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**EAN-Camera Compatibility**  
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## PURPOSE

This EAN covers what cameras are currently supported by SLA boards and firmware. It will also cover 1500 FPGA driver support, lens control through our command and control protocol, and provide a table for both 1500 and 3000 basic acquisitions settings for common camera interface board options. For more detailed instructions for setting up connections and software configurations, please refer to the corresponding EAN. These are located on our [Engineering Notes](#) page on our website. We are continually working on expanding our camera support, and new additions will be added to this document and updates to the links on our [website](#).

## CAMERA COMPATIBILITY

Below is a list of specific cameras and drivers that have been developed. If you do not see a driver for your specific camera, support might be possible via our 'Generic Digital' driver. We can help in outline settings that might offer support. Adapter type is defined as: 1 = Direct Connection to SLA board, 2 = Interface Board Available, 3 = Multiple Interface Boards, 4 = External Power Adapter.

Analog Cameras Supported					
Camera or Type	SLA Panel Setting	Adapter Types	Definition & Support	1500	3000
<b>Generic Models</b>	NTSC	2	480i/30 – NTSC analog is really 29.97 fps	✓	✓
	PAL	2	480i/25 – PAL analog is 25 fps	✓	✓
	BT656 NTSC	2			✓
	BT656 PAL	2			✓
<b>Digital Cameras Supported</b>					
<b>Airborne Innovations</b>					
<b>AGS720P</b>	Generic Digital	2	720p30	✓	✓
<b>GoPro</b>					
<b>Hero 3+ Black</b>	Generic Digital	2	720p30, 720p60	✓	✓
<b>Hero 3 White</b>	Generic Digital	2	720p30, 1080p30	✓	✓
<b>Hitachi</b>					
<b>DI-SC120R</b>	Hitachi 720p	2,4	SC120R – supports 30 or 60 fps	✓	✓
<b>JAI Go Series</b>					
<b>GO-2400M</b>	G8 16bit Input	2,4	GO-2400-PMCL		✓
<b>L3 Communications</b>					
<b>NightWarrior</b>	Generic Digital	2,3	MWIR Cooled 640x480	✓	
<b>Sony</b>					
<b>EH3150</b>	Sony FCB-EH	2,4	EH3150 – 720p30	✓	✓
<b>EH6300</b>	Sony FCB-EH	2,4	EH6300 – 720p30, 1080p30	✓	✓
<b>EH6500</b>	Sony FCB-EH	2,4	EH6500 – 720p, 1080p30	✓	✓
<b>EV7500</b>	Sony FCB-EV	2,4	EV7500 – 720p30, 1080p30	✓	✓
<b>EV7100</b>	Sony FCB-EV	2,4	EV7100 – 720p30, 1080p30	✓	✓

<b>EX1010</b>	Analog	2	720(640)x480@29.97fps	✓	✓
<b>Tamron</b>					
<b>MP1010M-VC</b>	Generic Digital	2,4	MP1010M (compact block) – supports 720p & 1080p	✓	✓
<b>Digital Cameras Supported (continued)</b>					
Camera or Type	SLA Panel Setting	Adapter Types	Definition & Support	1500	3000
<b>DRS</b>					
<b>Tamarisk 320</b>	DRS Tam 320 8 Bit	2,3	320x240 sensor array	✓	✓
	DRS Tam 320 14 Bit	2,3	320x240 sensor array	✓	✓
<b>Tamarisk 640</b>	DRS Tam 640 8 Bit	2,3	640x480 sensor array	✓	✓
	DRS Tam 640 14 Bit	2,3	640x480 sensor array	✓	✓
<b>Zafiro640</b>	Generic Digital	2,3	Both 8 and 14 Bit support	✓	✓
<b>FLIR</b>					
<b>Tau 320</b>	Tau 320 8 Bit	1,2,3	320x240 8 Bit support	✓	✓
<b>Tau 320</b>	Tau 320 14 Bit	1,2,3	320x240 14 Bit support	✓	✓
<b>Tau 336</b>	Generic Digital	1,2,3	336x256 or 320x256 (8 & 14 Bit)	✓	✓
<b>Tau 640</b>	FLIR Tau 640 8 Bit	1,2,3	640x480 8 Bit support	✓	✓
<b>Tau 640</b>	FLIR Tau 640 14 Bit	1,2,3	640x480 14 Bit support	✓	✓
<b>Quark 336</b>	Generic Digital	2,3	336x256 or 320x256 (8 & 14 Bit)	✓	✓
<b>Quark 640</b>	Generic Digital	2,3	640x480 8 Bit 14 Bit support	✓	✓
<b>Photon HRC</b>	Generic Digital	2	640x480 8 Bit 8 & 14 Bit support	✓	
<b>Neutrino</b>	Generic Digital	2	MWIR 8 Bit or 14 Bit digital data via: Camera Link, CMOS, BT-656	✓	✓
<b>XENICS</b>					
<b>XTM-640</b>	Analog Only	n/a	BT.656 PAL/NTSC	✓	
<b>SENTECH</b>					
<b>STC-HD233</b>	Generic Digital	2	720p60, 1080p30/60	✓	✓
<b>SOFRADIR</b>					
<b>LEO MW640</b>	Generic Digital	2,4	640 x 512	✓	✓

## SLA-1500 – FPGA SUPPORT

The SLA-1500 has a separate FPGA that is part of the System-On-Module (SOM) board. It is programmed at build time with version 6 to supply standard camera support. Other versions are descriptions are list here:

SLA 1500 Board Revision	FPGA Version	Support Cameras
<b>Hardware Programmer</b>		<b>Hardware and software required for updating FPGA programming</b>
<b>Revision C</b>	5	Analog (NTSC & PAL), FLIR Tau 2 & Quark, DRS Tamarisk, Hitachi SC120R SONY EH & EV Series
	6	Analog (NTSC & PAL), FLIR Tau 2, Quark, and Photon, DRS Tamarisk, Hitachi SC120R, SONY EH & EV Series, L3 Night Warrior
	7	Analog (NTSC & PAL), Tamron
	8	Analog (NTSC & PAL), FLIR Tau 2, Quark, DRS Tamarisk, Hitachi SC120R
	9	Analog (NTSC & PAL), AGS Camera (Aptina/Bayer)
	10	Analog (NTSC & PAL), High 8 bits of 12 bits for Aptina Bayer, all above except the DRS in 8 bit mode
<b>Onboard Updates</b>		<b>In system FPGA system updates</b>
<b>SLA-1500 Rev E</b>	5	Analog (NTSC & PAL), FLIR Tau 2 & Quark, DRS Tamarisk, Hitachi SC120R SONY EH & EV Series
	6	Analog (NTSC & PAL), FLIR TAU 2, Quark, and Photon, DRS Tamarisk, Hitachi SC120R, SONY EH & EV Series, L3 Night Warrior
	7	Analog (NTSC & PAL), Tamron
	8	Analog (NTSC & PAL), FLIR Tau 2, Quark, DRS Tamarisk, Hitachi SC120R
	9	Analog (NTSC & PAL), AGS Camera (Aptina/Bayer)
	10	Analog (NTSC & PAL), High 8 bits of 12 bits for Aptina Bayer, all above except the DRS in 8 bit mode

**Note:** There are some dependencies on with SLA Firmware versions for supporting these different FPGA versions. For 'In-System' updates on the SLA-1500-OEM Rev E boards, firmware 2.22.18 or higher is required. For more details on how to use this new onboard updater, please refer to [EAN-SLA-1500-FPGA](#) found on our website.

Also note that FPGA version 8 additionally supports some GPIO functionality, if interested, contact us at either [sale@sightlineapplications.com](mailto:sale@sightlineapplications.com) or [support@sightlineapplications.com](mailto:support@sightlineapplications.com).

## LENS COMPATIBILITY

The following table lists camera lens compatibility. The current a limitation in using SLA Lens control relates to the SLA Serial Passthrough option. Presently these features are mutually exclusive, and need to be used (defined) independently of each other. In the SLA Panel+ application, on the Lens control tab, there is an option to disable serial passthrough for serial ports. For the SLA-1500 board, as a general rule, camera interface boards extend serial port 2 to the serial interface of the support camera. For the SLA-3000 this depend on the connector used on the SLA-3000-IO board. For the VIN0 (J6) connector, serial port 2 is extended, and for VIN1 (J7) serial port 3 is extended. When defining SLA Lens control for your camera, please disable the corresponding serial port.

Manufacturer	Camera Model	Zoom	Min FOV	Horz Pixels Per Deg (Video)	Weight	Minimum Illumination
<b>SONY</b>	FCB-EH3150	12X	4.6	278	150g	0.3 / 1.2 lx
	FCB-EH6300	20X	2.9	662	260g	0.5 / 1.7 lx
	FCB-EH6500	30X	2.1	914	265g	0.5 / 1.7 lx
	FCB-EV7500	30X	2.3	835	260g	0.35 / 1.4 lx
	FCB-EV7100	10X	7.6	37	210g	0.35 / 1.4 lx
	MA130	52°x29°	52	253	2.2g	6 lx
	MA131	26°x15°	26	74	9.5g	4 lx
	MA133	115°x62°	115	17	8.7g	6 lx
<b>Hitachi</b>	DI-SC120R	18X	3.2	400	250g	1.8 lx
<b>Tamron</b>	MP1010M-VC	10.5X	6.5	295	70g	1.0 lx
	SC001					

## ADAPTER BOARDS & KITS

Below is a list of our camera adapter boards for the SLA-1500 and SLA-3000. The above adapter types provide guidelines on whether the specific camera requires more than one interface board and/or requires external power.

Kits and Interface Boards	Description	OEM Direct Connect Option	Serial Passthrough Supported	External Power Required
<b>1500 Boards &amp; Kits</b>				
<b>SLA-KIT-1500-CL</b>	CameraLink interface board with SLA-1500-OEM mounting hardware	Yes	Yes	Yes
<b>SLA-KIT-1500-FFC-DRS</b>	DRS camera interface board and a SLA-FFC board with cable, and mounting hardware	No	Yes	No
<b>SLA-KIT-1500-FFC-TAU</b>	TAU camera interface board and a SLA-FFC board with cable	Optional*	Yes	No
<b>SLA-KIT-1500-FFC-QUARK</b>	Quark camera interface board and a SLA-FFC board with cable	No	Yes	No
<b>SLA-KIT-1500-HIT</b>	Hitachi camera interface board, camera interface cable and mounting hardware with 12v power adaptor and extension	Yes	Yes	Yes
<b>SLA-KIT-1500-SONY</b>	SONY camera interface board, camera interface cable, and 12v Power adaptor and extension	Yes	Yes	Yes
<b>SLA-KIT-1500-TAM</b>	Tamron camera interface board, camera interface cable, and 12v Power adaptor and extension	Yes	Yes	Yes
<b>SLA-KIT-1500-TAU</b>	TAU interface board with SLA-1500-OEM mounting hardware	Yes	Yes	Yes

<b>SLA-KIT-1500-HDMI</b>	HDMI interface board with SLA-1500-OEM mounting hardware	Yes	Yes (separate onboard connector)	Yes
<b>SLA-3000 Boards &amp; Kits</b>				
<b>SLA-KIT-3000-AB</b>	Analog input board with two MCX connectors, and mounting hardware	Yes	No	No
<b>SLA-KIT-3000-HDSDI-IN</b>	HDSDI input board with MCX connector, MCX-BNC cable, and mounting hardware	Yes	Yes (separate onboard connector)	No
<b>SLA-KIT-3000-HDMI</b>	HDMI interface board with mounting hardware	Yes	Yes (separate onboard connector)	No
<b>SLA-KIT-3000-HIT</b>	Hitachi camera interface board, camera interface cable and mounting hardware	Yes	Yes	No
<b>SLA-KIT-3000-SONY</b>	SONY camera interface board, camera interface cable and mounting hardware	Yes	Yes	No
<b>SLA-KIT-3000-FFC-DRS</b>	DRS camera interface board and a SLA-FFC board with cable, and mounting hardware	Yes	Yes	No
<b>SLA-KIT-3000-FFC-TAU</b>	TAU camera interface board and a SLA-FFC board with cable, and mounting hardware	Yes	Yes	No
<b>SLA-KIT-3000-FFC-QUARK</b>	Quark camera interface board and a SLA-FFC board with cable, and mounting hardware	Yes	Yes	No
<b>SLA-KIT-3000-FFC-TAM</b>	Tamron camera interface board and a SLA-FFC board with cable, and mounting hardware	Yes	Yes	No

As a general guideline, it is recommended to run the latest version of our SLA board firmware. While there are legacy releases for specific boards and cameras, running the most recent version of our firmware ensures compatibility. For the SLA-1500 please be sure to check that table above for FPGA version support.

## 1500 BASIC CONFIGURATION SETTINGS

SLA-1500 Settings																
EO Digital Cameras																
	Camera Type	Frame Step	Height	Width	VFP	HFP	Bits	Input	Invert VSync	Invert HSync	Use DVal	Use ESync	Init Code	Flags	Link to EAN Document	
Sony EH Series 6300, 3150	<b>SONY FCB-EH 720P</b>	0	Auto Config Setting for 720P – preferred setup – SLA3000-Sony Adapter Board default													<a href="#">EAN-SLA-1500-SONY</a>
	Generic Digital	0	720	1280	25	300	16	YUV	✓	✓			InitVisca	0x71		
	Configuration Notes: Save parameters and reset board required for changing parameters. If video is not then present, cycle power on system.															
Sony EV Series 7500, 7100	<b>SONY FCB-EV 720P</b>	0	Auto Config Setting for 720P – preferred setup													<a href="#">EAN-SLA-1500-SONY</a>
	Generic Digital	0	720	1280	25	260	16	YUV					InitVisca	0x41		
	Configuration Notes: Save parameters and reset board required for changing parameters. This camera then requires a power cycle when changing resolution															
Tamron	Generic Digital	2	720	1280	0	0	16	YUV				✓	InitVisca	0x841	<a href="#">EAN-TamronCameraMP1010M</a>	
	Configuration Notes: Save parameters and reset board required for changing parameters. If video is not then present, cycle power on system.															
Hitachi SC120R SC110	<b>Hitachi 720P</b>	0	Auto Config Setting for 720P – preferred setup – SLA3000-Hitachi Adapter board default													
	Generic Digital	0	720	1280	30	320	16	YUV	✓	✓			None	0x31		
	Configuration Notes: Save parameters and reset board required for changing parameters. If video is not then present, cycle power on system.															
HDMI Cameras																
	Camera Type	Frame Step	Height	Width	VFP	HFP	Bits	Input	Invert VSync	Invert HSync	Use DVal	Use ESync	Init Code	Flags	Link to EAN Document	
All	Generic Digital	0	720	1280	20	220	16	YUV					None	0x1	<a href="#">EAN-SLA-1500-HDMI-Input</a>	
	Configuration Notes: Frame Step value of "2" may be required for cameras that output P60 frame rate.															



### 3000 BASIC CONFIGURATION SETTINGS

SLA-3000 Settings																
EO Digital Cameras																
	Camera Type	Frame Step	Height	Width	VFP	HFP	Bits	Input	Invert VSync	Invert HSync	Use DVal	Use ESync	Init Code	Flags	Link to EAN Document	
Sony EH Series 6300, 3150	<b>SONY FCB-EH 720P</b>	0	Auto Config Setting for 720P – preferred setup – SLA3000-Sony Adapter Board default													<a href="#">EAN-SLA-3000-SONY</a>
	<b>SONY FCB-EH 1080P</b>	0	Auto Config Setting for 1080P – preferred setup													
	Generic Digital	0	720	1280	25	300	16	YUV	✓	✓			InitVisca	0x71		
	Generic Digital	0	1080	1920	41	236	16	YUV	✓	✓			InitVisca	0x71		
Configuration Notes: Save parameters and reset board required for changing parameters. If video is not then present, cycle power on system.																
Sony EV Series 7500, 7100	<b>SONY FCB-EV 720P</b>	0	Auto Config Setting for 720P – preferred setup													<a href="#">EAN-SLA-3000-SONY</a>
	<b>SONY FCB-EV 1080P</b>	0	Auto Config Setting for 1080P – preferred setup													
	Generic Digital	0	720	1280	25	260	16	YUV					InitVisca	0x41		
	Generic Digital	0	1080	1920	41	192	16	YUV					InitVisca	0x41		
Configuration Notes: Save parameters and reset board required for changing parameters. <b>This camera then requires a power cycle when changing resolution</b>																
Tamron	Generic Digital	2	720	1280	0	0	16	YUV				✓	InitVisca	0x841	<a href="#">EAN-TamronCameraMP1010M</a>	
	Generic Digital	0	1080	1920	0	0	16	YUV				✓	InitVisca	0x841		
Configuration Notes: Save parameters and reset board required for changing parameters. If video is not then present, cycle power on system.																
Hitachi SC120R SC110	<b>Hitachi 720P</b>	0	Auto Config Setting for 720P – preferred setup – SLA3000-Hitachi Adapter board default													
	Generic Digital	0	720	1280	30	320	16	YUV	✓	✓			None	0x31		
Configuration Notes:																
HDMI Cameras																
	Camera Type	Frame Step	Height	Width	VFP	HFP	Bits	Input	Invert VSync	Invert HSync	Use DVal	Use ESync	Init Code	Flags	Link to EAN Document	
All	Generic Digital	0	720	1280	20	220	16	YUV					None	0x1	<a href="#">EAN-SLA-3000-HDMI-Input</a>	
	Generic Digital	0	1080	1920	36	148	16	YUV					None	0x1		
Configuration Notes: Frame Step value of “2” may be required for cameras that output P60 frame rate.																
HD-SDI Cameras																
	Camera Type	Frame Step	Height	Width	VFP	HFP	Bits	Input	Invert VSync	Invert HSync	Use DVal	Use ESync	Init Code	Flags	Link to EAN Document	
ALL	<b>HD-SDI 720P</b>	0	Auto Config Setting for 720P – preferred setup – SLA3000-HD-SDI Adapter board default													
	Generic Digital	0	720	1280	0	0	16	YUV			✓		None	0x401		
	Generic Digital	0	720	1280	25	262	16	YUV					None	0x1		
	<b>HD-SDI 1080P</b>	0	Auto Config Setting for 1080P – preferred setup													
	Generic Digital	0	1080	1920	0	0	16	YUV			✓		None	0x401		
	Generic Digital	0	1080	1920	41	194	16	YUV					None	0x1		
Configuration Notes: If image colors are incorrect (green/purple) then camera is in different resolution mode than SLA3000 setting. Frame Step value of “2” may be required for cameras that output P60 frame rate. HD-SDI typically uses Data Valid line; it is possible to use generic digital to manually adjust vertical and horizontal front porch (blanking).																

Camera Link Cameras															
	Camera Type	Frame Step	Height	Width	VFP	HFP	Bits	Input	Invert VSync	Invert HSync	Use DVal	Use ESync	Init Code	Flags	Link to EAN Document
JAI GO-2400M (monochrome)	Generic Digital	0	1080	1920	0	0	8	G8 - 16bit					None	0x4002	
Configuration Notes: <ul style="list-style-type: none"> <li>• "Byte Swap" must be checked.</li> <li>• The camera outputs larger image (1936 x 1216) and it is cropped to 1920 x 1080. The image can be shifted by adjusting VFP &amp; HFP.</li> <li>• The camera must be configured as:                          "TAGM=1\r\n" (1=Geometry_1X2_1Y), "CLCF=2\r\n" (2=37.12MHz)</li> </ul>															