

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

MONTEREY RESEARCH, LLC,)	
)	
Plaintiff,)	
)	C.A. No. _____
v.)	
)	JURY TRIAL DEMANDED
MARVELL TECHNOLOGY GROUP LTD.,)	
MARVELL INTERNATIONAL LTD.,)	
MARVELL ASIA PTE LTD., and MARVELL)	
SEMICONDUCTOR, INC.,)	

Defendants.

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Monterey Research, LLC (“Monterey”), for its Complaint for Patent Infringement against Defendants Marvell Technology Group Ltd. (“Marvell Technology Group”), Marvell International Ltd. (“Marvell International”), Marvell Asia Pte Ltd. (“Marvell Asia”), and Marvell Semiconductor, Inc. (“Marvell Inc.”) (collectively, “Marvell” or “Marvell Defendants”), alleges as follows:

INTRODUCTION

1. Monterey is an intellectual property and technology licensing company. Monterey’s patent portfolio comprises over 2,700 active and pending patents worldwide, including approximately 2,000 active United States patents. Monterey’s patent portfolio stems from technology developed by a number of leading high-technology companies, including Cypress Semiconductor Corporation, Advanced Micro Devices, Fujitsu, NVX Corporation, and Ramtron. Those companies developed key innovations that have greatly enhanced the capabilities of computer systems, increased electronic device processing power, and reduced electronic device power consumption. Among other things, those inventions produced significant technological advances, including smaller, faster, and more efficient semiconductors and integrated circuits.

2. The Marvell Defendants, jointly and severally, infringe Monterey's patents by making, using, selling, offering for sale, and/or importing products (including importing products made by a patented process) throughout the United States, including within this District. Marvell's customers incorporate those products into downstream products that are made, used, sold, offered for sale, and/or imported throughout the United States, including within this District. Those downstream products include, but are not limited to, motherboards, desktop computers, servers, laptop computers, videogame consoles, and other products that include Marvell semiconductor devices and integrated circuits.

3. The Marvell Defendants have infringed and continue to infringe Monterey's patents. Moreover, despite Monterey notifying them of infringement, the Marvell Defendants have thus far refused to license those patents and, instead, have continued to make, use, sell, offer to sell, and/or import Monterey's intellectual property within the United States without Monterey's permission.

NATURE OF THE CASE

4. This action arises under 35 U.S.C. § 271 for the Marvell Defendants' infringement of Monterey's United States Patent Nos. 6,459,625 ("the '625 patent"); 6,534,805 ("the '805 patent"); 6,629,226 ("the '226 patent"); 6,651,134 ("the '134 patent"); and 6,765,407 ("the '407 patent") (collectively, "the Patents-in-Suit").

THE PARTIES

5. Plaintiff Monterey is a Delaware limited liability company with offices in New Jersey and California. Monterey maintains a registered agent for service in Delaware: Intertrust Corporate Services Delaware Ltd. located at 200 Bellevue Parkway, Suite 210, Wilmington, Delaware 19808.

6. Defendant Marvell Technology Group is a corporation organized under the laws of Bermuda, with a corporate office at Canon's Court, 22 Victoria Street, Hamilton HM 12, Bermuda.

Marvell Technology Group is a publicly traded company and is the parent corporation of defendants Marvell Inc., Marvell International, and Marvell Asia.

7. Defendant Marvell Inc. is a California corporation with a principal place of business at 5488 Marvell Lane, Santa Clara, California 95054. Marvell Inc. is a publicly traded company that may be served through its registered agent for service, C T Corporation System, 28 Liberty Street, New York, New York 10005. Defendant Marvell Inc. is a wholly-owned subsidiary of defendant Marvell Technology Group.

8. Defendant Marvell International is a corporation organized under the laws of Bermuda, with a corporate office at Canon's Court, 22 Victoria Street, Hamilton HM 12, Bermuda. Defendant Marvell International is a wholly-owned subsidiary of defendant Marvell Technology Group.

9. Defendant Marvell Asia is a corporation organized under the laws of Singapore, with a corporate office at Tai Sing Centre, 3 Irving Road, #10-01, Singapore 369522. Defendant Marvell Asia is a wholly-owned subsidiary of defendant Marvell Technology Group.

JURISDICTION AND VENUE

10. This Court has jurisdiction over the subject matter of this action under 28 U.S.C. §§ 1331 and 1338(a) at least because this action arises under the patent laws of the United States, including 35 U.S.C. § 271 *et seq.*

11. Personal jurisdiction exists over each Marvell Defendant.

12. Personal jurisdiction exists over Marvell Technology Group at least because Marvell Technology Group has committed, aided, abetted, contributed to, and/or participated in the commission of acts of infringement giving rise to this action within the State of Delaware by, *inter alia*, directly and/or indirectly making, using, selling, offering for sale, importing products, and/or practicing methods that practice one or more claims of the Patents-in-Suit. Marvell Technology

Group, which controls Marvell Inc., Marvell International, and Marvell Asia, is a global operating company that has transacted and conducted business in the State of Delaware and with Delaware residents with respect to the products and instrumentalities that practice one of more claims of the Patents-in-Suit. Among other things, Marvell Technology Group, directly and/or through intermediaries, uses, sells, ships, distributes, imports into, offers for sale, and/or advertises or otherwise promotes their products throughout the United States, including in the State of Delaware. *See, e.g.*, <https://www.marvell.com/>. For example, Marvell Technology Group has committed and continues to commit acts of direct infringement in the State of Delaware by selling its products online, including through sales on Arrow and other online platforms. *See, e.g.*, <https://www.arrow.com/en/products/mrvl8040-16-220-08/solidrun-ltd>. At least for those reasons, Marvell Technology Group has the requisite minimum contacts within the forum such that the exercise of jurisdiction over Marvell Technology Group would not offend traditional notions of fair play and substantial justice.

13. Personal jurisdiction exists over Marvell Inc. at least because Marvell Inc. has committed, aided, abetted, contributed to, and/or participated in the commission of acts of infringement giving rise to this action within the State of Delaware by, *inter alia*, directly and/or indirectly making, using, selling, offering for sale, importing products, and/or practicing methods that practice one or more claims of the Patents-in-Suit. Furthermore, Marvell Inc. has transacted and conducted business in the State of Delaware and with Delaware residents by making, using, selling, offering to sell, and/or importing (including importing products made by a patented process) products and instrumentalities that practice one or more claims of the Patents-in-Suit. Among other things, Marvell Inc., directly and/or through intermediaries, uses, sells, ships, distributes, imports into, offers for sale, and/or advertises or otherwise promotes its products throughout the United States, including

in the State of Delaware. *See, e.g.*, <https://www.marvell.com/>. In addition, Marvell Inc. develops and markets products in the United States on behalf of and at the direction of Marvell Asia. At least for those reasons, Marvell Inc. has the requisite minimum contacts within the forum such that the exercise of jurisdiction over Marvell Inc. would not offend traditional notions of fair play and substantial justice.

14. Personal jurisdiction exists over Marvell International at least because Marvell International has committed, aided, abetted, contributed to, and/or participated in the commission of acts of infringement giving rise to this action within the State of Delaware by, *inter alia*, directly and/or indirectly making, using, selling, offering for sale, importing products, and/or practicing methods that practice one or more claims of the Patents-in-Suit. Furthermore, Marvell International has transacted and conducted business in the State of Delaware and with Delaware residents by making, using, selling, offering to sell, and/or importing (including importing products made by a patented process) products and instrumentalities that practice one or more claims of the Patents-in-Suit. Among other things, Marvell International, directly and/or through intermediaries, uses, sells, ships, distributes, imports into, offers for sale, and/or advertises or otherwise promotes their products throughout the United States, including in the State of Delaware. *See, e.g.*, <https://www.marvell.com/>. For example, Marvell International has committed and continues to commit acts of direct infringement in the State of Delaware by selling its products online, including through sales on Arrow and other online platforms. *See, e.g.*, <https://www.arrow.com/en/products/mrvl8040-16-220-08/solidrun-ltd>. At least for those reasons, Marvell International has the requisite minimum contacts within the forum such that the exercise of jurisdiction over Marvell International would not offend traditional notions of fair play and substantial justice.

15. Personal jurisdiction exists over Marvell Asia at least because Marvell Asia has

committed, aided, abetted, contributed to, and/or participated in the commission of acts of infringement giving rise to this action within the State of Delaware by, *inter alia*, directly and/or indirectly making, using, selling, offering for sale, importing products, and/or practicing methods that practice one or more claims of the Patents-in-Suit. Furthermore, Marvell Asia has transacted and conducted business in the State of Delaware and with Delaware residents by making, using, selling, offering to sell, and/or importing (including importing products made by a patented process) products and instrumentalities that practice one or more claims of the Patents-in-Suit. Among other things, Marvell Asia, directly and/or through intermediaries, uses, sells, ships, distributes, imports into, offers for sale, and/or advertises or otherwise promotes their products throughout the United States, including in the State of Delaware. *See, e.g.*, <https://www.marvell.com/>. For example, Marvell Asia has committed and continues to commit acts of direct infringement in the State of Delaware by selling its products online, including through sales on Arrow and other online platforms. *See, e.g.*, <https://www.arrow.com/en/products/mrvl8040-16-220-08/solidrun-ltd>. In addition, Marvell Asia develops and markets products in the United States through Marvell Inc. At least for those reasons, Marvell Asia has the requisite minimum contacts within the forum such that the exercise of jurisdiction over Marvell Asia would not offend traditional notions of fair play and substantial justice.

16. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391(b) and (c) and 1400(b). Marvell Inc., Marvell International, and Marvell Asia have committed acts of infringement in this district. Marvell Technology Group is a foreign corporation that has committed acts of infringement in this district by, among other things, selling and offering for sale in this district (and elsewhere) infringing products made, used, developed, tested, and otherwise practiced by Marvell Technology Group. Additionally, Marvell Inc., Marvell International, and Marvell Asia have acted in conjunction with and under the control of Marvell Technology Group by, among other things, selling and offering

for sale in this district (and elsewhere) infringing products made, used, developed, tested, and otherwise practiced by Marvell Technology Group. Venue is further proper based on the facts alleged in the preceding and subsequent paragraphs, which Monterey incorporates by reference as if fully set forth herein.

THE PATENTS-IN-SUIT

17. Monterey incorporates by reference the preceding paragraphs as if fully set forth herein.

A. U.S. Patent No. 6,459,625

18. The '625 patent, titled "Three Metal Process for Optimizing Layout Density," was duly and properly issued by the USPTO on October 1, 2002. A true and correct copy of the '625 patent is attached hereto as Exhibit A.

19. Monterey is the owner and assignee of the '625 patent; owns all right, title, and interest in the '625 patent; and holds the right to sue and recover damages for infringement thereof, including past infringement.

B. U.S. Patent No. 6,534,805

20. The '805 patent, titled "SRAM Cell Design," was duly and properly issued by the United States Patent and Trademark Office ("USPTO") on March 18, 2003. On October 14, 2014, the USPTO issued an Ex Parte Reexamination Certificate for the '805 patent, which confirmed the patentability of the '805 patent. A true and correct copy of the '805 patent and the Ex Parte Reexamination Certificate for the '805 patent is attached hereto as Exhibit B.

21. Monterey is the owner and assignee of the '805 patent; owns all right, title, and interest in the '805 patent; and holds the right to sue and recover damages for infringement thereof, including past infringement.

C. U.S. Patent No. 6,629,226

22. The '226 patent, titled "FIFO Read Interface Protocol," was duly and properly issued by the USPTO on September 30, 2003. A true and correct copy of the '226 patent is attached hereto as Exhibit C.

23. Monterey is the owner and assignee of the '226 patent; owns all right, title, and interest in the '226 patent; and holds the right to sue and recover damages for infringement thereof, including past infringement.

D. U.S. Patent No. 6,651,134

24. The '134 patent, titled "Memory Device with Fixed Length Non Interruptible Burst," was duly and properly issued by the USPTO on November 18, 2003. A true and correct copy of the '134 patent is attached hereto as Exhibit D.

25. Monterey is the owner and assignee of the '134 patent; owns all right, title, and interest in the '134 patent; and holds the right to sue and recover damages for infringement thereof, including past infringement.

E. U.S. Patent No. 6,765,407

26. The '407 patent, titled "Digital Configurable Macro Architecture," was duly and properly issued by the USPTO on July 20, 2004. A true and correct copy of the '407 patent is attached hereto as Exhibit E.

27. Monterey is the owner and assignee of the '407 patent; owns all right, title, and interest in the '407 patent; and holds the right to sue and recover damages for infringement thereof, including past infringement.

FACTUAL BACKGROUND

28. Monterey incorporates by reference the preceding paragraphs as if fully set forth herein.

29. The Patents-in-Suit stem from the research and design of innovative and proprietary

technology developed by leading high-technology companies, including Cypress Semiconductor Corporation (“Cypress”). Cypress is an American multinational company and pioneer of cutting-edge semiconductor technology. Founded in 1982, Cypress has made substantial investments in researching, developing, and manufacturing high-quality semiconductor devices, integrated circuits, and products containing the same.

30. The Patents-in-Suit are directed to inventive technology relating to semiconductor devices, integrated circuits, and/or products containing the same.

31. The Marvell Defendants work closely with their customers, OEMs, foundry suppliers, distributors, and/or other third parties to make, use, sell, offer to sell, and/or import semiconductor devices, integrated circuits, and/or products containing the same. Among other things, the Marvell Defendants optimize their manufacturing process for their customers and optimize their products for integration into downstream products. The Marvell Defendants’ affirmative acts in furtherance of the manufacture, use, sale, offer to sell, and importation of their products in and/or into the United States include, but are not limited to, any one or combination of: (i) designing specifications for manufacture of their products; (ii) collaborating on, encouraging, and/or funding the development of processes for the manufacture of their products; (iii) soliciting and/or sourcing the manufacture of their products; (iv) licensing, developing, and/or transferring technology and know-how to enable the manufacture of their products; (v) enabling and encouraging the use, sale, or importation of their products in the United States; and (vi) advertising their products and/or downstream products incorporating them in the United States.

32. The Marvell Defendants also provide marketing and/or technical support services for their products from their facilities in the United States. For example, the Marvell Defendants maintain a website that advertises their products, including identifying the applications for which

they can be used and providing specifications for their products. *See, e.g.*, <https://www.marvell.com/>. The Marvell Defendants' publicly-available website also contains user manuals, product documentation, and other materials related to their products. *See, e.g.*, <https://www.marvell.com/>. For example, the Marvell Defendants' website contains a knowledge base, software help center, support forum, technical resources, and tools for design support. *See, e.g.*, <https://www.marvell.com/support/?src=main>.

MARVELL'S PRE-SUIT KNOWLEDGE OF MONTEREY'S PATENTS AND CHARGE OF INFRINGEMENT

33. Before filing this action, Monterey, through its agent IPValue Management, Inc. ("IPValue"), notified the Marvell Defendants about the Patents-in-Suit and Marvell's infringement thereof. Among other things, Monterey, through its agent IPValue, identified the Patents-in-Suit to the Marvell Defendants; alleged that they infringed the Patents-in-Suit, including identifying exemplary infringing products; and offered to license the Patents-in-Suit to them. By way of example and not limitation:

a. On December 3, 2018, Monterey sent a letter to the Marvell Defendants, notifying them of their infringement of certain Monterey patents, including the '625, '805, '226, '134, and '407 patents. Among other things, Monterey identified representative Marvell products that utilize those patents, expressly charged that the Marvell Defendants and their customers infringed those patents, and explained that the Marvell Defendants required a license from Monterey. Monterey identified IPValue as Monterey's appointed agent and requested a meeting with the Marvell Defendants.

b. Following the December 3, 2018 notice letter, Monterey repeatedly asked the Marvell Defendants for a meeting to discuss the infringement identified in the notice letter.

c. At Marvell's request, Monterey agreed to limit the licensing discussions to

a subset of the patents Monterey had asserted in the notice letter, although Monterey made clear that it was not withdrawing its assertion of any of the Monterey patents.

d. On May 15, 2019, Monterey met in-person with the Marvell Defendants and presented the Marvell Defendants with detailed infringement claim charts of certain Monterey patents. Among other things, Monterey's presentation discussed specific Monterey patents including the '625, '805, '226, and '407 patents (as well as exemplary patent claims); identified representative Marvell products that utilize those patents; identified where every element of each of those exemplary patent claims was found in the representative products of the Marvell Defendants; expressly charged that the Marvell Defendants and their customers infringed those patents; and explained that the Marvell Defendants required a license from Monterey.

e. Following the May 15, 2019 meeting, Monterey repeatedly asked the Marvell Defendants to schedule a next meeting. The Marvell Defendants did not agree to meet again until November 6, 2019. At the November 6, 2019 meeting, Monterey met in-person with the Marvell Defendants. At that meeting, the Marvell Defendants indicated that they were not prepared to take a license to the Monterey patents.

34. Despite Monterey's repeated efforts—which have continued for well over a year—the Marvell Defendants still have not engaged in any meaningful discussions to end their infringement of the Patents-in-Suit and have not taken a license to them. Instead, the Marvell Defendants continue to knowingly, intentionally, and willfully infringe Monterey's patents directly, contributorily, and by inducement, to obtain their significant benefits without a license from Monterey. Monterey thus has no other choice but to seek relief through litigation.

COUNT ONE
INFRINGEMENT OF THE '625 PATENT

35. Monterey incorporates by reference the preceding paragraphs as if fully set forth

herein.

36. Monterey is the assignee and lawful owner of all right, title, and interest in and to the '625 patent.

37. The '625 patent is valid and enforceable.

38. The '625 patent is directed to memory device layout, and particularly to systems for optimizing layout density in the periphery area of a memory device using a three-metal or more interconnect process.

39. The '625 patent explains that metallization can involve depositing a thin film of conductive metal on a memory device such that the electrical components are formed and electrically connected with the conductive metal. A periphery area of a memory device can include, for example, a plurality of electrical components such as transistors, resistors, capacitors and diodes formed in the silicon substrate during fabrication. Some types of previously known memory used a two-metal layer metallization process to electrically connect the electrical components in the periphery area of the memory. A problem with this two-metal layer metallization method concerned the layout area consumed by the periphery area. The layout area for the traditional electrical connection systems and methods increased the size of the periphery area on the memory. The area on the memory that is not consumed by the periphery area can be, for example, reserved for the core cell area, allowing more core memory cells to be fabricated on the memory. It is therefore desirable to minimize the amount of periphery area consumed, thereby increasing the amount of information stored in the memory.

40. The '625 patent teaches, among other things, how to selectively place and electrically connect a plurality of electrical components to form sub-circuits and selectively electrically connect the sub-circuits, resulting in, among other things, minimizing the layout area of the sub-circuits in the periphery area.

41. Marvell products use the three metal layer or more metallization in their memory device's periphery area. This has enabled Marvell to, among other things, decrease their memory device's periphery area. Memory devices containing an infringing periphery area are found integrated in Marvell products, including their wireless networking system-on-chip semiconductor devices. Specifically, at least the Marvell wireless networking system-on-chip devices and microcontrollers have infringing three metal layer or more metallization in their memory devices' periphery area and other infringing features that use the technology of the '625 patent.

42. The Marvell Defendants have directly infringed, and continue to directly infringe, one or more claims of the '625 patent under 35 U.S.C. § 271(a), either literally and/or under the doctrine of equivalents, by, among other things, making, using, selling, offering to sell, and/or importing in or into the United States without authorization products covered by one or more claims of the '625 patent, including, but not limited to, products that use the three metal layer or more metallization in their integrated memory device's periphery area, such as the 88W8897A network system-on-chip; other Marvell semiconductor devices, integrated circuits, and products; and all other semiconductor devices, integrated circuits, and products with similar integrated memory devices containing a periphery area which uses the infringing technology ("the Accused '625 Products").

43. As one non-limiting example, the Marvell Defendants infringe claim 10 of the '625 patent. For example, the 88W8897A semiconductor device contains::

- a. a plurality of sub-circuits in a periphery area of a memory device (e.g., sub-circuits in the periphery of the SRAM of the 88W8897A), wherein each sub-circuit includes at least one electrical circuit with a plurality of circuit components (e.g., electrical circuit with a plurality of circuit components in the periphery of the SRAM of the 88W8897A);
- b. a first metal interconnect layer that partially connects the circuit

components, wherein first metal layer lines are oriented in substantially one direction (e.g., metal layer connecting circuit components of the SRAM of the 88W8897A);

c. a second metal interconnect layer that completes the connection of the circuit components, and where the second metal interconnect layer lines are fabricated substantially perpendicular to the first metal layer lines (e.g., metal layer perpendicular to the first that completes the connection of the circuit components of the SRAM of the 88W8897A); and

d. a third metal interconnect layer that connects the plurality of sub-circuits, wherein the third metal interconnect layer lines are fabricated substantially parallel to the first metal layer lines (e.g., metal layer substantially parallel to the first that connects the plurality of sub-circuits of the SRAM of the 88W8897A).

44. Claim 10 of the '625 patent applies to each Accused '625 Product at least because each of those products contain the same or similar three metal layer or more metallization in their memory device's periphery area as the Marvell 88W8897A.

45. The Marvell Defendants have known of the '625 patent and their infringement of that patent since at least as early as December 3, 2018.

46. Monterey has complied with the requirements of 35 U.S.C. § 287(a) at least because Monterey provided the Marvell Defendants with written notice of the infringement as discussed above.

47. The Marvell Defendants, knowing their products infringe the '625 patent and with the specific intent for others to infringe the '625 patent, have induced infringement of, and continue to induce infringement of, one or more claims of the '625 patent under 35 U.S.C. § 271(b), either literally and/or under the doctrine of equivalents, by, among other things, actively inducing others, including their customers, to make, use, sell, offer to sell, and/or import in or into the United States

without authorization the Accused '625 Products, as well as products containing the same. The Marvell Defendants knowingly and intentionally instruct their customers, OEMs, foundry suppliers, distributors, and/or other third parties to infringe at least through user manuals, product documentation, and other materials, such as those located on the Marvell Defendants' website at <https://www.marvell.com/>. Additional non-limiting examples include the materials found on the Marvell Defendants' website at <https://www.marvell.com/company/news/pressDetail.do?releaseID=2421>.

48. The Marvell Defendants have contributed to the infringement of, and continue to contribute to the infringement of, one or more claims of the '625 patent under 35 U.S.C. § 271(c), either literally and/or under the doctrine of equivalents, by, among other things, selling, offering to sell, and/or importing in or into the United States the Accused '625 Products, which constitute a material part of the invention of the '625 patent, knowing the Accused '625 Products to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

49. Monterey has sustained and is entitled to recover damages as a result of the Marvell Defendants' past and continuing infringement.

50. The Marvell Defendants' infringement of the '625 patent has been knowing, deliberate, and willful, since at least as early as December 3, 2018, the date of Monterey's letter to the Marvell Defendants and therefore the date on which the Marvell Defendants knew of the '625 patent and that their conduct constituted and resulted in infringement of the '625 patent. Monterey continued to put the Marvell Defendants on notice of the '625 patent and the Marvell Defendants' infringement thereof, including without limitation during the meetings on May 15, 2019 and November 6, 2019 and yet again through this complaint. The Marvell Defendants nonetheless have

committed—and continue to commit—acts of direct and indirect infringement despite knowing that their actions constituted infringement of the valid and enforceable '625 patent, despite a risk of infringement that was known or so obvious that it should have been known to the Marvell Defendants, and/or even though the Marvell Defendants otherwise knew or should have known that their actions constituted an unjustifiably high risk of infringement of that valid and enforceable patent. The Marvell Defendants' conduct in light of these circumstances is egregious. The Marvell Defendants' knowing, deliberate, and willful infringement of the '625 patent entitles Monterey to increased damages under 35 U.S.C. § 284 and to attorney fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

COUNT TWO
INFRINGEMENT OF THE '805 PATENT

51. Monterey incorporates by reference the preceding paragraphs as if fully set forth herein.

52. Monterey is the assignee and lawful owner of all right, title, and interest in and to the '805 patent.

53. The '805 patent is valid and enforceable.

54. The '805 patent is generally directed to static random access memory ("SRAM") cell design, particularly to optimizing SRAM cell design using a simpler geometric layout.

55. As semiconductor structure size continued to shrink with time, one exemplary issue with the prior art of the '805 patent was increased difficulties in manufacturing. Specifically, the then-existing memory cells contained complex geometric designs which required numerous processing steps and larger cell sizes. Generally, more processing steps lead to increased manufacturing costs and reduced profits.

56. The '805 patent teaches, among other things, an improved memory cell layout which

allows the features to be arranged in such a way as to minimize cell size. For example, the single local interconnect layer of the '805 patent allows for a thinner product and fewer processing steps.

57. Marvell products use SRAM with a six-transistor ("6T") and/or eight-transistor ("8T") cell design. Marvell's 6T and 8T SRAM contain a single local interconnect layer. This has resulted in, among other things, Marvell's ability to decrease the size of its SRAM area and to decrease the number of manufacturing steps.

58. The Marvell Defendants have directly infringed, and continue to directly infringe, one or more claims of the '805 patent under 35 U.S.C. § 271(a), either literally and/or under the doctrine of equivalents, by, among other things, making, using, selling, offering to sell, and/or importing in or into the United States without authorization products covered by one or more claims of the '805 patent, including, but not limited to, all Marvell devices incorporating SRAM with a 6T and/or 8T cell design, such as the 88W8897 system-on-chip semiconductor device; all other products that include SRAM with 6T or 8T cells, including embedded SRAM; and all other semiconductor devices, integrated circuits, and products with similar infringing technology ("the Accused '805 Products").

59. As one non-limiting example, the Marvell Defendants infringe claim 8 of the '805 patent. For example, the 88W8897 system-on-chip semiconductor device contains:

- a. a memory cell (e.g., SRAM cell of the 88W8897) comprising a plurality of substantially oblong active regions formed in a semiconductor substrate and arranged substantially in parallel with one another, and a plurality of substantially oblong local interconnects (e.g., structures formed at the polysilicon layer on top of the substrate of the 88W8897) above said substrate that extend only partially across the memory cell and are arranged substantially in parallel with one another and substantially perpendicular to said active regions; and

b. a single local interconnect layer (e.g., metal 1 (“M1”) layer of the 88W8897) comprising local interconnects (e.g., structures formed at the M1 layer of the 88W8897) corresponding to bitlines (e.g., those formed at the metal 3 (“M3”) layer of the 88W8897) and a global word-line (e.g., those formed at the metal 2 (“M2”) layer of the 88W8897).

60. Claim 8 of the ’805 patent applies to each Accused ’805 Product at least because each of those products contain the same or similar structures as the 88W8897.

61. The Marvell Defendants have known of the ’805 patent and their infringement of that patent since at least as early as December 3, 2018.

62. Monterey has complied with the requirements of 35 U.S.C. § 287(a) at least because Monterey provided the Marvell Defendants with written notice of the infringement as discussed above.

63. The Marvell Defendants, knowing their products infringe the ’805 patent and with the specific intent for others to infringe the ’805 patent, have induced infringement of, and continue to induce infringement of, one or more claims of the ’805 patent under 35 U.S.C. § 271(b), either literally and/or under the doctrine of equivalents, by, among other things, actively inducing others, including their customers, to make, use, sell, offer to sell, and/or import in or into the United States without authorization the Accused ’805 Products, as well as products containing the same. The Marvell Defendants knowingly and intentionally instruct their customers, OEMs, foundry suppliers, distributors, and/or third parties to infringe at least through user manuals, product documentation, and other materials, such as those located on the Marvell Defendants’ website at <https://www.marvell.com/>. Additional non-limiting examples include the materials found on the ST Defendants’ website at <https://www.marvell.com/company/news/pressDetail.do?releaseID=2421>.

64. The Marvell Defendants have contributed to the infringement of, and continue to

contribute to the infringement of, one or more claims of the '805 patent under 35 U.S.C. § 271(c), either literally and/or under the doctrine of equivalents, by, among other things, selling, offering to sell, and/or importing in or into the United States the Accused '805 Products, which constitute a material part of the invention of the '805 patent, knowing the Accused '805 Products to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

65. Monterey has sustained and is entitled to recover damages as a result of the Marvell Defendants' past and continuing infringement.

66. The Marvell Defendants' infringement of the '805 patent has been knowing, deliberate, and willful, since at least as early as December 3, 2018, the date of Monterey's letter to the Marvell Defendants and therefore at least the date on which the Marvell Defendants knew of the '805 patent and that their conduct constituted and resulted in infringement of the '805 patent. Monterey continued to put the Marvell Defendants on notice of the '805 patent and the Marvell Defendants' infringement thereof, including without limitation during the meetings on May 15, 2019 and November 6, 2019 and yet again through this complaint. The Marvell Defendants nonetheless have committed—and continue to commit—acts of direct and indirect infringement despite knowing that their actions constituted infringement of the valid and enforceable '805 patent, despite a risk of infringement that was known or so obvious that it should have been known to the Marvell Defendants, and/or even though the Marvell Defendants otherwise knew or should have known that their actions constituted an unjustifiably high risk of infringement of that valid and enforceable patent. The Marvell Defendants' conduct in light of these circumstances is egregious. The Marvell Defendants' knowing, deliberate, and willful infringement of the '805 patent entitles Monterey to increased damages under 35 U.S.C. § 284 and to attorney fees and costs incurred in prosecuting this action

under 35 U.S.C. § 285.

COUNT THREE
INFRINGEMENT OF THE '226 PATENT

67. Monterey incorporates by reference the preceding paragraphs as if fully set forth herein.

68. Monterey is the assignee and lawful owner of all right, title, and interest in and to the '226 patent.

69. The '226 patent is valid and enforceable.

70. The '226 patent is generally directed to a method and/or architecture for implementing a multiqueue memory read interface, and more particularly, to a method and/or architecture for implementing a multiqueue read interface protocol for eliminating synchronizing problems for configuration dependent latencies where the protocol may be capable of handling variable size packets.

71. The '226 patent explains that in prior multiqueue memories (e.g., first-in-first-out (“FIFO”) memory), a signal, e.g., ADDRESS, was a queue address configured to determine a queue number of the multiqueue memory. The signals, e.g., READ_CLOCK and READ_EN, could control the timing of the presentation of the data signal, e.g., DATA. Because of particular architectures and specifications of particular devices, the latency between enabling a queue address signal, e.g., ADDRESS, and presenting a data signal, e.g., DATA, could differ depending on the particular configuration. Configuration information needed to be written into an external read device. The only event reference available to the external read device was an end of packet or a start of packet, e.g., EOP or SOP. In such an environment, the read device was required to monitor this event to generate the queue address signal, e.g., ADDRESS, in a sufficient number of cycles ahead of the read.

72. These prior multiqueue memory systems had the disadvantage of requiring a fixed

packet size. This circuit could be required to generate the queue address, e.g., ADDRESS, a certain number of cycles before the end of packet occurs. The particular number of cycles may be the same as the minimum latency requirement. For certain configurations, there was a specific latency between the queue address signal, e.g., ADDRESS, and presenting the signal, e.g., DATA. If the packet size varied randomly, such as when the size of the packet was less than the number of cycles of latency, a read of one or more unwanted packets occurred. Additionally, it may have been difficult for the read device to synchronize the queue address signal, e.g., ADDRESS, with the data received from the memory (e.g., FIFO). Therefore, the read device needed to be configured with enough logic to respond to the different latencies. Such a configuration required extra overhead for the read device.

73. The '226 patent teaches, among other things, an interface coupled to a multiqueue storage device and configured to interface the multiqueue storage device with one or more handshaking signals. The multiqueue storage device and the interface may be configured to transfer variable size data packets. Such a system provided numerous benefits, including but not limited to: (i) eliminating synchronizing problems with configuration dependent latencies; (ii) being capable of handling variable size packets; (iii) allowing back-to-back reads of variable size packets; and (iv) exchanging address and data between an external read device and a multiqueue storage device.

74. Marvell products use a multiqueue storage device, such as an NVM Express (“NVME”) compliant memory. For example, NVME compliant memory can be found in, among other products, the Marvell NVME SSD controllers. Marvell products use multiqueue storage devices that are compliant with the NVME Base Specification standard and similar versions of the NVME standard that incorporate the innovations of the '226 patent's multiqueue memory read interface. Marvell's multiqueue storage device further interfaces with handshaking signals, and allows back-to-back reads of variable size data packets.

75. The Marvell Defendants have directly infringed, and continue to directly infringe, one or more claims of the '226 patent under 35 U.S.C. § 271(a), either literally and/or under the doctrine of equivalents, by, among other things, making, using, selling, offering to sell, and/or importing in or into the United States without authorization products covered by one or more claims of the '226 patent, including, but not limited to, products supporting NVME or with NVME compliant memory, such as the Marvell 88SS1100 NVME SSD controllers; other Marvell semiconductor devices, integrated circuits, and products built to utilize NVME compliant memory; and all other semiconductor devices, integrated circuits, and products using a similar multiqueue memory read interface (“the Accused '226 Products”).

76. As one non-limiting example, the Marvell Defendants infringe claim 18 of the '226 patent. For example, the 88SS1100 NVME SSD controllers contain: An interface coupled to a multiqueue storage device (e.g., multiqueue memory of the 88SS1100 NVME SSD controllers) and configured to interface said multiqueue storage device with one or more handshaking signals (e.g., data link packets and/or command set of the 88SS1100 NVME SSD controllers), wherein said multiqueue storage device and said interface are configured to allow back-to-back reads of variable size data packets (e.g., via sequential read requests and/or burst read requests, and/or a Scatter Gather List of the 88SS1100 NVME SSD controllers).

77. Claim 18 of the '226 patent applies to each Accused '226 Product at least because each of those products contain infringing NVME compliant memory; and/or contain a multiqueue storage device with similar infringing functionality.

78. The Marvell Defendants have known of the '226 patent and their infringement of that patent since at least as early as December 3, 2018.

79. Monterey has complied with the requirements of 35 U.S.C. § 287(a) at least because

Monterey provided the Marvell Defendants with written notice of the infringement as discussed above.

80. The Marvell Defendants, knowing their products infringe the '226 patent and with the specific intent for others to infringe the '226 patent, have induced infringement of, and continue to induce infringement of, one or more claims of the '226 patent under 35 U.S.C. § 271(b), either literally and/or under the doctrine of equivalents, by, among other things, actively inducing others, including their customers, to make, use, sell, offer to sell, and/or import (including import products made by a patented process) in or into the United States without authorization the Accused '226 Products, as well as products containing the same. The Marvell Defendants knowingly and intentionally instruct their customers, OEMs, foundry suppliers, distributors, and/or other third parties to infringe at least through user manuals, product documentation, and other materials, such as those located on the Marvell Defendants' website at <https://www.marvell.com/>. Additional non-limiting examples include the materials found on the Marvell Defendants' websites at <https://www.marvell.com/documents/d8ycv5spoy9774u4c31w/> and <https://www.marvell.com/documents/mlpoecdbgi0pcxxd8qf/>.

81. The Marvell Defendants have contributed to the infringement of, and continue to contribute to the infringement of, one or more claims of the '226 patent under 35 U.S.C. § 271(c), either literally and/or under the doctrine of equivalents, by, among other things, selling, offering to sell, and/or importing in or into the United States the Accused '226 Products, which constitute a material part of the invention of the '226 patent, knowing the Accused '226 Products to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

82. Monterey has sustained and is entitled to recover damages as a result of the Marvell

Defendants' past and continuing infringement.

83. The Marvell Defendants' infringement of the '226 patent has been knowing, deliberate, and willful, since at least as early as December 3, 2018, the date of Monterey's letter to the Marvell Defendants and therefore at least the date on which the Marvell Defendants knew of the '226 patent and that their conduct constituted and resulted in infringement of the '226 patent. Monterey continued to put the Marvell Defendants on notice of the '226 patent and the Marvell Defendants' infringement thereof, including without limitation during the meetings on May 15, 2019 and November 6, 2019 and yet again through this complaint. The Marvell Defendants nonetheless have committed—and continue to commit—acts of direct and indirect infringement despite knowing that their actions constituted infringement of the valid and enforceable '226 patent, despite a risk of infringement that was known or so obvious that it should have been known to the Marvell Defendants, and/or even though the Marvell Defendants otherwise knew or should have known that their actions constituted an unjustifiably high risk of infringement of that valid and enforceable patent. The Marvell Defendants' conduct in light of these circumstances is egregious. The Marvell Defendants' knowing, deliberate, and willful infringement of the '226 patent entitles Monterey to increased damages under 35 U.S.C. § 284 and to attorney fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

COUNT FOUR
INFRINGEMENT OF THE '134 PATENT

84. Monterey incorporates by reference the preceding paragraphs as if fully set forth herein.

85. Monterey is the assignee and lawful owner of all right, title, and interest in and to the '134 patent.

86. The '134 patent is valid and enforceable.

87. The '134 patent generally concerns memory devices, and is more specifically related to non-interruptible burst read and write access features, as described in JEDEC standards JESD79-3F DDR3 SDRAM, JESD79-4A DDR4 SDRAM, JESD209-3 LPDDR3, JESD209-4 LPDDR4, and similar versions of the JEDEC DDRx standards.

88. The '134 patent provides a faster and more efficient way for burst read and write access over conventional DRAM devices existing when the patent was filed in early 2000. A conventional DRAM may need an interrupt to perform data refreshes. Prior to the '134 patent, DRAM memory devices had a burst mode that had the possibility of needing to continually perform interrupts to perform data refreshes.

89. The '134 patent teaches, among other things, a fixed burst memory that can have non-interruptible bursts, hide required DRAM refreshes inside a known fixed burst length, free up the address and control busses for multiple cycles, and operate at higher frequencies without needing interrupts to perform refreshes of data.

90. Marvell products use memory devices that are compliant with the JEDEC standards JESD79-3F DDR3 SDRAM, JESD79-4A DDR4 SDRAM, JESD209-3 LPDDR3, JESD209-4 LPDDR4 and similar versions of the JEDEC DDRx standards that incorporate the innovations of the '134 patent's non-interruptible fixed burst length.

91. The Marvell Defendants have directly infringed, and continue to directly infringe, one or more claims of the '134 patent under 35 U.S.C. § 271(a), either literally and/or under the doctrine of equivalents, by, among other things, making, using, selling, offering to sell, and/or importing in or into the United States without authorization products covered by one or more claims of the '134 patent, including, but not limited to, products that comply with the JEDEC standards JESD79-3F DDR3 SDRAM, JESD79-4A DDR4 SDRAM, JESD209-3 LPDDR3, JESD209-4 LPDDR4 and

similar versions of the JEDEC DDRx standards that use non-interruptible burst read or write operations, such as the 88SS1100 SSD controller, the Armada 8040 processors, and the Avanta 88F610/30/50/60; other Marvell semiconductor devices, integrated circuits, and products that are compliant with JESD79-3F DDR3 SDRAM, JESD79-4A DDR4 SDRAM, JESD209-3 LPDDR3, JESD209-4 LPDDR4 or similar versions; and all other semiconductor devices, integrated circuits, and products with similar infringing technology (“the Accused ’134 Products”).

92. As one non-limiting example, the Marvell Defendants infringe claim 17 of the ’134 patent since the Armada 8040 semiconductor device contains DDR4 SDRAM memory controllers that operate in conformance with JEDEC’s DDR4 SDRAM standard. For example, the method used by the Armada 8040 semiconductor device:

- a. accesses a memory (e.g., banks of storage elements) in response to a plurality of internal address signals (e.g., bank addresses, row addresses, and column addresses of the Armada 8040); and
- b. generates a predetermined number of said internal address signals (e.g., generating addresses in the Armada 8040) in response to an external address signal (e.g., read and/or write signals of the Armada 8040), a clock signal (e.g., clock signal of the Armada 8040), and a control signal (e.g., control signal of the Armada 8040);
- c. wherein said generation of said predetermined number of internal address signals is non-interruptible (e.g., burst reads or writes cannot be terminated or interrupted in the Armada 8040).

93. Claim 17 of the ’134 patent applies to each Accused ’134 Product at least because each of those products either complies with the same JEDEC DDR4 SDRAM standard, or similar versions of the JEDEC standard, which result in infringing features (e.g., non-interruptible burst

oriented read or write operations of the Accused '134 Products) found in the JESD79-4A DDR4 SDRAM standard.

94. The Marvell Defendants have known of the '134 patent and their infringement of that patent since at least as early as December 3, 2018.

95. Monterey has complied with the requirements of 35 U.S.C. § 287(a) at least because Monterey provided the Marvell Defendants with written notice of the infringement as discussed above.

96. The Marvell Defendants, knowing their products infringe the '134 patent and with the specific intent for others to infringe the '134 patent, have induced infringement of, and continue to induce infringement of, one or more claims of the '134 patent under 35 U.S.C. § 271(b), either literally and/or under the doctrine of equivalents, by, among other things, actively inducing others, including their customers, to make, use, sell, offer to sell, and/or import in or into the United States without authorization the Accused '134 Products, as well as products containing the same. The Marvell Defendants knowingly and intentionally instruct their customers, OEMs, foundry suppliers, distributors, and/or other third parties to infringe at least through user manuals, product documentation, and other materials, such as those located on the Marvell Defendants' website at <https://www.marvell.com/>. A more specific non-limiting example includes the materials found on the Marvell Defendants' website at <https://www.marvell.com/documents/zjpkrnvwlqmrkdfcmbwb/>.

97. The Marvell Defendants have contributed to the infringement of, and continue to contribute to the infringement of, one or more claims of the '134 patent under 35 U.S.C. § 271(c), either literally and/or under the doctrine of equivalents, by, among other things, selling, offering to sell, and/or importing in or into the United States the Accused '134 Products, which constitute a material part of the invention of the '134 patent, knowing the Accused '134 Products to be especially

made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

98. Monterey has sustained and is entitled to recover damages as a result of the Marvell Defendants' past and continuing infringement.

99. The Marvell Defendants' infringement of the '134 patent has been knowing, deliberate, and willful, since at least as early as December 3, 2018, the date of Monterey's letter to the Marvell Defendants and therefore at least the date on which the Marvell Defendants knew of the '134 patent and that their conduct constituted and resulted in infringement of the '134 patent. Monterey continued to put the Marvell Defendants on notice of the '134 patent and the Marvell Defendants' infringement thereof, including without limitation through communications in April 2019 and yet again through this complaint. The Marvell Defendants nonetheless have committed—and continue to commit—acts of direct and indirect infringement despite knowing that their actions constituted infringement of the valid and enforceable '134 patent, despite a risk of infringement that was known or so obvious that it should have been known to the Marvell Defendants, and/or even though the Marvell Defendants otherwise knew or should have known that their actions constituted an unjustifiably high risk of infringement of that valid and enforceable patent. The Marvell Defendants' conduct in light of these circumstances is egregious. The Marvell Defendants' knowing, deliberate, and willful infringement of the '134 patent entitles Monterey to increased damages under 35 U.S.C. § 284 and to attorney fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

COUNT FIVE
INFRINGEMENT OF THE '407 PATENT

100. Monterey incorporates by reference the preceding paragraphs as if fully set forth herein.

101. Monterey is the assignee and lawful owner of all right, title, and interest in and to the '407 patent.

102. The '407 patent is valid and enforceable.

103. The '407 patent is generally directed to programmable digital circuit architecture, and particularly to programmable digital devices which are configurable to perform any one of various digital functions, by changing the contents of a register.

104. The '407 patent explains that microcontrollers or controllers have been utilized in various applications for many years. Microcontrollers are frequently found in, for example: appliances, computers and computer equipment, automobiles, environmental control, aerospace, and thousands of other uses. Prior to the '407 patent, field programmable gate arrays ("FPGA") were utilized in several microcontroller applications. FPGAs are highly inefficient with respect to chip area, increasing their cost. Moreover, FPGAs need to have their look-up tables re-programmed in order to enable them to implement a new digital function, which is a time consuming task. FPGAs are not ideally suited for microcontroller applications, since, for example, microcontroller applications are very cost-sensitive. A FPGA is not able to realize the number of digital functions that are demanded by certain microcontroller applications within these strict cost constraints.

105. The '407 patent teaches, among other things, a programmable digital circuit block that can be programmed to perform a variety of predetermined digital functions upon being configured with a single register write operation. This solution allows the configuration of the programmable digital circuit block to be determined by a small number of configuration registers, providing much flexibility. In particular, the configuration of the programmable digital circuit block is fast and easy since changes in configuration are accomplished by changing the contents of the configuration registers, whereas the contents are generally a small number of configuration data bits.

106. Marvell products use an array of programmable digital circuit blocks, such as ARM cores. For example, the ARM core can be found in a number of different Marvell semiconductor devices, as it functions as a processing core of certain Marvell semiconductor devices. The ARM core is programmable to perform a variety of predetermined digital functions by changing the contents of a register.

107. The Marvell Defendants have directly infringed, and continue to directly infringe, one or more claims of the '407 patent under 35 U.S.C. § 271(a), either literally and/or under the doctrine of equivalents, by, among other things, making, using, selling, offering to sell, and/or importing in or into the United States without authorization products covered by one or more claims of the '407 patent, including, but not limited to, products with multiple ARM cores, such as the 88PA6270 Quad-Core MFP Printer system-on-chip, ARMADA Mobile PXA1908/18/28, 1500 Ultra, and the IAP140 semiconductor devices and other products in the FX-14, ARMADA 8K, ARMADA 7K, ARMADA 3700 product families; other multicore Marvell semiconductor devices, integrated circuits, and products containing ARM A53 and newer cores; and all other semiconductor devices, integrated circuits, and products with similar ARM or ARM-derived cores (“the Accused '407 Products”).

108. As one non-limiting example, the Marvell Defendants infringe claim 8 of the '407 patent. For example, the 88PA6270 Quad-Core MFP Printer system-on-chip semiconductor device contains:

- a. an array of programmable digital circuit block (e.g., ARM cores of the 88PA6270 Quad-Core MFP Printer system-on-chip);
- b. where each programmable digital circuit block is configurable to perform a predetermined digital function (e.g., operating in AArch32 or AArch64 execution state in the 88PA6270 Quad-Core MFP Printer system-on-chip);

c. upon being configured with a single register write operation (e.g., writing RMR register in the 88PA6270 Quad-Core MFP Printer system-on-chip).

109. Claim 8 of the '407 patent applies to each Accused '407 Product at least because each of those products contain infringing ARM A53 or newer cores; and/or contain ARM or ARM-derived cores containing similar infringing functionality.

110. The Marvell Defendants have known of the '407 patent and their infringement of that patent since at least as early as December 3, 2018.

111. Monterey has complied with the requirements of 35 U.S.C. § 287(a) at least because Monterey provided the Marvell Defendants with written notice of the infringement as discussed above.

112. The Marvell Defendants, knowing their products infringe the '407 patent and with the specific intent for others to infringe the '407 patent, have induced infringement of, and continue to induce infringement of, one or more claims of the '407 patent under 35 U.S.C. § 271(b), either literally and/or under the doctrine of equivalents, by, among other things, actively inducing others, including their customers, to make, use, sell, offer to sell, and/or import (including import products made by a patented process) in or into the United States without authorization the Accused '407 Products, as well as products containing the same. The Marvell Defendants knowingly and intentionally instruct their customers, OEMs, foundry suppliers, distributors, and/or other third parties to infringe at least through user manuals, product documentation, and other materials, such as those located on the Marvell Defendants' website at <https://www.marvell.com/>. Additional non-limiting examples include the materials found on the Marvell Defendants' websites at <https://www.marvell.com/documents/egvyunkgbnxclinododn/>.

113. The Marvell Defendants have contributed to the infringement of, and continue to

contribute to the infringement of, one or more claims of the '407 patent under 35 U.S.C. § 271(c), either literally and/or under the doctrine of equivalents, by, among other things, selling, offering to sell, and/or importing in or into the United States the Accused '407 Products, which constitute a material part of the invention of the '407 patent, knowing the Accused '407 Products to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

114. Monterey has sustained and is entitled to recover damages as a result of the Marvell Defendants' past and continuing infringement.

115. The Marvell Defendants' infringement of the '407 patent has been knowing, deliberate, and willful, since at least as early as December 3, 2018, the date of Monterey's letter to the Marvell Defendants and therefore at least the date on which the Marvell Defendants knew of the '407 patent and that their conduct constituted and resulted in infringement of the '407 patent. Monterey continued to put the Marvell Defendants on notice of the '407 patent and the Marvell Defendants' infringement thereof, including without limitation during the meetings on May 15, 2019 and November 6, 2019 and yet again through this complaint. The Marvell Defendants nonetheless have committed—and continue to commit—acts of direct and indirect infringement despite knowing that their actions constituted infringement of the valid and enforceable '407 patent, despite a risk of infringement that was known or so obvious that it should have been known to the Marvell Defendants, and/or even though the Marvell Defendants otherwise knew or should have known that their actions constituted an unjustifiably high risk of infringement of that valid and enforceable patent. The Marvell Defendants' conduct in light of these circumstances is egregious. The Marvell Defendants' knowing, deliberate, and willful infringement of the '407 patent entitles Monterey to increased damages under 35 U.S.C. § 284 and to attorney fees and costs incurred in prosecuting this action

under 35 U.S.C. § 285.

RELIEF REQUESTED

Wherefore, Monterey respectfully requests that this Court enter judgment against the Marvell Defendants as follows:

- A. that the Marvell Defendants have infringed each of the Patents-in-Suit;
- B. that the Marvell Defendants' infringement of each of the Patents-in-Suit is and has been willful;
- C. that Monterey be awarded damages adequate to compensate it for the patent infringement that has occurred, together with pre-judgment interest, post-judgment interest, and costs;
- D. that Monterey be awarded an accounting and additional damages for any infringing sales not presented at trial;
- E. that Monterey be awarded all other damages permitted by 35 U.S.C. § 284, including without limitation increased damages up to three times the amount of compensatory damages found;
- F. that this is an exceptional case and that Monterey be awarded its costs and reasonable attorneys' fees incurred in this action as provided by 35 U.S.C. § 285;
- G. that the Marvell Defendants as well as their officers, directors, agents, employees, representatives, attorneys, and all others acting in privity or in concert with them, their subsidiaries, divisions, successors and assigns be permanently enjoined from further infringement of each of the Patents-in-Suit;
- H. that, in the event a permanent injunction preventing further infringement of each of the Patents-in-Suit is not granted, Monterey be awarded a compulsory ongoing licensing fee for any such further infringement; and

I. such other relief as this Court deems just and proper.

DEMAND FOR JURY TRIAL

Monterey hereby demands trial by jury on all claims and issues so triable.

Dated: January 31, 2020

Respectfully submitted,

Of Counsel:

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