

1 Performance Benchmarking Results for Adnaco Gen2 products

The Altera PCI Express High Performance Reference Design was used for testing. Detailed information on the FPGA design and test software is provided in Altera's AN456 (www.altera.com/literature/an/an456.pdf). The Stratix IV GX FPGA was configured for PCI Express hard IP Gen2 x4 operation.

Table 1 Adnaco-S5

Length	Cable Type	Transceivers	DMA Write	DMA Read	Notes
50 m	x4 50/125 MM	MM	1,593 Mbytes/s	1,447 Mbytes/s	1, 3, 5
100 m	x4 50/125 MM	MM	1,581 Mbytes/s	1,358 Mbytes/s	1, 3, 5
250 m	x4 9/125 SM	SM	1,419 Mbytes/s	1,080 Mbytes/s	2, 4, 5
500 m	x4 9/125 SM	SM	759 Mbytes/s	591 Mbytes/s	2, 4, 5

Table 2 Adnaco-S1B

Length	Cable Type	Transceivers	DMA Write	DMA Read	Notes
10 m	50/125 MM	MM	412 Mbytes/s	405 Mbytes/s	1, 3, 5
50 m	50/125 MM	MM	412 Mbytes/s	404 Mbytes/s	1, 3, 5
100 m	50/125 MM	MM	411 Mbytes/s	402 Mbytes/s	1, 3, 5
250 m	9/125 SM	SM	409 Mbytes/s	397 Mbytes/s	2, 4, 5
500 m	9/125 SM	SM	405 Mbytes/s	390 Mbytes/s	2, 4, 5
750 m	9/125 SM	SM	401 Mbytes/s	380 Mbytes/s	2, 4, 5
1 km	9/125 SM	SM	394 Mbytes/s	290 Mbytes/s	2, 4, 5
4 km	9/125 SM	SM	95 Mbytes/s	77 Mbytes/s	2, 4, 5
8 km	9/125 SM	SM	48 Mbytes/s	39 Mbytes/s	2, 4, 5

Table 3 Adnaco-S1A

Length	Cable Type	Transceivers	DMA Write	DMA Read	Notes
10 m	50/125 MM	MM	412 Mbytes/s	405 Mbytes/s	1, 2, 5
50 m	50/125 MM	MM	412 Mbytes/s	404 Mbytes/s	1, 2, 5
100 m	50/125 MM	MM	411 Mbytes/s	402 Mbytes/s	1, 2, 5
250 m	9/125 SM	SM	408 Mbytes/s	213 Mbytes/s	1, 4, 5

Notes:

1. [Test computer 1](#)
2. [Test computer 2](#)
3. Standard system configuration
4. Long range system configuration - contact factory for more detail
5. MM – multi-mode, SM – single-mode

2 Test Equipment

2.1 FPGA board

Altera Stratix IV GX FPGA Development Kit, P/N DK-DEV-4SGX230N, PCI Express hard IP Gen2 x4

2.2 Test computer 1 information:

Motherboard: Asus P8H67-M LE

CPU: Intel i5-2500 @ 3.30GHz

Chipset: Intel H67

Memory: 2 GB

OS: Windows XP SP3

2.3 Test computer 2 information:

Motherboard: Intel DZ68DB

CPU: Intel i3-2100 @ 3.10GHz

Chipset: Intel Z68

Memory: 3 GB

OS: Windows XP SP3