

# USB3-FRM13

# Base/Medium/Full Configuration Camera-link Frame Grabber Board



#### INTRODUCTION

The USB3-FRM13 interworks with the Camera Link Camera, it is a board already transmitting a frame to PC to USB3.0 Super Speed (5Gbps) methods.

## GENERAL DESCRIPTION

- ◆ Support Camera Link Camera
- ◆ USB 3.0 Specification Host Interface
- ◆ Supports PoCL (Power over Camera Link)
- ◆ Power by type-B connecter for power(5V) or External 12V DC Power
- ◆ Super Speed Device 5Gbps
- ◆ 256MByte DDR2 (128MB x 2)

#### **APPLICATION**

- ◆ Black and White, Color Image Display
- ◆ Image Acquisition (Pattern, Particle etc)
- ◆ Inspection Equipment (Sensor, Semiconductor, Device etc)
- ◆ Medical Image Capture (X-ray, Supersonic)

#### **SOFTWARE**

# Operating System

Windows 2000/XP/7/8/10 (32/64bit)

#### **■** API

 Interface with Application through client DLL

# **SPECIFICATION**

#### **■** Features

- Supports USB3.0 specification type B
  Connecter
- Super Speed(5Gbps) device
- Pixel Clock: 20 ~ 85MHz
- Under 8Tap supports 85MHz /
  10Tap supports 65MHz

## Functions

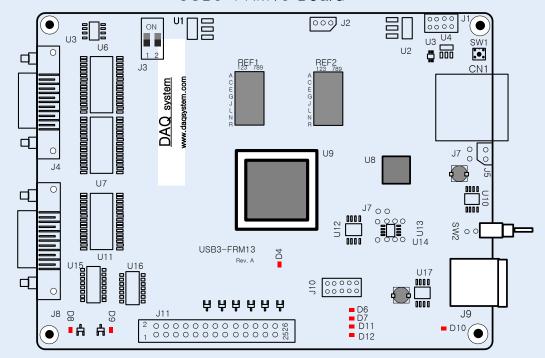
- PoCL (Base Connector)
- All of the board functions are controlled by the logic program of the FPGA.
- Support 1-CH Camera Link Base/Medium/ Full Configuration
- A,B,Z phase RS422 signal input
- Line Trigger input
- Line Trigger Output

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## **■** Board Feature

# USB3-FRM13 Board



# Connecter Map



Medium/Full Camera Link: J4

#### Frame Grabber PoCL(+12V) Inner shield (26) (12) X0-25) X0+ X1-(24) (11) X1+ X2-(23) (10) X2+ Xclk-(22) Xclk+ X3-(21) X3+ SerTC+ SerTC-SerTFG-SerTFG+ (19) CC1-CC1+ (18) (5) CC2+ CC2-(17) CC3-(16) (3) CC3+ CC4+ CC4-(15) (2) PoCL(+12V) Inner shield (14)

Base Camera Link: J8



# PHYSICAL/ENVIRONMENTAL

## **■** From Factor

■ USB3.0

# Dimension

- Camera Interface : Camera Link
- Dimension (not including connectors) : 110mm x 80 mm

# **■** Temperature

- 0 to 60°C, Operating
- -20 to 70°C Storage

# **■** Relative Humidity

• 5 to 95%, Non-considering

# **■** Power Requirement

- Power Supply through USB(Max. 500mA)
- 12V (Max. 1A)

## **BLOCK DIAGRAM**

#### USB3-FRM13 М DDR2 DDR2 USB3.0 Ν #1 #2 Interface I Camera Link М **USB 3.0** Receiver D R ı ZClock-26 FPGA Core М Logic RX0+/ ١ Ν ı Camera Link Receiver М D R ı **JTAG** 26