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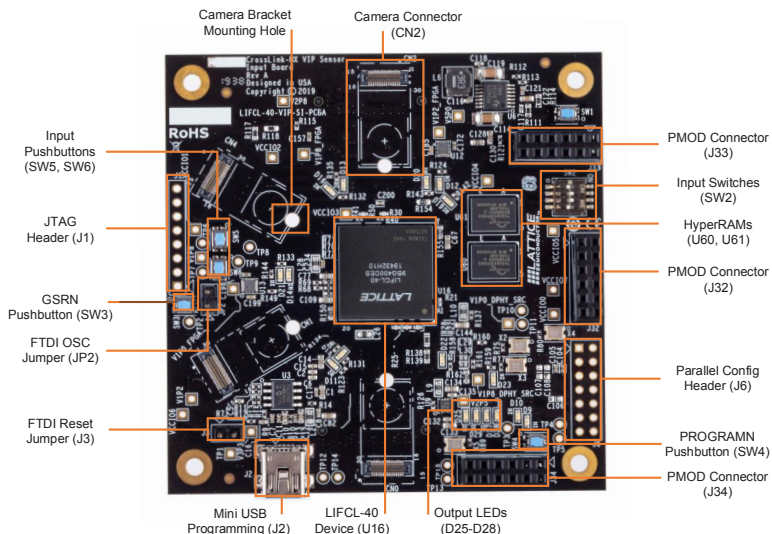


Embedded Vision

11447 VIDEO INTERFACE PLATFORM (VIP) 560124587963

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This document provides a brief introduction to the Crosslink-NX VIP Sensor Input Board. The board is pre-programmed to demonstrate the 4 to 1 Image Aggregation Demo.



1

Check the Kit Contents

The Crosslink-NX VIP Sensor Input Board kit contains the following items:

- Crosslink-NX Sensor Input Board
- IMX258 camera sensors (4 sensors, mounted on board)
- Camera sensor support piece
- USB Cable for Programming via PC (USB-A to Mini-B)
- Quick Start Guide

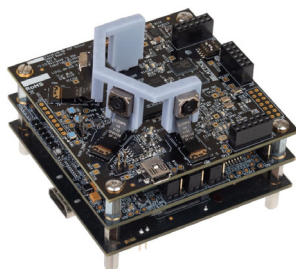
2

Assembling the Demonstration Hardware

This board will only work when used as part of the Lattice Embedded Vision Development Kit (EVDK). It is designed to be pin compatible with the Crosslink VIP Input Bridge Board. Follow the steps below to prepare the hardware before applying power.

- Remove Crosslink VIP Input Bridge Board from EVDK, replace with Crosslink-NX VIP Sensor Input Board. Connectors J5 and J4 of the Crosslink-NX VIP Sensor Input Board connect to J10 and J11 of the ECP5 VIP Processor Board.
- Mount cameras to camera connectors (CN0, CN1, CN2, and CN4).
- Mount camera sensor support piece and stick camera backs to piece.

The assembled hardware will look like the picture below:



3

Run the Demonstration

- Apply power to the ECP5 VIP Processor Board using a 12 V adapter.
- Connect jumpers to the Crosslink and ECP boards as follows:

CrossLink Jumper Settings	
Jumper	Pins to Connect
J2	Open
J3	Open
—	All other headers should be kept open

ECP5 Jumper Settings	
Jumper	Default
J3	1-2, 5-6
J5	1-2
J6	1-2
J7	2-3
J9	1-2
J50	1-2
J51	1-2
J52	2-3
J53	1-2
J55	2-3
—	All other headers should be kept open

- Connect HDMI cable between HDMI VIP Output Board and monitor.
- The output of the 4 cameras will be observed on the monitor as a single video stream.
- SW3 on Crosslink-NX resets the pattern, SW5 changes camera view.



4 Done!

Congratulations! You have successfully demonstrated the 4 to 1 Image Aggregation demo on the Crosslink-NX VIP Sensor Input Board. This demo is intended to show basic functionality of the kit as shipped. This kit can be reprogrammed and/or connected to additional hardware (available separately) to demonstrate a number of bridging solutions. To learn more about these solutions and download full documentation for this kit, including schematics for all the boards, visit the Lattice website at: www.latticesemi.com/evdkit.

Development with the Lattice Crosslink-NX FPGA is supported by the Lattice Radiant Software. You can learn more and download the latest version from the Lattice website at www.latticesemi.com/radiant.

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Technical Support

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