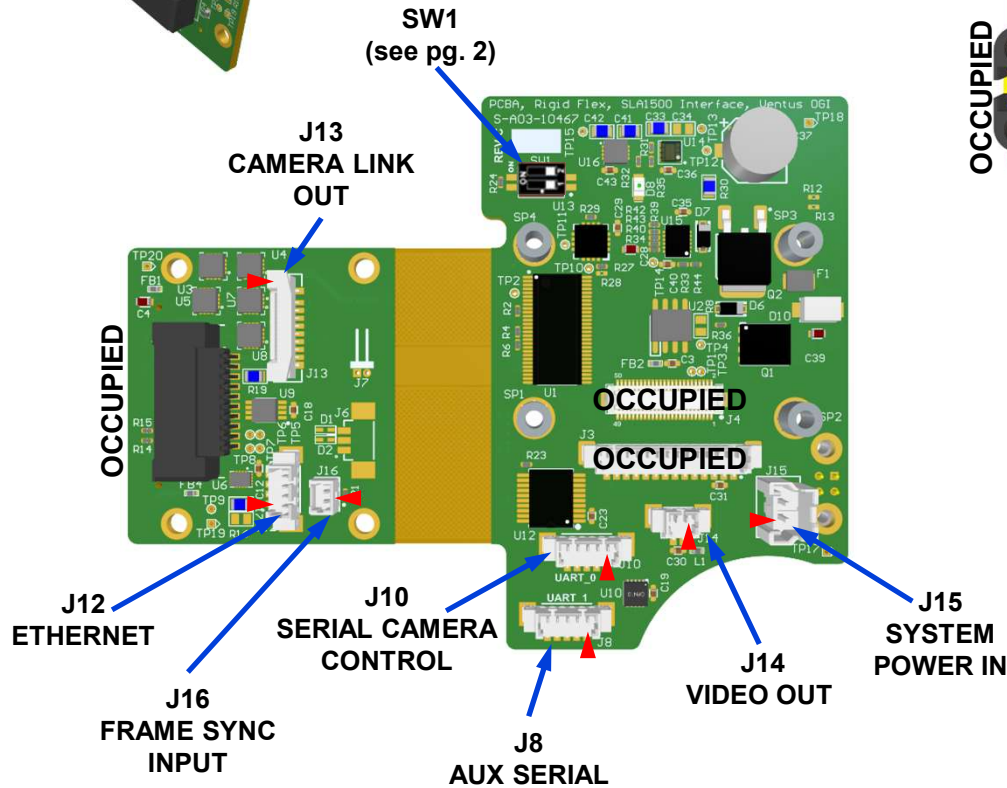
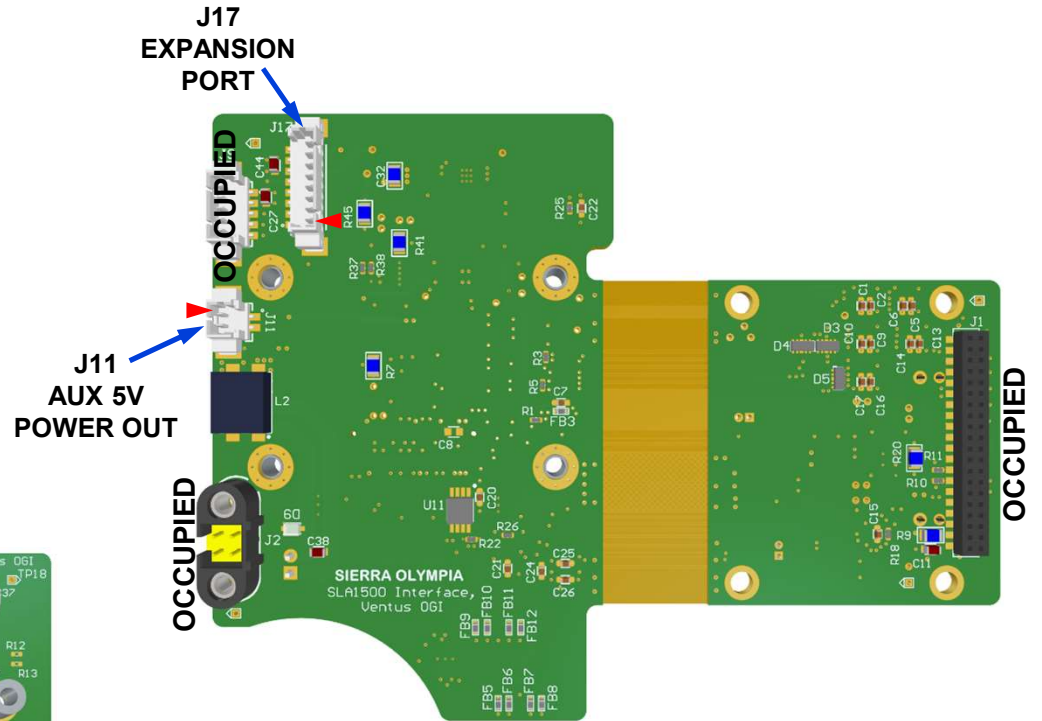
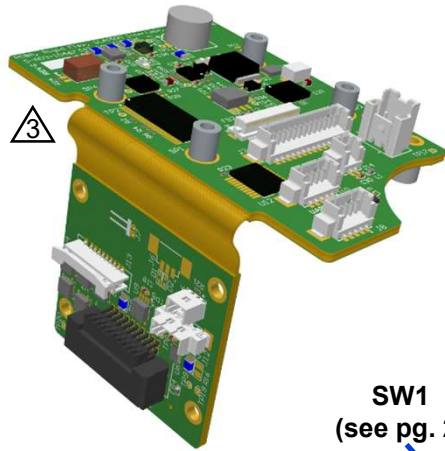


**NOTES:**

1. LEGEND: ▶ Position 1 indicator
2. Mating connectors, pinouts, and signal names on Sheets 3-5
3. 3 Image of folded assembly for reference only.

REVISIONS				
REV	DESCRIPTION	ECO	DATE	Eng.
A	UPDA TE BOARDS AND RELEASE	1131	2021-10-20	WK
B	UPDA TED TEMPLA TE, ADDED ECCN	1651	2024-01-19	GO
C	Corrections for SW callout in J8, J10 tables	1772	2024-07-16	WK



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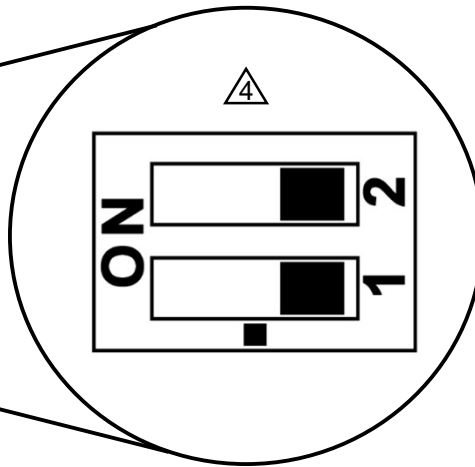
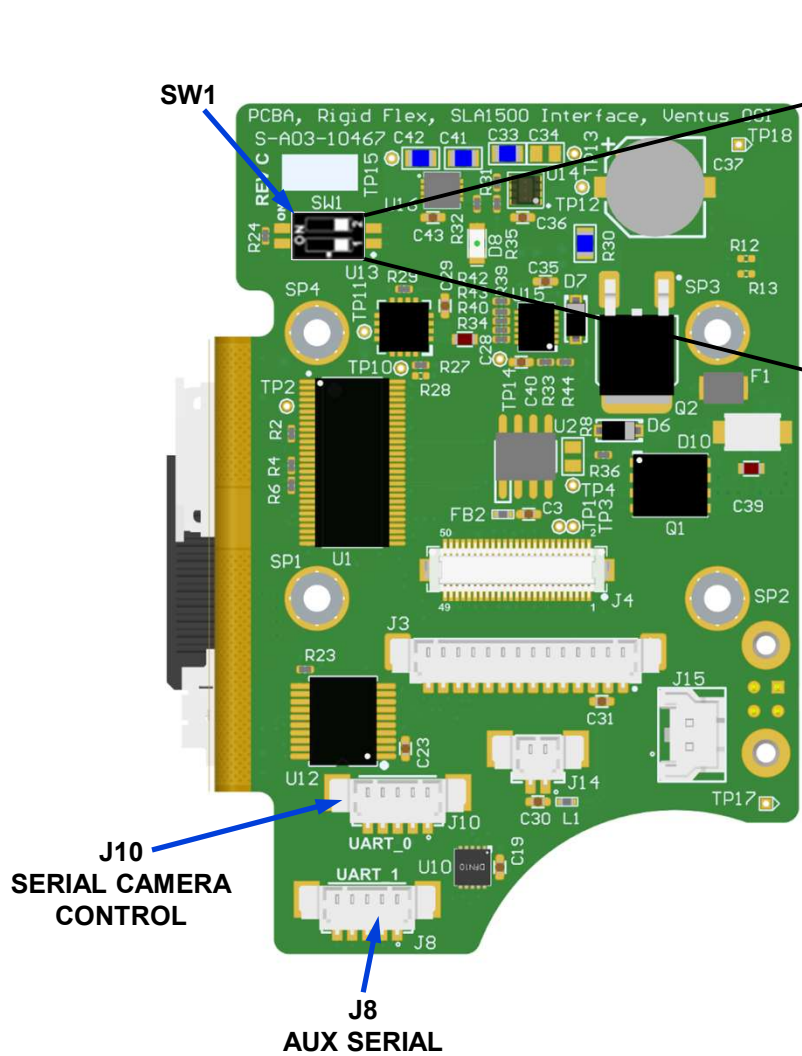
Electrical ICD, Ventus OGI

Size: <b>A</b>	Revision Date: 2024-01-19	Document Rev: <b>C</b>
N T S	Drawn: W. Kettle	SHEET 1 OF 5

# NOTES:

# SERIAL CONFIG

- 4. Switches shown in factory default positions.
- 5. J8 maps to processor Serial Port 1. J10 maps to processor Serial Port 0.



## SW1 - SERIAL PORT CONFIGURATIONS

J8 – AUX SERIAL (SW1-1)		J10 – CAMERA CONTROL (SW1-2)	
RS-422 (default)	SW1-1 OFF	RS-422 (default)	SW1-2 OFF
3.3V TTL	SW1-1 ON	RS-232	SW1-2 ON

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# NOTES:

- 6. RX indicates input to camera from external system.  
TX indicates output from camera to external system.
- 7. Exceeding Max Ratings could cause damage to components.

# USER INTERFACE CONNECTORS

## J15 - SYSTEM POWER IN

Molex Sherlock 2-position, 2 mm pitch connector  
 Mating connector housing: Molex 0355070200  
 Connector terminals: Molex 0502128100

**SOTI mating pigtail cable Assy: S-A07-10237 (18", 24 awg)**

Model	Input Power (Steady State, after cooldown)	Power During Cooldown	Momentary Peak Power
Ventus OGI	7.2W typical	15W typical	24W typical

Position	Name	Max Rating
1	Input Power Return	11.0 - 14.5 VDC
2	+12 VDC Nominal Input Power	

## J12 - ETHERNET

Molex PicoBlade 4-position, 1.25 mm pitch  
 Mating connector housing: Molex 0510210400  
 Connector terminals: Molex 0500798100 (26-28 AWG)

Standard 100BASE-TX UTP Ethernet (recommend 26 awg)  
 Encoded video stream: 8 Bit corrected with AGC  
 Framerate: 30 Hz Default

**SOTI mating patch cable assy: S-A07-10240 (72", RJ45)**

Position	Name
1	ETH_RX-
2	ETH_RX+
3	ETH_TX+
4	ETH_TX-

## J10 - SERIAL CAMERA CONTROL (Ser0)

Molex PicoBlade 5-position, 1.25 mm pitch  
 Mating connector housing: Molex 0510210500  
 Connector terminals: Molex 0500588100 (28-32 AWG)

Factory default: RS-422 signal levels - SW1-2 OFF (open)  
 Optional: RS-232 signal levels - SW1-2 ON (closed)  
 Baud Rate: Default 57600 8-1-N

**SOTI mating pigtail cable assy: S-A07-10236 (18", 28 awg)**

Position	RS-422	RS-232	Max Rating
1	RX+	RX	+/- 25V
2	RX-	n/c	
3	GND	GND	+/- 13.2V
4	TX+	n/c	
5	TX-	TX	

## J8 - AUX SERIAL (Ser1)

Same connector housing/terminals as J10

This port is for feature expansion (e.g. GPS/NMEA)  
 Port Disabled by Default  
 Factory default: RS-422 signal levels - SW1-1 OFF (open)  
 Optional: LVTTTL (0-3.3 V) signal levels - SW1-1 ON (closed)

Position	RS-422 (default)	LVTTTL (optional)	Max Rating
1	RX+	RX	+/- 10V
2	RX-	n/c	
3	GND	GND	+/- 10V
4	TX+	TX	
5	TX-	n/c	

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# NOTES:

8. Exceeding Max Ratings could cause damage to components.

# USER INTERFACE CONNECTORS

## J13 - CAMERA LINK OUT

Output Connector: Amphenol SFV16R-1STE1HLF, Bottom Contact  
 Mating cable: 16-position 0.5 mm pitch FFC

14-bit uncorrected data  
 Frame rate: 30 Hz Default

This interface provides the BASE serialized Camera Link data signals.  
 Camera Link serial camera control "CCn" not supported.

**SOTI Camera Link Adapter Kit: S-A07-10277**

Position	Name	Max Rating
1	GND	1.8V LVDS  LVDS Driver Output Absolute Max Rating: -0.3V to 2.1V
2	CL_OUT3_P	
3	CL_OUT3_N	
4	GND	
5	CL_OUT2_P	
6	CL_OUT2_N	
7	GND	
8	CL_OUT1_P	
9	CL_OUT1_N	
10	GND	
11	CL_OUT0_P	
12	CL_OUT0_N	
13	GND	
14	CL_CLK_N	
15	CL_CLK_P	
16	GND	

## J14 - VIDEO OUT

Molex PicoBlade 2-pin, 1.25mm pitch  
 Mating connector housing: Molex 0510210200  
 Connector terminals: Molex 0500588000 (28-32 AWG)

Composite, DC Coupled Video, 75Ω impedance.  
 Supported formats:  
 NTSC-J,M; PAL-B, D, G, H, I; PAL-M

**SOTI mating pigtail cable assy: S-A07-10239 (36", 28 awg)**

Position	Name
1	Video Out
2	Video GND

## J16 - FRAME SYNC INPUT

Molex Picoblade 2-position, 1.25 mm pitch  
 Mating connector housing: Molex 0510210200  
 Connector terminals: Molex 0500588100 (28-32 AWG)

Contact SOTI factory for frame sync implementation details.  
 SW development required for use.

Position	Name	Max Rating
1	GND	-
2	Fsync IN - 3.3V Logic	-0.5V to 6.0V

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NTS	Drawn: W. Kettle	SHEET 4 OF 5

## NOTES:

9. Exceeding Max Ratings could cause damage to components.

### J11 - AUX 5V POWER OUT

Molex Picoblade 2-position, 1.25 mm pitch  
Mating connector housing: Molex 0510210200  
Connector terminals: Molex 0500588100 (28-32 AWG)

Optional 5V power output for stirring fan.

Position	Name	Max Rating
1	5V Out	0.5A cont.
2	GND	Fused

### J17 - EXPANSION PORT

Molex PicoBlade 8-pin, 1.25mm pitch  
Mating connector housing: Molex 0510210800  
Connector terminals: Molex 0500588100 (28-32 AWG)

I2C connections connect to system processor.  
Contact SOTI factory for I2C implementation details.

Position	Name	Max Rating
1	I2C_SCL - 3.3V logic	0V to 4.0V
2	I2C_SDA - 3.3V logic	
3	Gnd	-
4	3.3V Out	100mA Unfused
5	Gnd	-
6	5V Out	100mA Unfused
7	Gnd	-
8	12V Out	2A Unfused

## USER INTERFACE CONNECTORS

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