

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

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<b>Advanced Processor Technologies LLC</b>	§	
	§	
<b>Plaintiff,</b>	§	
	§	
<b>v.</b>	§	
	§	<b>Civil Action No. 2:12-cv-155</b>
<b>Marvell Semiconductor, Inc.</b>	§	
	§	<b>Jury Trial Demanded</b>
<b>Defendant.</b>	§	
	§	
	§	

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**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Advanced Processor Technologies LLC (“APT”) files this Complaint against Defendant Marvell Semiconductor, Inc. (“Marvell”) and alleges as follows:

**SUBJECT MATTER JURISDICTION AND VENUE**

1. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. §§ 101, *et seq.* This Court has subject matter jurisdiction over this patent infringement action under 28 U.S.C. §§ 1331, 1332, and/or 1338(a).

2. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391 and/or 1400.

**PARTIES AND PERSONAL JURISDICTION**

3. Plaintiff APT is a limited liability company organized and existing under the laws of the State of Texas with a principal place of business at 6136 Frisco Square Blvd., 4<sup>th</sup> floor, Frisco, Texas 75034.

4. On information and belief, Defendant Marvell is a California corporation, with its principal place of business at 5488 Marvell Lane, Santa Clara, California 95054.

5. This Court has personal jurisdiction over Marvell. Marvell has conducted and does conduct business within the State of Texas. Marvell, directly or through intermediaries (including

distributors, retailers, sales representatives, or others), imports, ships, distributes, offers for sale, sells, and/or advertises its products in the United States, the State of Texas, and the Eastern District of Texas.

**THE PATENTS-IN-SUIT:  
U.S. PATENT NO. 6,629,207; and  
U.S. PATENT NO. 6,092,172**

**Ownership**

6. United States Patent No. 6,629,207 (the ‘207 patent), entitled “Method for Loading Instructions or Data Into a Locked Way of a Cache Memory,” was duly and legally issued to Hitachi on September 30, 2003. A copy of the ‘207 patent is attached as Exhibit A and is made a part of this Complaint.

7. United States Patent No. 6,092,172 (the ‘172 patent), entitled “Data Processor and Data Processing System Having Two Translation Lookaside Buffers,” was duly and legally issued to Hitachi on July 18, 2000. A copy of the ‘172 patent is attached as Exhibit B and is made a part of this Complaint.

8. Plaintiff APT is currently the assignee and sole owner of the patents-in-suit (and all worldwide counterparts), including without limitation all rights to sue for past, present and future infringement, including the right to collect and receive any damages, royalties or settlements for such infringements, all rights to sue for injunctive or other equitable relief, and any and all causes of action relating to any inventions of these patents.

**Brief Summary of the Technology**

9. Virtual memory is a memory management technique that allows a program to be designed as though there is only a single hardware memory device (*i.e.*, the “virtual” single memory device containing *logical* memory addresses) when, in fact, there may be a plurality of memory devices with portions of each supporting the program (*i.e.*, the physical memory devices containing

*physical* memory addresses). Systems that employ virtual memory, among other things, may use physical memory more efficiently and render the programming of applications easier.

10. Computer operating systems that employ virtual memory typically contain a data processor that supports an address translation mechanism in order to translate a logical memory address from the virtual memory (*e.g.*, when requested by a program) into a physical memory address from the physical memory. Such systems may do so by utilizing, among other things, a buffer memory, which may be known as a translation lookaside buffer (TLB).

11. Each of the patents-in-suit discloses data processors that achieve greater processing efficiency through novel and non-obvious improvements to data processor virtual memory structure and operation.

### **INFRINGEMENT OF THE '207 PATENT**

12. Plaintiff realleges and incorporates herein by reference the allegations stated in paragraphs 1-11 of this Complaint.

13. Upon information and belief, Marvell has been and is now infringing, inducing infringement, and contributing to the infringement of the '207 patent in this District and elsewhere by making, using, selling, offering for sale, and/or importing devices, including without limitation, Armada 16x products containing Sheeva processors, and similar products with Sheeva processors, or products containing the same, and other products with MMUs covered by one or more claims of the '207 patent, and/or contributing to or inducing the same by third-parties, all to the injury of APT.

14. Accordingly, Marvell has infringed and continues to infringe, either literally or under the doctrine of equivalents, one or more claims of the '207 patent without license or authority.

15. Plaintiff APT has suffered damages as a result of Marvell's infringement and will continue to suffer damages as a result of Marvell's infringement.

### **INFRINGEMENT OF THE '172 PATENT**

16. Plaintiff realleges and incorporates herein by reference the allegations stated in paragraphs 1-11 of this Complaint.

17. Upon information and belief, Marvell has been and is now infringing, inducing infringement, and contributing to the infringement of the '172 patent in this District and elsewhere by making, using, selling, offering for sale, and/or importing devices, including without limitation, Armada 16x products containing Sheeva processors, and similar products with Sheeva processors, or products containing the same, and other products with MMUs covered by one or more claims of the '172 patent, and/or contributing to or inducing the same by third-parties, all to the injury of APT.

18. Accordingly, Marvell has infringed and continues to infringe, either literally or under the doctrine of equivalents, one or more claims of the '172 patent without license or authority.

19. Plaintiff APT has suffered damages as a result of Marvell's infringement and will continue to suffer damages as a result of Marvell's infringement.

### **DEMAND FOR JURY TRIAL**

Plaintiff APT demands a trial by jury on all issues so triable.

### **PRAYER FOR RELIEF**

**WHEREFORE**, Plaintiff prays for judgment as follows:

- (a) that Defendant has infringed one or more claims of the '207 patent;
- (b) that Defendant has infringed one or more claims of the '172 patent;
- (c) that Plaintiff be awarded damages from Defendant adequate to compensate for Defendant's infringement, but in no event no less than a reasonable royalty, as provided by 35 U.S.C. § 284;

- (d) that a reasonable royalty going forward be awarded for Defendant's future infringement, or in the alternative, that an injunction be issued against further infringement by Defendant and their directors, officers, agents, servants, employees, attorneys and all persons in active concert or participation with them; and
- (e) that Plaintiff be granted such other and further relief, in law or in equity, as the Court deems just and equitable.

Dated: March 23, 2012

Respectfully Submitted,

By: /s/ William E. Davis, III  
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