DpuScan

DpuScan 7

Reference Manual

TWAIN Scanner

DpuScan

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errors, omissions, or discrepancies between this manual and the product.

Actuality

It may happen that a more recent version of this manual for DpuScan is available for download
from the Internet. Therefore, it is recommended that you should compare the version by means
of the date printed on this page with the version on the Internet. You should please use the
most up-to-date version of the manual.

Table of Contents

1   DPUTWAIN Configuration

The DPUTWAIN driver interfaces TWAIN scanner drivers to DPU applications.

To configure the driver interface and to setup TWAIN scanning parameters there are the following dialog pages and subsequent dialogs:

TWAIN   TWAIN Scanner Configuration

TWAIN more   Further settings, in particular for the communication process and special scanner settings

TWAIN Barcode   Settings for the hand over of the scanner's barcode search result.

TW-Specials   Special settings around TWAIN driver interface.

1.1   TWAIN

The TWAIN "User Interface", that is the scanner's setup dialog provided by the TWAIN driver, is available here.
Also, some operation parameters for the DPUTWAIN driver can be selected.

Depending on the capabilities of the scanner some of these controls may be not available.

TWAIN Setup   The following values indicate how the scanner should be operated.

Show User Interface ..   This button opens the TWAIN driver's setup dialog. Make all scanner related settings in this dialog.
For the other settings there consult the manual of the scanner manufacturer for help.

Note: The "User Interface" dialog must be closed before further DPU settings or testscans can be done.

Note: Some TWAIN scanner offer to save your settings when you **exit the setup dialog**. This is useful for other programs that don't have own storage options. So if you use the scanner with other software too, you should ensure that the settings are not overwritten. In this case you should just cancel the Save dialog, or leave it with "no".

Show User Interface   If checked, the "User Interface" will be open while scanning process.
while Scanning

In general, it makes more sense to hide the dialog, because the functions start / stop can also be performed by the program.

So it is recommended not to activate this feature. But it may happen that the driver of the scanner requires this procedure. If so, the parameters should be changed with care; the DPU scanning software assumes some parameters to be constant while scanning!

ON or **OFF**, Default: **OFF**

Show Indicators   Shows - if exists - a status dialog of the scanner on the screen while scanning. This can be, for example, a progressbar for a flatbed scanner.

ON or **OFF**, Default: **OFF**

Advanced Settings	The following values defines how the communication shall carried out between the program and the driver. These settings are determined automatically and should be changed only in a case of a failure.
check FEEDERLOADED before starting feeder	Should be set to ON normally. Set to OFF if:
Autoselect Feeder/Flatbed	(1) paper detection does not work (machine does not start but reports 'no more paper'); (2) the scanner supports feature 'automatic switching to flatbed if feeder is empty' and you want to use this.

Note: check FEEDERLOADED is not processed when 'Show User Interface while Scanning' is selected.

ON or **OFF**, Default: **ON**

Image Transfer Mode   **Memory**

> In this mode the images can be transferred compressed. This may save time.

Native

> This basic mode is defined for all TWAIN scanner and should work always.

Default: **Memory**

Bitonal Transfer Compression   **G4**

> Transfers black/white images compressed by the CCITT method G4.

Uncompressed

> Transfers black/white images uncompressed

Panel

> Uses the parameters as set in the scanner driver or at the machine.

Default:**G4**

Gray/Color Transfer Compression   **JPEG**

> Transfers gray images and color images compressed by the JPEG method

Uncompressed

> Transfers gray images and color images uncompressed.

Panel

> Uses the parameters as set in the scanner driver or at the machine.

Default: **JPEG**

Bitonal Photometric Uncomp.   Defines the interpretation of the image data for black/white images. This can be set for **G4** and **uncompressed** images separately.

	normal: Ones will be interpreted as black, zeros as white.
G4	**Reverse**: Zeros will be interpreted as black, ones as white

If the scanner serves the TWAIN-Capabilitiy **TWEI_PIXELFLAVOR** , also this values may be used.

XImg Info: Interpretation as given in the XImg information

rev. XImg Info: Reversed interpretation as given in the XImg information

Default: **normal, normal**

Paper Side Info   Specifies how to determine whether the side is a front or back.

by DS:

Only the information from the DS (also know as DATASOURCE) is used..

by DS/Counter:

First it will be tried to get the information from the DS. Then, if this doesn't exists, the internal counter is used.

by DS/Counter

The internal counter is used.

Default: **DS/Counter**

more ...   Opens a further further dialog to determine the procedures after leaving the driver's setting.

.

1.1.1   Twain More

This setting is normally preset already correctly when loading the driver. Please change it only if you have detailed knowledge of the processes or if you are prompted to after consultation with us.

set CAP_AUTOFEED   If switched on, the scanner automatically pulls in the next page from the document feeder after a successful scan.

set CAP_AUTOSCAN   Sometimes a scanner is able to scan in auto mode (queuing mode), but does not confirm this capability at startup phase.

Enabling this checkbox will override this and mark the scanner as ready for auto scan.

get DAT:IMAGEINFO in.   Choose, when to operate DAT_IMAGEINFO / MSG_GET to read the general image description information. Standard is State 7 (that's when image data transfer is ready).
Some TWAIN driver handle over incorrect informations in State 7; image data interpretation fails then. Choose State 6 (that's just before image data transfer starts) in those cases.

send MSG_STOPFEEDER	The Program can stop the scanning in queuing mode with the TWAIN command MSG_STOPFEEDER only. This command should be available if the scanner has the capability CAP_AUTOSCAN (scanning in queuing mode). Define here how this command should be sent: **normal** The command will just be sent. **never** The command will never be sent. This is useful for **older scanner** models not knowing this command and throwing an error instead. **always** There are scanners knowing the command but doesn't working in queuing mode. If such a device doesn't work correctly in **normal** mode use **always**.
Alternatively send PENDINGXFERS/RESET **to stop feeder**	If activated, in case of a stop feeder request from aplication, and if MSG_STOPFEEDER does not work or is disabled (send never), MSG_RESET is send to the TWAIN scanner. This will stop most scanner models, but buffered prescanned images will be lost.
Avoid PENDINGXFERS/RESET	Disables the attempt to stop the scanner with the Reset-Command when the scan application wants to break the scanning process. Thus will keep the prescanned images. To break the process the operator has to press the stop button at the device.
Limit MemXFer Block Size	In case of errors during the image transfer from the scanner to the receiving application, the size of the transferred memory blocks can be specified. For that the data source can be asked for the smallest, largest and preferred size of the buffer. unlimited / Complete Image Size Send the image in one block if possible. DS:Preferred Value Send the image in blocks of the preferred size as given by the driver (data source) DS:MinBufferSize Send the image in smallest blocks as possible and allowed by the by the driver (data source). DS:MaxBufferSize Send the image in largest blocks as possible and allowed by the by the driver (data source).
While MemXfer ignore DS:MinBufferSize ignore	In case of a transfer errors you can try to override the values suggested by the driver (data source). You can try to ignore the minimum the maximum or both values for the block size.

DS:MaxBuffersize limit	
Realloc MemXfer Blocks in steps of	Here one can specify the size steps which shall be used to enlarge or reduce the memory allocated currently for the next (smaller or larger) image.
store TWEI Barcode Information in Image Header	Allows to hand over the barcode search result in the Image Header.
BC-Setup...	This button will open a configuration dialog for the barcode search options.
always get Extra&Imageinfo (TWEI)	Always fetches the TWEI values, even if no barcode was found.
Add ICC profile...	Allows loading of ICC profiles for the front and rear cameras. These are tables that assign precisely defined color values to the scanned color values.
	The control elements below helps to locate and load the ICC profile files.
Delay Endxfer	Delays the check for the end of transfer.
Throw No Paper after unbuffered scan.	Throws the error „No Paper" after each scan in non-queuing mode. It's up to the scan application to handle this error, for example to display a message. Otherwise the scanner will wait for the next paper or a timeout.
After scanning unload and reload DS	This option unloads and reloads the driver after scanning. This will release locked resources.
on MSG_CLOSEDSOK	Choose what to process when TWAIN command MSG_CLOSEDSREQ occures (when User Interface closes):

D+C+O+P (default)

The TWAIN-driver will be **d**isabled, then **c**losed, then **o**pened again and then the **p**arameters will be read again.

This works with all scanners but takes a little time because the driver will be reloaded.

D+P

The TWAIN-driver will be **d**isabled then and then the **p**arameters will be read again. This is faster but not all TWAIN-Scanners support this method.

D+P+C

The TWAIN-driver will be **d**isabled then and then the **p**arameters will be read

Load PresetFile before ENABLE_ DS	Loads the settings from a Preset File, formerly exported by the driver in the user interface. The following controls will help to locate the file and to specify the behavior if the file cannot be found at run time. "MessageBox will show a message, where throw ScanError 05556 will just inform the scan application.

1.1.1.1   Twain Barcode

If the scanner offers barcode recognition, detected barcodes will be returned by ImageHeader. To enable barcode search, please in the scanner's TWAIN settings enable the search.

To transfer barcode data by ImageHeader, enable this feature at in the TWAIN-More Dialog, option TWEI Barcode Info in ImageHeader

Set up positioning and format within ImageHeader by the following values:

Start   Usually value for the start is position 436 in the image header.

Length   Usually value for the length is 76 (the ImageHeader has got a maximum length of 512)

Text   The usual text is
                          `%[BC-Text]`

                          `%[BC-Text]` – all decoded barcodetext in a row, separated by the specified separation character

                          This can be followed by the following specifications:

                          `%[Type]` – a two digit number representing the barcode type, which can be
                            01 = EAN8
                            02 = EAN13
                            02 = UPCA
                            04 = 3OF9

05 = 2OF5INTERLEAVED
06 = 2OF5MATRIX
07 = 2OF5DATALOGIC
08 = 2OF5INDUSTRIAL
10 = CODABAR
11 = CODABARWITHSTARTSTOP
12 = 3OF9FULLASCII
13 = CODE128
14 = 2OF5IATA
15 = UPCE
19 = CODE93
20 = PDF417
21 = UCC128
22 = QRCODE
23 = DATAMATRIX
24 = AZTEC
25 = 2OF5NONINTERLEAVED (TWAIN; what ever that is)
26 = POSTNET
27 = MAXICODE
99 = unknown type

Others:

%[PosX] – horizontal position of barcode within image, 5 digits, leading zeroes, pixels
%[PosY] – vertical position of barcode within image, 5 digits, leading zeroes, pixels
%[Confidence] – there might be errors during barcode decoding, gives the confidence of result
%[Rotation] – rotation or orientation of the barcode within image 0, 1 (90°), 2 (180°), 3 (270°), 4 else

Note: Most likely, the scanner only gives %[BC-Text] and %[Type], so it is usesless to specify the others.
Please check the scanner's manual for details.

Separation

Usual is the comma "," but should be set to some *rare* character which will certainly not come with the decoded barcode.

Especially with the 2D barcodes a normal punctuaction, such as comma, full stop, exclamation mark, etc can be part of the information stored with the barcode.

They will not work as a character to separate several detected barcodes from one page.

- A useful character to separate multiple result barcodes will be: ÿ (Alt-0255)

- Another character to separate %[BC-Text] from %[Type] is: þ (Alt-0254)

Not-Found Text

This is a replacement text in case there are no barcodes found.

1.2 TW-Specials

On this page, preferences for controlling the driver can be set, e.g. the program's brightness and contrast sliders can be linked directly to the corresponding functions of the driver. Of course, this only works if the scanning program supports this on its side.

Please change it only if you have detailed knowledge of the processes or if you are prompted to after consultation with us.

Restart the application to apply the changes!

Values other than default ones should be selected by experts only!
Changes will take effect only when the application starts next time!
The configuration is global for all TWAIN scanners used by this interface

Special Extra Settings   These settings determine how the scanner's TWAIN dialog is integrated

Subclass Dialog   **Subclass Dialog**

If checked, the TWAIN driver's dialog gets sub-classed to the current application. Should be changed by experts only!
Restart the application to apply changes!

send Timer MSGs   These settings determine whether permanently displayed driver windows should receive synchronization messages.

Allow Control by Application   With these options, important settings can be made directly from the program. If these options are switched off, it is only possible to make these settings directly in the driver dialog.

These options should only be activated if the corresponding setting option in the program is actually used.

Color Mode   **Color Mode**

If checked, the application selects the color mode (black&white, gray, color). Selection in TWAIN's User Interface has no effect then.
Restart the application to apply changes!

Resolution   **Resolution**

If checked, the application selects scanning resolution. Selection in TWAIN's User Interface has no effect then.
Restart the application to apply changes!

Brightness   **Brightness**

If checked, the application can change scanner's brightness.
Restart the application to apply changes!

... reversed Values   **Brightness - reversed Values**

Check to reverse application's brightness slider direction.

Threshold   **Threshold**

If checked, the application sets the scanner's threshold value. Threshold value set in TWAIN's User Interface has no effect then.
Restart the application to apply changes!

... reversed Values   **Threshol - reversed Values**

Check to reverse application's threshold slider direction.

Contrast   **Contrast**

If checked, the application can change scanner's contrast.
Restart the application to apply changes!

... reversed Values　　**Contrast - reversed Values**

Check to reverse application's contrast slider direction.

Paper Source　　　　**Paper Source**

If checked, the application can change scanner's paper source (flatbed, autofeeder).
Restart the application to apply changes!

Paper Size　　　　　　**Paper Size**

If checked, the application selects the scan area. Selection in TWAIN's User Interface has no effect then.
Restart the application to apply changes!

Endorser　　　　　　　**Endorser**

If checked, the application can change scanner's endorser/imprinter text and counter.
Restart the application to apply changes!

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