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EXHIBIT G

Case 2:17-cv-00547-RAJ-RJK Document 1-7 Filed 10/18/17 Page 2 of 10 PageID# 172 Exhibit G - U.S. Patent No. 7,149,867 – Amazon F1

Claim 1

A (RP) reconfigurable processor that instantiates an algorithm as hardware comprising:

F1 FPGA Instance Types on AWS

- Up to 8 Xilinx UltraScale+ 16nm VU9P FPGA devices in assingle instance
- The f1.16xlarge size provides:
 - 8 FPGAs, each with over 2 million customer-accessible FPGA programmable logic cells and over 5000 programmable DSP blocks
 - Each of the 8 FPGAs has 4 DDR-4 interfaces, with each interface accessing a 16GiB, 72-bit wide, ECC-protected memory

Instance Size	FPGAs	DDR-4 (GiB)	FPGA Link	FPGA Direct	VCPUs	Instance Memory (GIB)	NVMe Instance Storage (GB)
f1.2xlarge	1	4 x 16		-	8	122	1 x 470
		20 10		10 10			

Introduction

The Xilinx LogiCORE™ IP AXI Central Direct Memory Access (CDMA) core is a soft Xilinx Intellectual Property (IP) core for use with the Vivado® Design Suite. The AXI CDMA provides high-bandwidth Direct Memory Access (DMA) between a memory-mapped source address and a memory-mapped destination address using the AXI4 protocol. An optional Scatter Gather (SG) feature can be used to offload control and sequencing tasks from the system CPU. Initialization, status, and control registers are accessed through an AXI4-Lite slave interface, suitable for the Xilinx MicroBlaze™ processor.

	<u> </u>
I	ogiCORE IP Facts Tab
	Core Specifics
Supported Device Family ⁽¹⁾	Zynq®-7000 All
Supported User Interfaces	
Resources	See Tab
	Provided with Core
Design Files	
Example Design	
Test Bench	
Constraints File	Xilinx Desi delivere
Simulation Model	

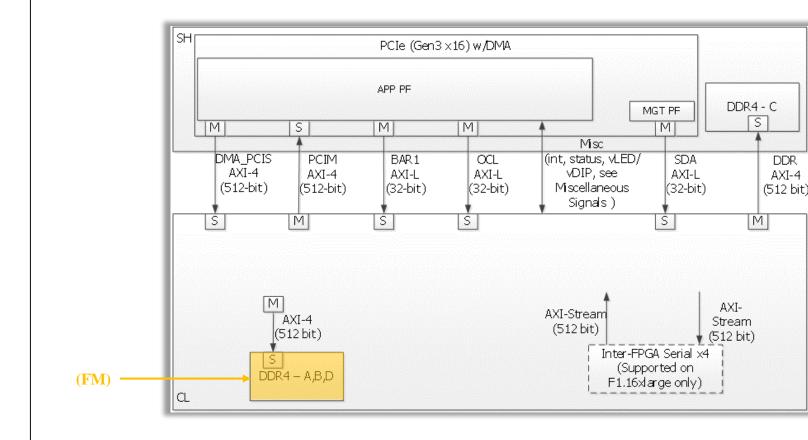
(RP)

Source: https://www.xilinx.com/support/documentation/ip_documentation/axi_cdma/v4_1/pg034-axi-cdma.pdf;



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a (FM) first memory having a first characteristic memory bandwidth and/or memory utilization; and

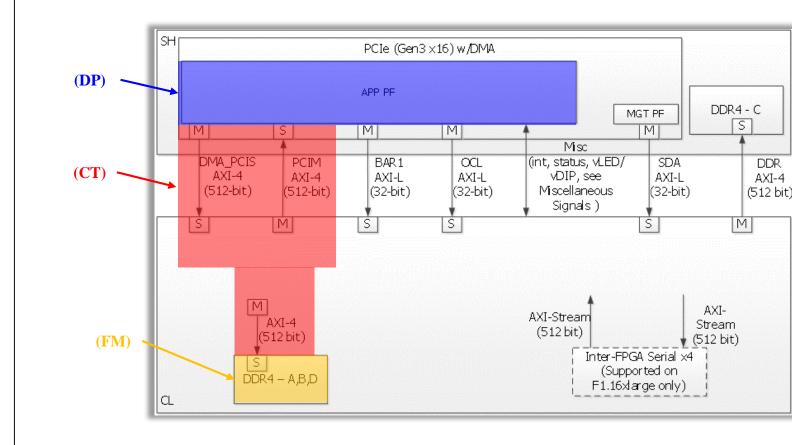




Claim 1

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a (DP) data prefetch unit (CT) coupled to the (FM) memory,

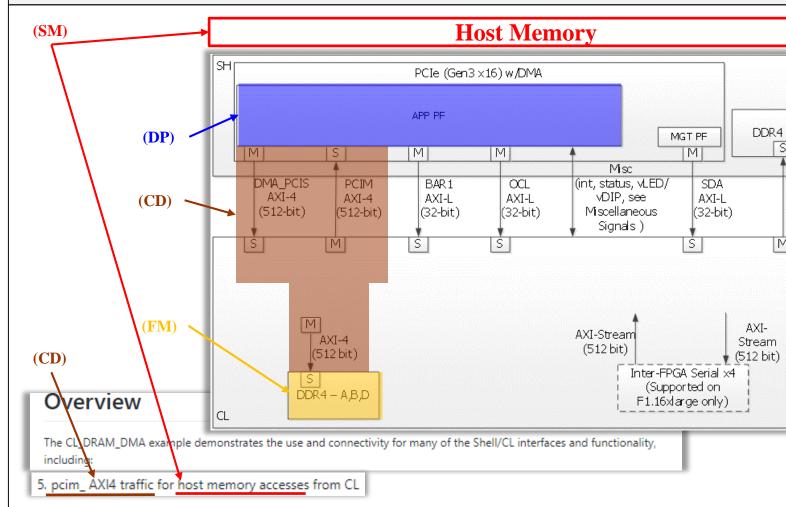




Claim 1

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wherein the (DP) data prefetch unit (CD) retrieves only computational data required by the algorithm from a (SM memory of second characteristic memory bandwidth and/or memory utilization and places the retrieved computational (FM) first memory



Source: https://www.slideshare.net/AmazonWebServices/deep-dive-on-amazon-ec2-f1-instance-may-2017-aws-online-tech-talks;



Claim 1

DOCKET

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