



# KLINK Base Reference Manual

Version 1.0 rev10β

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## 1. INTRODUCTION

◆ The KLINK\_BASE extends the latest generation of PLDA boards (DK\_PClEX1/x4, XpressLiteCY2, XpressliteSP3, XpressFX, PCIXSYS2) by adding base Camera Link resources, a standard communication interface for vision applications.

## 2. MECHANICAL DESCRIPTION

◆ Figure 1 illustrates the mechanical architecture of the card.

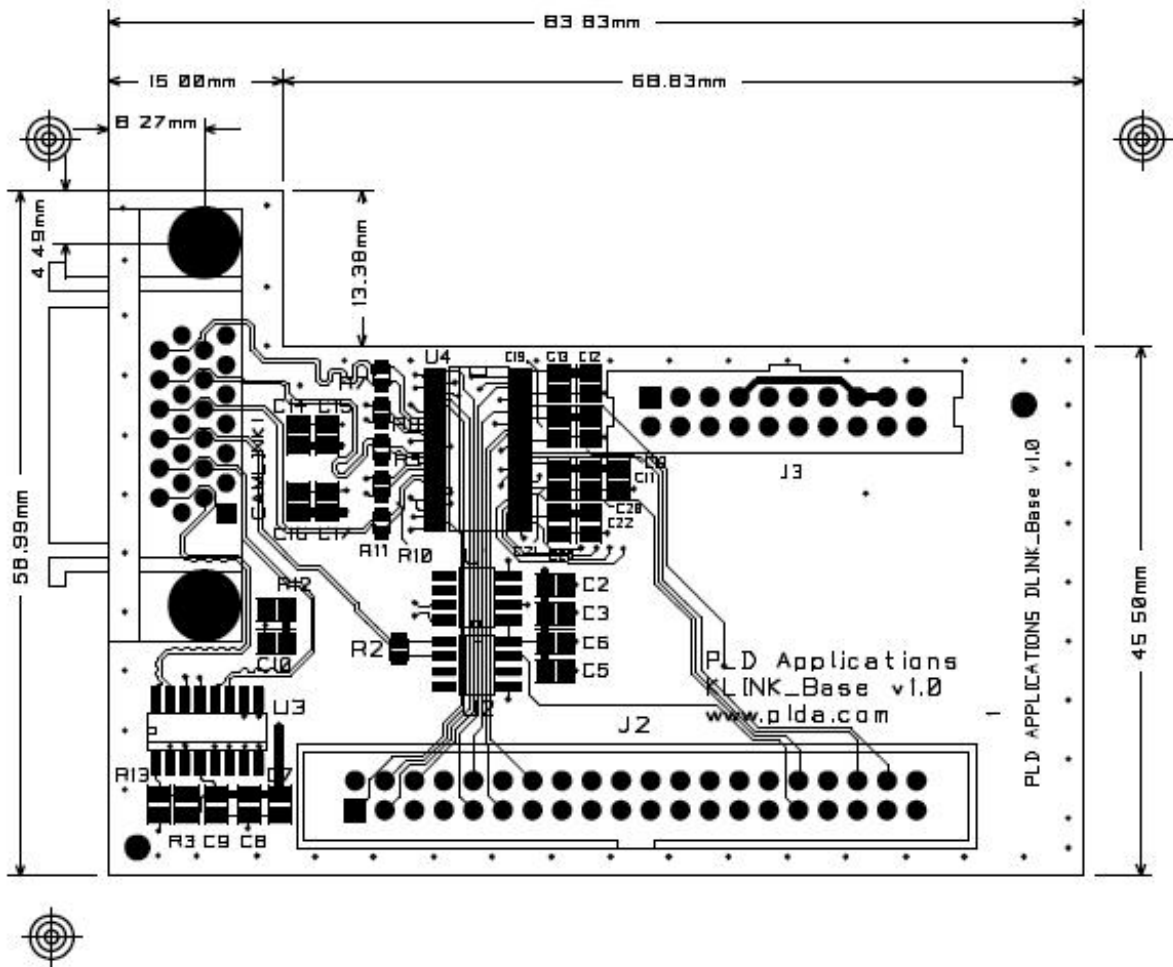


Figure 1 - mechanical information

The devices implemented on the KLINK\_Base meet the base Camera Link requirements, which require:

- 3 x 8-bit taps
- 4-bit synchronisation signals
- 4 command signals
- 1 bidir serial communication channel.

These devices offer a 75MHz input data flow for an effective bandwidth of up to 225MB/s.

### 3. BEHAVIOURAL DESCRIPTION

◆ The KLINK Base offers access to base Camera Link configuration and to all signals provided by the Camera Link devices (up to 10 taps of 8 bits), as shown in figure 2.

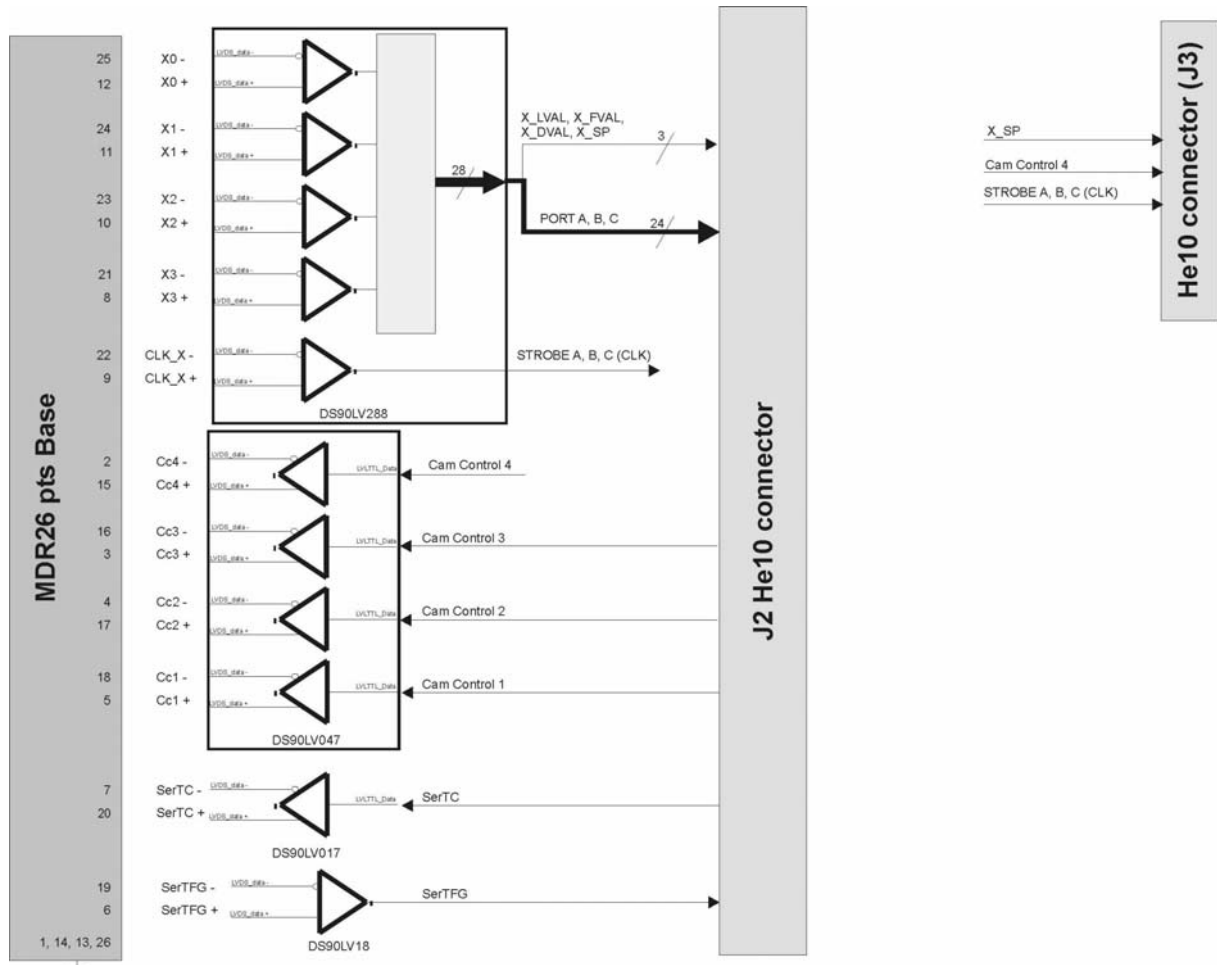


Figure 2 – Board bloc diagram

### 4. CONNECTIONS DESCRIPTION

The following table shows signal / pin assignments for the J2 HE10 connector. For signal / pin assignments for a host board FPGA (DK\_PClex4, XpressFx, PCIXSYS2) please check the corresponding Reference Manual. For more information concerning bit assignments, please see the Camera Link specification.

J2 HE10 Pin number	Signal name	J2 HE10 Pin number	Signal name
1	Port_A0	2	GND
3	XDVAL	4	Port_A6
5	XLVAL	6	Port_C5
7	Port_C4	8	XFVAL
9	Port_C2	10	Port_C6
11	Port_B5	12	Port_C3
13	Port_B3	14	Port_B4
15	Port_B2	16	Cam_control1
17	Port_B1	18	Port_C0
19	GND	20	Port_A1

21	Port_C1	22	GND
23	Port_A2	24	GND
25	Port_A3	26	GND
27	Port_C7	28	SerTC
29	Port_A4	30	GND
31	SerTFG	32	Port_A5
33	Port_A7	34	GND
35	Port_B0	36	Port_B6
37	Cam_control3	38	Port_B7
39	Cam_control2	40	GND

<b>J3 HE10 Pin number</b>	<b>Signal name</b>	<b>J3 HE10 Pin number</b>	<b>Signal name</b>
1	NC	2	GND
3	NC	4	GND
5	3.3V	6	GND
7	3.3V	8	GND
9	XSP	10	GND
11	Cam_Control4	12	GND
13	Strobe_ABC	14	GND
15	3.3V	16	GND
17	3.3V	18	GND
19	NC	20	GND

## 6. INSTALLATION EXAMPLES

Figure 3 illustrates mounting the KLINK\_Base on PLDA's XpressLite CY2. Figure 4 illustrates mounting the KLINK\_Base on PLDA's XpressFX.

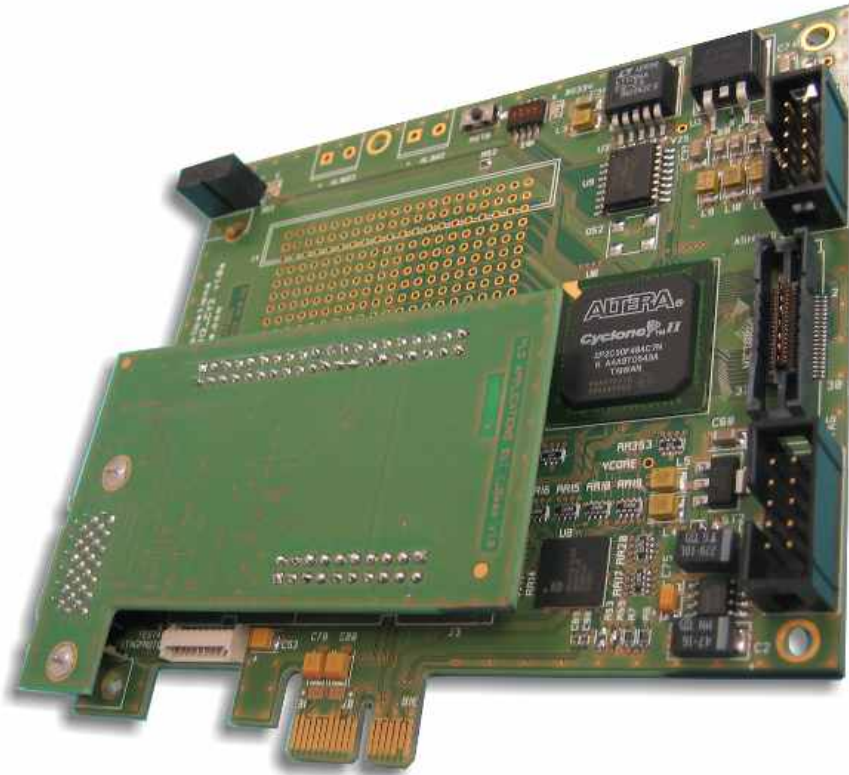


Figure 3 – XpressLiteCY2 + KLINK\_BASE

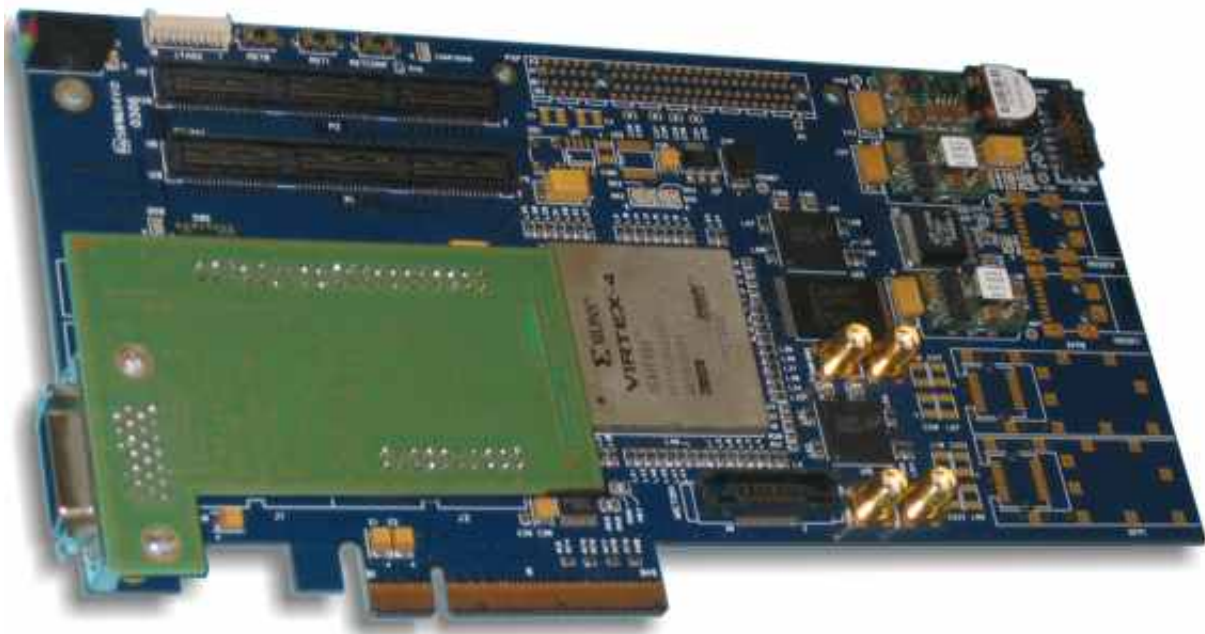


Figure 4 - XpressFX + KLINK\_BASE