

# Table of Contents

<b>Quick Guide</b>	1
<b><i>Initialize</i></b>	1
<b><i>Setting Options</i></b>	2
<b><i>Scan Card</i></b>	4
<b><i>Scan Finger</i></b>	5
<b><i>Setting Fingerprint templates and Fingerprint Identified</i></b>	7
<b><i>Users finger management (Insert/Update/Delete/Delete all)</i></b>	9
<b><i>Data detected (Card/Finger/Input)</i></b>	10
<b><i>LED / Output Control</i></b>	12
<b><i>Firmware upgrade</i></b>	13

# Quick Guide

## Initialize

```
package com.example.yourapplication;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;

import com.supremainc.sdk.SvpManager;
import com.supremainc.sdk.callback.Event;
import com.supremainc.sdk.callback.Fingerprint;
import com.supremainc.sdk.callback.Input;
import com.supremainc.sdk.callback.Punch;
import com.supremainc.sdk.service.DeviceListener;

public class MainActivity extends AppCompatActivity {

    SvpManager svpManager = new SvpManager();
    private static final String TAG = "YourApp";

    /**
     * DeviceListener receives events about a device.
     */
    private DeviceListener deviceListener = new DeviceListener() {
        @Override
        public void onPunchDetected(Punch data) { }
        @Override
        public void onInputDetected(Input data) { }
        @Override
        public void onEventDetected(Event data) { }
        @Override
        public void onCardScanCompleted(Punch data) { }
        @Override
        public void onFingerprintDetected(Fingerprint data) { }
        @Override
        public void onFingerprintScanCompleted(Fingerprint data) { }
        @Override
        public void onFingerprintIdentified(Fingerprint data) { }
        @Override
        public void onFingerprintScanProgress(int scanTimeout) { }
        @Override
        public void onCardScanProgress(int scanTimeout) { }
    };

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
```

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

        /**
         * SDK Initialize.
         */
        svpManager.initialize(this, deviceListener);

        /**
         * SDK service run.
         */
        svpManager.run();
    }

    @Override
    protected void onDestroy() {
        /**
         * SDK service stop.
         */
        svpManager.stop();

        super.onDestroy();
    }
}
```

## Setting Options

```
package com.example.yourapplication;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

import com.supremainc.sdk.SvpManager;
import com.supremainc.sdk.option.CardOption;
import com.supremainc.sdk.option.FingerprintOption;
import com.supremainc.sdk.service.DeviceListener;

public class MainActivity extends AppCompatActivity {

    SvpManager svpManager = new SvpManager();
    private static final String TAG = "YourApp";

    private DeviceListener deviceListener = new DeviceListener() {
    };

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
    }
}
```

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

        /**
         * SDK Initialize.
         */
        svpManager.initialize(this, deviceListener);

        /**
         * SDK service run.
         */
        svpManager.run();

        findViewById(R.id.button).setOnClickListener(mClickListener);
    }

    @Override
    protected void onDestroy() {
        /**
         * SDK service stop.
         */
        svpManager.stop();

        super.onDestroy();
    }

    Button.OnClickListener mClickListener = new View.OnClickListener() {
        public void onClick(View v) {
            int result = ;

            /**
             * Card option
             */
            CardOption cardOption = new CardOption();
            cardOption.byteOrder = CardOption.BYTE_ORDER_MSB;
            cardOption.scanTimeout = 5;

            result = svpManager.setCardOption(cardOption);

            /**
             * Fingerprint option
             */
            FingerprintOption fingerOption = new FingerprintOption();
            fingerOption.securityLevel =
FingerprintOption.DEFAULT_SECURITY_LEVEL;
            fingerOption.fastMode = FingerprintOption.DEFAULT_FAST_MODE;
            fingerOption.sensitivity =
FingerprintOption.DEFAULT_SENSOR_SENSITIVITY;
            fingerOption.sensorMode = FingerprintOption.DEFAULT_SENSOR_MODE;
            fingerOption.templateFormat =
FingerprintOption.DEFAULT_TEMPLATE_FORMAT;
            fingerOption.scanTimeout =
```

```
FingerprintOption.DEFAULT_SCAN_TIMEOUT;  
    fingerOption.lfdLevel = FingerprintOption.DEFAULT_LFD_LEVEL;  
    fingerOption.useAdvancedEnrollment = true;  
    fingerOption.useBitmapImage = true;  
  
    result = svpManager.setFingerprintOption(fingerOption);  
}  
};  
}
```

## Scan Card

```
package com.example.yourapplication;  
  
import android.support.v7.app.AppCompatActivity;  
import android.os.Bundle;  
import android.util.Log;  
import android.view.View;  
import android.widget.Button;  
  
import com.supremainc.sdk.SvpManager;  
import com.supremainc.sdk.callback.Punch;  
import com.supremainc.sdk.service.DeviceListener;  
  
public class MainActivity extends AppCompatActivity {  
  
    SvpManager svpManager = new SvpManager();  
    private static final String TAG = "YourApp";  
  
    private DeviceListener deviceListener = new DeviceListener() {  
        /**  
         * Called when a card scan completed.  
         */  
        @Override  
        public void onCardScanCompleted(Punch data) {  
            Log.i(TAG, "result : " + data.result);  
            Log.i(TAG, "card number : " + data.displayString);  
        }  
  
        /**  
         * Called when a card scan progressed.  
         */  
        @Override  
        public void onCardScanProgress(int scanTimeout) {  
            Log.i(TAG, "scanTimeout:" + scanTimeout);  
        }  
    };  
  
    @Override
```

```
protected void onCreate(Bundle savedInstanceState) {  
    /**  
     * SDK Initialize.  
     */  
    svpManager.initialize(this, deviceListener);  
  
    /**  
     * SDK service run.  
     */  
    svpManager.run();  
  
    findViewById(R.id.button).setOnClickListener(mClickListener);  
  
    super.onCreate(savedInstanceState);  
    setContentView(R.layout.activity_main);  
}  
  
Button.OnClickListener mClickListener = new View.OnClickListener() {  
    public void onClick(View v) {  
        /**  
         * Scan card  
         */  
        int result = svpManager.scanCard();  
    }  
};  
}
```

## Scan Finger

```
package com.example.yourapplication;  
  
import android.graphics.drawable.BitmapDrawable;  
import android.graphics.drawable.Drawable;  
import android.support.v7.app.AppCompatActivity;  
import android.os.Bundle;  
import android.util.Log;  
import android.view.View;  
import android.widget.Button;  
  
import com.supremainc.sdk.SvpManager;  
import com.supremainc.sdk.callback.Fingerprint;  
import com.supremainc.sdk.service.DeviceListener;  
  
public class MainActivity extends AppCompatActivity {  
  
    SvpManager svpManager = new SvpManager();  
    private static final String TAG = "YourApp";  
  
    private DeviceListener deviceListener = new DeviceListener() {
```

```
/**
 * Called when a fingerprint scan completed.
 */
@Override
public void onFingerprintScanCompleted(Fingerprint data) {
    Log.i(TAG, "result:" + data.result);
    Log.i(TAG, "quality:" + data.quality);

    /**
     * data.template is managed by your application.
     */
    Log.i(TAG, "template:" + data.template.toString());

    if(null != data.image)
    {
        /**
         * fingerprint bitmap image.
         */
        Drawable ob = new BitmapDrawable(getResources(),
data.image);
    }
}

/**
 * Called when a fingerprint scan progressed.
 */
@Override
public void onFingerprintScanProgress(int scanTimeout) {
    Log.i(TAG, "scanTimeout:" + scanTimeout);
}
};

@Override
protected void onCreate(Bundle savedInstanceState) {
    /**
     * SDK Initialize.
     */
    svpManager.initialize(this, deviceListener);

    /**
     * SDK service run.
     */
    svpManager.run();

    findViewById(R.id.button).setOnClickListener(mClickListener);

    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
}
```

```
Button.OnClickListener mClickListener = new View.OnClickListener() {  
    public void onClick(View v) {  
        /**  
         * Scan fingerprint.  
         */  
        int result = svpManager.scanFingerprint();  
    }  
};  
}
```

## Setting Fingerprint templates and Fingerprint Identified

```
package com.example.yourapplication;  
  
import android.graphics.drawable.BitmapDrawable;  
import android.graphics.drawable.Drawable;  
import android.support.v7.app.AppCompatActivity;  
import android.os.Bundle;  
import android.util.Log;  
import android.view.View;  
import android.widget.Button;  
  
import com.supremainc.sdk.SvpManager;  
import com.supremainc.sdk.callback.Fingerprint;  
import com.supremainc.sdk.model.Finger;  
import com.supremainc.sdk.model.FingerList;  
import com.supremainc.sdk.service.DeviceListener;  
  
public class MainActivity extends AppCompatActivity {  
  
    SvpManager svpManager = new SvpManager();  
    private static final String TAG = "YourApp";  
  
    private DeviceListener deviceListener = new DeviceListener() {  
        /**  
         * Called when a fingerprint identified.  
         */  
        @Override  
        public void onFingerprintIdentified(Fingerprint data) {  
            Log.i(TAG, "result:" + data.result);  
            Log.i(TAG, "id:" + data.id);  
            Log.i(TAG, "templateSize:" + data.templateSize);  
            Log.i(TAG, "quality:" + data.quality);  
            Log.i(TAG, "fingerprintIndex:" + data.fingerprintIndex);  
            Log.i(TAG, "isUpdated:" + data.isUpdated);  
  
            if(null != data.image)
```



```
        {
            Drawable ob = new BitmapDrawable(getResources(),
data.image);
        }
    }
};

@Override
protected void onCreate(Bundle savedInstanceState) {
    /**
     * SDK Initialize.
     */
    svpManager.initialize(this, deviceListener);

    /**
     * SDK service run.
     */
    svpManager.run();

    findViewById(R.id.button).setOnClickListener(mClickListener);

    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
}

Button.OnClickListener mClickListener = new View.OnClickListener() {
    public void onClick(View v) {

        /**
         * Fingerprint templates are managed by your application.
         * Template array represents the data received as
"onFingerprintScanCompleted"
         */
        byte[][] template = new
byte[Finger.TEMPLATE_PER_FINGER][Fingerprint.FINGERPRINT_TEMPLATE_SIZE];

        FingerList fingerList = new FingerList();
        for(int i = 0; i < Finger.MAX_NUM_OF_FINGER; i++)
        {
            Finger finger = new Finger();
            finger.id = i;
            finger.index = (int)(Math.random() *
FingerList.MAX_NUM_OF_FINGER_PER_USER);

            finger.setTemplate(0, template[0]);
            finger.setTemplate(1, template[1]);

            fingerList.addFinger(finger);
        }

        /**
```

```
        * Fingerprint matching is done with the set templates.
        * If the fingerprint matches successfully, the
"onFingerprintIdentified" is called.
        */
        int result = svpManager.setFingerList(fingerList);
    }
};
}
```

## Users finger management (Insert/Update/Delete/Delete all)

```
package com.example.yourapplication;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

import com.supremainc.sdk.SvpManager;
import com.supremainc.sdk.callback.Fingerprint;
import com.supremainc.sdk.model.Finger;
import com.supremainc.sdk.service.DeviceListener;

public class MainActivity extends AppCompatActivity {

    SvpManager svpManager = new SvpManager();
    private static final String TAG = "YourApp";

    private DeviceListener deviceListener = new DeviceListener() {
    };

    @Override
    protected void onCreate(Bundle savedInstanceState) {

        /**
         * SDK Initialize.
         */
        svpManager.initialize(this, deviceListener);

        /**
         * SDK service run.
         */
        svpManager.run();

        findViewById(R.id.button).setOnClickListener(mClickListener);

        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
}
```

```
}

Button.OnClickListener mClickListener = new View.OnClickListener() {
    public void onClick(View v) {
        int result = ;
        /**
         * Fingerprint templates are managed by your application.
         * Template array represents the data received as
"onFingerprintScanCompleted"
         */
        byte[][] template = new
byte[Finger.TEMPLATE_PER_FINGER][Fingerprint.FINGERPRINT_TEMPLATE_SIZE];
        int id = 1000;

        Finger finger = new Finger();
        finger.id = id;
        finger.index = ;
        finger.setTemplate(, template[]);
        finger.setTemplate(1, template[1]);

        /**
         * Insert new finger.
         */
        result = svpManager.insertFinger(finger);

        /**
         * Update new finger.
         */
        result = svpManager.updateFinger(finger);

        /**
         * Delete finger.
         */
        result = svpManager.deleteFinger(finger);

        /**
         * Delete all fingers.
         */
        result = svpManager.deleteAllFinger();
    }
};
}
```

## Data detected (Card/Finger/Input)

```
package com.example.yourapplication;

import android.graphics.drawable.BitmapDrawable;
import android.graphics.drawable.Drawable;
```

```
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.util.Log;

import com.supremainc.sdk.SvpManager;
import com.supremainc.sdk.callback.Fingerprint;
import com.supremainc.sdk.callback.Input;
import com.supremainc.sdk.callback.Punch;
import com.supremainc.sdk.service.DeviceListener;

public class MainActivity extends AppCompatActivity {

    SvpManager svpManager = new SvpManager();
    private static final String TAG = "YourApp";

    private DeviceListener deviceListener = new DeviceListener() {
        /**
         * Called when a card detected.
         */
        @Override
        public void onPunchDetected(Punch data) {
            Log.i(TAG, "result : " + data.result);
            Log.i(TAG, "card number : " + data.displayString);
        }

        /**
         * Called when a finger detected.
         */
        @Override
        public void onFingerprintDetected(Fingerprint data) {
            Log.i(TAG, "result:" + data.result);
            Log.i(TAG, "template:" + data.template.toString());
            Log.i(TAG, "quality:" + data.quality);

            if(null != data.image)
            {
                /**
                 * fingerprint bitmap image.
                 */
                Drawable ob = new BitmapDrawable(getResources(),
data.image);
            }
        }

        /**
         * Called when an input(TTL/Tamper) detected.
         */
        @Override
        public void onInputDetected(Input data) {
            Log.i(TAG, "result : " + data.result);
            Log.i(TAG, "type : " + data.type);
        }
    }
}
```

```

        Log.i(TAG, "port : " + data.port);
        Log.i(TAG, "status : " + data.status);

        if (data.type == Input.INPUT_TYPE_TTL) {
            Log.i(TAG, "TTL input detected.");
        }
        else if (data.type == Input.INPUT_TYPE_TAMPER) {
            Log.i(TAG, "Tamper input detected.");
        }
    }
};

@Override
protected void onCreate(Bundle savedInstanceState) {
    /**
     * SDK Initialize.
     */
    svpManager.initialize(this, deviceListener);

    /**
     * SDK service run.
     */
    svpManager.run();

    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
}
}

```

## LED / Output Control

```

package com.example.yourapplication;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

import com.supremainc.sdk.SvpManager;
import com.supremainc.sdk.define.Channel;
import com.supremainc.sdk.define.LedColor;
import com.supremainc.sdk.define.Relay;
import com.supremainc.sdk.service.DeviceListener;

public class MainActivity extends AppCompatActivity {

    SvpManager svpManager = new SvpManager();
    private static final String TAG = "YourApp";
}

```

```

private DeviceListener deviceListener = new DeviceListener() { };

@Override
protected void onCreate(Bundle savedInstanceState) {
    /**
     * SDK Initialize.
     */
    svpManager.initialize(this, deviceListener);

    /**
     * SDK service run.
     */
    svpManager.run();

    findViewById(R.id.button).setOnClickListener(mClickListener);

    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
}

Button.OnClickListener mClickListener = new View.OnClickListener() {
    public void onClick(View v) {
        int result = ;
        /**
         * Execute LED action.
         */
        result = svpManager.executeLedAction(LedColor.LED_COLOR_RED);
        /**
         * Execute output action.
         */
        result = svpManager.executeOutputAction(Channel.RELAY_PORT_0,
Relay.ON);
    }
};
}

```

## Firmware upgrade

```

package com.example.yourapplication;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

import com.supremainc.sdk.SvpManager;
import com.supremainc.sdk.define.Channel;
import com.supremainc.sdk.define.LedColor;
import com.supremainc.sdk.define.Relay;

```

```
import com.supremainc.sdk.service.DeviceListener;

public class MainActivity extends AppCompatActivity {

    SvpManager svpManager = new SvpManager();
    private static final String TAG = "YourApp";

    private DeviceListener deviceListener = new DeviceListener() {
        /**
         * Called when a device event detected.
         */
        @Override
        public void onEventDetected(Event data) {
            Log.i(TAG, "result : " + data.result);
            Log.i(TAG, "code : " + data.code);

            if( data.code == EventCode.EVENT_DEVICE_FIRMWARE_UPGRADED )
            {
                /**
                 * Reboot device.
                 */
                if (data.result == ErrorCode.SUCCESS ) {
                    svpManager.rebootDevice();
                }
            }
        }
    };

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        /**
         * SDK Initialize.
         */
        svpManager.initialize(this, deviceListener);

        /**
         * SDK service run.
         */
        svpManager.run();

        findViewById(R.id.button).setOnClickListener(mClickListener);

        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }

    public void ftpUpgrade()
    {
        int result = ;
        /**
         * FTP firmware option.
         */
    }
}
```

```
    */
    FirmwareOption option = new FirmwareOption();
    option.type = FirmwareOption.FTP_UPGRADE;
    option.fileName = "omnis_1.0.0_20181201.bin";
    option.host = "127.0.0.1";
    option.port = 21;
    option.username = "suprema";
    option.password = "suprema";

    /**
     * Connect FTP server.
     */
    result = svpManager.connectFtpServer(option);

    /**
     * Get firmware file list.
     */
    ArrayList<String> fileList = new ArrayList<String>();
    result = mManager.getFirmwareFileList(fileList);

    /**
     * Upgrade firmware.
     */
    result = svpManager.upgradeFirmware(option);

    /**
     * Disconnect FTP server.
     */
    result = svpManager.disconnectFtpServer();
}

public void usbUpgrade()
{
    int result = ;
    /**
     * USB firmware option.
     */
    FirmwareOption option = new FirmwareOption();
    option.type = FirmwareOption.USB_UPGRADE;
    option.fileName = "omnis_1.0.0_20181201.bin";

    /**
     * Upgrade firmware.
     */
    result = svpManager.upgradeFirmware(option);
}

Button.OnClickListener mClickListener = new View.OnClickListener() {
    public void onClick(View v) {

        /**
```



```
    * FTP firmware upgrade.  
    */  
    ftpUpgrade();  
  
    /**  
    * USB firmware upgrade.  
    */  
    usbUpgrade();  
}  
};  
}
```

From:

<https://kb.supremainc.com/svpsdk/> - **SVP Android SDK**

Permanent link:

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