# Web Page Development Guide

Hanwha Vision Open Platform
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# Table of Contents

# 1 Prerequisites

To create an application using the SDK, prepare the following software and hardware:

- Linux, or Windows
- Hanwha Vision Open Platform SDK
- Hanwha IP camera that supports Hanwha Vision Open Platform

# 2 Functions

These functions are defined in the camera to request information or control third-party applications. Download home/js/SDKApi.js for details on these functions.

## 2.1 RequestAjaxMsg

**Define**

RequestAjaxMsg function

| Method | Parameters |
|---|---|
| RequestAjaxMsg | msg, alertMsg, reqUrl, command, asyncVal |

**Description**

This basic function is used for requesting or controlling the functions of the third-party application. This function is defined in the main server of the camera, so it can be used only for starting or stopping the application.

**Parameters**

| Members | Description |
|---|---|
| Msg | The string to start or stop the application* |
| alertMsg | To alert when the function call is failed<br><br>You can decide whether to use this message. |
| reqUrl | The URL processes all request message |
| Command | SDK/SDK_APP/SDK_APP_DATA<br><br>See 3. Commands |
| asyncVal | For most cases, use “undefined” |

**Return**

This function returns no string when the request is processed successfully. If not, it returns the “alertMsg”.

> **Note**
>
> The format of “msg” is xml. Refer to the following chapter.

## 2.2 startApplication

**Define**

startApplication function

| Method | Parameters |
|---|---|
| startApplication | paramJSON |

**Description**

This function is used for starting the application. This function is the same as when the **SDK** command is used.

**Parameters**

| Members | Description |
|---|---|
| paramJSON | JSON string that contains the following information:<br><br>appname: Name of the application.<br><br>success: Callback function when the application starts successfully.<br><br>error: Callback function when the application doesn’t start. |

**Return**

The *paramJSON* parameter is updated without returning anything.

## 2.3 stopApplication

**Define**

stopApplication function

| Method | Parameters |
|---|---|
| stopApplication | paramJSON |

**Description**

This function is used for stopping the application. This function is the same as when the **SDK** command is used.

**Parameters**

| Members | Description |
| --- | --- |
| paramJSON | JSON string that contains the following information:<br><br>appname: Name of the application.<br><br>success: Callback function when the application stops successfully.<br><br>error: Callback function when the application doesn't stop. |

**Return**

The *paramJSON* parameter is updated without returning anything.

# 2.4 getApplicationStatus

**Define**

getApplicationStatus function

| Method | Parameters |
| --- | --- |
| getApplicationStatus | paramJSON |

**Description**

This function is used for fetching application status information. This function returns the status of an application, such as running, stopped, etc.

**Parameters**

| Members | Description |
| --- | --- |
| paramJSON | JSON string that contains the following information:<br><br>appname: Name of the application.<br><br>success: Callback function when the application status information is fetched successfully. |

**Return**

The *paramJSON* parameter is updated without returning anything.

# 2.5 getApplicationSettings

**Define**

getApplicationSettings function

| Method | Parameters |
| --- | --- |
| getApplicationSettings | paramJSON |

**Description**

This function is used for fetching application settings information. This function is the same as when the **SDK_APP** command is used.

**Parameters**

| Members | Description |
| --- | --- |
| paramJSON | JSON string that contains the following information:<br><br>appname: Name of the application.<br><br>success: Callback function that gets the fetched settings information. |

**Return**

The *paramJSON* parameter is updated without returning anything.

## 2.6 updateApplicationSettings

**Define**

updateApplicationSettings function

| Method | Parameters |
| --- | --- |
| updateApplicationSettings | paramJSON |

**Description**

This function is used for updating the application settings information. This function is the same as when the **SDK_APP** command is used.

**Parameters**

| Members | Description |
| --- | --- |
| paramJSON | JSON string that contains following information:<br><br>appname: Name of the application.<br><br>appconfig: Application configuration data.<br><br>success: Callback function called when settings information is updated successfully.<br><br>error: Callback function when there is an error. |

**Return**

The *paramJSON* parameter is updated without returning anything.

# 2.7 sendCommandToServer

**Define**

sendCommandToServer function

| Method | Parameters |
| --- | --- |
| sendCommandToServer | paramJSON |

**Description**

This function is used for sending requests to the server. This function is the same as when the **SDK_APP_DATA** command is used.

**Parameters**

| Members | Description |
| --- | --- |
| paramJSON | JSON string that contains the following information :<br>appname: Name of the application.<br>requestMessage: message String containing request.<br><GetSDK_APP_DATA><br><AppName>application_name</AppName><br><Data>...</Data><br></GetSDK_APP_DATA><br>success: Callback function called with response from the server.<br>error: Callback function in case of error. |

**Return**

The *paramJSON* parameter is updated without returning anything.

> **Note**
>
> - If an error occurs when you use the **sendCommandToServer** function, change <Data>...</Data> to <data>...</data>.
> - Do not use the terms “data” or “Data” in the <Data> ... </Data>, <data> ... </data>. They may cause an xml parsing malfunction.

# 3 Commands

The following commands provide a way to communicate with the application and main server.

**Parameters**

Web communication commands

| Command | Description |
| --- | --- |
| SDK | To control the application, such as start/stop |
| SDK_APP | To set or get the setting of the application |
| SDK_APP_DATA | To communicate with the application, use this command |

## 3.1 SDK Command

This command is used to start or stop the application using the third-party application’s own web page.

Syntax

| Usage | Syntax |
| --- | --- |
| Start the app | <StartSDK><br><AppName>application_name</AppName><br></StartSDK> |
| Stop the app | <StopSDK><br><AppName>application_name</AppName><br></StopSDK> |

**Description**

Syntax is the message used as a parameter("msg") for the **RequestAjaxMsg** function. Type the full application name for "application_name" as defined in an IPCameraManifest.xml file.

**Return**

After the **RequesAjaxMsg** function is called, the web page is reloaded regardless of success. If the function fails to start or stop the application, the web page shows the alert message("alertMsg") as a popup.

# 3.2 SDK_APP Command

This command is used to set or get the settings of the application, especially the setting values defined in IPCameraManifest.xml.

Syntax

| Usage | Syntax |
| --- | --- |
| Set the settings | <SetSDK_APP><br><AppName>application_name</AppName><br><VideoEncoding>...</VideoEncoding><br><rawVideo>...</rawVideo><br><appConfigData>...</appConfigData><br><vaEvent>...</vaEvent><br><rawAudio>...</rawAudio><br></SetSDK_APP> |

| Usage | Syntax |
| --- | --- |
| Get the settings | <GetSDK_APP><br><AppName>application_name</AppName><br></GetSDK_APP> |

**Description**

Syntax is the message used as a parameter for the request function (request function will be defined). Type the full application name in “application_name” as defined in an IPCameraManifest.xml file.

**Function Define**

Request Function

| Method | Parameters |
| --- | --- |
| Any method allowed | msg, alertMsg, reqUrl, command, asyncVal |

**Function Description**

This is the function to set or get the basic information defined in an IPCameraManifest.xml file. This function is defined based on the **RequestAjaxMsg** function.

**Function Parameters**

| Members | Description |
| --- | --- |
| Msg | The string to set or get the IPCameraManifest.xml |
| alertMsg | To alert when the function call is failed<br>You can decide whether to use this message. |
| reqUrl | The URL processes all request messages |
| Command | SDK_APP |
| asyncVal | In most cases, use “undefined” |

**Function Return**

| Usage | Syntax |
| --- | --- |
| Success to set | <Results><br><Status>OK</Status><br></Results> |
| Success to get | IPCameraManifest.xml in xml format |

| Usage | Syntax |
| --- | --- |
| Fail to set or get | <Error><br><br><ErrorString>ERROR: Configuration file not found<br><br></ErrorString><br><br></Error> |

**Function Example**

```
function GetSettings()
{
    var msg = “”;
    msg = “<GetSDK_APP>”;
    msg += “<AppName>ServerPushMJPEG</AppName>”;
    msg += “</GetSDK_APP>”;
    SDK_APPGetSettingsAjaxMsg(msg, “”, URL, ‘SDK_APP’, ‘undefined’);
}

function SDK_APPGetSettingsAjaxMsg(msg, alertMsg, reqUrl, command,
asyncVal)
{
     if(typeof command == “undefined”) command = “”;
     if(typeof asyncVal == “undefined”) asyncVal = false;

     $.ajax({
          type: “POST”,
          async: asyncVal,
          cache : false,
          url : reqUrl,
          dataType: “xml”,
          data: encodeURI(msg),
          success: OnSuccessGetSettings
});
}

function OnSuccessGetSettings(ack)
{
     if($(ack).find(“ErrorString”).text())
     // Request is failed, process error.
     if($(ack).find(“model”).text())
```

```
    // Request is success
}
```

> **Note**
>
> See the example of “ServerPushMJPEG”.

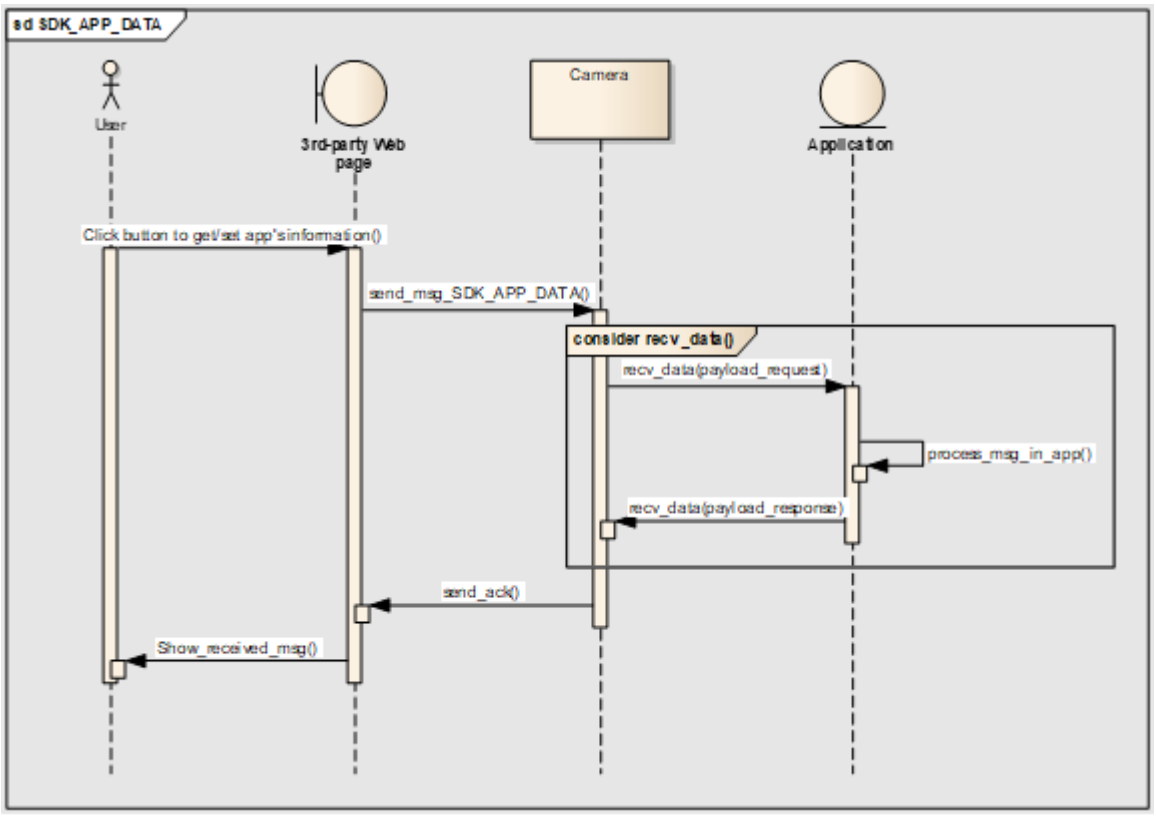
## 3.3 SDK_APP_DATA Command

This command is used to communicate with the application. The sequence diagram of this command is as shown in the picture below.

When the camera receives “SDK_APP_DATA” messages from the web, it sends the message to the application, especially “recv_data(void*, void*)”.

The function (recv_data()) has 2 parameters to receive and send messages: the first parameter (void *payload_request) is to receive the message from the camera (from the web) and the second (void *payload_response) is to send the message to the camera (to the web).

See the main source code when you make a project in Docker.




Syntax

| Usage | Syntax |
| --- | --- |
| Send the message to the application | <SetSDK_APP_DATA><br><AppName>application_name</AppName><br><Data>...</Data><br></SetSDK_APP_DATA><br><GetSDK_APP_DATA><br><AppName>application_name</AppName><br><Data>...</Data><br></GetSDK_APP_DATA> |

**Description**

Syntax is the message used as a parameter for the request function (see the example below). Type the full application name in “application_name” as defined in an IPCameraManifest.xml file.

> **Note**
>
> If an error occurred when running the **SDK_APP_DATA** command, change <Data>...</Data> to <data>...</data>.

**Function Example**

```
function GetSettings()
{
    var msg = “”;
    msg = “<GetSDK_APP>”;
    msg += “<AppName>ServerPushMJPEG</AppName>”;
    msg += “<Data>GetInitData</Data>”
    msg += “</GetSDK_APP>”;
    SDK_APP_DataGetAjaxMsg(msg, “”, URL, ‘SDK_APP_DATA’, ‘undefined’);
}

function SDK_APP_DATAGetMsg(msg, alertMsg, reqUrl, command, asyncVal)
{
     if(typeof command == “undefined”) command = “”;
     if(typeof asyncVal == “undefined”) asyncVal = false;

     $.ajax({
          type: “POST”,
```

```
          async: asyncVal,
          cache : false,
          url : reqUrl,
          dataType: “xml”,
          data: encodeURI(msg),
          success: OnSuccessGet
});
}

function OnSuccessGet(ack)
{
if($(ack).find(“Success”).text())
     // Request is success, the message is from the application
}
```

```
OPENSDK_ERR_CODE recv_data(void *payload_request, void *payload_response)
{
    OPENSDK_PAYLOAD_REQUEST *req =
    (OPENSDK_PAYLOAD_REQUEST *)payload_request;
    OPENSDK_PAYLOAD_REQUEST *rsp =
    (OPENSDK_PAYLOAD_REQUEST *)payload_response;
    if(strstr(req_payload->pBuff, “GetInitData”) != NULL)
    {
        strcpy(res_payload->pBuff, “Success”);
    }
    Return OPENSDK_APP_OK;
}
```

All messages to get or set data (**SDK_APP_DATA** command) will be sent to recv_data(void *, void *) in the application.

# 4 References

Refer to ServerPushMJPEGApp/html/index.html for examples of the use of functions.

# 5 Limitations

It is recommended to use the functions of 3.50 and later.