PCIe-7360

100 MHz 32-CH High-Speed Digital I/O Card



Introduction

ADLINK's PCIe-7360 is a high-speed digital I/O board with 32-CH bi-directional parallel I/O, with data rates up to 400 MB/s are available through the x4 PCI Express® interface, and clock rates up to 100 MHz internal or 200 MHz external, ideally suiting high speed and large scale digital data acquisition or exchange applications, such as digital image capture, video playback and IC testing.

Features

- **x4 lane PCI Express® Interface**
- **8/16/24/32-CH at up to100MHz for DI or DO**
- **8/16-CH at up to 200MHz for DI in external clock mode**
- **400 MB/s maximum throughput**
- **Voltage level software selectable from 1.8 V, 2.5 V, and 3.3 V**
- **80-step phase shift in external clock mode**
- **Per group (8-bit) input/output direction selectable**
- **Support for I2C and SPI programmable serial interfaces for external device communication**
- **Scatter-gather DMA support**
- **Flexible handshake and external digital trigger modes**
- **8-channel auxiliary programmable I/O**

Software Support

Supported Operating System

- Windows 7/8 x64/x86, Linux

Driver and SDK

- LabVIEW, MATLAB, C/C++, Visual Basic, Visual Studio.NET

Terminal Boards & Cables

DIN-68H-01

Terminal board with one 68-pin SCSI-VHDCI connector and 0 or 50 Ω jumper selectable impedance (Cables are not included.)

ACL-10279

- 68-pin SCSI-VHDCI cable with 50 Ω impedance

SMB-SMB-1M

- SMB to SMB cable, 1M

*** For more information about mating cables, please refer to P3-48/49.**

Ordering Information

PCIe-7360
100 MHz 32-CH High-Speed Digital I/O PCI Express® Card

Specifications

Digital I/O

- 32-channels, per group (8-channel) input/output direction, with selectable logic levels: 1.8 V, 2.5 V, 3.3 V (software selectable)
- Power-up status: All digital inputs
- Impedance:
  - Input: 10 kΩ
  - Output: 50 Ω
- Input protection: -1 to 6 V
- Data transfer: Programmable I/O, bus-mastering DMA with scatter-gather
- Maximum data transfer rate: 400 MB/s
- Digital logic levels:

Logic Levels		1.8 V	2.5 V	3.3 V
Digital Input	Min. input high voltage	1.2 V	1.6 V	2 V
	Max. input low voltage	0.63 V	0.7 V	0.8 V
Digital Output	Min. output high voltage	1.6 V	2.3 V	3.1 V
	Max. output low voltage	0.2 V	0.2 V	0.2 V
	Max. output driving current	8 mA	16 mA	32 mA

Clocking Mode

- Internal clock: up to 100 MHz (100 MHz / N; 1<N<65535)
- External clock: up to 100 MHz (support 8/16/24/32-bit data width for DI/DO); up to 200 MHz (support 8/16-bit data width for DI only)
- Handshake
- Burst handshake

Trigger Sources

- Software trigger
- External digital trigger: AFI[0…7]

Trigger Modes

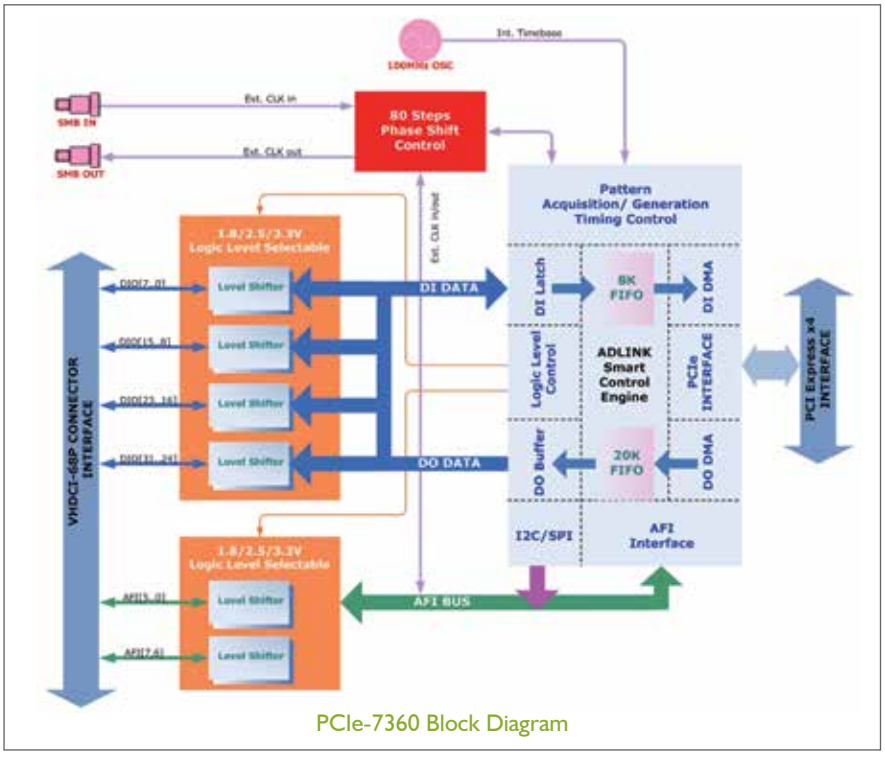
- Post trigger, Retrigger, Pattern match, Handshake

Change of State Interrupt

- Interrupt sources: Any of 32 channels or a pre-define channel change-of-state

Application Function I/O

- 8 channels
- Supported modes: static I/O, I²C or SPI master node, external clock input/output, external digital trigger input, handshake



PCIe-7360 Block Diagram

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