EAN-Sony Compatible Block Cameras

PN: EAN-Sony-Compatible-Block-Cameras

7/28/2020

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Alerts

The following notifications are used throughout the document to help identify important safety and setup information to the user:

⚠ **CAUTION:** Alerts to a potential hazard that may result in personal injury, or an unsafe practice that causes damage to the equipment if not avoided.

ⓘ **IMPORTANT:** Identifies crucial information that is important to setup and configuration procedures.

Used to emphasize points or reminds the user of something. Supplementary information that aids in the use or understanding of the equipment or subject that is not critical to system use.

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1 Overview

This document describes how to set up and configure the SightLine OEM video processing boards to receive video from Sony compatible block cameras.

1.1 Associated Documents

EAN-Camera Compatibility: Lists third-party cameras that are currently supported by SightLine software. Lists camera adapter board kits for the SightLine OEM video processing boards.

EAN-Digital Video Configuration: Describes how to configure the SightLine hardware for digital video input.

EAN-Ethernet-and-Serial-Communication: Describes how to set up serial communications for cameras or other payload devices from SightLine hardware.

EAN-Lens Focus Control.pdf: Describes how to configure the SightLine hardware for controlling motorized lenses.

Interface Command and Control (IDD): Describes the native communications protocol used by the SightLine Applications product line. The IDD is also available as a PDF download on the Software Download page.

Panel Plus User Guide: A complete overview of settings and dialog windows located in the Help menu of the Panel Plus application.

Additional support documentation EANs can be found on the Documentation pages of the SightLine Applications website.

1.2 SightLine Software Requirements

1500-OEM: Version 2.20.xx and higher and FPGA version 12. FPGA version 5 is acceptable in 1500-OEM REV C.

3000-OEM (REV C): Version 2.24.xx and higher.

ⓘ **IMPORTANT:** The Panel Plus software version should match the firmware version running on the board. Firmware and Panel Plus software versions are available on the Software Download page.

1.2.1 FPGA - 1500-OEM

Not all FPGA firmware versions are compatible with all Sony compatible block cameras. The FPGA firmware version must be compatible with the selected camera to operate correctly with the 1500-OEM. See the Table 1 or the EAN-Camera Compatibility documentation for the correct FPGA version to use for each specific camera.

Firmware and FPGA version information is located on the *Connect* tab under the *Video Output* section. See the EAN-FPGA Firmware Update 1500-OEM for updating instructions.

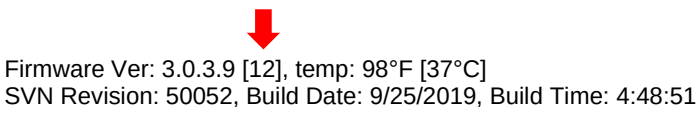


Figure 1: FPGA Version Number Location

1.3 Third Party Software

Camera control software from Sony. HW VSP3-Virtual Serial Port from the HW group.

2 Interface Boards

System interface boards provide options for network interfacing, serial ports, and GPIO. Camera interface and adapter boards provide an interface from the camera to OEM. See the ICD-1500 Adapter Boards and ICD-3000-4000-Adapter Boards for complete specifications, and pinouts.

IMPORTANT:

- All boards should be attached together before applying power.
- The 1500-Sony board is known to work with several Sony FCB-EX and FCB-EH cameras. Although they all use the same KEL connector, there are some differences between cameras. The FCB-EX7500 does not provide analog video over the KEL cable. See the EAN-Camera Compatibility document for more camera compatibility information.
- The KEL ribbon cable length should be as short as possible to ensure video quality and reduce EMI susceptibility. SightLine provides a 10cm cable within camera interface kits. A KEL cable length greater than 15cm is not recommended. There are COTS sources for alternate length KEL cables to help with custom integrations.

2.1 1500-AB Power Connection

REV H and later 1500-AB boards have a single power switch. REV E and earlier boards have a dual power switch. REV H and later boards are immediately powered on when power is connected. If using the 1500-AB board in a bench setup, review Figure 1 and Figure 2 prior to making power connections.

CAUTION: Power to the 1500-OEM board is provided through the 1500-Sony interface board using the SLA-PWR-B12V power supply shown in Figure 3. Powering the OEM through the J3 power pins and through the 1500-Sony board can damage the OEM.

CAUTION: DO NOT power up the 1500-OEM board from the 1500-AB interface board. The power switches should be set to the positions shown in Figure 2 (AB board power ON / 1500-OEM power OFF). Long term over powering will permanently damage the 1500-OEM board.

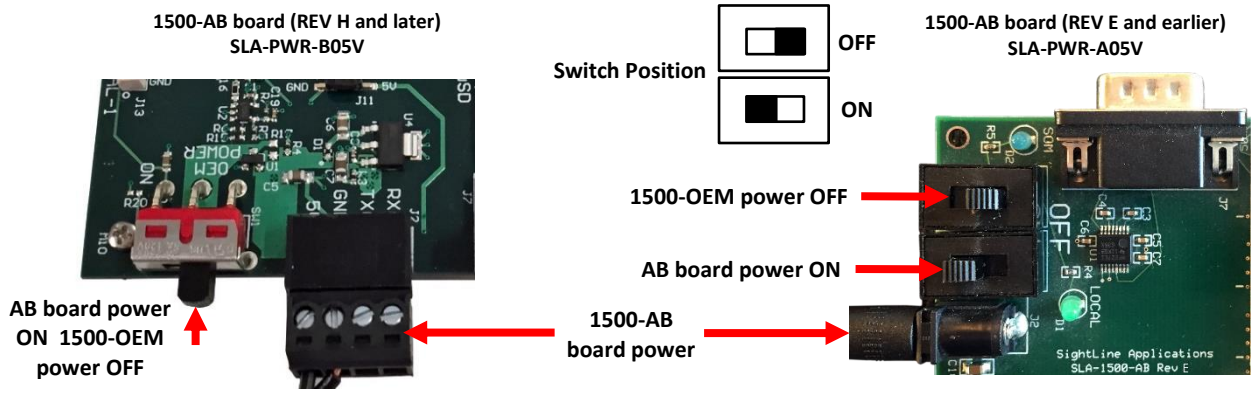


Figure 2: 1500-AB Board Power Connections

3 Hardware Connections

3.1 1500-OEM Block Camera Bench Setup

Interface and adapter boards:

- SLA-1500-SONY: Block camera and 1500-OEM interface.
- SLA-1500-AB: Provides serial and network interfaces. See the 1500-Sony exploded drawing for more connection layout information.

Do not attach the 1500-OEM and Sony adapter board to the 1500-AB board. They should remain separate.

Cable connections:

IMPORTANT: Do not apply power to the 1500-OEM board from the 1500-AB board (see Figure 2).

Power on the 1500-AB board (first), then connect the SLA-PWR-B12V to an AC power source to power up the 1500-OEM and block camera.

- SLA-CAB-1514: Connects to J3 (14-pin) on the 1500-OEM connector and to the 1500-AB J3 (14-pin) connector. Provides analog video, network, and serial connections to the 1500-OEM.
- SLA-CAB-K010 (KEL): Connects to the 1500-SONY board and the block camera. Provides serial communication and digital video to the camera. Insert KEL cable with gold contacts facing up.
- SLA-CAB-1504: Connects to J2 on the SLA-1500-SONY board and SLA-PWR-B12V power adapter.
- SLA-PWR-B12V: Connects to an AC power source. Powers the camera, SLA-1500-SONY board, and the 1500-OEM board.
- SLA-PWR-B05V: Connects to the 1500-AB board and AC power source.

Power and network connectivity LEDs:

A green light indicates the 1500-AB board is powered on. A blue light on the 1500-AB and a green light on the 1500-OEM board indicate that all the boards are powered on. A second flashing green light on the 1500-OEM indicates network connectivity

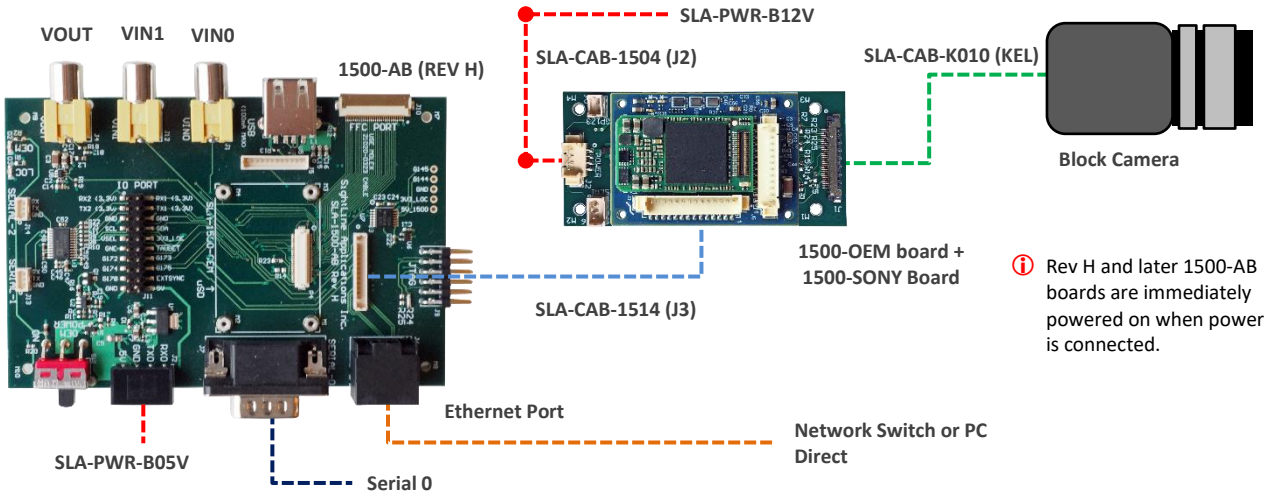


Figure 3: 1500-OEM Block Camera Bench Setup

3.2 3000-OEM Block Camera Bench Setup

Interface and adapter boards:

- SLA-3000-SONY: Block camera and 3000-OEM interface. The 3000-OEM supplies power to the camera through the SLA-3000-SONY board.
- SLA-3000-IO: Provides serial and network interfaces. Adapter boards can be connected to one of two available video input connectors (VIN1 or VIN0). See the 3000-OEM exploded assembly drawing for more connection layout information.

  VIN0 has camera channels 0 and 1 assigned. VIN1 has camera channels 2 and 3 assigned. If the configuration includes an analog board with a digital adapter board the analog board must be installed on VIN0.
- SLA-3000-mIO (optional smaller IO board): Provides serial and network interfaces. This board allows SLA-3000-SONY board to be connected directly to the OEM board.

Cable connections:

- SLA-CAB-K010 (KEL): Connects to the 1500-SONY board and the block camera. Provides serial communication and digital video to the camera. Insert KEL cable with gold contacts facing up.
- SLA-CAB-0403: Connects to J4 on SLA-3000-mIO board. Provides an RJ45 Ethernet connection.
- SLA-PWR-C12V: Connects to J5 on SLA-3000-IO board and AC power source.
- SLA-CAB-1504 / SLA-PWR-B12V: Connects to J9 on the SLA-3000-mIO board and AC power source.

Power and network connectivity LEDs:

A green light on the 3000-IO or 3000-mIO board indicates that all boards are powered on. An amber light on the 3000-OEM board verifies network connection.

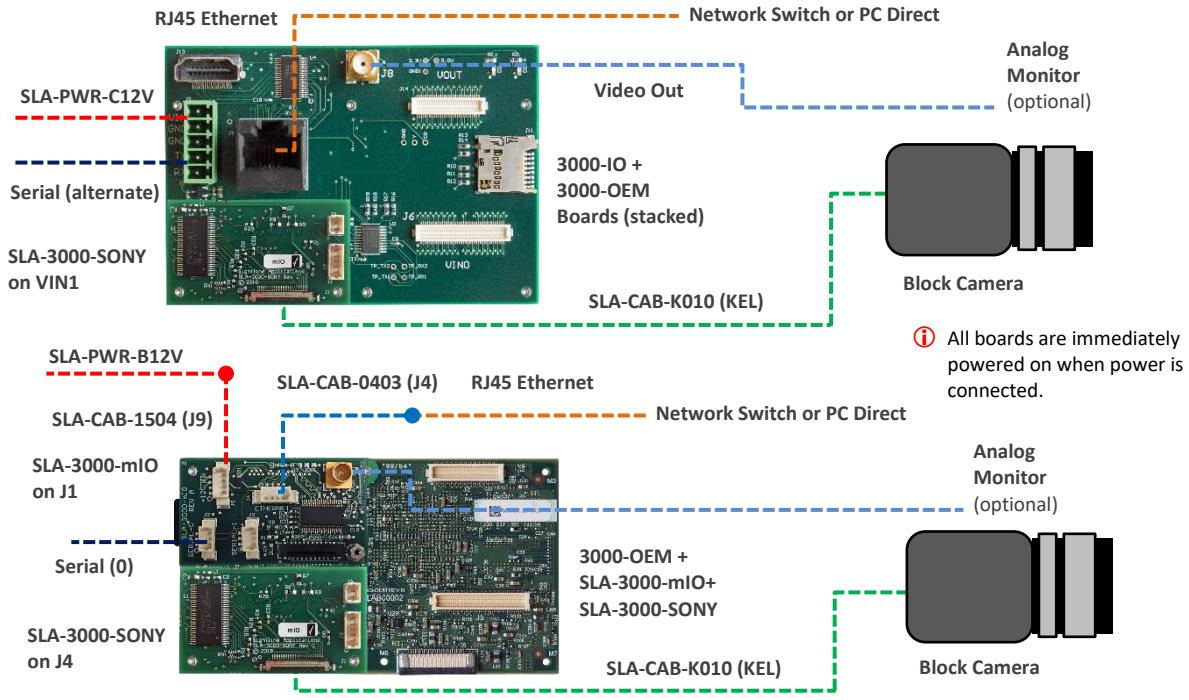
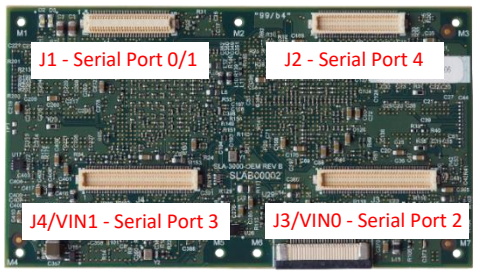


Figure 4: 3000-OEM Block Camera Bench Setup



3000-OEM	SLA-3000-IO	Serial Port	Camera Index Panel Plus
J1		0/1	NA
J2	VOUT	4	NA
J3	VIN0	2	CAM0/CAM1
J4	VIN1	3	CAM2

Figure 5: 3000-OEM Serial Port and Connector Reference

3.3 4000-OEM Block Camera Bench Setup

Interface and adapter boards:

- SLA-3000-SONY: Block camera and 4000-OEM interface. The 4000-OEM board supplies power to the camera through the SLA-3000-SONY board. Serial and network interfaces are provided on the 4000-OEM.
- The SLA-3000-SONY board can be connected to J6 on the 4000-OEM board. Additional camera adapter boards can be connected using the SLA-4000-MIPI board. See the ICD-3000-4000 Adapter Boards for specific MIPI board power requirements.

Cable connections:

- SLA-CAB-K010 (KEL): Connects to the 1500-SONY board and the block camera. Provides serial communication and digital video to the camera. Insert KEL cable with gold contacts facing up.
- SLA-CAB-0403: Connects to J4 on 4000-OEM board. Provides an RJ45 Ethernet connection.
- SLA-CAB-1504 / SLA-PWR-B12V-36W: Connects to J50 on the 4000-OEM board and AC power source.

Power and network connectivity LEDs:

A green light (D1) on the 4000-OEM board indicates that all boards are powered on. An amber light (D5) verifies network connection.

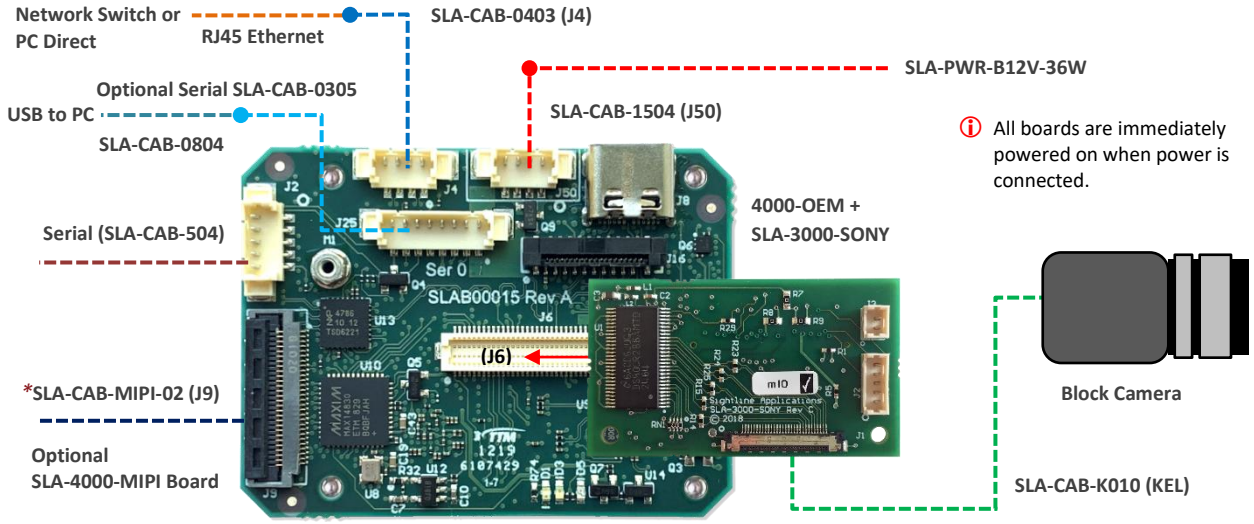


Figure 6: 4000-OEM Block Camera Bench Setup

**SLA-CAB-MIPI-02 is an FFC cable and must be oriented and connected correctly. See FFC cable instructions and precautions before connecting the SLA-4000-MIPI board.*

4 Configuration Settings

This section covers the basic camera configuration settings in Panel Plus for the SightLine OEM video processing boards.

Before connecting with the Panel Plus software, the OEM board should be powered up and connected through:

- a network switch or directly to the host PC (preferred) or,
- Direct serial connection (for troubleshooting or if a network connection cannot be established).

See the one of the corresponding OEM startup guides for connection and video streaming instructions:

- EAN-Startup Guide 1500-OEM
- EAN-Startup Guide 3000-OEM
- EAN-Startup Guide 4000-OEM

IMPORTANT: This procedure makes the assumption that the customer has read the OEM startup guide(s) and has a basic understanding of the following fundamentals:

- Completed a functional connection between the SightLine video processing board and Panel Plus application
- Familiar with Panel Plus controls
- Successfully streamed video in Panel Plus

If you do not have a strong basic system setup and familiarity, we recommend reviewing the OEM startup guide(s) and work with our support team to establish basic connection and streaming fundamentals.

4.1 Acquisition Settings

From the main menu in Panel Plus go to *Configure* » *Acquisition Settings*.

If available, use the *AutoFIll* drop down menu in the *Acquisition Settings* dialog to automatically populate the relevant fields with the correct settings. The settings can also be manually entered as shown in Table 1, Table 2, or Table 3.

For information about Acquisition fields in Panel Plus see EAN-Digital Video Configuration.

Save parameters and reset the board when changing parameters. Cycle system power when changing resolution.

If video does not display, try saving and activating the settings again. Check the encoding settings on the Compression tab and review the network addresses for the destination video.

Table 1: 1500-OEM Panel Plus Basic Acquisition Settings

Digital Cameras	Camera Index = Digital		Camera Type = Generic Digital (Unless otherwise specified)									
Acquisition Settings	**Auto Fill**	**Height**	**Width**	**VFP**	**HFP**	**Bits**	**Input**	**Invert VSync**	**Invert HSync**	**Sync/Crop**	**Init Code**	**Flags**
Intertest												
XBC-KZ12G	Tamron MP1010720p	720	1280	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
Configuration notes: *Requires software version 3.00.04 and above and FPGA version 7.*												
XBC-KZ30G	No	720	1280	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
Configuration notes: Requires software version 2.25.09 and above and FPGA version 7.												
XBC-KZ33G	Tamron MP1010720p	720	1280	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
Configuration notes: Requires software version 3.00.04 and above and FPGA version 7. Frame Step = 2. Camera requires firmware version 2.0.6 from the manufacturer.												
XBC-KZ10	Intertest KZ10/KT&C HZ7810 720p	720	1280	20	331	8	YUV	None	None	None	InitVISCA	0x41
Configuration notes: Requires software version 2.24.13 and above and FPGA version 12. Frame Step = 2.												
KT&C												
ATC-HZ7810LC	Intertest KZ10/KT&C HZ7810 720p	720	1280	20	331	8	YUV	None	None	None	InitVISCA	0x41
Configuration notes: Requires software version 2.24.13 and above and FPGA version 12. Frame Step = 2.												
ATC-HZ5533M-LP	No	720	1280	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
Configuration notes: Requires software version 3.00.04 and above and FPGA version 7. Camera requires firmware version 2.0.6 from the manufacturer.												
Sony FCB-EH Series	**Camera Index = Digital**		**Camera Type = Sony FCB-EH720P**									
3150, 3310, 3300, 3400, 3410, 6300, 6500	No	720	1280	NA	NA	NA	NA	NA	NA	NA	NA	NA
Configuration notes: Requires software version 2.18.xx and above and FPGA version 5. Sony has announced the end-of-life (EOL) notice for these cameras. Commercial availability may be limited.												
Sony FCB-EV Series	**Camera Index = Digital**		**Camera Type = Sony FCB-EV720P30**									
5300, 5500, 7500, 7100	No	720	1280	NA	NA	NA	NA	NA	NA	NA	NA	NA
Configuration notes: Requires software version 2.19.xx and above and FPGA version 5. Sony has announced the end-of-life (EOL) notice for these cameras. Commercial availability may be limited.												
Tamron												
MP1010M-VC MP1110M-VC MP2030M-GS	Tamron MP1010 720p	720	1280	0	0	8	YUV	None	None	None	InitVISCA	0x841
Configuration notes: Requires software version 2.21.13 and above. Requires FPGA version 7. Frame Step = 2. For passthrough use 9600 baud.												

Table 2: 3000-OEM Panel Plus Basic Acquisition Settings

Digital Cameras	Camera Index = Cam 0 (VIN0) / Cam 2 (VIN1)					Camera Type = Generic Digital						
Acquisition Settings	**Auto Fill**	**Height**	**Width**	**VFP**	**HFP**	**Bits**	**Input**	**Invert VSync**	**Invert HSync**	**Sync/Crop**	**Init Code**	**Flags**
Intertest												
XBC-KZ10G	Intertest KZ10/KT&C HZ7810 720p	720	1280	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
Configuration notes: Requires software version 2.25.04 and above.												
XBC-KZ12G	Intertest KZ10/KT&C HZ7810 720p	720	1280	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
	Intertest KZ10/KT&C HZ7810 1080p	1080	1920	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
Configuration notes: Requires software version 3.00.04 and above.												
XBC-KZ30G	Intertest KZ10/KT&C HZ7810 720p	720	1280	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
	Intertest KZ10/KT&C HZ7810 1080p	1080	1920	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
Configuration notes: Requires software version 2.25.09 and above.												
XBC-KZ33G	Intertest KZ10/KT&C HZ7810 720p	720	1280	1	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
Configuration notes: Requires camera firmware 2.25.04 and above. Camera requires firmware version 2.0.6 from the manufacturer.												
XBC-KZ10	Intertest KZ10/KT&C HZ7810 720p	720	1280	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
	Intertest KZ10/KT&C HZ7810 1080p	1080	1920	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
Configuration notes: Requires software version 2.24.13 and above. 720: Frame Step = 2.												
XBC-KZ33	No	720	1280	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
Configuration notes: Requires software version 2.25.xx and above.												
KT&C												
ATC-HZ7810LC	Intertest KZ10/KT&C HZ7810 720p	720	1280	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
	Intertest KZ10/KT&C HZ7810 1080p	1080	1920	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
Configuration notes: Requires software version 2.24.13 and above. 720: Frame Step = 2.												
ATC-HZ5533M-LP	No	720	1280	1	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
Configuration notes: Requires software version 2.25.04 and above. Camera requires firmware version 2.0.6 from the manufacturer.												
Sony FCB-EH Series												
3150, 3310, 3300, 3400, 3410, 6300, 6500	Sony EH 720p	720	1280	25	300	16	YUV	YES	YES	None	InitVISCA	0x71
	Sony EH 1080p	1080	1920	41	236	16	YUV	YES	YES	None	InitVISCA	0x71
Configuration notes: Requires software version 2.21.xx and above. Sony has announced the end-of-life (EOL) notice for these cameras. Commercial availability may be limited.												
Sony FCB-EV Series												
5300, 5500, 7500, 7100	Sony EV 720p	720	1280	25	260	16	YUV	None	None	None	InitVISCA	0x41
	Sony EV 1080p	1080	1920	41	192	16	YUV	None	None	None	InitVISCA	0x41
Configuration notes: Requires software version 2.21.xx and above. Sony has announced the end-of-life (EOL) notice for these cameras. Commercial availability may be limited.												
EV7520A	Sony EV7520A 720p	720	1280	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
	Sony EV7520A 1080p	1080	1920	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
Configuration notes: Requires software version 2.25.xx and above.												
Tamron												
MP1010M-VC	Tamron MP1010 720p	720	1280	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
MP1110M-VC	Tamron MP1010 1080p	1080	1920	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
Configuration notes: Requires software version 2.22.10 and above. 720: Frame Step = 2.												
MP2030M-GS	No	720	1280	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
	No	1080	1920	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
Configuration notes: Requires software version 2.22.10 and above. 720: Frame Step = 2.												

Table 3: 4000-OEM Panel Plus Basic Acquisition Settings

Digital Cameras	Camera Index = 0		Camera Type = Generic Digital									
Acquisition Settings	**Auto Fill**	**Height**	**Width**	**VFP**	**HFP**	**Bits**	**Input**	**Invert VSync**	**Invert HSync**	**Sync/Crop**	**Init Code**	**Flags**
Intertest												
XBC-KZ10G	Intertest KZ10G/12G/30G/ 33G 720p	720	1280	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
Configuration notes: Requires software version 3.00.04 and above.												
XBC-KZ12G	Intertest KZ10G/12G/30G/ 33G 720p	720	1280	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
	Intertest KZ10G/12G/30G 1080p	1080	1920	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
Configuration notes: Requires software version 3.01.xx and above.												
XBC-KZ30G	IntertestKZ10G/12G/ 30G/33G 720p	720	1280	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
	Intertest KZ10G/12G/30G 1080p	1080	1920	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
Configuration notes: Requires software version 3.01.xx and above.												
XBC-KZ33G	IntertestKZ10G/12G/ 30G/33G 720p	720	1280	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
Configuration notes: Requires software version 3.01.xx. Camera requires firmware version 2.0.6 from the manufacturer.												
KT&C												
ATC-HZ5533M-LP	IntertestKZ10G/12G/ 30G/33G 720p	720	1280	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
Configuration notes: Requires software version 3.01.xx. Camera requires firmware version 2.0.6 from the manufacturer.												
Sony FCB-EH Series												
3150, 3310, 3300, 3400, 3410, 6300, 6500	No	720	1280	20	260	16	YUV	None	None	None	InitVISCA	0x41
	No	1080	1920	36	192	16	YUV	None	None	None	InitVISCA	0x41
Configuration notes: Requires software version 3.00.04 and above. Sony has announced the end-of-life (EOL) notice for these cameras. Commercial availability may be limited.												
Sony FCB-EV Series												
5300, 5500, 7500, 7100	Sony EV 720p	720	1280	20	220	16	YUV	YES	YES	None	InitVISCA	0x71
	Sony EV 1080p	1080	1920	36	148	16	YUV	YES	YES	None	InitVISCA	0x71
Configuration notes: Requires software version 2.21.xx and above. Sony has announced the end-of-life (EOL) notice for these cameras. Commercial availability may be limited.												
FCB-EV7520A	Sony EV7520A 720p	720	1280	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
	Sony EV7520A 1080p	1080	1920	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
Configuration notes: Requires software version 3.01.xx and above.												
Sony FCB-ER8550 4K + SLA-4000-STM Board	Sony FCB-ER8550 720p	720	1280	0	0	8	YUV	None	None	None	InitVISCA	0x41
	Sony FCB-ER8550 1080p	1080	1920	0	0	8	YUV	None	None	None	InitVISCA	0x41
	Sony FCB-ER8550 2160p	2160	3840	0	0	8	YUV	None	None	None	InitVISCA	0x41
Configuration notes: Requires software version 3.01.xx and above. <mipi=lt6911> in the options field. Use Cam 1 only.												
Tamron												
MP1010M-VC MP1110M-VC MP2030M-GS	Tamron MP1010 720p	720	1280	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
	Tamron MP1010 1080p	1080	1920	0	0	16	YUV	None	None	Embedded Sync	InitVISCA	0x841
Configuration notes: Requires software version 3.00.04 and above. Use 9600 Baud for passthrough.												
HDMI												
Acquisition Settings	**Auto Fill**	**Height**	**Width**	**VFP**	**HFP**	**Bits**	**Input**	**Invert VSync**	**Invert HSync**	**Sync/Crop**	**Init Code**	**Flags**
Sony FCB-ER Series												
FCB-ER8550 4K + HDMI 4K Adapter Board	HDMI 720p	720	1280	20	220	16	YUV	None	None	None	None	0x1
	HDMI 1080p	1080	1920	36	148	16	YUV	None	None	None	None	0x1
Configuration notes: Requires software version 3.00.04 and above. Use Auto Fill HDMI 720P or HDMI 1080P.												

5 Camera Control - Sony and Tamron Cameras Only

This section describes how to set up a TCP passthrough and virtual COM port to allow camera control through the Sony GUI. The HW VSP3-Virtual Serial Port application is used to set up a virtual COM port. Alternately, the lens focus and zoom can be controlled through Panel Plus, see the EAN-Lens Focus Control document for setup steps.

This serial connection shows up as Serial 2 through the 1500-OEM and allows access to the lens control tools in Panel Plus. Serial 2 can also be configured for TCP passthrough to use the Sony command-and-control interface directly with the camera.

Enabling TCP passthrough will disable lens control in Panel Plus (or SightLine protocol) for the camera and lens attached to that port. The SightLine lens control implementation requires that the port protocol is set to Port Not Used.

5.1 TCP Passthrough Setup

Configure TCP passthrough on the SightLine hardware.

1. From the Panel Plus main menu » *Configure* » *Serial Ports*:
   - 3000-OEM: *Serial Port 2* (Cam0 / VIN0) or *Serial Port 3* (Cam2 / VIN1).
   - 1500-OEM: Select *Serial Port 2*.
   - *Protocol*: *TCP Pass Through*.
   - Enter the desired inbound port number. This example uses port *4001*.
   - *Baud*: *9600*
   - *Data Bits*, *Stop Bits*, *Parity* are set at default values shown.

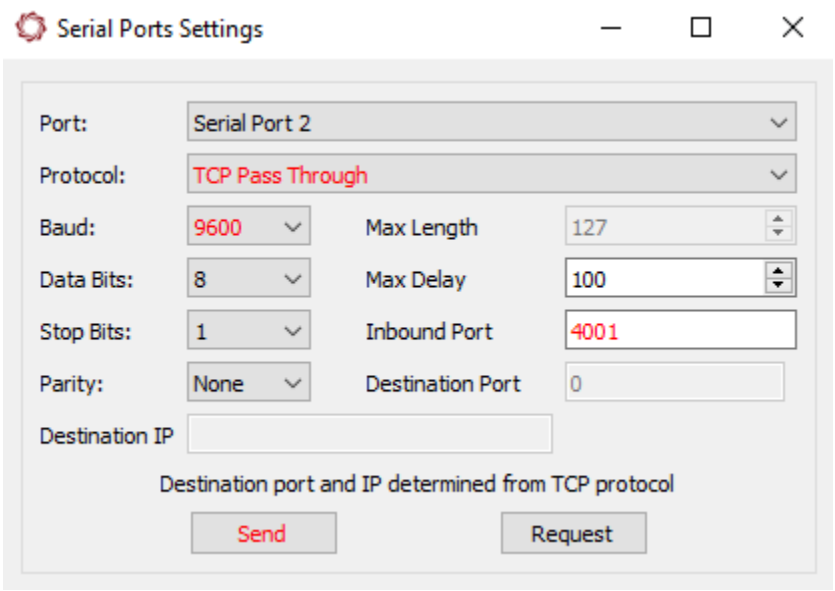


Figure 7: TCP Passthrough Setup

2. After configuring the settings, changed fields will be highlighted in red. Click *Send*.
3. To save the configuration to the parameter file, from the Panel Plus main menu » *Parameters* » *Save to board*.

In 3.01.xx and earlier software versions, saving the Serial Port settings will prompt an additional dialog window (Figure 8). Some setting changes require the board to be restarted for the settings to take effect. In the Apply New Settings dialog window, select an option to save the port configuration.

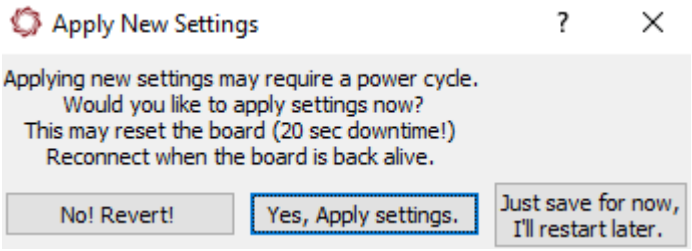


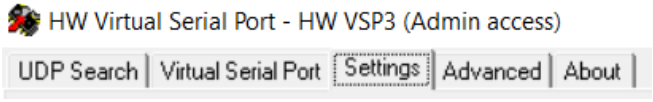
Figure 8: Apply New Settings Dialog - 3.01.xx and Earlier

4. Proceed to the next section to set up the virtual COM port.

5.2 Virtual Com Port Setup

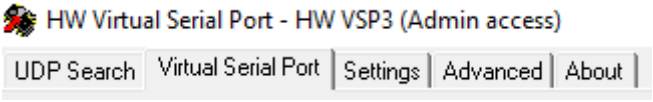
Review the physical serial ports on the host PC. Create virtual serial ports that are not already assigned or in use on the current system. COM4 is used in this example.

1. Launch the HW VSP3-Virtual Serial Port application.
2. Select the *Setting* tab.

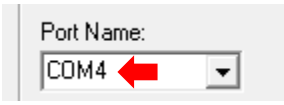


3. Make sure the *NVT Enabled* box in unchecked.

4. Select the *Virtual Serial Port* tab.



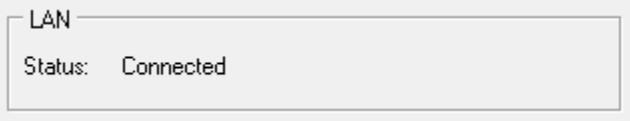
5. Select an unused COM port from the *Port Name* drop-down menu.



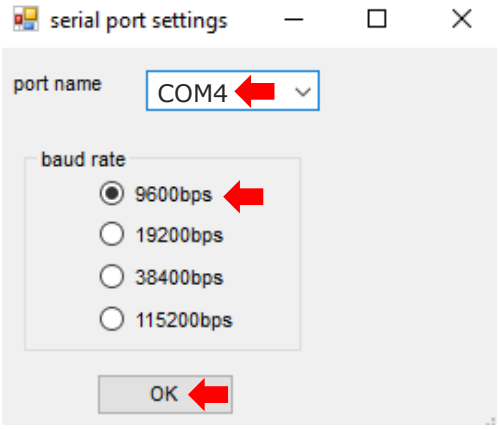
6. Enter the IP address of the SightLine hardware and TCP passthrough inbound port.

7. Click *Create COM* to create the virtual serial port. The virtual serial port parameters are configured automatically.

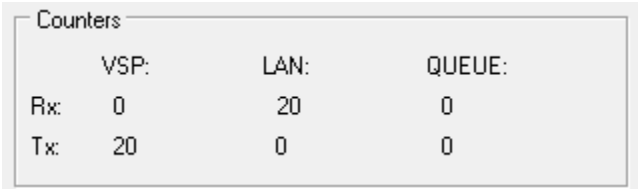
8. Verify a successful connection in the LAN Status section of the dialog window.



9. Launch the Sony camera control application. Select the virtual port and the baud rate. COM4 is used in this example.



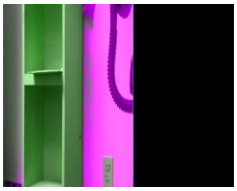
10. Verify sent and received packets are being shown in the *Counters* section of the *Virtual Serial Ports* tab. The FLIR control application is now ready to use.



6 Trouble Shooting

Problem	Recommendation
Green and purple video - objects have correct aspect ratio. 	The Sony camera could be outputting a resolution that is different from the resolution that the SightLine hardware is setup to acquire. The SightLine hardware communicates with the Sony camera to automatically change its resolution based on user settings setup in the Acquisition Parameters dialog window in Panel Plus. Changing resolutions on the Sony cameras requires a power cycle to the camera: 1. Main menu » *Parameters* » *Save to Board*. 2. Main menu » *Reset* » *Board*. 3. Wait for the system to boot, and then reconnect to the board using Panel Plus. Make sure the board connects. 4. Power cycle the Sony camera. This should correct the issue.

(Troubleshooting continued)

Problem	Recommendation
Green and purple video - aspect ratio wrong right, half of video blank. 	Sony EV series cameras support dual channel LVDS. This is enabled for some camera models. SightLine hardware only supports single channel LVDS. Connect the Sony camera to the SightLine hardware. Disable the dual channel LVDS using Panel Plus by sending a Sony VISCA command to the camera. This will use the Sightline command **Passthrough (0x3D)** to send the message to the correct serial port. This command will only need to be sent once and will persist through power cycles. From the Panel Plus main menu, use the *File* » *Send Command* to send the following raw message (do not check insert header/checksum): For 1500 (serial 2) and 3000 Port VIN0 (Serial 2): 51,AC,0B,3D,04,81,01,04,24,74,00,00,FF,07 For 3000 Port VIN1 (Serial 3): 51,AC,0B,3D,06,81,01,04,24,74,00,00,FF,56 A hard power cycle on the camera is required to change this mode. If the command passthrough is not successful, try setting up serial port (2/3) to have the proper baud rate. This can be done by temporarily setting the serial port (2/3) to TCP passthrough mode as outlined in EAN-Ethernet-and-Serial-Communication. Once this setup is done, the above commands should work.
Poor video quality. 	Long cables can change video timing and result in poor video quality. Use a shorter KEL cable (10 cm recommended). Configure the camera to generate a smaller video frame.
Unsupported baud rate in Sony Camera.	The Sony camera could have been set to an unsupported baud rate. Currently SightLine uses 9600. In this case the board cannot communication with the camera to automatically change the Sony camera resolution. If a power cycle does not work, contact Technical Support.

6.1 Questions and Additional Support

For questions and additional support, please contact Technical Support. Additional support documentation and Engineering Application Notes (EANs) can be found on the Documentation page of the SightLine Applications website.