



SCANNER SERVICE

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INTRODUCTION

This documentation details the specific set of commands for scanner devices. These, along with *common commands* conform the complete set of commands available for scanner devices. Sometimes, certain *common commands* can be overwritten within a specific service, because they change their behavior. In the case of **Scanner Service**, the following commands are overwritten:

- [XPEAK_COMMAND_GET_CAPABILITIES](#)
- [XPEAK_COMMAND_GET_STATUS](#)

All commands described here meet the *Xpeak* specification [General Message Format](#).

COMMANDS

 **XPEAK_COMMAND_CALIBRATE** (0x11030001)**Version:** 1103**Description:**

Some devices need to be calibrated in order to work properly. This command is used to calibrate the device. Commonly, devices need some kind of media during this operation. Due to this, the [XPEAK_COMMAND_ENABLE_INSERT](#) command should be called before this command is executed. If no media is required during the calibrate operation, the XPEAK_RESULT_MEDIA_INSERTED (0x7060060) event will be automatically sent by the service.

 **Result:**

- **int Result**

Apart from the common values, this command can return the following results:

Result	Description
XPEAK_RESULT_MEDIA_NOT_PRESENT (0x706005C)	The media required to calibrate the reader is not present in the device and so, it is not possible to execute the calibration.
XPEAK_RESULT_MEDIA_JAMMED (0x706005D)	Error due to a check jam

XPEAK_COMMAND_CAPTURE_IMAGE (0x7060179)

Version: 1011

Description:

Scans the current document and returns the corresponding image data.

Parameters:

- **int ImageFormat**

The format of the returned image data. This format should be one of the list indicated in the *ImageFormats* capability, see command [XPEAK_COMMAND_GET_CAPABILITIES](#). The possible values are:

- XPEAK_GRAPHIC_FORMAT_GIF (0x706008C)
- XPEAK_GRAPHIC_FORMAT_BMP (0x706008D)
- XPEAK_GRAPHIC_FORMAT_JPG (0x706008E)
- XPEAK_GRAPHIC_FORMAT_TIF (0x706008F)
- XPEAK_GRAPHIC_FORMAT_PCX (0x7060090)
- XPEAK_GRAPHIC_FORMAT_PNG (0x7060091)
- XPEAK_GRAPHIC_FORMAT_RAW (0x7060176)

- **int PixelType**

The type of pixels that form the image. This type defines the color of the image and should be one of the list indicated in the *PixelTypes* capability, see command [XPEAK_COMMAND_GET_CAPABILITIES](#). The possible values are:

- XPEAK_PIXEL_TYPE_BW (0x12020005)
- XPEAK_PIXEL_TYPE_GRAY (0x12020006)
- XPEAK_PIXEL_TYPE_RGB (0x12020007)
- XPEAK_PIXEL_TYPE_PALETTE (0x12020008)
- XPEAK_PIXEL_TYPE_CMY (0x12020009)
- XPEAK_PIXEL_TYPE_CMYK (0x1202000A)
- XPEAK_PIXEL_TYPE_YUV (0x1202000B)
- XPEAK_PIXEL_TYPE_YUVK (0x1202000C)
- XPEAK_PIXEL_TYPE_CIEXYZ (0x1202000D)
- XPEAK_PIXEL_TYPE_SRGB (0x1202000E)
- XPEAK_PIXEL_TYPE_SCRGB (0x1202000F)
- XPEAK_PIXEL_TYPE_INFRARED (0x12020010)

- **int[] Sides**

This field indicates which sides of the document should be scanned. This values must be some of the values contained in the *Scansides* capability, see command [XPEAK_COMMAND_GET_CAPABILITIES](#). The possible values are:

- XPEAK_SIDE_FRONT (0x7060177)
- XPEAK_SIDE_BACK (0x7060178)

 **Result:**

- **int Result**

Apart from the common values, this command can return the following results:

Result	Description
XPEAK_RESULT_MEDIA_NOT_PRESENT (0x706005C)	There is no check present in the reader. For <i>SWIPE</i> card readers, this error will be launched if it is not possible to read the check data.
XPEAK_RESULT_MEDIA_JAMMED (0x706005D)	Error due to a check jam

- **Base64 FrontData**

Array of bytes containing the front image data with the specified format. This field will be empty if the *Side* parameter did not include *XPEAK_SIDE_FRONT* or if the device does not support front scanning.

- **Base64 BackData**

Array of bytes containing the back image data with the specified format. This field will be empty if the *Side* parameter did not include *XPEAK_SIDE_BACK* or if the device does not support back scanning.

 **XPEAK_COMMAND_CAPTURE_IMAGE_MULTI** (0x7060180)

Version: 1011

Description:

Scans the current documents and returns a collection of images.

 **Parameters:**

- **int ImageFormat**

The format of the returned image data. This format should be one of the list indicated in the *ImageFormats* capability, see command [XPEAK_COMMAND_GET_CAPABILITIES](#). The possible values are:

- XPEAK_GRAPHIC_FORMAT_GIF (0x706008C)
- XPEAK_GRAPHIC_FORMAT_BMP (0x706008D)
- XPEAK_GRAPHIC_FORMAT_JPG (0x706008E)
- XPEAK_GRAPHIC_FORMAT_TIF (0x706008F)
- XPEAK_GRAPHIC_FORMAT_PCX (0x7060090)
- XPEAK_GRAPHIC_FORMAT_PNG (0x7060091)
- XPEAK_GRAPHIC_FORMAT_RAW (0x7060176)

- **int PixelType**

The type of pixels that form the image. This type defines the color of the image and should be one of the list indicated in the *PixelTypes* capability, see command [XPEAK_COMMAND_GET_CAPABILITIES](#). The possible values are:

- XPEAK_PIXEL_TYPE_BW (0x12020005)
- XPEAK_PIXEL_TYPE_GRAY (0x12020006)
- XPEAK_PIXEL_TYPE_RGB (0x12020007)
- XPEAK_PIXEL_TYPE_PALETTE (0x12020008)
- XPEAK_PIXEL_TYPE_CMY (0x12020009)
- XPEAK_PIXEL_TYPE_CMYK (0x1202000A)
- XPEAK_PIXEL_TYPE_YUV (0x1202000B)
- XPEAK_PIXEL_TYPE_YUVK (0x1202000C)
- XPEAK_PIXEL_TYPE_CIEXYZ (0x1202000D)
- XPEAK_PIXEL_TYPE_SRGB (0x1202000E)
- XPEAK_PIXEL_TYPE_SCRGB (0x1202000F)
- XPEAK_PIXEL_TYPE_INFRARED (0x12020010)

- **int[] Sides**

This field indicates which sides of the document should be scanned. This values must be some of the values contained in the *ScanSides* capability, see command [XPEAK_COMMAND_GET_CAPABILITIES](#). The possible values are:

- XPEAK_SIDE_FRONT (0x7060177)
- XPEAK_SIDE_BACK (0x7060178)

 **Result:**

- **int Result**

Apart from the common values, this command can return the following results:

Result	Description
XPEAK_RESULT_MEDIA_NOT_PRESENT (0x706005C)	There is no check present in the reader. For <i>SWIPE</i> card readers, this error will be launched if it is not possible to read the check data.
XPEAK_RESULT_MEDIA_JAMMED (0x706005D)	Error due to a check jam

- **String url**

url of the scanned images.

 **XPEAK_COMMAND_CAPTURE_IMAGE_MULTI** (0x7060180)

Version: 1306

Description:

Scans the current documents and returns a collection of images.

 **Parameters:**

- **int ImageFormat**

The format of the returned image data. This format should be one of the list indicated in the *ImageFormats* capability, see command [XPEAK_COMMAND_GET_CAPABILITIES](#). The possible values are:

- XPEAK_GRAPHIC_FORMAT_GIF (0x706008C)
- XPEAK_GRAPHIC_FORMAT_BMP (0x706008D)
- XPEAK_GRAPHIC_FORMAT_JPG (0x706008E)
- XPEAK_GRAPHIC_FORMAT_TIF (0x706008F)
- XPEAK_GRAPHIC_FORMAT_PCX (0x7060090)
- XPEAK_GRAPHIC_FORMAT_PNG (0x7060091)
- XPEAK_GRAPHIC_FORMAT_RAW (0x7060176)

- **int PixelType**

The type of pixels that form the image. This type defines the color of the image and should be one of the list indicated in the *PixelTypes* capability, see command [XPEAK_COMMAND_GET_CAPABILITIES](#). The possible values are:

- XPEAK_PIXEL_TYPE_BW (0x12020005)
- XPEAK_PIXEL_TYPE_GRAY (0x12020006)
- XPEAK_PIXEL_TYPE_RGB (0x12020007)
- XPEAK_PIXEL_TYPE_PALETTE (0x12020008)
- XPEAK_PIXEL_TYPE_CMY (0x12020009)
- XPEAK_PIXEL_TYPE_CMYK (0x1202000A)
- XPEAK_PIXEL_TYPE_YUV (0x1202000B)
- XPEAK_PIXEL_TYPE_YUVK (0x1202000C)
- XPEAK_PIXEL_TYPE_CIEXYZ (0x1202000D)
- XPEAK_PIXEL_TYPE_SRGB (0x1202000E)
- XPEAK_PIXEL_TYPE_SCRGB (0x1202000F)
- XPEAK_PIXEL_TYPE_INFRARED (0x12020010)

- **int[] Sides**

This field indicates which sides of the document should be scanned. This values must be some of the values contained in the *ScanSides* capability, see command [XPEAK_COMMAND_GET_CAPABILITIES](#). The possible values are:

- XPEAK_SIDE_FRONT (0x7060177)
- XPEAK_SIDE_BACK (0x7060178)

- **boolean `SendImageEvents`**
If this field is set to true, a `XPEAK_RESULT_IMAGE_CAPTURED` event will be fired each time an image is scanned.
- **boolean `SendImagesOnEvent`**
If this field is set to true, a `XPEAK_RESULT_IMAGE_CAPTURED` the raw fields `FrontData` and `BackData` are send in the `XPEAK_RESULT_IMAGE_CAPTURED` event.
- **double `XResolution`**
Horizontal resolution of the scanned images.
- **double `YResolution`**
Vertical resolution of the scanned images.
- **int `ImageQuality`**
Image Quality from 0 to 100. This value is relative to the image format.

Result:

- **int `Result`**
Apart from the common values, this command can return the following results:

Result	Description
<code>XPEAK_RESULT_MEDIA_NOT_PRESENT</code> (0x706005C)	There is no check present in the reader. For <i>SWIPE</i> card readers, this error will be launched if it is not possible to read the check data.
<code>XPEAK_RESULT_MEDIA_JAMMED</code> (0x706005D)	Error due to a check jam

- **String `url`**
url of the scanned images.

Events:

`XPEAK_RESULT_IMAGE_CAPTURED` (0x13060001) Since 1306

This event is thrown whenever an image is scanned and the `SendImageEvents` was set to true.

- **Base64 `FrontData`**
Array of bytes containing the front image data with the specified format. This field will be empty if the Side parameter did not include `XPEAK_SIDE_FRONT` (0x7060177) or if the device does not support front scanning.
- **Base64 `BackData`**
Array of bytes containing the back image data with the specified format. This field will be empty if the Side parameter did not include `XPEAK_SIDE_BACK` (0x7060178) or if the device does not support back scanning.

- **boolean IsLastPage**

If this field is set to true, the page corresponded to this event is the last one of the current [XPEAK_COMMAND_CAPTURE_IMAGE_MULTI](#) operation. This could be because this is the last page in the scanner inbox or because a [XPEAK_COMMAND_STOP_CAPTURE](#) has been executed.

- **int PageNumber**

This field contains the number of the page currently scanned. In case of Duplex scans, front and back sides are considered a unique page, given that they are returned in the same event.

XPEAK_RESULT_CAPTURE_STOPPED (0x13060002) Since 1306

This event is thrown if a [XPEAK_COMMAND_STOP_CAPTURE](#) command is executed during a [XPEAK_COMMAND_CAPTURE_IMAGE_MULTI](#) process.

field IsLastPage, boolean, 1306 If this field is set to true, the page corresponded to this event is the last one of the current [XPEAK_COMMAND_CAPTURE_IMAGE_MULTI](#) operation. This could be because this is the last page in the scanner inbox or because a [XPEAK_COMMAND_STOP_CAPTURE](#) has been executed.

 **XPEAK_COMMAND_DISABLE_INSERT** (0x7060019)

Version: 1011

Description:

Disables the insertion of a media in the scanner.

 **Result:**

- **int Result**

Apart from the common values, this command could return as result:

Result	Description
XPEAK_RESULT_MEDIA_INSERTED (0x7060060)	A document was already inserted

 **XPEAK_COMMAND_EJECT** (0x7060039)**Version:** 1011**Description:**

This command ejects the document previously inserted by the [XPEAK_COMMAND_ENABLE_INSERT](#) command. If the device has an output shutter, it will be automatically open with this command.

 **Parameters:**

- **int Timeout**

If the field *HasCheckTakenSensor* of the command [XPEAK_COMMAND_GET_CAPABILITIES](#) is *true*, the service will wait for the document to be taken by the user during this time (in milliseconds). If this value is less than zero, the device will wait for the document to be taken without timeout or until a [XPEAK_COMMAND_RETRACT](#) is executed. If there is any error, it will be notified by an event.

 **Result:**

- **int Result**

Apart from the common values, this command could return as result:

Result	Description
XPEAK_RESULT_MEDIA_NOT_PRESENT (0x706005C)	There is no document inside the reader. No events will be sent.
XPEAK_RESULT_MEDIA_JAMMED (0x706005D)	There was a jam trying to eject the document. No consequent events will be sent.
XPEAK_RESULT_SHUTTER_ERROR (0x7060061)	There is an error in the output shutter and the document can not be ejected. No consequent events will be sent.

 **Events:**

XPEAK_RESULT_MEDIA_TAKEN (0x7060062) Since 1011

This event is thrown when the user takes the document. The output shutter, if any, will be automatically closed. If the device has no sensor to detect if the document was taken, this event will not be sent. This capability (*HasDocumentTakenSensor*) can be obtained through the command [XPEAK_COMMAND_GET_CAPABILITIES](#)

XPEAK_COMMAND_ENABLE_INSERT (0x7060018)

Version: 1011

Description:

Enables the document insertion. If the device has an input shutter, it will be automatically opened when this command is received.

Parameters:

- **int Timeout**
During this timeout (in milliseconds), the insertion of the document will be enabled. If this value is less than zero, the device will be enabled until the command [XPEAK_COMMAND_DISABLE_INSERT](#) is executed or the document is inserted. In case of any error, it will be notified with an event.

Result:

- **int Result**
Apart from the common values, this command can return the following results:

Result	Description
XPEAK_RESULT_MEDIA_INSERTED (0x7060060)	There is already a document inserted. No later events will be sent.
XPEAK_RESULT_SHUTTER_ERROR (0x7060061)	The insertion can not be enabled due to a shutter error. No later events will be sent.

Events:

XPEAK_RESULT_MEDIA_INSERTED (0x7060060) Since 1011

This event is sent when the document is inserted in the device. The shutter, if any, will be automatically closed. Depending on the device capabilities, this event could include some of the following fields:

- **double MediaWidth**
If the device can detect the width of the inserted document (see the *CanDetectMediaWidth* field in the [XPEAK_COMMAND_GET_CAPABILITIES](#) command), the service will return in this field the width in inches.
- **double MediaHeight**
If the device can detect the height of the inserted document (see the field *CanDetectMediaHeight* of the command [XPEAK_COMMAND_GET_CAPABILITIES](#)), the service will return in this field the height in inches.

XPEAK_RESULT_MEDIA_JAMMED (0x706005D) Since 1011

This event indicates that the document is jammed in the printer. The shutter, if any, will be automatically closed, in case it is possible although the document jam.

XPEAK_COMMAND_ENABLE_INSERT (0x7060018)

Version: 1103

Description:

Enables the document insertion. If the device has an input shutter, it will be automatically opened when this command is received.

Parameters:

- int Timeout**
 During this timeout (in milliseconds), the insertion of the document will be enabled. If this value is less than zero, the device will be enabled until the command [XPEAK_COMMAND_DISABLE_INSERT](#) is executed or the document is inserted. In case of any error, it will be notified with an event.
- int Operation**
 Indicates the operation that is going to be executed. Can be one of the following values:

Operation	Description
XPEAK_COMMAND_CAPTURE_IMAGE (0x7060179)	A capture image operation (XPEAK_COMMAND_CAPTURE_IMAGE) will be performed
XPEAK_COMMAND_CALIBRATE (0x11030001)	A calibration (XPEAK_COMMAND_CALIBRATE) will be performed

Result:

- int Result**
 Apart from the common values, this command can return the following results:

Result	Description
XPEAK_RESULT_MEDIA_INSERTED (0x7060060)	There is already a document inserted. No later events will be sent.
XPEAK_RESULT_SHUTTER_ERROR (0x7060061)	The insertion can not be enabled due to a shutter error. No later events will be sent.

Events:

XPEAK_RESULT_MEDIA_INSERTED (0x7060060) Since 1011

This event is sent when the document is inserted in the device. The shutter, if any, will be automatically closed. Depending on the device capabilities, this event could include some of the following fields:

- double MediaWidth**

If the device can detect the width of the inserted document (see the *CanDetectMediaWidth* field in the [XPEAK_COMMAND_GET_CAPABILITIES](#) command), the service will return in this field the width in inches.

- **double MediaHeight**

If the device can detect the height of the inserted document (see the field *CanDetectMediaHeight* of the command [XPEAK_COMMAND_GET_CAPABILITIES](#)), the service will return in this field the height in inches.

XPEAK_RESULT_MEDIA_JAMMED (0x706005D) Since 1011

This event indicates that the document is jammed in the printer. The shutter, if any, will be automatically closed, in case it is possible although the document jam.

 **XPEAK_COMMAND_GET_CAPABILITIES** (0x7060017)

Version: 1011

Description:

Returns the device capabilities. Depending on them, the application behavior should be different and should be adapted to the peripheral characteristics.

 **Result:**

- **boolean HasDocumentTakenSensor**
Indicates if the device has a sensor to detect when the ejected document is taken by the user. If it is *false* the command **XPEAK_COMMAND_EJECT** will not send the **XPEAK_RESULT_MEDIA_TAKEN** (0x7060062) event.

- **int[] ScansSides**
This field indicates which sides of the documents the device is able to scan with the command **XPEAK_COMMAND_CAPTURE_IMAGE**. The possible values are:
 - XPEAK_SIDE_FRONT (0x7060177)
 - XPEAK_SIDE_BACK (0x7060178)

- **int[] ImageFormats**
List of image formats supported by the command **XPEAK_COMMAND_CAPTURE_IMAGE**. The possible values are:
 - XPEAK_GRAPHIC_FORMAT_GIF (0x706008C)
 - XPEAK_GRAPHIC_FORMAT_BMP (0x706008D)
 - XPEAK_GRAPHIC_FORMAT_JPG (0x706008E)
 - XPEAK_GRAPHIC_FORMAT_TIF (0x706008F)
 - XPEAK_GRAPHIC_FORMAT_PCX (0x7060090)
 - XPEAK_GRAPHIC_FORMAT_PNG (0x7060091)
 - XPEAK_GRAPHIC_FORMAT_RAW (0x7060176)

 **XPEAK_COMMAND_GET_CAPABILITIES** (0x7060017)

Version: 1103

Description:

Returns the device capabilities. Depending on them, the application behavior should be different and should be adapted to the peripheral characteristics.

 **Result:**

- **boolean HasDocumentTakenSensor**
Indicates if the device has a sensor to detect when the ejected document is taken by the user. If it is *false* the command **XPEAK_COMMAND_EJECT** will not send the **XPEAK_RESULT_MEDIA_TAKEN** (0x7060062) event.

- **int[] ScanSides**
This field indicates which sides of the documents the device is able to scan with the command **XPEAK_COMMAND_CAPTURE_IMAGE**. The possible values are:
 - XPEAK_SIDE_FRONT (0x7060177)
 - XPEAK_SIDE_BACK (0x7060178)

- **int[] ImageFormats**
List of image formats supported by the command **XPEAK_COMMAND_CAPTURE_IMAGE**. The possible values are:
 - XPEAK_GRAPHIC_FORMAT_GIF (0x706008C)
 - XPEAK_GRAPHIC_FORMAT_BMP (0x706008D)
 - XPEAK_GRAPHIC_FORMAT_JPG (0x706008E)
 - XPEAK_GRAPHIC_FORMAT_TIF (0x706008F)
 - XPEAK_GRAPHIC_FORMAT_PCX (0x7060090)
 - XPEAK_GRAPHIC_FORMAT_PNG (0x7060091)
 - XPEAK_GRAPHIC_FORMAT_RAW (0x7060176)

- **int[] PixelTypes**
The type of pixels the device is able to use with the command **XPEAK_COMMAND_CAPTURE_IMAGE**. The possible values are:
 - XPEAK_PIXEL_TYPE_BW (0x12020005)
 - XPEAK_PIXEL_TYPE_GRAY (0x12020006)
 - XPEAK_PIXEL_TYPE_RGB (0x12020007)
 - XPEAK_PIXEL_TYPE_PALETTE (0x12020008)
 - XPEAK_PIXEL_TYPE_CMY (0x12020009)
 - XPEAK_PIXEL_TYPE_CMYK (0x1202000A)
 - XPEAK_PIXEL_TYPE_YUV (0x1202000B)
 - XPEAK_PIXEL_TYPE_YUVK (0x1202000C)
 - XPEAK_PIXEL_TYPE_CIEXYZ (0x1202000D)

- XPEAK_PIXEL_TYPE_SRGB (0x1202000E)
 - XPEAK_PIXEL_TYPE_SCRGB (0x1202000F)
 - XPEAK_PIXEL_TYPE_INFRARED (0x12020010)
-
- **boolean CanCalibrate**
Indicates if the device has calibration capability, i.e. if it supports the [XPEAK_COMMAND_CALIBRATE](#) command.

 **XPEAK_COMMAND_GET_STATUS** (0x7060051)

Version: 1011

Description:

This command allows to get different status of the device.

 **Result:**

- **int[] Statuses**

Apart from the general statuses, possible values are:

Status	Description
XPEAK_STATUS_MEDIA_JAMMED (0x7060048)	There is a media jammed in the scanner.
XPEAK_STATUS_MEDIA_PRESENT (0x706005E)	There is a media present in the device.
XPEAK_STATUS_MEDIA_NOT_PRESENT (0x706005F)	There is not a media present in the device.
XPEAK_STATUS_SHUTTER_ERROR (0x7060097)	If the device has one or more shutters, this status will indicate an error in any of them.

Besides this statuses, the command can return any of the ones specified in the generic command [XPEAK_COMMAND_GET_STATUS](#)

 **XPEAK_COMMAND_STOP_CAPTURE** (0x13600001)

Version: 1306

Description:

Stops the current [XPEAK_COMMAND_CAPTURE_IMAGE_MULTI](#) operation. If there is a page under process it will be scanned.

 **Result:**

See Common Results