

General Linux SDK Interface Description (USB3.0)

1. Interface description

1.1 guide_usb_initial

int guide_usb_initial()

Function

Initializes the USB device

Input parameter: None

Return value

0 success <0 failed to open the device

1.2 guide_usb_setpalette

int guide_usb_setpalette(int paletteIndex)

Function

setpalette:

paletteIndex, range: 0~11;

Return value

0 success <0 failed to open the device

1.3 guide_usb_openstream

```
int guide_usb_openstream(guide\_usb\_device\_info\_t* deviceInfo,  
                        OnFrameDataReceivedCB frameRecvCB,  
                        OnDeviceConnectStatusCB connectStatusCB)
```

Function

Open the video stream

Input parameter:

deviceInfo: Device information, including height, width, and video mode.

frameRecvCB: Video stream callback method

connectStatusCB: Connection state callback method

Return value

0 success <0 failure

1.4 guide_usb_closestream

```
int guide_usb_closestream()
```

Function

Turn off the video stream

Input parameter: None

Return value

0 success <0 failure

1.5 guide_usb_exit

```
int guide_usb_exit()
```

Function

Exit, clear data, free memory.

Input parameter: None

Return value

0 success <0 failure

1.6 guide_usb_setloglevel

```
int guide_usb_setloglevel(int level)
```

Function

Set the log switch and level.

Input parameter:

level: indicates the log level. See guide_usb_log_level_e.

Return value

0 success <0 failure

2. The data type

2.1 enum guide_usb_video_mode_e

type definition

```
typedef enum
```

```
{
```

```
    X16 = 0,                                //X16
```

```
    X16_PARAM = 1,                          //X16+ paramline
```

```

Y16 = 2,                                //Y16
Y16_PARAM = 3,                          //Y16+ paramline
YUV = 4,                                //YUV
YUV_PARAM = 5,                          //YUV + paramline
Y16_YUV = 6,                            //Y16+ YUV
Y16_YUV_PARAM = 7                       //Y16+ YUV+ paramline
} guide_usb_video_mode_e;

```

Function

Movement video mode: According to the video mode configured by the movement, the corresponding type is passed in.

2.2 enum guide_usb_device_status_e

type definition

```

typedef enum
{
    DEVICE_CONNECT_OK = 1,                //video stream open

    DEVICE_DISCONNECT_OK = -1,            //video stream close
} guide_usb_device_status_e;

```

Function

Movement video stream connection status

2.3 struct guide_usb_device_info_t

type definition

```

typedef struct
{
    int width;                            // Width of the image

```

```

        int height;                                // Height of the image
        guide_usb_video_mode_e video_mode;         // Video mode }
guide_usb_device_info_t;

```

Function

Movement video information, the information needed to open the device.

According to the movement to configure

eg: COIN612R width:640, height:512,

Video mode:Y16_YUV_PARAM。

eg: COIN612 ViewVersion width:640, height:512,

Video mode:YUV。

2.4 struct guide_usb_frame_data_t

type definition

typedef struct

```

{
    int frame_width;                                // Width of the image
    int frame_height;                              // Height of the image
    unsigned char* frame_rgb_data;                 //rgb Data
    int frame_rgb_data_length;                     // Length of Rgb Data
    short* frame_src_data;                         // Raw data Y16
    int frame_src_data_length;                     // Length of Raw data
    short* frame_yuv_data;                         //yuv422 Data
    int frame_yuv_data_length;                     // Length of yuv422
    short* paramLine;                              //Paramline

    int paramLine_length;                          //Paramline Length

} guide_usb_frame_data_t;

```

Function

Image data:

Y16 data is obtained from frame_src_data

YUV data is obtained from frame_yuv_data

2.5 enum guide_usb_log_level_e

type definition

typedef enum

```
{  
    CLOSE = 0,                //close log  
    LOG_FATALEER = 1,  
    LOG_ERROR = 3,  
    LOG_WARN = 7,  
    LOG_INFO = 15,  
    LOG_TEST = 31  
} guide_usb_log_level_e;
```

Function

Log level setting.

◦

2.6 OnDeviceConnectStatusCB

type definition

```
typedef int (*OnDeviceConnectStatusCB) (  
    guide_usb_device_status_e deviceStatus);
```

Function

Video stream connection status callback method.

2.7 OnFrameDataReceivedCB

type definition

```
typedef int (*OnFrameDataReceivedCB)(  
    guide_usb_frame_data_t *pVideoData);
```

Function

Video stream callback method.

3. The development process

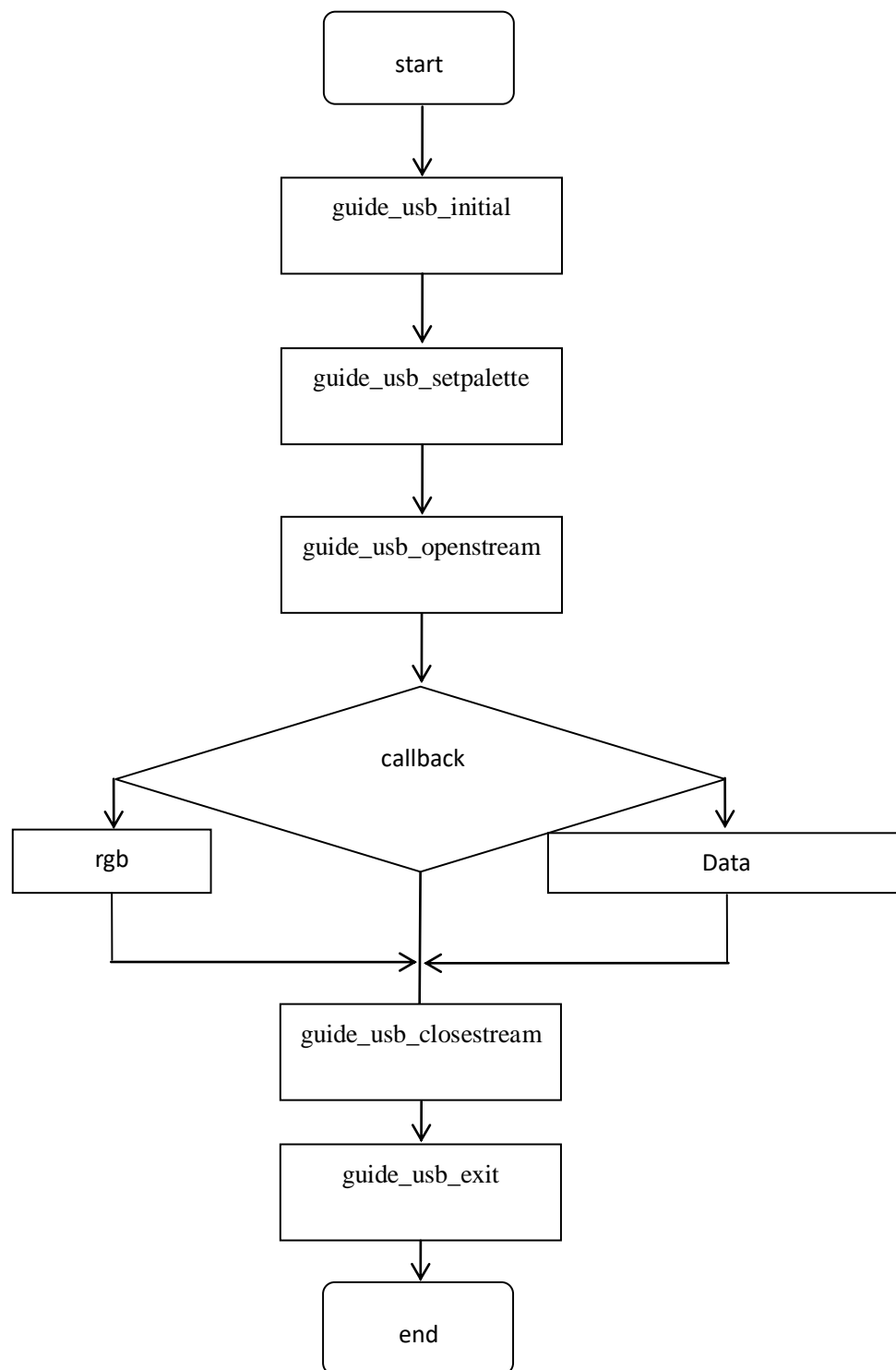


Figure 1 Development flow chart

4. Revision record

Version	Data	Content of change	Signature
V1.0.0	20210816	The first version of C language SDK is consistent with USB2.0	05174lg
V1.0.1	20210903	Supplementary callback method definition description	05174lg