

PL2303G Huawei Android Development Package



Agenda

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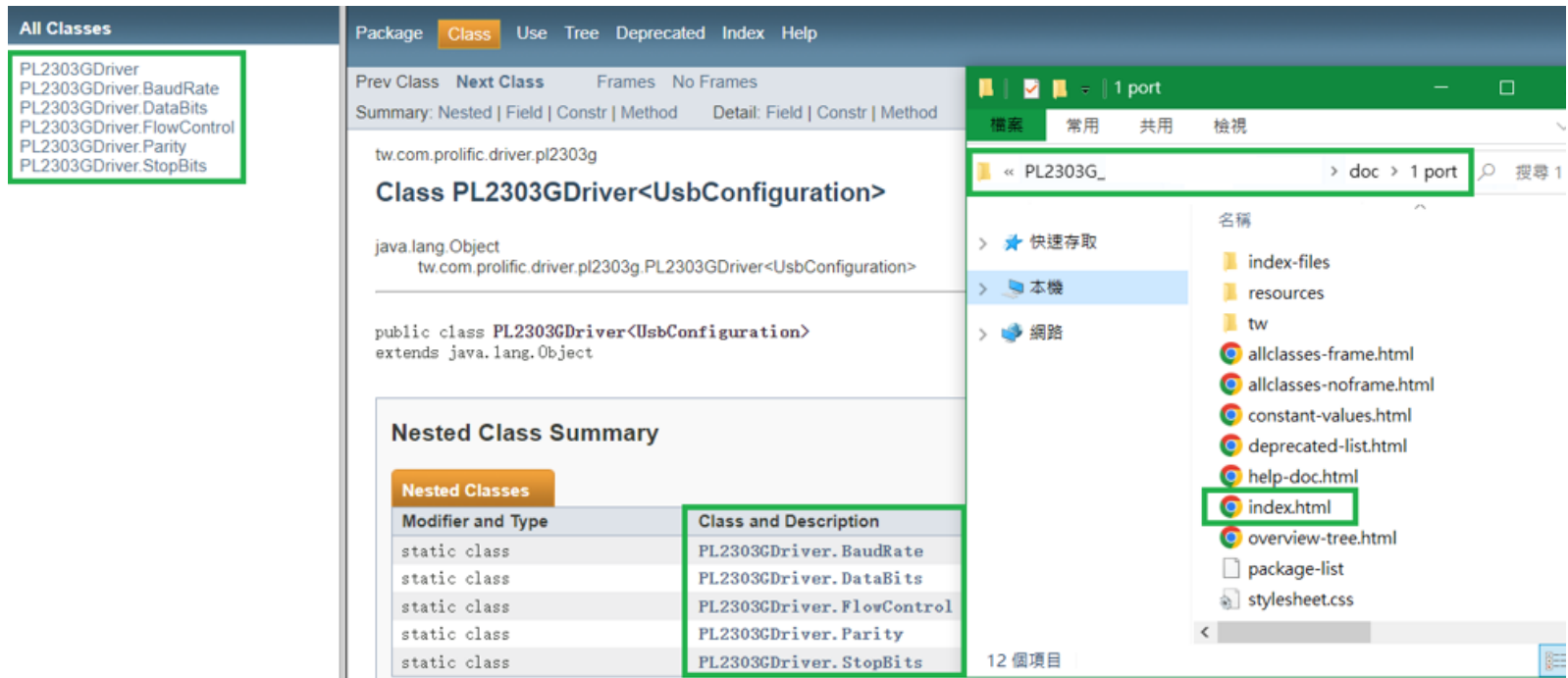
- Implementing USB Interface in Android
Dynamically Registering a BroadcastReceiver
PendingIntent
Reading Data
Writing Data
- Implementing the Drop-Down Menu

Documents Index

The folder name may vary depending on the software version and release date.

Example:

PL2303G_Harmony_v<version>_<YYYYMMDD>\doc\1 port\index.html



The screenshot displays the Java documentation for the `PL2303GDriver` class and a file explorer view of the documentation files.

Class Documentation:

- All Classes:** PL2303GDriver, PL2303GDriver.BaudRate, PL2303GDriver.DataBits, PL2303GDriver.FlowControl, PL2303GDriver.Parity, PL2303GDriver.StopBits.
- Package:** tw.com.prolific.driver.pl2303g
- Class:** `Class PL2303GDriver<UsbConfiguration>`
- Summary:** java.lang.Object, tw.com.prolific.driver.pl2303g.PL2303GDriver<UsbConfiguration>
- Detail:** Field | Constr | Method
- Code:**

```
public class PL2303GDriver<UsbConfiguration>
    extends java.lang.Object
```
- Nested Class Summary:**

Modifier and Type	Class and Description
static class	PL2303GDriver.BaudRate
static class	PL2303GDriver.DataBits
static class	PL2303GDriver.FlowControl
static class	PL2303GDriver.Parity
static class	PL2303GDriver.StopBits

File Explorer:

- Path:** << PL2303G_ > doc > 1 port
- Files:** index-files, resources, tw, allclasses-frame.html, allclasses-noframe.html, constant-values.html, deprecated-list.html, help-doc.html, **index.html**, overview-tree.html, package-list, stylesheet.css.

PL2303Driver Class

Method Summary

Methods

Modifier and Type	Method and Description
void	end() Close an PL2303G USB Device
boolean	enumerate() Found a PL2303G device , the default VID_PID is 067B_23A3
boolean	InitByBaudRate(PL2303GDriver.BaudRate R) Open an PL2303G USB Device by BaudRate (The stop bit is 1, The parity bit is none, The Flow Control is none), the Timeout Constant of read and write is 100ms
boolean	InitByBaudRate(PL2303GDriver.BaudRate R, int TimeoutConstant) Open an PL2303G USB Device by BaudRate (The stop bit is 1, The parity bit is none, The Flow Control is none)
boolean	InitByDefaultValue() Open an PL2303G USB Device by Default (The baud rate is 9600 bps, The stop bit is 1, The parity bit is none, The Flow Control is none), the Timeout Constant of read and write is 100ms
boolean	InitByPortSetting(PL2303GDriver.BaudRate R, PL2303GDriver.DataBits D, PL2303GDriver.StopBits S, PL2303GDriver.Parity P, PL2303GDriver.FlowControl F) Open an PL2303G USB Device by BaudRate, Data bit, stop bit, parity bit and Flow Control
boolean	isConnected() Get the connection status of this PL2303G, ie, whether there is an active connection with PL2303G device.
boolean	PL2303Device_GetCommTimeouts(int TimeoutConstant) The PL2303Device_GetCommTimeouts function retrieves the time-out parameters for all read and write operations on a specified communications device.
java.lang.String	PL2303Device_GetSerialNumber() Get PL2303G serial number
boolean	PL2303Device_IsHasPermission() Detecting whether this PL2303 devices has permission
boolean	PL2303Device_IsSupportChip() Detecting whether this PL2303 supports this Android OS, only PL2303G is supported.
boolean	PL2303Device_SetCommTimeouts(int TimeoutConstant) The PL2303Device_SetCommTimeouts function sets the time-out parameters for all read and write operations on a specified communications device.
int	PL2303G_Enable_GPIO_B(int GPIO_Num, boolean Enable) PL2303G has 8 software controllable ~General Purpose Input Output # control signal pin, you can use this API to control the direction of these pin

PL2303Driver.BaudRate Class

Enum PL2303GDriver.BaudRate

```
java.lang.Object
  java.lang.Enum<PL2303GDriver.BaudRate>
    tw.com.prolific.driver.pl2303g.PL2303GDriver.BaudRate
```

All Implemented Interfaces:

```
java.io.Serializable, java.lang.Comparable<PL2303GDriver.BaudRate>
```

Enclosing class:

```
PL2303GDriver<UsbConfiguration>
```

```
public static enum PL2303GDriver.BaudRate
extends java.lang.Enum<PL2303GDriver.BaudRate>
```

Enum Constants

Enum Constant and Description

E0	
E115200	E3000000
E1200	E38400
E12000000	E460800
E1228800	E4800
E14400	E57600
E150	E600
E1800	E6000000
E19200	E614400
E230400	E75
E2400	E921600
E2457600	E9600
E300	

Method Summary

Methods

Modifier and Type	Method and Description
static PL2303GDriver.BaudRate	valueOf (java.lang.String name) Returns the enum constant of this type with the specified name.
static PL2303GDriver.BaudRate[]	values () Returns an array containing the constants of this enum type, in the order they are declared.

PL2303Driver.DataBits Class

Enum PL2303GDriver.DataBits

java.lang.Object
java.lang.Enum<PL2303GDriver.DataBits>
tw.com.prolific.driver.pl2303g.PL2303GDriver.DataBits

All Implemented Interfaces:

java.io.Serializable, java.lang.Comparable<PL2303GDriver.DataBits>

Enclosing class:

PL2303GDriver<UsbConfiguration>

Enum Constant Summary

Enum Constants

Enum Constant and Description
D5
D6
D7
D8

```
public static enum PL2303GDriver.DataBits  
extends java.lang.Enum<PL2303GDriver.DataBits>
```

Method Summary

Methods

Modifier and Type	Method and Description
static PL2303GDriver.DataBits	valueOf(java.lang.String name) Returns the enum constant of this type with the specified name.
static PL2303GDriver.DataBits[]	values() Returns an array containing the constants of this enum type, in the order they are declared.

PL2303Driver.FlowControl Class

Enum PL2303GDriver.FlowControl

```
java.lang.Object
  java.lang.Enum<PL2303GDriver.FlowControl>
    tw.com.prolific.driver.pl2303g.PL2303GDriver.FlowControl
```

All Implemented Interfaces:

```
java.io.Serializable, java.lang.Comparable<PL2303GDriver.FlowControl>
```

Enclosing class:

```
PL2303GDriver<UsbConfiguration>
```

```
public static enum PL2303GDriver.FlowControl
extends java.lang.Enum<PL2303GDriver.FlowControl>
```

Enum Constant Summary

Enum Constants

Enum Constant and Description

DTRDSR

OFF

RFRCTS

RTSCTS

RTSCTSDTRDSR

XONXOFF

Method Summary

Methods

Modifier and Type

Method and Description

```
static PL2303GDriver.FlowControl
```

```
valueOf(java.lang.String name)
```

Returns the enum constant of this type with the specified name.

```
static PL2303GDriver.FlowControl[]
```

```
values()
```

Returns an array containing the constants of this enum type, in the order they are declared.

PL2303Driver.Parity Class

Enum PL2303GDriver.Parity

java.lang.Object
java.lang.Enum<PL2303GDriver.Parity>
tw.com.prolific.driver.pl2303g.PL2303GDriver.Parity

All Implemented Interfaces:

java.io.Serializable, java.lang.Comparable<PL2303GDriver.Parity>

Enclosing class:

PL2303GDriver<UsbConfiguration>

Enum Constant Summary

Enum Constants

Enum Constant and Description
EVEN
NONE
ODD

```
public static enum PL2303GDriver.Parity  
extends java.lang.Enum<PL2303GDriver.Parity>
```

Method Summary

Methods

Modifier and Type	Method and Description
static PL2303GDriver.Parity	valueOf(java.lang.String name) Returns the enum constant of this type with the specified name.
static PL2303GDriver.Parity[]	values() Returns an array containing the constants of this enum type, in the order they are declared.

PL2303Driver.StopBits Class

Enum PL2303GDriver.StopBits

```
java.lang.Object
  java.lang.Enum<PL2303GDriver.StopBits>
    tw.com.prolific.driver.pl2303g.PL2303GDriver.StopBits
```

All Implemented Interfaces:

```
java.io.Serializable, java.lang.Comparable<PL2303GDriver.StopBits>
```

Enclosing class:

```
PL2303GDriver<UsbConfiguration>
```

Enum Constant Summary

Enum Constants

Enum Constant and Description

S1

S2

```
public static enum PL2303GDriver.StopBits
extends java.lang.Enum<PL2303GDriver.StopBits>
```

Method Summary

Methods

Modifier and Type	Method and Description
static PL2303GDriver.StopBits	valueOf (java.lang.String name) Returns the enum constant of this type with the specified name.
static PL2303GDriver.StopBits []	values () Returns an array containing the constants of this enum type, in the order they are declared.

Implementing USB Interface in Android

- Register a `BroadcastReceiver` to detect USB device attach and detach events.
- Request USB permission by using `PendingIntent`.
- Initialize the `PL2303G driver` after USB permission is granted.
- Read and write data through the serial interface.

Dynamically Registering a BroadcastReceiver

```
/* Listen for USB device attach and detach events. */  
IntentFilter filter = new IntentFilter();  
  
filter.addAction(UsbManager.ACTION_USB_DEVICE_ATTACHED);  
filter.addAction(UsbManager.ACTION_USB_DEVICE_DETACHED);  
  
/* Register the BroadcastReceiver. */  
registerReceiver(mUsbReceiver, filter);
```

PendingIntent

```
/* Initialize the PL2303G driver. */  
mSerial = new PL2303GDriver(  
    (UsbManager) getSystemService(Context.USB_SERVICE),  
    this,  
    ACTION_USB_PERMISSION  
);  
/* Create a PendingIntent for the USB permission request. */  
PendingIntent permissionIntent =  
    PendingIntent.getBroadcast(  
        this,  
        0,  
        new Intent(ACTION_USB_PERMISSION),  
        0  
    );  
mSerial.setPermissionIntent(permissionIntent);
```

Handling USB Device Attachment Events

```
/* Handle USB device attach events. */  
BroadcastReceiver mUsbReceiver = new BroadcastReceiver(){  
    public void onReceive(Context context, Intent intent){  
        String action = intent.getAction();  
  
        if(UsbManager.ACTION_USB_DEVICE_ATTACHED.equals(action)) {  
            mBaudrate = loadDefaultBaudrate();  
            mSerial.begin();  
        }  
    }  
};
```

Handling USB Device Detachment and Permission Events

```
else if
(UsbManager.ACTION_USB_DEVICE_DETACHED.equals(action)) {
    mSerial.usbDetached(intent);
    mSerial.end();
} else if (ACTION_USB_PERMISSION.equals(action)) {
    /* Handle the USB permission result. */
}
```

Handling Granted USB Permission

```
if (!mSerial.isConnected()) {  
    mBaudrate = loadDefaultBaudrate();  
    mSerial.begin();  
    loadDefaultSettingValues();  
    mTvSerial.setTextSize(mTextFontSize);  
}
```

```
unregisterReceiver(mUsbReceiver);  
/* Unregister the BroadcastReceiver. */
```

Reading Data

```
private void readDataFromSerial() {  
    if (!mSerial.isConnected()) {  
        return;  
    }  
    int len = mSerial.read(rbuf);  
}
```

Writing Data

```
private void writeToSerial() {  
    if (!mSerial.isConnected()) {  
        return;  
    }  
  
    String strWrite = etWrite.getText().toString();  
    byte[] data = strWrite.getBytes();  
    if (SHOW_DEBUG) {  
        Log.d(TAG, "PL2303GDriver Write (" +  
            data.length + " bytes): " + strWrite);  
    }  
  
    int res = mSerial.write(data, data.length);  
}
```

Implementing the Drop-Down Menu

Use an Android Spinner to create a drop-down menu for baud rate selection.

- A Spinner displays a list of selectable baud rates, such as 9600, 19200, and 115200.
- After the user selects a value, the selected baud PL2303G serial connection.

Key Implementation

Layout XML → Spinner Adapter → Baud Rate Selection

Reference:

[Android Developers - Add spinners to your app](#)

