**D1 SDK Instructions for Use**

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## 1. Printing SDK Instructions

## Get an instance of the print service

**Example:**

AP80PrintService printService = AP80PrintService .getInstance();

### Initialize print service

**Example:**

printService.initSDK (this);

### print characters

**Example(1):**

printService.printData("ESC |10lF" + "Test AP80EscCommand");

**Incoming parameters:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **parameter field name** | **required** | **type** | **illustrate** | **detailed** |
| ESC Command | no | string | print command | ESC |#lF: feed # lines, for example: ESC |10lF, feed 10 lines  ESC | bC: bold  ESC | iC: italic  ESC | 1C: Normal  ESC | 2C: double width  ESC | 4C: Double width & double height  ESC | cA: Centered |
| Data | Yes | string | printed characters | 3-inch content is printed by default |
| Size | no | int | font size |  |
| isBold | no | boolean | whether to bold | false: not bold  true: bold |
| isUnderLine | no | boolean | Is there an underscore | false: no underscore  true: underlined |
| alignment | no | int | font position | 0: Left  1: Centered  2: to the right |

**Example(2):**

printService.printData("Test AP80 Print", 32, 1 , true);

**Incoming parameters:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **parameter field name** | **required** | **type** | **illustrate** | **detailed** |
| Data | Yes | string | printed characters | 3-inch content is printed by default |
| Size | Yes | int | font size |  |
| textType | Yes | int | print text type | 0: normal  1: bold  2: Italic |
| isUnderLine | Yes | boolean | Is there an underscore | false: no underscore  true: underlined |

**Example(3):**

printService.printData("Test AP80 Print", 32, 1 , true, 1);

**Incoming parameters:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **parameter field name** | **required** | **type** | **illustrate** | **detailed** |
| Data | Yes | string | printed characters | 3-inch content is printed by default |
| Size | Yes | int | font size |  |
| textType | Yes | int | print text type | 0: normal  1: bold  2: Italic |
| isUnderLine | Yes | boolean | Is there an underscore | false: no underscore  true: underlined |
| alignment | Yes | int | font position | 0: Left  1: Centered  2: to the right |

**Example ( 4 ):**

printService.printData("Test AP80 Print", 32, 1 , true, 1 ,80 );

**Incoming parameters:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **parameter field name** | **required** | **type** | **illustrate** | **detailed** |
| Data | Yes | string | printed characters |  |
| Size | Yes | int | font size |  |
| textType | Yes | int | print text type | 0: normal  1: bold  2: Italic |
| isUnderLine | Yes | boolean | Is there an underscore | false: no underscore  true: underlined |
| alignment | Yes | int | font position | 0: Left  1: Centered  2: to the right |
| paperWidth | Yes | int | Print 3/2 inch content | 80:3 inches  58:2 inches |

### Print Bitmap image

**Example:**

printService.printBitmap("/sdcard/image.jpg", 200, 2, 0);

**Incoming parameters:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **parameter field name** | **required** | **type** | **illustrate** | **detailed** |
| FilePath | Yes | String | path to print image | 3-inch pictures are printed by default |
| Width | Yes | int | The width of the printed picture | The width should be smaller than the width of the corresponding path image, otherwise it will crash (android native design) |
| Alignment | Yes | int | where to print the picture | 0: Left  1: Centered  2: to the right |
| Rotate | Yes | int | The angle of rotation of the printed picture | 10~360 |

**Example 2 :**

printService.printBitmap( bitmap, 2, 80 );

**Incoming parameters:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **parameter field name** | **required** | **type** | **illustrate** | **detailed** |
| bitmap | Yes | Bitmap | printed pictures | 3-inch pictures are printed by default |
| Alignment | Yes | int | where to print the picture | 0: Left  1: Centered  2: to the right |
| paperWidth | Yes | int | Print 3/2 inch image content | 80:3 inches  58:2 inches |

### print barcode

**Example:**

printService.printBarcode("12345678", 0, 200, 300, 0, 1);

**Incoming parameters:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **parameter field name** | **required** | **type** | **illustrate** | **detailed** |
| BarCode | Yes | String | barcode value |  |
| Symbology | Yes | int | code system | 0: UPC-A  1: UPC-E  2: EAN13  3: EAN8  4: CODE39  5: ITF  6: CODABAR  7: CODE93  8: CODE128A  9: CODE128B  10: CODE128C |
| Height | Yes | int | bar code height |  |
| Width | Yes | int | the width of the barcode |  |
| Alignment | Yes | int | location of barcode | 0: Left  1: Centered  2: to the right |
| TextPosition | Yes | int | whether to print characters | 0: do not print  1: print |

### print QR code

**Example:**

printService.printQRCode("12345678", 2, 1);

**Incoming parameters:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **parameter field name** | **required** | **type** | **illustrate** | **detailed** |
| BarCode | Yes | String | barcode value |  |
| Size | Yes | int | barcode size | Optional values: 1 ; 2; 3; 4 |
| Alignment | Yes | int | location of barcode | 0: Left  1: Centered  2: to the right |

### paper walk

**Example:**

printService.lineFeed(10);

**Incoming parameters:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **parameter field name** | **required** | **type** | **illustrate** | **detailed** |
| Lines | Yes | int | The number of lines of paper |  |

### cut paper

**Example:**

printService.cutPaper(1);

**Incoming parameters:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **parameter field name** | **required** | **type** | **illustrate** | **detailed** |
| Percentage | Yes | int | After the printing content is completed, it is best to print on 2 lines of paper to avoid the printed content from being cut . | 1 : Half cut  2: full cut |

### Get printer status

**Example:**

int state = printService.getPrinterState(context)

**return value:**

|  |  |  |  |
| --- | --- | --- | --- |
| **parameter field name** | **type** | **illustrate** | **detailed** |
| State | int | the status of the printer | 1: The printer is working normally  4: Out of paper  5: The temperature is too high |

### paper feed and cut

**Example:**

printService.cutPaper ( 1,2 ) ;

**Incoming parameters :**

|  |  |  |  |
| --- | --- | --- | --- |
| **parameter field name** | **type** | **illustrate** | **detailed** |
| cutPaper( type,feedline ) | int,int | Type is the cutting type: full cut/half cut  Feedline is the number of paper lines | paper feed and cut |

### Print characters (size can be set)

**Example:**

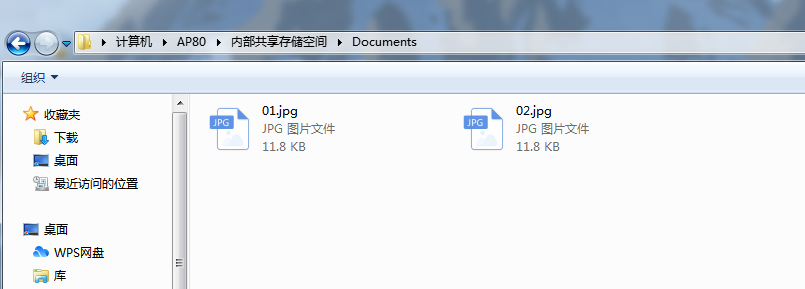
printService.printData("ESC |bC" + "Test AP80EscCommand",58); ( Please refer to 1.3 for other parameters )

**Incoming parameters :**

|  |  |  |  |
| --- | --- | --- | --- |
| **parameter field name** | **type** | **illustrate** | **detailed** |
| paperWidth | int | Print content width 80:3 inches  58:2 inches | The default print size is 80 (3 inches), if you want to print 2 inches, you need to pass in 58 |

### Print Bitmap image

**Example:**

printService.printBitmap("/ Documents / 01.jpg ", 200, 2, 0 , 58 );

**Incoming parameters:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **parameter field name** | **required** | **type** | **illustrate** | **detailed** |
| FilePath | Yes | String | path to print image |  |
| Width | Yes | int | The width of the printed picture | 3 inches: width<576  2 inches: width<384 |
| Alignment | Yes | int | where to print the picture | 0: Left  1: Centered  2: to the right |
| Rotate | Yes | int | The angle of rotation of the printed picture |  |
| paperWidth | Yes | int | print content width | 80:3 inches  58:2 inches |

### start printing

**Example:**

printService.printStart();

**Incoming parameters :**

|  |  |  |  |
| --- | --- | --- | --- |
| **parameter field name** | **type** | **illustrate** | **detailed** |
| none | none | start printing | This method needs to be called after the printing process is modified. All printData methods need to call this method to print |

### Is the printer cover closed?

**Example:**

printService.isPrinterFilpOpen();

**Return value :**

|  |  |  |  |
| --- | --- | --- | --- |
| **parameter field name** | **type** | **illustrate** | **detailed** |
| none | int | Return to the top cover of the printer | 0 for printer cover open  1 to close the printer cover |

## 2. Get Android Information SDK Instructions

### Get SDK instance

##### Example:

AP80\_AndroidSDK.getInstance ();

### Initialize SDK

##### Example:

AP80\_AndroidSDK .getInstance() .initSDK(this);

**Incoming parameters:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **parameter field name** | **required** | **type** | **illustrate** | **detailed** |
| context | Yes | Context | context |  |

### Get virtual machine memory

##### Example:

AP80\_AndroidSDK .getInstance().getVMHeapSize();

**return value:**

|  |  |  |  |
| --- | --- | --- | --- |
| **parameter field name** | **type** | **illustrate** | **detailed** |
| size | string | virtual machine memory size | Example: 500m |

### Set virtual machine memory

##### Example:

AP80\_AndroidSDK .getInstance().setVMHeapSize();

**Incoming parameters:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **parameter field name** | **required** | **type** | **illustrate** | **detailed** |
| size | Yes | string | set memory size | After setting the size of the memory value, add "m",  For example, set the memory to 500m, and the parameters passed are:  setVMHeapSize("500m"); |

### Get virtual machine memory limit

##### Example:

AP80\_AndroidSDK .getInstance().getVMHeapGrowLimit();

**return value:**

|  |  |  |  |
| --- | --- | --- | --- |
| **parameter field name** | **type** | **illustrate** | **detailed** |
| size | string | Virtual machine memory limit size | Example: 128m |

### Set virtual machine memory limit

##### Example:

AP80\_AndroidSDK .getInstance().setVMHeapGrowLimit();

**Incoming parameters:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **parameter field name** | **required** | **type** | **illustrate** | **detailed** |
| size | Yes | string | Set the virtual machine memory limit size | After setting the size of the memory value, add "m",  For example, set the memory to 500m, and the parameters passed are:  setVMHeapGrowLimit("500m"); |

### Get Android version

##### Example:

AP80\_AndroidSDK .getInstance().getAndroidVersion();

**return value:**

|  |  |  |  |
| --- | --- | --- | --- |
| **parameter field name** | **type** | **illustrate** | **detailed** |
| version | string | Android Version | For example: android11 |

### Get CPU model

##### Example:

AP80\_AndroidSDK .getInstance().getDeviceCpuModel();

**return value:**

|  |  |  |  |
| --- | --- | --- | --- |
| **parameter field name** | **type** | **illustrate** | **detailed** |
| cpuModel | string | CPU model | For example: mt8168 |

### Get Patch version

##### Example:

AP80\_AndroidSDK .getInstance().getSecurityPatch();

**return value:**

|  |  |  |  |
| --- | --- | --- | --- |
| **parameter field name** | **type** | **illustrate** | **detailed** |
| patchVersion | string | security patch version number | For example: 2021-07-05 |

### Get DDR Size

##### Example:

AP80\_AndroidSDK .getInstance().getDeviceDDRSize();

**return value:**

|  |  |  |  |
| --- | --- | --- | --- |
| **parameter field name** | **type** | **illustrate** | **detailed** |
| size | string | DDR Size | Example: 3.04 GB |

### Get available DDR size

##### Example:

AP80\_AndroidSDK .getInstance().getAvailDeviceDDRSize());

**return value:**

|  |  |  |  |
| --- | --- | --- | --- |
| **parameter field name** | **type** | **illustrate** | **detailed** |
| size | string | DDR available size | Example: 2.21 GB |

### Get Available Storage Size

##### Example:

AP80\_AndroidSDK .getInstance().getAvailDeviceStorageSize();

**return value:**

|  |  |  |  |
| --- | --- | --- | --- |
| **parameter field name** | **type** | **illustrate** | **detailed** |
| size | string | Available storage size | Example: 26.94 GB |

### Read SDK version number

##### Example:

AP80\_AndroidSDK .getInstance().getSdkVersion();

**Return value :**

|  |  |  |  |
| --- | --- | --- | --- |
| **parameter field name** | **type** | **illustrate** | **detailed** |
| getSdkVersion | String | Get sdk version number | Get sdk built-in version number |

## 3. Get UART Information SDK Instructions

### 1. Get the SDK instance

##### Example:

AP80UartHelper.getInstance();

### 2. Initialize SDK

##### Example:

AP80UartHelper.getInstance().initContext(this);

**Incoming parameters:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **parameter field name** | **required** | **type** | **illustrate** | **detailed** |
| context | Yes | Context | context |  |

### 3. Set the serial port name and baud rate, parity bit, stop bit, callback

##### Example:

AP80UartHelper.getInstance().setPortAndBaudRate("dev/ttyS1",115200,8,1,callback);

**return value:**

|  |  |  |  |
| --- | --- | --- | --- |
| **parameter field name** | **type** | **illustrate** | **detailed** |
| port | string | Serial port name | For example: dev/ttyUSB0, dev/ttyS1 |
| baudRate | int | baud rate | For example: 921600, 115200 |
| dataBits | int | Check Digit |  |
| stopBits | int | stop bit |  |
| callback | interface | Receive serial data | Receive data from serial port |

### 4. Open the serial port

##### Example:

AP80UartHelper.getInstance().openUart();

**return value:**

|  |  |  |  |
| --- | --- | --- | --- |
| **parameter field name** | **type** | **illustrate** | **detailed** |
| none | none | Open serial port |  |

### 5. Close the serial port

##### Example:

AP80UartHelper.getInstance().closeUart(this);

**return value:**

|  |  |  |  |
| --- | --- | --- | --- |
| **parameter field name** | **type** | **illustrate** | **detailed** |
| none | none | close serial port |  |

### 6. Send serial data

##### Example:

AP80UartHelper.getInstance().sendText( " 111111 Test Text " );

**Parameter value :**

|  |  |  |  |
| --- | --- | --- | --- |
| **parameter field name** | **type** | **illustrate** | **detailed** |
| text | string | Send text to serial port |  |