

PT5521 HD-SDI Interface Board for Sony FCB-H11 Block Camera

Hardware Description



<Ponca Technologies>

1 Specification

1.1 INPUT VIDEO

- LVDS for HD Digital video data (from Sony HCB-H10, HCB-H11)
- Analog Video

1.2 OUTPUT VIDEO

- HD-SDI (available only in HD camera mode, 720p, 1080i)
 - i .SMPTE296M 720p/59.94, 720p/50
 - ii.SMPTE274M 1080i/59.94, 1080i/50
 - iii.1.485 Gb/s, 1.485/1.001 Gb/s
- HD Analog Video (Bypass , available only in HD camera mode)
 - i .Component Y, CB, CR
- SD Analog Video (Bypass , available only in SD camera mode)
 - i .S-Video Y,C
 - ii.Composite

1.3 Control

- RS232
 - Remote Control Interface (VISCA protocol)

1.4 I/O Connector

- J11 : Power Input
- J12 : HD-SDI Output
- J13 : Analog Video Out (Bypass)
- J14 : RS232, UART TTL

1.5 POWER

- HD-SDI Interface Module
 - i .Max Input Range : 6 to 16V DC
 - ii.Recommend Input Range : 6 to 12V DC
 - iii.Power consumption : Approx. 70mA @ 12VDC
- Sony Camera
 - i .Input range : 6 to 12V DC
 - ii.Power consumption : 4.8W

1.6 Environment

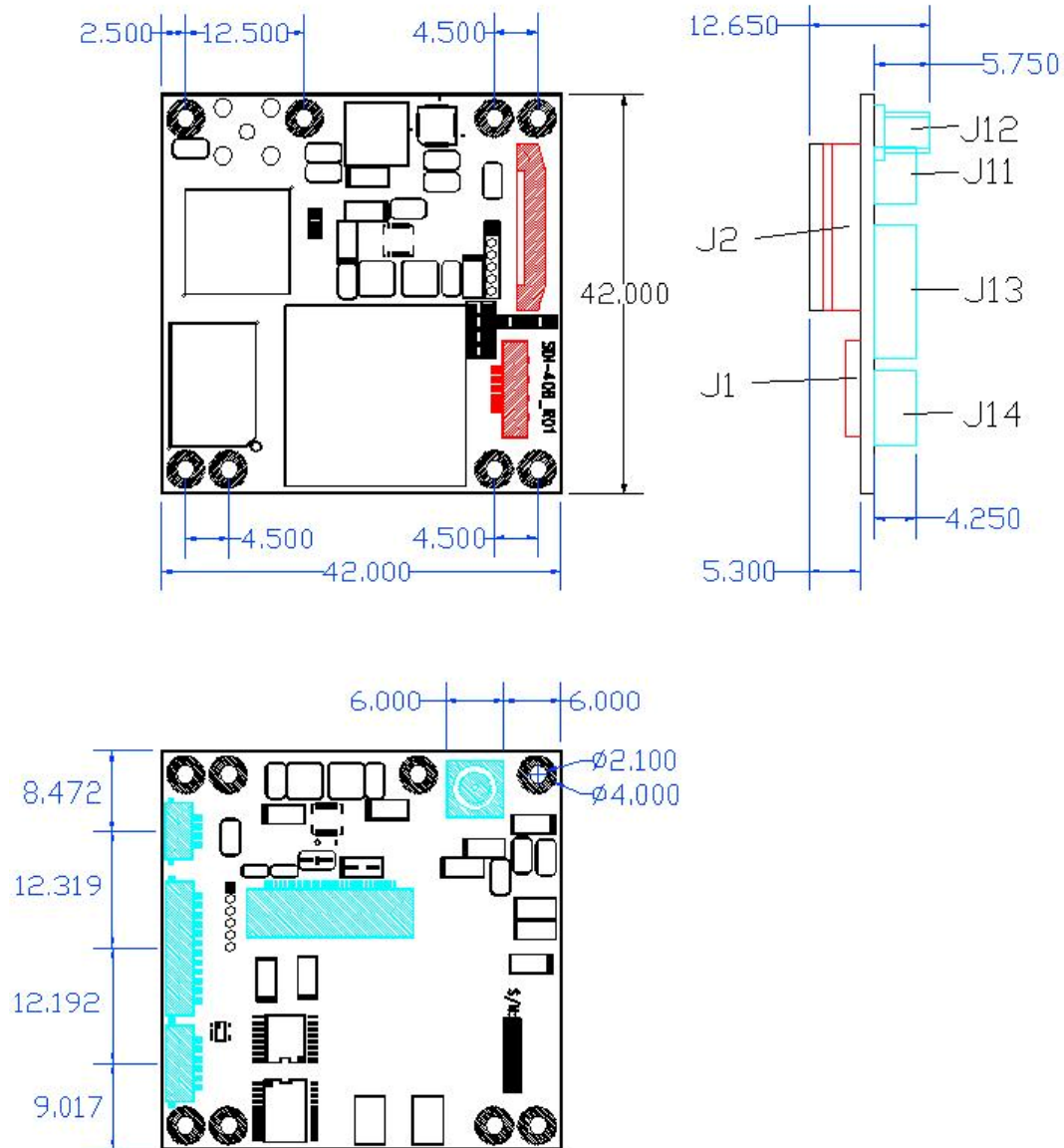
- Operating : 0 to 45°C(32 to 113°F) / 20 to 80 % RH
- Storage : -20 to 60°C(-4 to 140°F) / 20 to 95 % RH

1.7 PHYSICAL

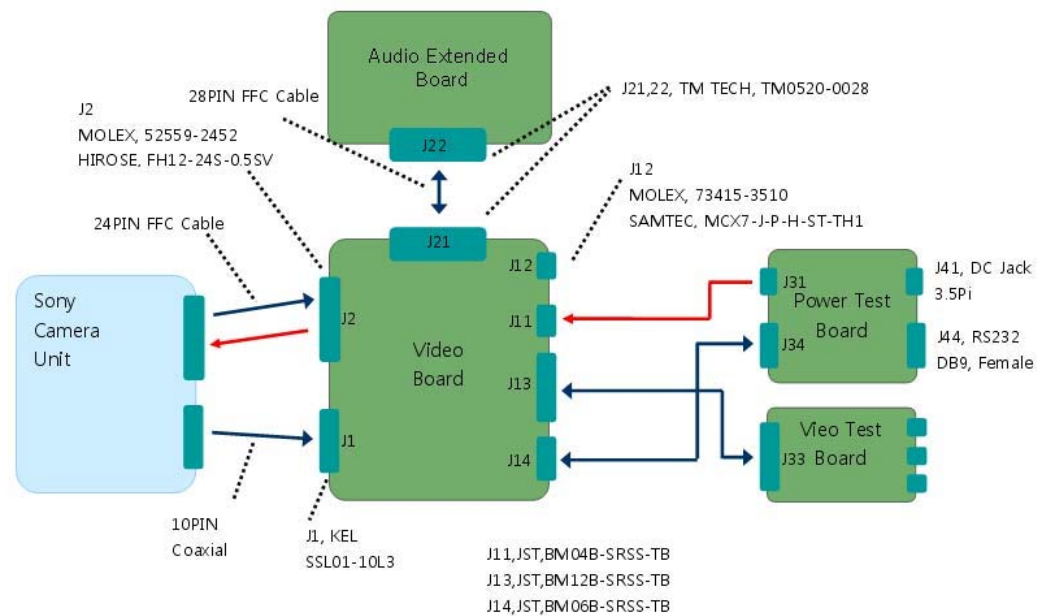
- Dimension
 - i .WIDTH : 42 mm
 - ii .HEIGHT : 42 mm
 - iii .THICKNESS : Approx. 12.65mm (PCB 1.6mm)
- Weight
 - Approx. 14g

2 DIMENSION

2.1 Video Board (Main) PCB Layout

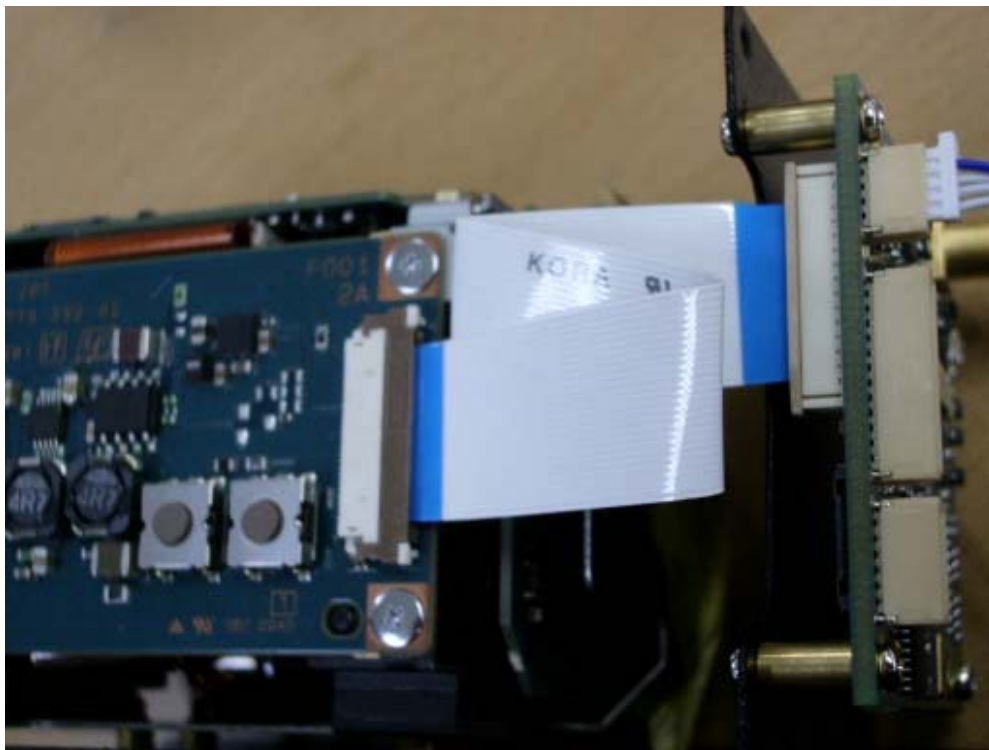


2.2 PIN DIAGRAM

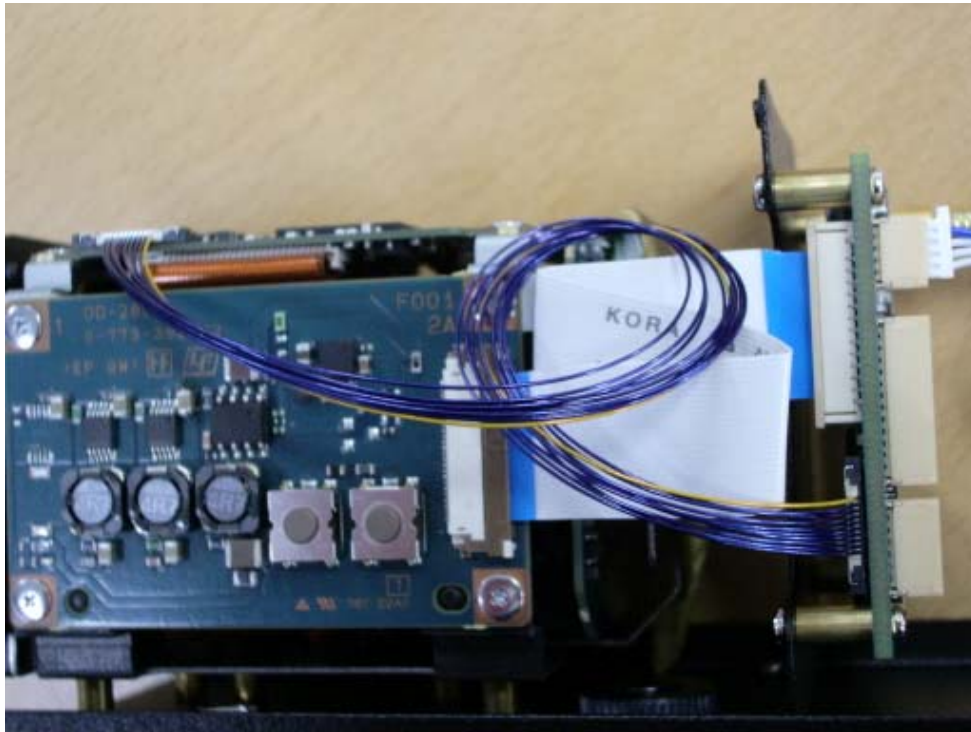


2.3 Cable Connection

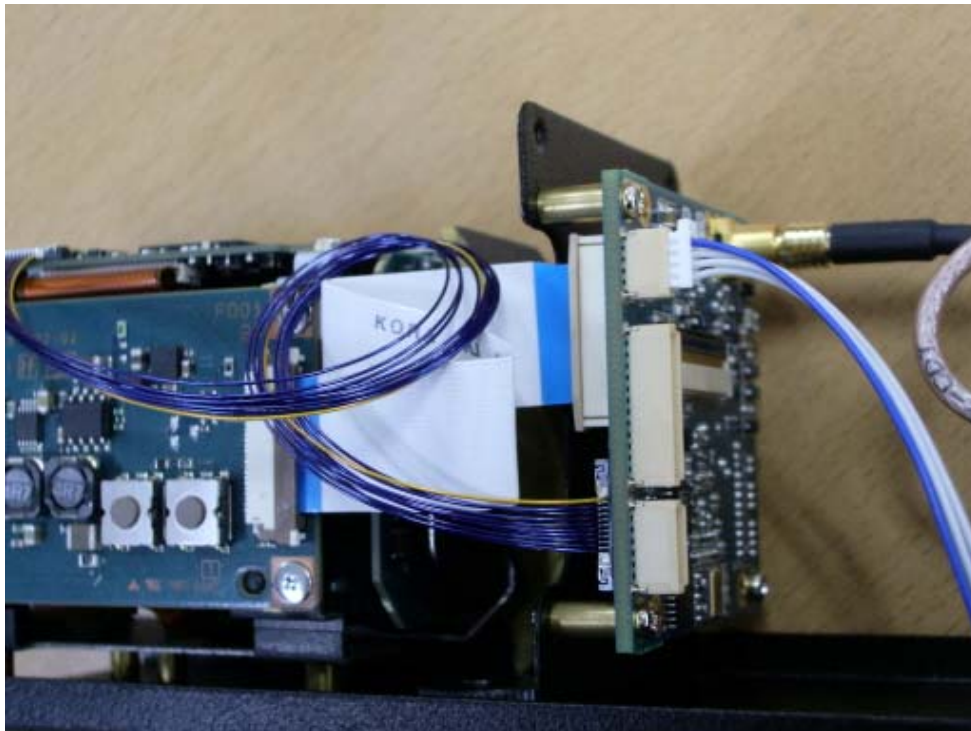
2.3.1 FFC Cable Connection



2.3.2 FFC Cable & LVDS 10Pin Coaxial Connection

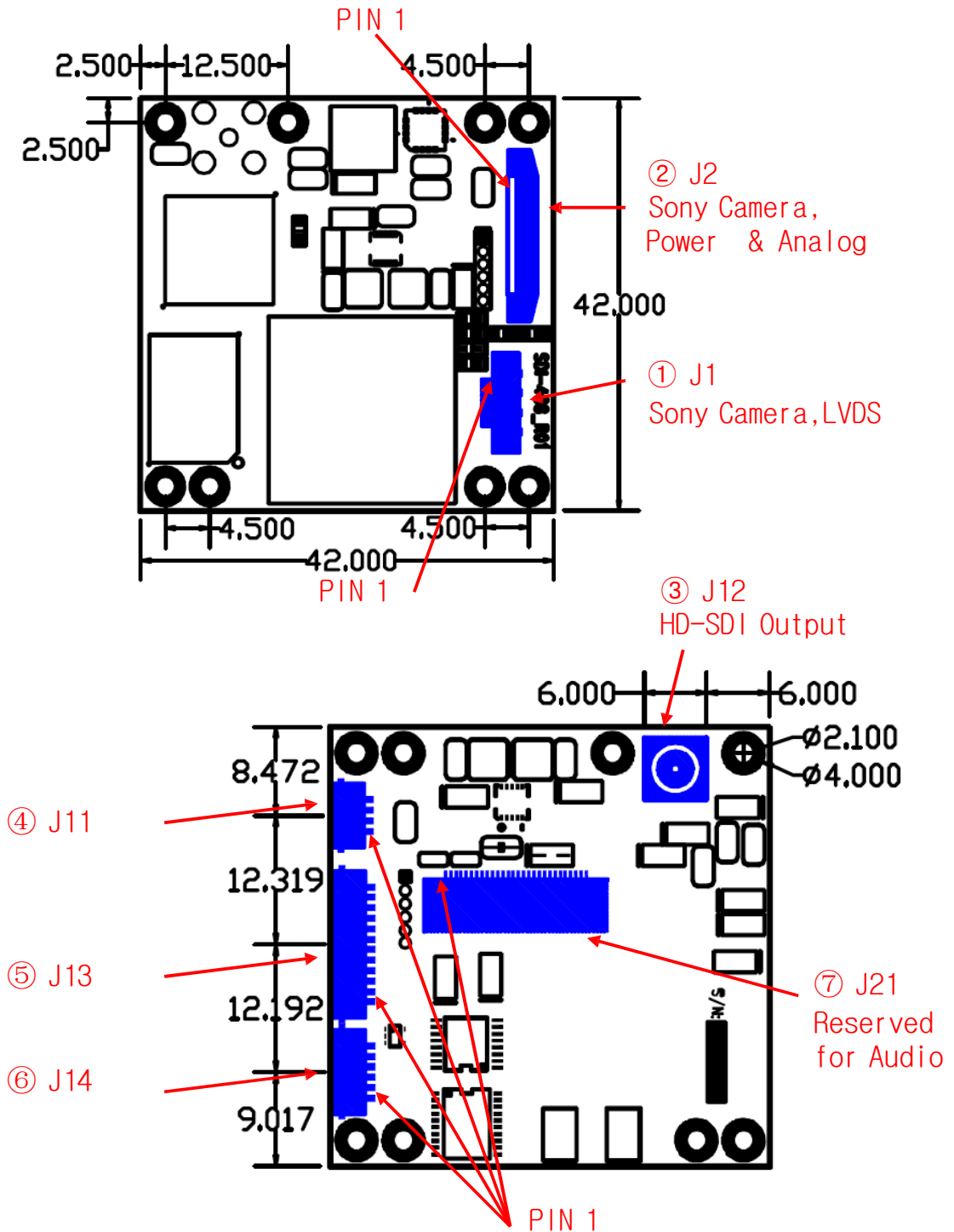


2.3.3 FFC Cable & LVDS 10Pin Coaxial & Power Connection



3 PCB Board Connector Description

3.1 Main Board Connector



- ① J1, Sony Camera , LVDS Digital Camera Interface Connector
 - Connector : SSL01-10L3(KEL, 10pin)
- ② J2, Sony Camera , Power and Analog Video Interface Connector
 - Connector : 52559-2452 (MOLEX,0.5mm),FH12-24S-0.5SV (HIROSE,0.5mm)
- ③ J12, HD-SDI Output MCX Connector
 - Connector : 73415-3510 (MOLEX,MCX, Straight),
 MCX7-J-P-H-ST-TH1 (SAMTEC,MCX, Straight)

J12, MOLEX, 73415-3510 SAMTEC, MCX7-J-P-H-ST-TH1		Electrical	Description
Name	Pin		
HD_SDI_SDO	1		HD-SDI Output
GND	2		

- ④ J11, Power Input Connector
 - Connector : BM04B-SRSS-TB (JST, 1.0mm)

J11, JST,BM04B-SRSS-TB		Electrical	Description
Name	Pin		
POWER_IN	1	Max input : 16V	
POWER_IN	2	Max input : 16V	
GND	3		
GND	4		

- ⑤ J13, Video output (bypass) Connector
 - Connector : BM12B-SRSS-TB (JST, 1.0mm)

J13, JST,BM12B-SRSS-TB		Electrical	Description
Name	Pin		
GND	1		
SVIDEO_Y_OUT	2	Bypass	S-video Y
GND	3		
SVIDEO_C_OUT	4	Bypass	S-video C
GND	5		
SD_VBS_OUT	6	Bypass	Composite
GND	7		
HD_Y_OUT	8	Bypass	HD Component Y
GND	9		
HD_Pb_OUT	10	Bypass	HD Component Pb
GND	11		

HD_Pr_OUT	12	Bypass	HD Component Pr
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⑥ J14, RS232 In/Out Connector

- Connector : BM06B-SRSS-TB (JST, 1.0mm)
- Signal Define

J14, JST,BM06B-SRSS-TB		Electrical	Description
Name	Pin		
RXD_RS232	1	RS232	Video Board Input
TXD_RS232	2	RS232	Video Board output
GND	3		
RXD_TTL	4	TTL, 5V	Video Board Input
TXD_TTL	5	TTL, 5V	Video Board output
SW_EXT	6	Pull-Up 10K, 2.5V	Reserved(Open (High) -> SET 1920 x 1080 Short (Low) -> SET 1440 x 1080)

⑦

J21, Audio Board Interface Connector

- Connector : TM0520-0028 (TM TECH,0.5mm)