPEG DCT compression 32773- Macintosh RLE 32946- Deflate compression 8- Adobe deflate compression	0
PDF: Enabled	REG_DWORD	This option enables producing of PDF files.	0- disable 1- enable	0
PDF: Produce PDF/A (optional)	REG_DWORD	This option enables producing of PDF-A/b files.	0- disable 1- enable	0
PDF: Separate	REG_DWORD	This option enables generation of separate PDF file for every printed page.	0 - one multipage PDF document 1 - separate PDF files	0
PDF: Do not embed fonts	REG_DWORD	This option turns off the PDF font embedding.	0- embedding on 1- embedding off	0

Converter settings. These options can be global (HKLM hive) or local (HKCU hive).

Option name	Type	Description	Value	Default value
PDF: Embed Font Style (optional, HKLM only)	REG_DWORD	This option allow to sets the style for embedded fonts in the PDF document.	0- embeds the full font 1- embeds only the character set 2- embeds only the glyphs 3- does not embed fonts	
PDF: Exclude fonts	REG_SZ	This option excludes specific fonts from embedding into PDF document.	Enumerate fonts you want to exclude separating them with ";" symbol. For example: PDF: Exclude fonts=Arial Unicode MS;Impact	
PDF: Creation Date (optional)	REG_DWORD	This option sets PDF files creation date to local time. By default creation date sets to system time.	0- disable 1- enable	0
PDF: Log (optional)	REG_DWORD	This option enables log for PDF Creator Pilot library. Log file will be placed in "%UserAppData%\Two Pilots\PDF Library\Log.txt"	0- disable 1- enable	0
TXT: Enabled	REG_DWORD	This option enables producing of TXT files.	0- disable 1- enable	0
TXT: Separate	REG_DWORD	This option enables generation of separate TXT file for every printed page.	0- single continuous TXT document 1- separate TXT files	0
TXT: Encoding	REG_DWORD	This options sets text encoding.	0- ANSI 1- Unicode 2- UTF-8	0
TXT: Write BOM	REG_DWORD	This option sets writing of byte-order mark (BOM) at the beginning of Unicode and UTF-8 encoded text file.	0- BOM off 1- BOM on	0
TXT: Adobe embed fix (optional)	REG_DWORD	This option enables to encode glyphs for Adobe embed fonts.	0- disable 1- enable	0
TXT: Single line interval (optional)	REG_DWORD	This option allows to set width of an interval on axis OY in which two words are in single line.		5
TXT: Debug (optional)	REG_DWORD	This option allows to print tokens information at the end of text file.	0- disable 1- enable	0
TXT: Default Bidirectional Algorithm (optional)	REG_DWORD	This option allows to use default bidirectional algorithm for Unicode/UTF-8 codepages.	0- disable 1- enable	0
REDIRECT: Enabled	REG_DWORD	This option enables the print redirection. REDIRECT: Printer is required.	0- redirection disabled 1- redirection enabled	0
REDIRECT: Printer	REG_SZ	Name of printer to redirect to. REDIRECT: Enabled is required.		
REDIRECT: Spool (optional)	REG_DWORD	Redirect raw spool file to the target printer.	0- spool redirection disabled 1- spool redirection enabled	0
REDIRECT: Watermarks (optional)	REG_DWORD	This option enables watermarking on redirected documents.	0- watermarks disabled 1- watermarks enabled	0
REDIRECT: Corrections (optional)	REG_SZ	This option allow to correct print area margins. Corrections look like «left;top;right;bottom», where left: >0 move to the right, <0 move to the left top: >0 move to the bottom, <0 move to the top right: >0 move to the left, <0 move to the right bottom: >0 move to the top, <0 move to the bottom		«0;0;0;0»
POS Converter: Enabled	REG_DWORD	This option enables POS converter with loop redirection.	0- POS converter disabled 1- POS converter enabled	0
RAW: Enabled (optional)	REG_DWORD	This option enables RAW-data storing after printing.	0- disable 1- enable	0

Watermark settings. These options can be global (HKLM hive) or local (HKCU hive), used «Watermarks» subkey. HKCU hive prefer for current logged in user.

Option name	Type	Description
WATERMARK: Enabled	REG_DWORD	This option enables watermarks.
ImageWtmCount (optional)	REG_DWORD	Count of graphic watermarks. WATERMARK: Enabled is required.
ImageWtmSourceiii (optional)	REG_SZ	<p>Information string for image watermark number iii where iii zero-based index. ImageWtmSourceiii string is <full_path;left_border;right_border;top_border;bottom_border;fillmode;posmode;pages> where</p> <p>full_path: full path to the watermark's image. Supported formats are JPEG/BMP/TIFF(single page)/PNG</p> <p>left_border: space at the left on page in pixels.</p> <p>right_border: space at the right on page in pixels.</p> <p>top_border: space from above on page in pixels.</p> <p>bottom_border: space from below on page in pexels.</p> <p>fillmode: fill type, available types are «Fill», «Fit», «Stretch», «Title», «Center», «none».</p> <p>posmode: choice of the beginning of coordinates. It is available when «fillmode» is «none» differently it is passed. LT: the beginning of coordinates in the left top corner LB: the beginning of coordinates in the left bottom corner RT: the beginning of coordinates in the right top corner RB: the beginning of coordinates in the right bottom corner C: place watermark to the center</p> <p>pages: list of pages where watermark should be. It should be like «1,2-4,7-10,13,24». For using image for all pages set this value to a big range like 1-1000 .</p> <p>Sample:</p> <p>in «HKEY_LOCAL_MACHINE\Software\Company\Printer\Watermarks»</p> <p>ImageWtmCount=2 ImageWtmSource0=«c:\tmp\wtm0.jpg;10;20;10;30;Fill;*;1-3,7,15-20» ImageWtmSource1=«c:\tmp\wtm1.bmp;10;20;30;40;none;LT;3,4,5,6»</p> <p>WATERMARK: Enabled and ImageWtmCount are required.</p>
TextWtmCount (optional)	REG_DWORD	<p>Count of text watermarks.</p> <p>WATERMARK: Enabled is required.</p>
TextWtmSourceiii (optional)	REG_SZ	<p>Information string for text watermark number iii where iii zero-based index. TextWtmSourceiii string look like <text_message;left_border;right_border;top_border;bottom_border;posmode;horz_alignment;vert_alignment;color;font_size;angel;pages> where</p> <p>text_message: text message for watermark w/o ';' symbol.</p> <p>left_border: space at the left on page in pixels.</p> <p>right_border: space at the right on page in pixels.</p> <p>top_border: space from above on page in pixels.</p> <p>bottom_border: space from below on page in pexels.</p> <p>posmode: choice of the beginning of coordinates. LT: the beginning of coordinates in the left top corner LB: the beginning of coordinates in the left bottom corner RT: the beginning of coordinates in the right top corner RB: the beginning of coordinates in the right bottom corner C: place watermark to the center</p> <p>horz_alignment: horizontal text alignment. Can be one of «left», «center», «right».</p> <p>vert_alignment: vertical text alignment. Can be one of «top», «center», «bottom».</p> <p>color: text color for watermark. Color format is 0xBBGGRR where BB — blue channel, GG — green channel, RR — red channel. For example: 0x1e140a.</p> <p>font_size: text font size.</p>

Watermark settings. These options can be global (HKLM hive) or local (HKCU hive), used «Watermarks» subkey.
HKCU hive prefer for current logged in user.

Option name	Type	Description
		<p>angel: text rotation angel in degreese.</p> <p>pages: list of pages where watermark should be. It should be like «1,2-4,7-10,13,24». For using image for all pages set this value to a big range like 1-1000 .</p> <p>Sample: in «HKEY_LOCAL_MACHINE\Software\Company\Printer\Watermarks» TextWtmCount=1 TextWtmSource0=«my test text watermark;400;100;10;10;RB;left;top;0x00FF00;32;0;0-100»</p> <p>WATERMARK: Enabled and TextWtmCount are required.</p>

FTP settings. These options can be global (HKLM hive) or local (HKCU hive).
HKCU hive prefer for current logged in user.

Option name	Type	Description	Value
FTP: Enabled	REG_DWORD	This option enables files upload via FTP.	0- disable 1- enable
FTP: url	REG_SZ	URL string like «ftp://colorpilot.com».	
FTP: uname	REG_SZ	User name.	
FTP: passwd	REG_SZ	Plain-text password.	
FTP: upload	REG_SZ	<p>Information string for uploaded files. String value should be in format (TYPE:DIR;)*, where TYPE: uploaded files type like EMF/BMP/JPEG/PDF/PNG/TXT/TIFF DIR: target directory for upload. Upload directory should exists.</p> <p>Sample: in «HKEY_CURRENT_USER\Software\Company\Printer» FTP: url=«ftp://colorpilot.com» FTP: upload=«BMP:.» will upload all BMP files to the «ftp://colorpilot.com/.» directory i.e. root directory.</p> <p>FTP: upload=«BMP:.;JPEG;jpeg;PNG:other/png» will upload all BMP files to the «ftp://colorpilot.com/.» directory, all JPEG files to the «ftp://colorpilot.com/jpeg/» directory and all PNG files to the «ftp://colorpilot.com/other/png/» directory.</p>	

Miscellaneous settings. These options are global (HKLM hive).

Option name	Type	Description	Value	Default value
EMF: Hide page	REG_DWORD	Hide EMF property page.	0- show 1- hide	0
BMP: Hide page	REG_DWORD	Hide BMP property page.	0- show 1- hide	0
PNG: Hide page	REG_DWORD	Hide PNG property page.	0- show 1- hide	0
JPEG: Hide page	REG_DWORD	Hide JPEG propetry page.	0- show 1- hide	0

Miscellaneous settings. These options are global (HKLM hive).

Option name	Type	Description	Value	Default value
TIFF: Hide page	REG_DWORD	Hide TIFF property page.	0- show 1- hide	0
PDF: Hide page	REG_DWORD	Hide PDF property page.	0- show 1- hide	0
TXT: Hide page	REG_DWORD	Hide TXT property page.	0- show 1- hide	0
REDIRECT: Hide page	REG_DWORD	Hide Redirection property page.	0- show 1- hide	0
LANGUAGE: Hide page	REG_DWORD	Hide Language property page.	0- show 1- hide	0
Agent: Hide page	REG_DWORD	Hide Agent property page.	0- show 1- hide	0
About: Hide page	REG_DWORD	Hide About property page of drvui dialog.	0- show 1- hide	0
Additional: Hide page	REG_DWORD	Hide Additional property page of drvui dialog.	0- show 1- hide	0
Version	REG_SZ	This option enables version info in the «About» tab.		