

# Evaluation Kit for Harrier Interface Board

This is a QuickStart Guide for Active Silicon's Harrier 3G-SDI camera interface board (75 Ohm) for the Tamron MP1110, Tamron MP1010 and Sony EV series cameras.

**Evaluation Kit Part Number:** AS-CIB-3GSDI-002-EVAL-A



Fig.1 - Evaluation Kit

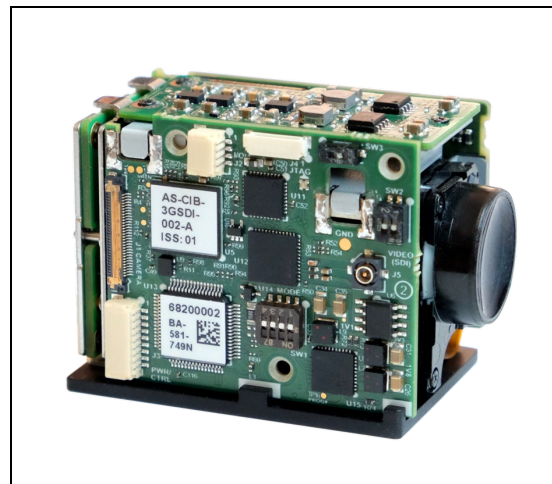


Fig.2 - Harrier Interface Board fitted to camera

**NOTE: The interface board and camera are not included in the kit and must be ordered separately.**

## Introduction

The purpose of the Evaluation Kit is to allow users to get up and running quickly with the camera and interface board. The kit provides power and serial communications to the camera and interface board, and 3G/HD-SDI out.

If a camera and Interface board were ordered with the Evaluation Kit, then the interface and board and bracket will already be fitted to the camera if requested.



Fig.3 - Interface Board

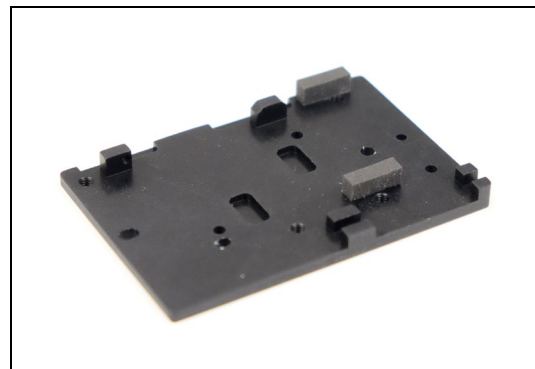


Fig.4 - Bracket

## Kit Contents



Fig.5 - Power supply



Fig.6 - Breakout Cable to Interface Board

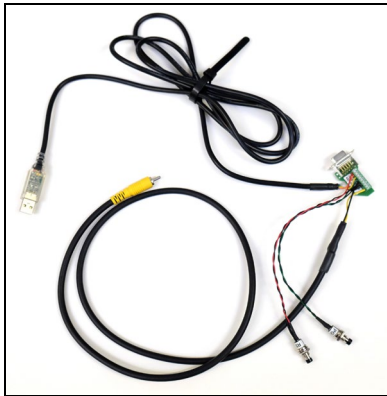


Fig.7 - Breakout Cable to PC / analog out



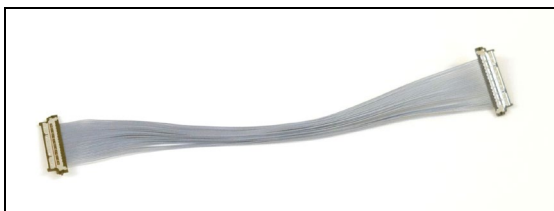
Fig.8 - Micro-coax connector to BNC



Fig.9 - Phono to BNC adapter



Fig.10 - Breakout cables for development purposes (J2, J3, 4-way and 9-way)



Camera to Interface Board cable

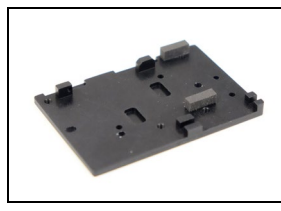


Fig.12 - Bracket (fitted to camera if requested and camera ordered separately)

## Operation

The interface board is connected up to the camera as show below:

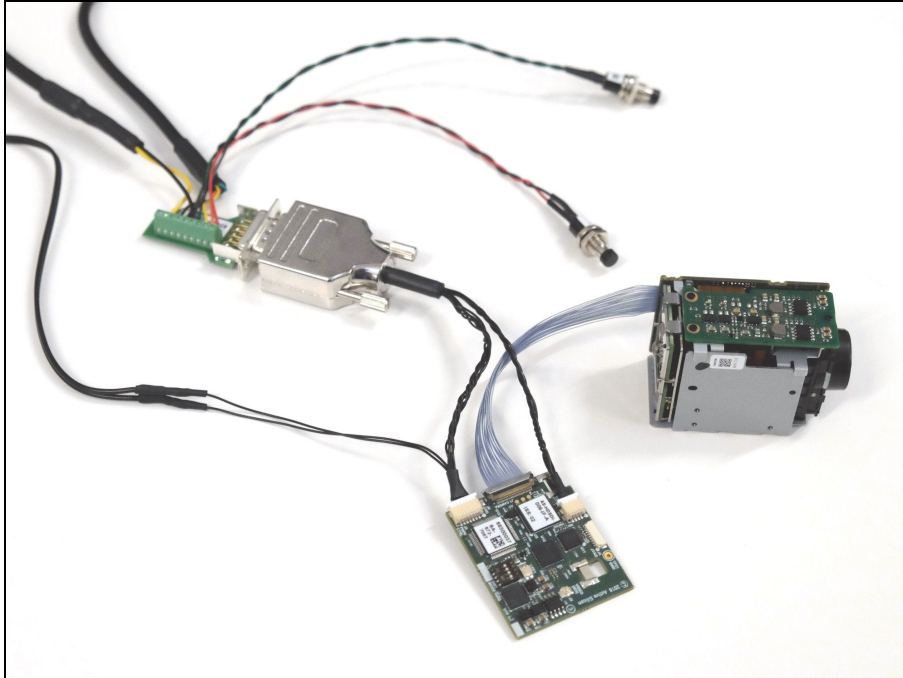


Fig.13 - Interface board connected up

The power supply is not shown in this photo but connects to the inline PSU connector in the Breakout Cable.

The push buttons are to (a) select the Test Pattern (PGEN, pin 1, J2) and (b) Reset. The Reset is used to apply a new default video setting to the camera. So for example, if the camera is in 720p60 mode (and SW1 DIP switches are all off – so VISCA controlled), then via a VISCA command the camera is changed to say 720p50 and then a Reset applied, the camera will reboot and the default will now be the new mode, 720p50. When switching from 3G modes to HD modes, the Dual LVDS mode must also be switched to Single LVDS mode (via VISCA commands) and vice-versa. Further details are in the camera manufacturer's manual.

The USB cable provides TTL level serial communications to a connected computer. SW2 should be configured with both DIP switch positions set to "ON" to support TTL serial communications.

SW3 selects between uncompressed SMPTE output (OFF), and compressed HD-VLC output (ON).

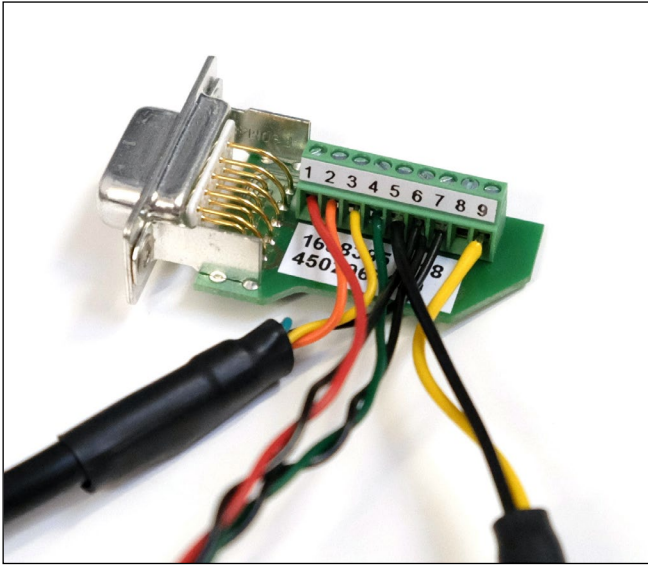


Fig.14 - Close up of Breakout Connector for reference

The 3G-SDI output can now be connected via the micro-coax to H.FL/BNC connector:

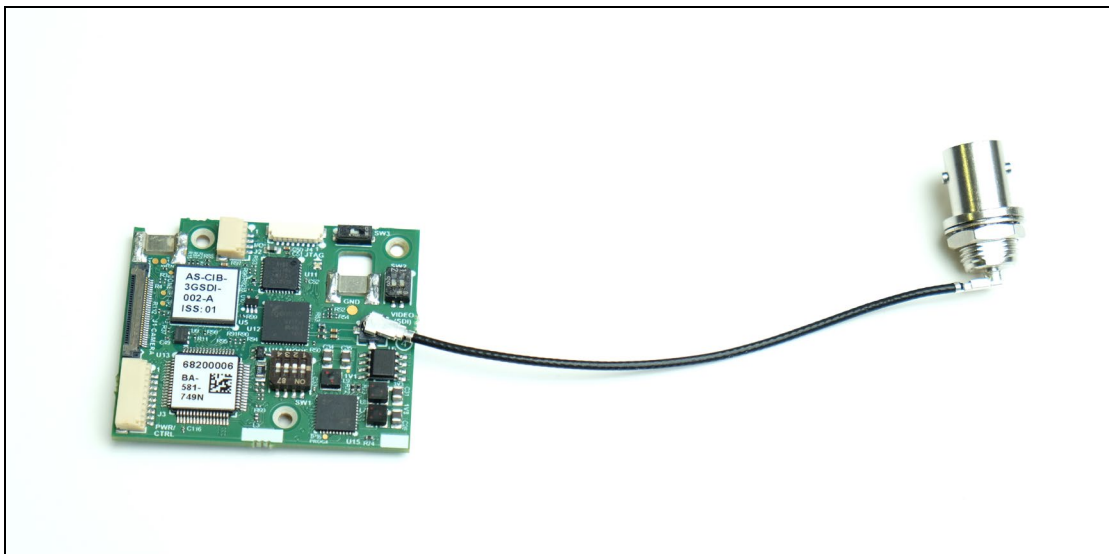


Fig.15 - Micro-coax to BNC connector

On power up, live video data should now be available on the output.

For information on camera configuration, please refer to the camera manufacturer's manual. Refer also to Active Silicon's datasheet on the interface board as well as the document "Harrier Series - Extended VISCA Commands" available on the website at [www.activesilicon.com](http://www.activesilicon.com).

## Serial Control Software

The camera can be setup and controlled via the Tamron application for the Tamron cameras and the Sony application for the Sony cameras.

Part of the Breakout Cable has a USB lead and connector. This can be plugged into a standard Windows PC or laptop, and this will result in serial port drivers being installed that the control software can use.

The Sony software is available from Sony here –

<https://www.image-sensing-solutions.eu/FCB-EV7520.html>

The Tamron software is available here –

<https://www.activesilicon.com/camera-files/MP1110M-VC-Camera-Control-Software.zip>

Technical Reference Manuals for Tamron cameras -

<https://www.activesilicon.com/camera-files/MP1010M-VC-Technical-Manual.pdf>

<https://www.activesilicon.com/camera-files/MP1110M-VC-Technical-Manual.pdf>

## RS-232 / RS-485 Communications

The Harrier adapter can be configured for serial communications at RS-232 or RS-485 levels using SW2. For these signalling levels, connection is made at pins 1 & 2 of connector J3 on the Harrier adapter (refer to product data sheet for further details).

Note that the USB interface to the host PC provided with the evaluation kit only supports TTL level communication to the adapter: users must implement their own hardware interface to the host PC using either RS-232 or RS-485 signalling.

Users implementing their own RS-485 electrical interface should be aware that the camera manufacturer's software may be incompatible with the half-duplex operation inherent in RS-485 operation.



## Fitting the Bracket

It should be fairly self-explanatory how to fit the bracket, but the following photos will be a useful guide.

- 1) Remove the original bracket as shown below – this has three base screws and one side screw, and clip in the interface board as shown below.

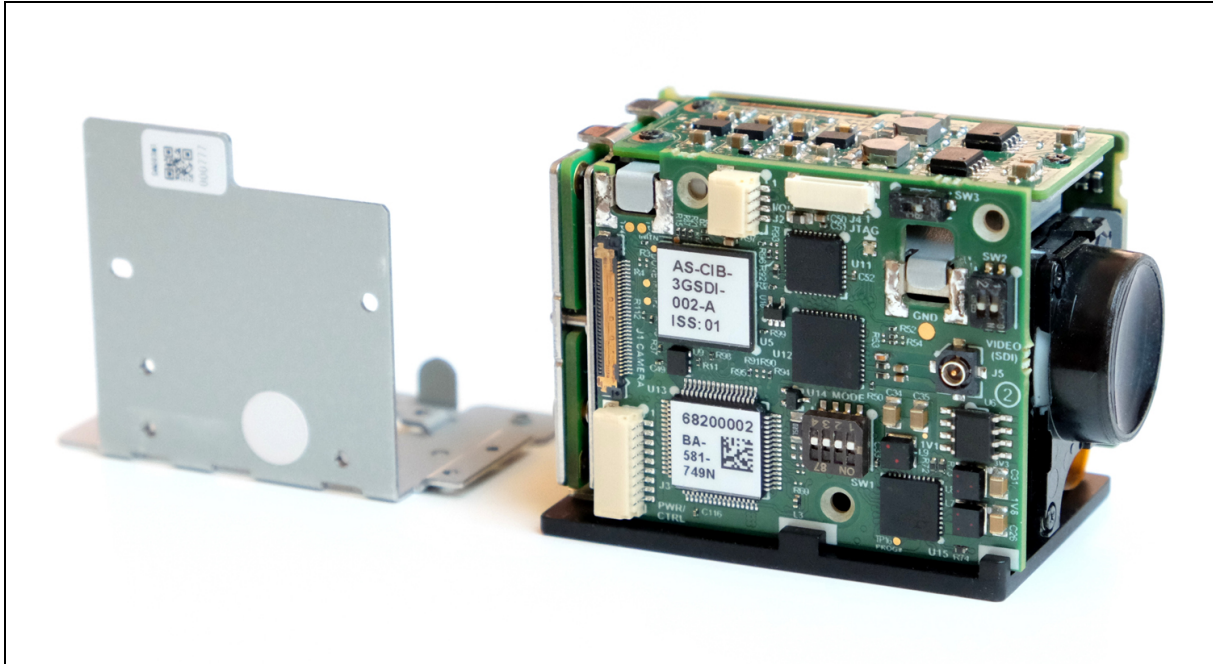


Fig.16 - Original bracket removed and interface board clipped onto side

- 2) Carefully align and attach the new bracket as shown below. Re-use the three base screws that were removed originally.

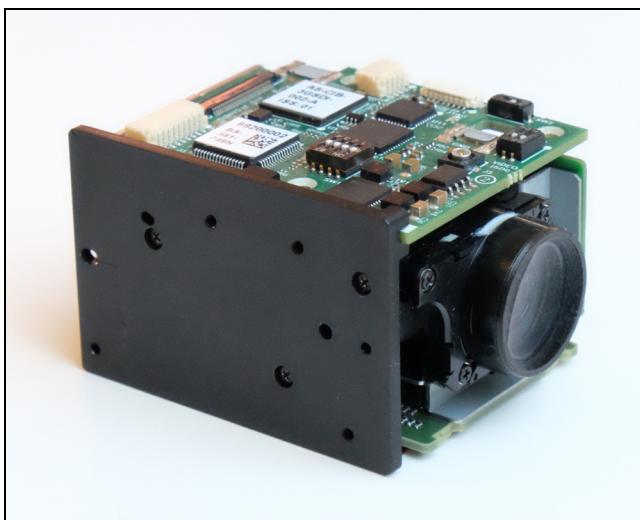


Fig.17 - Underside view

## Technical Support

In case of any issues, please contact Active Silicon Technical Support on the telephone numbers below or by email to [techsupport@activesilicon.com](mailto:techsupport@activesilicon.com)



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