



## DISPLAY SERVICE

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## INTRODUCTION

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

- [XPEAK\\_COMMAND\\_GET\\_CAPABILITIES](#)

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

## COMMANDS

 **XPEAK\_COMMAND\_CLEAR** (0x70600E1)

**Version:** 0706

**Description:**

This operation clears the full area of the device.

 **Result:**

See Common Results

 **XPEAK\_COMMAND\_CLEAR\_AREA** (0x70600E2)

**Version:** 0706

**Description:**

This operation clears the area of the display specified by the parameters. The top-left corner of the area to clear is defined by the parameters *x* and *y*. The rectangular area to clear is defined by the parameters *width* and *Height*.

The position numbering starts in the top-left corner (0,0).

If the area to clear overflows the resolution of the device, the service will clear the available area of the screen and the operation will finish successfully.

The capability *CanClearArea* specifies if this operation is supported or not.

 **Parameters:**

- **int x**  
Specifies the horizontal offset of the area to be cleared, expressed in number of columns, starting from the column number 0.
- **int y**  
Specifies the vertical offset of the area to be cleared, expressed in number of rows, starting from the row number 0.
- **int width**  
Specifies the width of the area to be cleared expressed in number of columns.
- **int Height**  
Specifies the height of the area to be cleared expressed in number of rows.

 **Result:**

See Common Results

## XPEAK\_COMMAND\_DISPLAY\_MENU (0x16040001)

**Version:** 1604

### **Description:**

This operation displays a menu. The title specified in the parameter *title* will be displayed followed by the *options*.

If the user does not enter an option in the specified *timeout*, the command will end with XPEAK\_RESULT\_TIMEOUT (0x7060002) result.

### **Parameters:**

- **int Timeout**  
The insertion of the menu option will be enabled during this time (in milliseconds) or until the option is selected. If this value is less than zero, the menu will be enabled until an option is selected.
- **String Title**  
Specifies the title of the menu.
- **String[] Options**  
Specifies the available options. They will be displayed in the same order as they are in the array.

### **Result:**

- **int SelectedOption**  
It returns the index of the selected option.

## **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:**

- **Struct[] Resolutions**  
Specifies the supported resolutions of the device. Each element of the array represents a different solution expressed in number of rows and number of columns.
- **int Width**  
Number of columns for the resolution
- **int Height**  
Number of rows for the resolution
- **int[] Styles**  
Specifies the text styles supported by the device. The possible values contained in the array are:
  - XPEAK\_DISPLAY\_STYLE\_INVERTED (0x70600E5)
  - XPEAK\_DISPLAY\_STYLE\_BLINK (0x70600E6)If the array is empty, it means the device does not support any style apart from the default one.
- **boolean CanClearArea**  
Indicates if the device can clear an area of the screen by the command [XPEAK\\_COMMAND\\_CLEAR\\_AREA](#)



## XPEAK\_COMMAND\_GET\_RESOLUTION (0x70600E7)

**Version:** 0706

### **Description:**

This operation gets the current resolution of the display specified by the number of columns and number of rows. This resolution is one of the supported resolutions returned in the result *Resolutions* of the [XPEAK\\_COMMAND\\_GET\\_CAPABILITIES](#) command.

### **Result:**

- **int Width**  
Specifies the number of columns of the current resolution.
- **int Height**  
Specifies the number of rows of the current resolution.

## XPEAK\_COMMAND\_SET\_RESOLUTION (0x70600E4)

**Version:** 0706

### **Description:**

This operation sets a new resolution specified by the number of columns and number of rows. The new resolution should be one of the supported resolutions returned in the result *Resolutions* of the [XPEAK\\_COMMAND\\_GET\\_CAPABILITIES](#) command.

If the specified resolution is not supported by the device, the service will return the `XPEAK_RESULT_INVALID_PARAMETER` (0x706003A) result.

### **Parameters:**

- **int Width**  
Width of the new resolution in number of columns.
- **int Height**  
Height of the new resolution in number of rows.

### **Result:**

See Common Results

## XPEAK\_COMMAND\_WRITE (0x70600E3)

**Version:** 0706

### **Description:**

This operation writes the data specified in the parameter *Data*, applying the styles and position indicated in the parameters.

If the text to write overflows the width of the screen, the service will continue writing in the next line. If the current row is the last one (the bottom line), the service will truncate the text.

### **Parameters:**

- **int X**  
Specifies the horizontal offset of the text to display, expressed in number of columns, starting from the column number 0.
- **int Y**  
Specifies the vertical offset of the text to display, expressed in number of columns, starting from the column number 0.
- **int Styles[]**  
Specifies the styles to apply to the text to be displayed. All these styles should be contained in the list of styles returned in the result *Styles* of the [XPEAK\\_COMMAND\\_GET\\_CAPABILITIES](#) command. If the parameter is not provided, or it is empty, default style will be assumed.
- **Unicode Data**  
Data to display.

### **Result:**

See Common Results