

AndroidManifest.xml

```

<?xml version="1.0" encoding="utf-8"?>
<manifest
xmlns:android="http://schemas.android.com/apk/res/android"
package="kindai.so.mycamerasv"
android:versionCode="1"
android:versionName="1.0" >

<uses-sdk
    android:minSdkVersion="8"
    android:targetSdkVersion="21" />
<uses-permission android:name="android.permission.CAMERA"/>
<uses-permission android:name="android.permission.RECORD_AUDIO"/>
<uses-permission android:name="android.permission.WRITE_EXTERNAL_STORAGE"/>
<uses-feature android:name="android.hardware.camera" />
<uses-feature android:name="android.hardware.camera.autofocus" />

<application
    android:allowBackup="true"
    android:icon="@drawable/ic_launcher"
    android:label="@string/app_name"
    android:theme="@style/AppTheme" >
    <activity
        android:name="kindai.so.mycamerasv.MainActivity"
        android:label="@string/app_name" >
        <intent-filter>
            <action android:name="android.intent.action.MAIN" />

            <category android:name="android.intent.category.LAUNCHER" />
        </intent-filter>
    </activity>
</application>

</manifest>

```

activity_main.xml

```

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:paddingBottom="@dimen/activity_vertical_margin"
android:paddingLeft="@dimen/activity_horizontal_margin"
android:paddingRight="@dimen/activity_horizontal_margin"
android:paddingTop="@dimen/activity_vertical_margin"
tools:context="kindai.so.mycamerasv.MainActivity" >

```

```
<kindai.so.mycamerasv.CameraSurfaceView
    android:id="@+id/cameraSurfaceView"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:layout_centerHorizontal="true"
    android:layout_centerVertical="true" />
```

自分で定義したクラスの指定方法

```
</RelativeLayout>
```

```
MainActivity.java
```

```
package kindai.so.mycamerasv;
```

```
import kindai.so.mycamerasv.R;
```

```
import android.support.v7.app.AppCompatActivity;
```

```
import android.os.Bundle;
```

```
import android.view.Menu;
```

```
import android.view.MenuItem;
```

```
public class MainActivity extends AppCompatActivity {
```

```
    CameraSurfaceView cameraSurfaceView;
```

```
    @Override
```

```
    protected void onCreate(Bundle savedInstanceState) {
```

```
        super.onCreate(savedInstanceState);
```

```
        setContentView(R.layout.activity_main);
```

```
        cameraSurfaceView = (CameraSurfaceView)findViewById(R.id.cameraSurfaceView);
```

```
    }
```

```
    @Override
```

```
    public boolean onCreateOptionsMenu(Menu menu) {
```

```
        // Inflate the menu; this adds items to the action bar if it is present.
```

```
        getMenuInflater().inflate(R.menu.main, menu);
```

```
        return true;
```

```
    }
```

```
    @Override
```

```
    public boolean onOptionsItemSelected(MenuItem item) {
```

```
        // Handle action bar item clicks here. The action bar will
```

```
        // automatically handle clicks on the Home/Up button, so long
```

```
        // as you specify a parent activity in AndroidManifest.xml.
```

```
        int id = item.getItemId();
```

```
        if (id == R.id.action_settings) {
```

```
            return true;
```

```
        }
```

```
        return super.onOptionsItemSelected(item);
```

```
    }
```

```
}
```

CameraSurfaceView.java

```
package kindai.so.mycamerasv;
```

```
import java.io.IOException;
import java.util.List;
import android.content.Context;
import android.util.AttributeSet;
import android.view.SurfaceHolder.Callback;
import android.view.SurfaceView;
import android.view.SurfaceHolder;
import android.view.ViewGroup;
import android.hardware.Camera;
import android.hardware.Camera.Parameters;
import android.hardware.Camera.Size;
```

```
public class CameraSurfaceView extends SurfaceView implements SurfaceHolder.Callback {
```

```
    private SurfaceHolder surfaceHolder;
    private Camera camera;
```

Layout.xml から生成する場合のコンストラクタは、AttributeSet が必要

```
public CameraSurfaceView(Context context, AttributeSet attrs) {
    super(context, attrs); setFocusable(true);
    // TODO Auto-generated constructor stub
    surfaceHolder = getHolder();
    surfaceHolder.addCallback(this);
    surfaceHolder.setType(SurfaceHolder.SURFACE_TYPE_PUSH_BUFFERS);
}
```

@Override

```
public void surfaceChanged(SurfaceHolder holder, int format, int width, int height) {
    // TODO Auto-generated method stub
```

```
    camera.stopPreview();
    Parameters params = camera.getParameters();
    int tmpWidth = 0;
    int prevWidth = width;
    int prevHeight = height;

    List<Size> sizeList = params.getSupportedPreviewSizes();

    for(Size currSize : sizeList){
        if( (prevWidth < currSize.width) || (prevHeight < currSize.height)){ continue; }
        if( tmpWidth < currSize.width){
            tmpWidth = currSize.width;
            prevWidth = currSize.width;
            prevHeight = currSize.height;
        }
    }
    params.setPreviewSize(prevWidth, prevHeight);
```

表示映像の縦横比がカメラのオリジナルの縦横と同じにならなくてよいのであれば、この四角の枠内のコード不要

```
float wScale = width/prevWidth;
float hScale = height/prevHeight;
float prevScale = wScale < hScale ? wScale : hScale;
ViewGroup.LayoutParams layoutParams = getLayoutParams();
layoutParams.width = (int)(prevWidth*prevScale);
layoutParams.height = (int)(prevHeight*prevScale);
this.setLayoutParams(layoutParams);

camera.setParameters(params);
```

```
camera.startPreview();
```

```
}
```

```
@Override
```

```
public void surfaceCreated(SurfaceHolder arg0) {
    // TODO Auto-generated method stub
    camera = Camera.open();    //主カメラ
    if( camera != null ){
        try{
            camera.setPreviewDisplay(surfaceHolder);    //プレビュー先指定
        }catch(IOException e){
            e.printStackTrace();
        }
    }
}
```

```
@Override
```

```
public void surfaceDestroyed(SurfaceHolder arg0) {
    // TODO Auto-generated method stub
    if( camera != null ){
        camera.stopPreview();
        camera.release();
        camera = null;
    }
}
```

```
}
```