Xylon d.o.o.

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Features

- FPGA Mezzanine Card (FMC) compatible with several Xilinx® Targeted Design Platforms

- Supports National Semiconductor® FPD-Link II Serial Interface

- Supports up to 4 FPD-Link II channels in the following configurations:
    - Up to Two 19-bit video channels
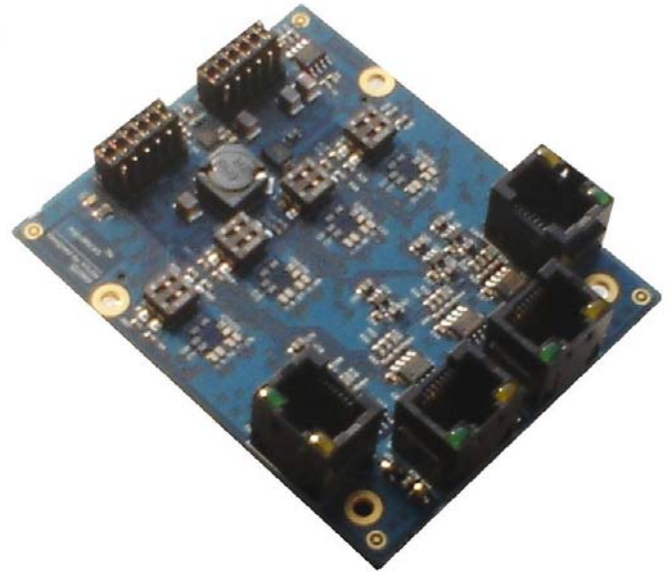   - Up to Four 13-bit video channels

Applications

- Automotive applications (development systems):
    - Rear View and Side View Camera
    - Lane Departure Warning
    - Parking Assistance
    - Blind Spot Detection, etc.
- Surveillance systems
- Multiple-camera applications
- LCD display driving

Figure 1: logiFMC-FPD-II FPD-Link II FMC Daughter Card

General Description

The logiFMC-FPD-II 4-channel FPD-Link II FMC daughter card is Xylon's add-on board (card) compatible with different Xilinx Targeted Design Platforms, such as the Xilinx Spartan®-6 SP605 Evaluation kit and the Spartan-3 DSP FPGA Video Starter Kit.

This daughter card is designed for use in video development systems requiring connections of up to 4 cameras. The supported interface between the logiFMC-FPD-II daughter card and the connected cameras is the National FPD-Link II (Flat Panel Display Link). The card features four National DS90C124 deserializer devices, power supply and I2C info EEPROM circuits.

The card supports either up to four 13-bit video channels (10x Data, Horizontal Sync, Vertical Sync and Clock), or up to two 19-bit video channels (16x Data, Horizontal Sync, Vertical Sync and Clock). The right configuration can be setup by on-board jumpers.

The logiFMC-FPD-II FPD-Link II FMC daughter card provides a simple means of expanding the Xilinx development kits without complex wiring, and shortens the development time. High-speed signal lines are carefully designed and routed to support trouble-free high-speed communication with the attached cameras.

The card utilizes the 160-pin FMC connector (ASP-127797-01).

Functional Description

The Figure 2 presents card's internal structure. The main functional blocks are:

- Power supply
- Info EEPROM
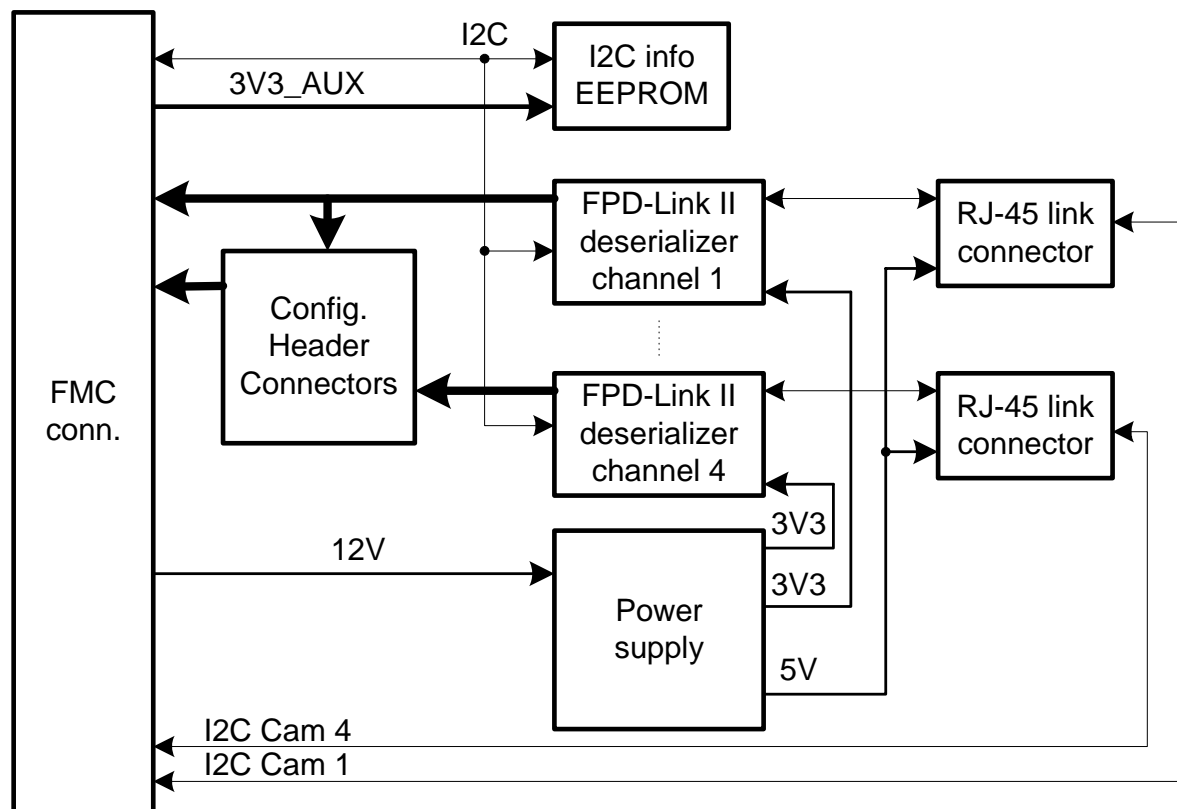- Configuration headers
- FPD-Link II deserializers

Figure 2: The logiFMC-FPD-II Daughter Card's Block Diagram

Power supply

Power supply module provides 3V3 power supply for the FPD-Link II deserializers and 5V power supply for remote serializer boards.

Info EEPROM

The info EEPROM stores card's information which may be used by main FPGA boards (i.e. Xilinx VSK, Xilinx SP605). Xylon delivers daughter cards with the blank EEPROM (not used).

Configuration Headers

The headers are used for setup of the four 13-bit channels and two 19-bit channels configurations.

FPD-Link II deserializers

Four National DS90C124 FPD-Link II deserializers support up to 4 FPD-Link II channels.

Available Support Products

To learn more about the Xylon boards and development platforms, contact Xylon or visit the web:

Email: support@logicbricks.com
URL: http://www.logicbricks.com/Products/Hardware-Platforms.aspx

Ordering Information

This product is available directly from Xylon. Please visit our web shop or contact Xylon for pricing and additional information:

Email: sales@logicbricks.com
URL: http://www.logicbricks.com/Products/logiFMC-FPD-II.aspx

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Related Information

Xilinx Evaluation Boards Logic

For information on Xilinx evaluation boards contact your local Xilinx sales office, or:

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National Semiconductor

For information on National Semiconductor products and evaluation boards contact your local National sales office, or:

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Revision History

Version	Date	Note
1.00.	14.10.2010.	Initial Xylon release