DocketPORT 687

Addendum

The DCT Mobile Scanner Development Kit document describes the DCT API in general. This addendum adds information that is specific for the DocketPORT 687 scanner.

Build

SI_OpenInterface

The following string must be used to open the API in the call to **SI_OpenInterface**:

"DocketPORT687"	To specify the DocketPORT 687.

The string is case-sensitive.

Linking

When linking with the scanner driver, you will need to link with the library named "DPORT687.LIB" for compile-time (implicit) linking. For runtime (explicit) linking, use LoadLibrary() to link to the file "DPORT687.DLL". This file will exist in the end user's "Windows\System32" directory after the driver is installed.

Property Types

The DocketPORT 687 has the following property types:

Property	Container Type	Item Type
SIP_BITS_PER_CHANNEL	SICON_SINGLE	SI_INT32
SIP_BITS_PER_PIXEL	SICON_SINGLE	SI_INT32
SIP_CHANNEL_ORDER	SICON_LIST	SI_INT32
SIP_CONTRAST	SICON_RANGE	SI_INT32
SIP_DESCREEN_ENABLED	SICON_SINGLE	SI_BOOL
SIP_DUPLEX_ENABLED	SICON_SINGLE	SI_BOOL
SIP_EOP_DETECT_ENABLED	SICON_SINGLE	SI_BOOL
SIP_FEED_DIRECTION	SICON_LIST	SI_INT32
SIP_FEED_RATE	SICON_RANGE	SI_FLOAT32
SIP_GAMMA	SICON_RANGE	SI_FLOAT32

SIP_HIGHLIGHT	SICON_RANGE	SI_INT32
SIP_LED_INDICATOR1	SICON_SINGLE	SI_BOOL
SIP_LED_INDICATOR2	SICON_SINGLE	SI_BOOL
SIP_LUT_BLUE	SICON_ARRAY	SI_UINT32
SIP_LUT_GREEN	SICON_ARRAY	SI_UINT32
SIP_LUT_GRAY	SICON_ARRAY	SI_UINT32
SIP_LUT_RED	SICON_ARRAY	SI_UINT32
SIP_MAX_SCAN_TIME_IN_SEC	SICON_SINGLE	SI_INT32
SIP_OPTICAL_RESOLUTION	SICON_SINGLE	SI_INT32
SIP_OPTICAL_WIDTH_IN_PIXELS	SICON_SINGLE	SI_INT32
SIP_PHOTOMETRIC_INTERPRETATION	SICON_LIST	SI_INT32
SIP_PLANARCHUNKY	SICON_SINGLE	SI_INT32
SIP_PREFEED_ENABLED	SICON_SINGLE	SI_BOOL
SIP_PREFEED_DELAY	SICON_RANGE	SI_INT32
SIP_PREFEED_DISTANCE	SICON_RANGE	SI_INT32
SIP_SCAN_LENGTH_IN_LINES	SICON_RANGE	SI_INT32
SIP_SCAN_MODE	SICON_LIST	SI_INT32
SIP_SCAN_RATE	SICON_RANGE	SI_FLOAT32
SIP_SCAN_WIDTH_IN_PIXELS	SICON_RANGE	SI_INT32
SIP_SHADOW	SICON_RANGE	SI_INT32
SIP_SPOOLER_ENABLED	SICON_SINGLE	SI_BOOL
SIP_THRESHOLD	SICON_RANGE	SI_INT32
SIP_USB_RATE	SICON_LIST	SI_INT32
SIP_LINE_WIDTH_IN_BYTES	SICON_SINGLE	SI_INT32
SIP_XOFFSET	SICON_RANGE	SI_INT32
SIP_XRESOLUTION	SICON_LIST	SI_INT32
SIP_YOFFSET	SICON_RANGE	SI_INT32
SIP_YRESOLUTION	SICON_LIST	SI_INT32

Additional Property Info

SIP_LED_INDICATOR1

SIP_LED_INDICATOR2

The DocketPORT 687 has two indicator LEDs, one green and one red. These two LEDs occupy the same window on the scanner so from the outside it looks as though there is only one. When the scanner is first plugged in, the red LED comes on as a hardware default. The driver, once loaded successfully, will turn the red LED off and the green LED on as part of its initialization. After that, the LEDs aren't changed again by the driver.

The application can change the state of the LEDs by setting properties. The SIP_LED_INDICATOR1 property controls the *red* LED. Setting it to SI_TRUE turns the red LED on and setting it to SI_FALSE turns it off. The SIP_LED_INDICATOR2 property controls the *green* LED likewise.

You can use the LEDs for whatever you like. For example, you may want to turn on the red LED during a scan and then set it back to green when the scan is done. Or you may want to flash the red LED if an error occurs. But we recommend leaving the green LED on while the scanner is idle to function as a “power on” indicator.

SIP_LUT_BLUE

SIP_LUT_GREEN

SIP_LUT_GRAY

SIP_LUT_RED

The DocketPORT 687 supports these four properties. The item type is SI_UINT16 and container type SICON_ARRAY.

Each property allows you to specify a lookup table which is an array of 256 values, each value being 16-bits. Each entry represents a threshold pixel level. Thus if a pixel value is equal to or greater than a given threshold stored at table index n, but less then the next higher threshold stored at index n+1, then the output pixel will be the index value n.

Table entries must be continuously increasing or continuously decreasing. In other words, in the case of a continuously increasing table, each table entry must be greater than all entries in lower table indices and less than all entries in higher table indices. In the case of color, all three tables must be the same type, increasing or decreasing, but otherwise the tables can be different.

The length of a table must be 256 entries (thus 512 bytes). The table becomes enabled by downloading a table of this length. To disable a table, specify a length of 0.

It is not necessary to provide a table for every color. For example, you can define a red table but not a blue or green table. In that case, green and blue will be a normal pass-through. If the defined table(s) is an increasing type, the pass-through response of the non-defined table(s) will also be increasing. If the defined table(s) is a decreasing type, the pass-through response of the non-defined table(s) will also be decreasing.

For performance reasons, the entire table is not checked to confirm that it is continuously increasing or decreasing. Only entries 0 and 255 are checked. A table that is not continuously increasing or decreasing will cause undesirable image data, but otherwise no adverse effects.

Calibration Data

Calibration data for the DocketPORT 687 is stored in the following location:

C:\Documents and Settings\All Users\Application Data\ Docucap \DocketPORT687

The portion of the path preceding the "Docucap" directory is obtained from the Windows API function **SHGetFolderPath()** using the folder ID `CSIDL_COMMON_APPDATA`.

The calibration file will take on the same security permissions as those of the directory.

Security Note: The directories listed above are created by the **SI_OpenInterface()** function if they do not already exist. Therefore, the account must have permission to create these directories in the file system. The STI driver will call **SI_OpenInterface()** when it is initialized and this will normally occur immediately after installation. The STI driver runs in the LocalService account which typically is able to create the directory.