QUICKSTART GUIDE
ORIOLE 3G-SDI BOARD CAMERA

Introduction

This guide is designed to get you up and running quickly with the **Oriole 3G-SDI Board Camera** (AS-BCAM-S42-001-A). This document should be read in conjunction with the datasheet and technical reference manual for the Oriole 3G-SDI Board Camera (www.activesilicon.com).
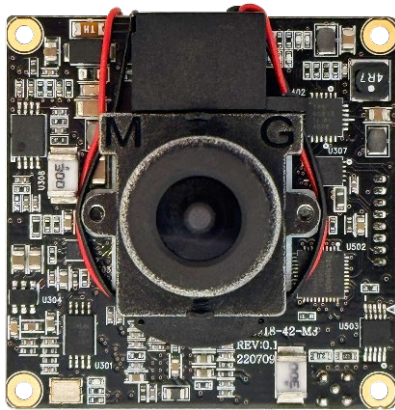

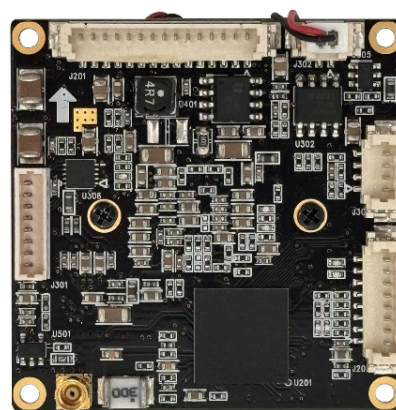|	
Figure 1. Oriole 3G-SDI Board Camera – Front	**Figure 2. Oriole 3G-SDI Board Camera – Rear**

Evaluation Kit Contents

The Evaluation Kit for the Oriole 3G-SDI Board Camera (AS-BCAM-S42-EVAL-A) contains all the parts needed to evaluate the Oriole 3G-SDI Board Camera (AS-BCAM-S42-001-A). Note that the evaluation kit does not include a camera, this needs to be ordered separately.

Please check that you have all the parts listed below:

- Multi-way evaluation cable
  (with power input socket, OSD navigation switch, serial port connection,
  BNC socket for CVBS output, BNC socket for SDI output, MMCX plug for camera SDI socket,
  header plug for camera J201 socket; see Figure 3).

- USB RS-485 serial communication cable (see Figure 4).

- 12V multi-standard power supply and mains socket adapters.

Figure 3. Oriole 3G-SDI Board Camera multi-way evaluation cable.

Figure 4. Oriole 3G-SDI Board Camera USB RS-485 serial communication cable.

Quick Start

1. Connect the header connector on the multi-way evaluation cable to the J201 header socket on the Oriole 3G-SDI Board Camera.
2. Connect the MMCX connector on the multi-way evaluation cable to the MMCX socket (J205) on the rear of the Oriole 3G-SDI Board Camera.
3. Connect the barrel connector of the power supply to the barrel socket on the multi-way evaluation cable.
4. When ready, plug in and switch on the power supply; the camera will start up.
5. After a brief period, the camera will output SDI and CVBS video from the BNC connectors on the on the multi-way evaluation cable.

Opening the Camera On-Screen Menu (OSD) system

The multi-way evaluation cable includes a navigation switch that can be moved up, down, left and right; when the switch is held the right way around, these will correspond to cursor movements in the camera on screen menu display (OSD). The button can also be pressed in to open the menu and select menu options.

To open the menu system, briefly press the navigation button down. The OSD menu will open. Browse the menu by using the navigation button to move the selection and the button press to select options and sub-menus. To apply the results to the camera you must 'Save' the settings on each OSD screen.

Figure 5. Oriole 3G-SDI Board Camera on-screen display menu

VISCA/Serial Communication

Camera control is supported over the RS-485 port; a connection to this is available on the multi-way evaluation cable. The multi-way evaluation cable should be connected to the USB RS-485 serial cable as shown below.

Multi-way cable			USB RS-485 serial cable	
Description	Colour.	Connect	Colour	Description
RS-485 +	Orange	Y	Orange	Data + (A)
RS-485 -	White	Y	Yellow	Data - (B)
		NC	Black	GND
		NC	Red	Power
		NC	Brown	120R pin 1
		NC	Green	120R pin 2

Table 1. RS-485 connections between multi-way cable and USB RS-485 serial cable

To evaluate VISCA/serial control connect the multi-way evaluation cable to the camera and the USB RS-485Serial communication cable to a Windows PC USB port. The USB-Serial communication cable contains an FTDI USB-serial device; the Windows PC will require FTDI drivers for this device. These drivers are usually automatically installed on Windows PCs.

The USB connection to the camera will be seen by the PC as a standard virtual COM port connection. Standard serial camera communication software (e.g. HarrierControl, see below) can use the COM port to communicate with and control the camera. The COM port number is assigned by the Windows operating system. Windows Device Manager (section: *Ports (COM & LPT)*) can be used to identify the actual COM port number assigned for the serial connection to the camera.

Look up the COM port number of the USB RS-485 serial cable and make a note of it so that you can use it in the serial communications program (e.g. HarrierControl, see below) that you will be using.

Using the HarrierControl Application

Go to the Active Silicon website and find the Software page, or the product page for the Oriole 3G-SDI Board Camera - download the HarrierControl application (.zip file).

Unzip the HarrierControl folder into a suitable folder on your PC.

The HarrierControl application is only supported on Windows 10/11. You may need to install the latest drivers from FTDI. These are available here:

https://www.ftdichip.com/Drivers/D2XX.htm

The HarrierControl application is a Windows command line program that relies on several DLL files also included in the HarrierControl folder. The best way to run the application is in a Windows Command Prompt shell; this can be found under Windows Start button in:

Start->Windows System->Command Prompt,

or you can search the applications/start for CMD.

Run the Command Prompt application and change drive/directory to the HarrierControl folder.

Connect the Oriole 3G-SDI Board Camera to the PC and power-up the camera.

Look up the COM port number of the USB RS-85 serial cable so that you can use it in the serial communications program (e.g. HarrierControl).
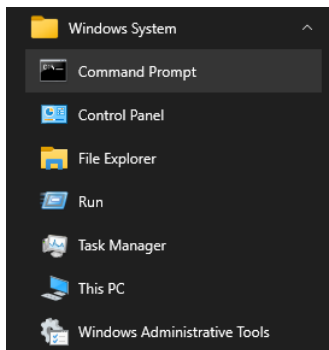
Figure 6. Windows 10 Command prompt application	**Figure 7. Typical HarrierControl usage**

The HarrierControl application can be used with command line arguments as follows:

HarrierControl [P1] [P2] [P3] [P4]

Argument **[P1]**:

This specifies the type of Interface/Serial communication to be used.

/? or **/h** or **/H**   displays help text.

COMx   COM port x selected, (x=2-255).

Argument **[P2]**:

This specifies the Baud Rate of the serial port. Valid values are **9600**, **19200**, **38400**, **57600** and **115200**.

Argument **[P3]**:

This is the VISCA command that is to be sent to the camera. The application requires VISCA commands to be entered in a comma delimited format; the commas are removed before sending the commands. Each individual number is treated as a hexadecimal number. To work in PowerShell the comma separated VISCA command should be enclosed in double quotation marks: " *command* "

For information on suitable VISCA commands please refer to the camera documentation.

Example:

```
C:\Tools\HarrierControl>harriercontrol COM6 9600 81,09,00,37,FF
Tx: [ 81 09 00 37 ff ]
Rx: [ 90 50 00 4e 3c 00 04 ff ]
```

Technical Support

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