



CARD SERVICE

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INTRODUCTION

This documentation details the specific set of commands for card devices. These, along with *common commands* conform the complete set of commands available for card devices. Sometimes, certain *common commands* can be overwritten within a specific service, because they change their behavior. In the case of **Card Service**, 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_CHIP_INPUT_OUTPUT (0x70600CE)

Version: 0706

Description:

This command performs an input/output operation, sending information to the chip card and returning the answer of the card to the application.

Parameters:

- **int Protocol**
Indicates the protocol to be used. It can be a value from 0 to 15 and must be one of the defined in the field *ChipProtocols* of the command [XPEAK_COMMAND_GET_CAPABILITIES](#)
- **String Data**
It contains the command to be sent to the card. Each byte will be represented by two characters (i.e.: byte 0xF7 will be character 'F' and character '7').

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 card present in the reader.
XPEAK_RESULT_MEDIA_JAMMED (0x706005D)	Error due to a card jam

- **String Data**
It contains the answer sent by the card. Each byte will be represented by two characters (i.e.: byte 0xF7 will be character 'F' and character '7').

XPEAK_COMMAND_CHIP_POWER (0x70600CD)

Version: 0706

Description:

This command performs a Power On or Power Off over the chip card.

Parameters:

- **int Type**

This parameter can be one of the following values:

- XPEAK_CARD_CHIP_POWER_ON (0x70600CF)
- XPEAK_CARD_CHIP_POWER_OFF (0x70600D0)

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 card present in the reader.
XPEAK_RESULT_MEDIA_JAMMED (0x706005D)	Error due to a card jam

- **String AnswerToReset**

If *Type* equals XPEAK_CARD_CHIP_POWER_ON (0x70600CF), it will contain the Answer To Reset information of the card. Each byte will be represented by two characters (i.e.: byte 0xF7 will be character 'F' and character '7').

 **XPEAK_COMMAND_DISABLE_INSERT** (0x7060019)

Version: 0706

Description:

Disables the insertion of the card in the reader

 **Result:**

- **int Result**

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

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

XPEAK_COMMAND_EJECT (0x7060039)

Version: 0706

Description:

This command ejects the card 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 parameter *HasCardTakenSensor* is *true*, the service will wait for the card to be taken by the user during this time (in milliseconds). If this value is less than zero, the device will wait for the card 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 card inside the reader. No events will be sent.
XPEAK_RESULT_MEDIA_JAMMED (0x706005D)	There was a card jam trying to eject the card. No consequent events will be sent.
XPEAK_RESULT_SHUTTER_ERROR (0x7060061)	There is an error in the output shutter and the card can not be ejected. No consequent events will be sent.

Events:

XPEAK_RESULT_MEDIA_TAKEN (0x7060062) Since 0706

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

 **XPEAK_COMMAND_ENABLE_INSERT** (0x7060018)**Version:** 0706**Description:**

Enables the insertion of the card. If the device has an input shutter, this will be automatically open on the execution of this command. If the card reader device is a *SWIPE* one, this command will also read the tracks, although the information of tracks read will not be returned until the command [XPEAK_COMMAND_MAGNETIC_READ](#) is received.

 **Parameters:**

- **int Timeout**
The insertion of the card will be enabled during this time (in milliseconds) or until the card is inserted. If this value is less than zero, the device will be enabled until the command [XPEAK_COMMAND_DISABLE_INSERT](#) is executed or until the card is inserted. If there is any error, it will be notified by an event.
- **boolean Track1**
For those readers that need to read the tracks in the insertion time, the application will indicate with this parameter if the application desires to get the track 1 data of the card. This is an optional parameter. Default value is *false*
- **boolean Track2**
For those readers that need to read the tracks in the insertion time, the application will indicate with this parameter if the application desires to get the track 2 data of the card. This is an optional parameter. Default value is *false*.
- **boolean Track3**
For those readers that need to read the tracks in the insertion time, the application will indicate with this parameter if the application desires to get the track 3 data of the card. This is an optional parameter. Default value is *false*

 **Result:**

- **int Result**
Appart from the common values, this command could return as result:

Result	Description
XPEAK_RESULT_MEDIA_INSERTED (0x7060060)	There was a card already inside the reader. No events will be sent.
XPEAK_RESULT_SHUTTER_ERROR (0x7060061)	There is an error in the shutter and the insertion of the card can not be enabled. No events will be sent.

 **Events:**

XPEAK_RESULT_MEDIA_INSERTED (0x7060060) Since 0706

This event is thrown in the moment that a card is detected in the reader device. The shutter, if any, will be automatically closed.

XPEAK_RESULT_MEDIA_JAMMED (0x706005D) Since 0706

This event indicates that the card was jammed inside the reader. The shutter, if any and possible, will be automatically closed.

 **XPEAK_COMMAND_GET_CAPABILITIES** (0x7060017)

Version: 0706

Description:

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

 **Result:**

- **int Type**
This capability indicates the type of card reader. Possible values are:
 - XPEAK_CARD_TYPE_MOTOR (0x70600C5)
 - XPEAK_CARD_TYPE_DIP (0x7060031)
 - XPEAK_CARD_TYPE_SWIPE (0x70600C4)

- **boolean CanReadTrack1**
Indicates if the device can read the card track 1.

- **boolean CanReadTrack2**
Indicates if the device can read the card track 2.

- **boolean CanReadTrack3**
Indicates if the device can read the card track 3.

- **boolean CanWriteTrack1**
Indicates if the device can write the card track 1.

- **boolean CanWriteTrack2**
Indicates if the device can write the card track 2.

- **boolean CanWriteTrack3**
Indicates if the device can write the card track 3.

- **int[] ChipProtocols**
If the device can manage chip cards, this capability will indicate the list of supported protocols, being the value 0=T0, 1=T1 and so on.

- **int CaptureBinCapacity**
Indicates the maximum number of cards that can be captured (by the [XPEAK_COMMAND_RETRACT](#)) and stored in the capture bin.

- **boolean HasCardTakenSensor**
Indicates if the device has a sensor to detect when the ejected card is taken by the user. If it is *false* the command [XPEAK_COMMAND_EJECT](#) will not send the

XPEAK_RESULT_MEDIA_TAKEN (0x7060062) event.

 **XPEAK_COMMAND_GET_STATUS** (0x7060051)

Version: 0706

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 card reader.
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_MAGNETIC_READ (0x706001A)

Version: 0706

Description:

This command reads the magnetic tracks indicated in the parameters. Only those tracks specified in the fields *CanReadTrack* of the [XPEAK_COMMAND_GET_CAPABILITIES](#) command can be read.

Parameters:

- **boolean Track1**
Indicates if Track1 must be read.
- **boolean Track2**
Indicates if Track2 must be read.
- **boolean Track3**
Indicates if Track3 must be read.

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 card present in the reader. For <i>SWIPE</i> card readers, this error will be launched if no tracks where specified in the XPEAK_COMMAND_ENABLE_INSERT
XPEAK_RESULT_MEDIA_JAMMED (0x706005D)	Error due to a card jam

- **int Track1Status**
It returns the status of Track1 read operation. The possible values are:.

Status	Description
XPEAK_RESULT_TRACK_OK (0x7060038)	The track has been read successfully.
XPEAK_RESULT_TRACK_FAILURE (0x7060032)	Read error on track.
XPEAK_RESULT_TRACK_NOT_SUPPORTED (0x7060033)	Track not supported by this device.
XPEAK_RESULT_TRACK_PARITY_ERROR (0x7060034)	Parity read error.
XPEAK_RESULT_TRACK_EOF (0x7060035)	Only SS, SE, BCC on track.
XPEAK_RESULT_TRACK_NO_STRIPE (0x7060036)	No magnetic stripe detected.
XPEAK_RESULT_TRACK_NOT_REQUESTED (0x7060037)	Track not requested.

- **Base64 Track1Data**
Track1 data read. Only valid if the Track1Status equals XPEAK_RESULT_TRACK_OK (0x7060038)
- **int Track2Status**
It returns the status of Track2 read operation. See values in *Track1Status* field.
- **Base64 Track2Data**
Track2 data read. Only valid if the Track2Status equals XPEAK_RESULT_TRACK_OK (0x7060038)
- **int Track3Status**
It returns the status of Track2 read operation. See values in *Track1Status* field.
- **Base64 Track3Data**
Track3 data read. Only valid if the Track3Status equals XPEAK_RESULT_TRACK_OK (0x7060038)

XPEAK_COMMAND_MAGNETIC_WRITE (0x7060052)

Version: 0706

Description:

This command write the magnetic tracks indicated in the parameters. Only those tracks specified in the fields *CanWriteTrack?* of the [XPEAK_COMMAND_GET_CAPABILITIES](#) command can be written.

Parameters:

- **Base64 Track1**
Track1 data to write. If empty, this track will not be written.
- **Base64 Track2**
Track2 data to write. If empty, this track will not be written.
- **Base64 Track3**
Track3 data to write. If empty, this track will not be written.

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 card present in the reader.
XPEAK_RESULT_MEDIA_JAMMED (0x706005D)	Error due to a card jam

- **int Track1Status**
It returns the status of Track1 write operation. The possible values are:

Status	Description
XPEAK_RESULT_TRACK_OK (0x7060038)	The track has been written successfully.
XPEAK_RESULT_TRACK_FAILURE (0x7060032)	Write error on track.
XPEAK_RESULT_TRACK_NOT_SUPPORTED (0x7060033)	Track can not be written by this device.
XPEAK_RESULT_TRACK_NOT_REQUESTED (0x7060037)	Track not requested.

- **int Track2Status**
It returns the status of Track2 write operation. See values in *Track1Status* field.
- **int Track3Status**

It returns the status of Track2 write operation. See values in *Track1Status* field.

 **XPEAK_COMMAND_RESET_CAPTURE_BIN_COUNT** (0x70600D1)

Version: 0706

Description:

This command sets to zero the counter of captured cards

 **Result:**

See Common Results

XPEAK_COMMAND_RETRACT (0x70600A6)

Version: 0706

Description:

Retracts a card. A card can be retracted whether when it is inserted in the reader or when it was previously ejected by the [XPEAK_COMMAND_EJECT](#). If the device has an output shutter, it will be automatically closed after the retract action.

This command will not be supported by *DIP* or *SWIPE* readers.

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 card to be retracted. It is possible that the user took it after the timeout of the command XPEAK_COMMAND_EJECT .
XPEAK_RESULT_MEDIA_JAMMED (0x706005D)	The card was jammed.
XPEAK_RESULT_SHUTTER_ERROR (0x7060061)	There was a shutter error.
XPEAK_RESULT_CAPTURE_BIN_FULL (0x7060050)	The retain bin is full and the retract operation could not be executed. The retain bin should be emptied and the counter reset through the XPEAK_COMMAND_RESET_CAPTURE_BIN_COUNT command.

- **int CaptureBinCount**

Number of cards on the Capture Bin, including the card retracted with the current command.