Product Change Notification

Title:	Harrier 3G-SDI camera interface board firmware update
Our reference:	PCN-AP23-0026-01
Date:	29th June 2021
For further information contact:	Email: sales@activesilicon.com Europe: +44 (0)1753 650600 USA: +1 410-696-7642

Product(s) affected:	Active Silicon products affected by this change: • AS-CIB-3GSDI-002-A • AS-CIB-3GSDI-002-1110-A • AS-CIB-3GSDI-002-1110WP-A • AS-CIB-HDSDI-002-2030-A • AS-CIB-3GSDI-002-7520-A • AS-CIB-3GSDI-002-10LHD-A * • AS-CIB-HDSDI-002-36LGHD-A * * Pre-assembled Harrier 10x and 36x camera modules purchased before the date of this PCN have intermediate firmware revisions that already support many of the features described in this PCN.
Description of change:	There is a new version of firmware (v.2.3.0, previous version v.1.2.1) for the AS-CIB-3GSDI-002-A 3G-SDI Camera Interface board. This firmware adds the features/functions listed below: 1. **Support for new cameras**: Harrier 10x (10LHD), Harrier 36x (36LGHD) and Harrier 40x (40LHD) cameras are now supported. 2. **Version number indication**: On power-up the firmware revision number is indicated by the number of yellow flashes on the LED. 3. **New start-up process**: On power-up the Camera Interface Board will interrogate the camera to identify the camera model. It will do this for ~40 seconds; if there is no correct response in this period it will time out, stop communicating with the camera and report the error by sending a VISCA error message (A0,DE,AD,FF). At this point communication with the camera is disabled, but this can be re-enabled by sending the Serial Bypass command - this enables potential camera issues to be diagnosed directly. 4. **Error code indication**: In the case of an error, the LED will flash red; the number of red flashes indicates the specific type of error. 5. **Error code VISCA inquiry**: A new VISCA inquiry (Error Code - 82 09 0A 05 FF) reports detailed error information (matching the red LED flash count). 6. **Hardware ID VISCA inquiry**: A new VISCA inquiry (82 09 0A 04 FF) reports hardware ID/board revision information.

	7. **Interface board VISCA commands not forwarded to camera**: With the previous version of the Harrier firmware, the camera interface board serial interface simply forwarded all received serial communication to the camera, including VISCA commands intended for the camera interface board (at address 82). Tamron cameras with older firmware do not forward any serial communication, so the host computer would only see VISCA responses from the camera. Tamron cameras with the latest firmware, and the new Harrier cameras, forward all received VISCA commands that are not at the camera VISCA address (81). This means that camera interface board VISCA commands will now be forwarded to the host computer. To maintain previous operation, the new firmware does not forward VISCA messages at the camera interface board address (82) to the camera. 8. **Serial bypass VISCA command**: The old camera interface board firmware would simply forward all received serial communication, this meant that it could be used for non-standard serial mode/speed communications with the camera. The new firmware filters the communication and hence does not forward non-standard serial mode/speed communications to the camera. A new VISCA command (Serial Bypass - 82 01 0A 06 00 FF) restores the previous mode of operation, enabling support for operations like programming camera firmware. Once the serial bypass mode has been engaged the Camera Interface Board will not process VISCA commands. Serial bypass mode can only be disengaged by power cycling the board. 9. **Fully VISCA compliant responses**: The camera interface board will now generate fully VISCA compliant responses to VISCA commands at address 82. VISCA Commands will generate VISCA standard acknowledge ACK (A0 41 FF) and Complete (A0 51 FF) responses. VISCA Inquiries are returned in the VISCA compliant format A0 50 xx xx xx FF. If the format of a VISCA command is not recognised, a standard VISCA syntax error response (A0 60 02 FF) will be returned. 10. **Faster start-up time**: The camera interface board start-up time has been reduced (camera dependent).
Affect that change has on operation:	For normal operation, there is no effect on the fit, form or function other than the addition of support for new VISCA commands and additional cameras. As described in section 9. above, the camera interface board will now generate fully VISCA compliant responses to VISCA commands at address 82. To use the serial interface in non-standard modes (for functions other than VISCA communication, e.g. programming camera firmware) the Serial Bypass command must be sent to the camera interface board.

How to identify original and changed product:	The new firmware indicates the firmware version by flashing the board LED yellow at power up, e.g. it will flash twice then once to indicate v.2.1.0 firmware. The firmware version can also be queried by sending a VISCA command to the serial interfaces (82 09 0A 00 FF). The label on the product box indicates the version of the Harrier firmware, a typical example is shown below: 
Date from which changed product will be shipped:	12th July 2021 (or sooner if requested)
Notes:	