

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

VANTAGE MICRO LLC,

Plaintiff,

v.

STMICROELECTRONICS, INC.,

Defendant.

Civil Action No. _____

DEMAND FOR JURY TRIAL

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Vantage Micro LLC (“Vantage Micro” or “Plaintiff”) hereby alleges for its Complaint for patent infringement against Defendant STMicroelectronics, Inc. (“STMicro” or “Defendant”) on personal knowledge as to its own actions and on information and belief as to the actions of others, as follows:

NATURE OF THE ACTION

1. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.*

THE PARTIES

2. Plaintiff Vantage Micro is a limited liability company organized under the laws of the State of Delaware, with its principal place of business at 717 North Union Street, Suite 9, Wilmington, DE 19805.

3. On information and belief, Defendant STMicro is a Delaware corporation with its principal place of business located at 750 Canyon Drive, Suite 300, Coppel, TX 75019. Upon

information and belief, STMicro is authorized to do business in Texas and may be served through its registered agent CT Corporation System, 1999 Bryan Street, Suite 900, Dallas, Texas 75201.

4. STMicro produces and sells a broad range of integrated circuits, optoelectronics, solid-state sensors, actuators, and discrete semiconductors used in a wide variety of applications. Its products include dedicated automotive ICs, discrete and power transistors, analog and power conversion ICs, industrial ICs, MEMS, specialized imaging sensors, digital ASICs, general purpose and secure MCUs, and EEPROMs.

5. STMicro's product portfolio includes over 3,000 main types of products ranging from single transistors and diodes to a variety of MCUs and highly complex application-specific SoC and SiP devices. In addition to discrete semiconductors and ICs, the company sells optoelectronics and MEMS-based sensor/actuator devices. ST also participates in the manufacturing of smartcard products, including smartcard chips and smartcards.

6. On information and belief, STMicro designs, develops, manufactures, sells, offers to sell, and/or imports products, devices, systems, and/or components of systems that either infringe or support the infringement of the Asserted Patents as described further herein.

7. On information and belief, STMicro sells and offers to sell products and services throughout the United States, including in Texas and this District, in concert and partnership with third parties who sell mobile phones, personal computers, servers, notebook computers, televisions, and other consumer media products.

8. Vantage Micro is the assignee and owner of the patents at issue in this action: U.S. Patents Nos. 6,678,838, 7,414,606, 6,546,508, and 9,959,593 (collectively, the "Asserted Patents"). Vantage Micro holds all substantial rights and interest in the Asserted Patents, as

described below, including the exclusive right to sue Defendant for infringement and recover damages.

9. Vantage Micro seeks monetary damages and prejudgment interest for Defendant STMicro's past and ongoing direct and indirect infringement of the Asserted Patents.

JURISDICTION AND VENUE

10. This action for patent infringement arises under the patent laws of the United States, Title 35 of the United States Code.

11. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

12. This Court has general and personal jurisdiction over STMicro because STMicro has sufficient minimum contacts with the forum as a result of business conducted within the State of Texas and within this District. For example, STMicro has a Texas office in Austin, which is in this District. Personal jurisdiction also exists specifically over STMicro because it, directly or through subsidiaries or intermediaries, makes, uses, offers for sale, or sells products or services within the State of Texas and within this District that directly or indirectly infringe the Asserted Patents as described further herein.

13. Furthermore, personal jurisdiction over STMicro in this action comports with due process. STMicro has conducted and regularly conducts business within the United States and this District. STMicro has purposefully availed itself of the privileges of conducting business in the United States, and more specifically in the State of Texas and this District. STMicro has sought protection and benefit from the laws of the State of Texas by placing products into the stream of commerce through an established distribution channel that infringe the Asserted Patents (as described further herein) with the awareness and/or intent that they will be purchased by consumers in this District. Having purposefully availed itself of the privilege of conducting

business within this District, STMicro should reasonably and fairly anticipate being brought into court here.

14. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391 and 1400(b) at least because STMicro is subject to personal jurisdiction in this District and has regularly conducted business in this District, and because certain of the acts complained of herein occurred in this District. On information and belief, STMicro makes, uses, sells, offers to sell, and/or imports, within the state of Texas and in this District, systems and components that infringe one or more claims of the Asserted Patents or that are the instrumentalities for infringing one or more claims of the Asserted Patents.

THE ASSERTED PATENTS

15. On January 13, 2004, the United States Patent and Trademark Office (“USPTO”) duly and legally issued U.S. Patent No. 6,678,838 (“the ’838 Patent”), entitled “Method to Track Master Contribution Information in a Write Buffer.” A copy of the ’838 Patent is attached hereto as Exhibit 1.

16. Vantage Micro owns all substantial right, title, and interest in the ’838 Patent, and holds the right to sue and recover damages for infringement thereof, including past infringement.

17. On August 19, 2008, the USPTO duly and legally issued U.S. Patent No. 7,414,606 (“the ’606 Patent”), entitled “Method and Apparatus for Detecting a Flat Panel Display Monitor.” A copy of the ’606 Patent is attached hereto as Exhibit 2.

18. Vantage Micro owns all substantial right, title, and interest in the ’606 Patent, and holds the right to sue and recover damages for infringement thereof, including past infringement.

19. On May April 8, 2003, the USPTO duly and legally issued U.S. Patent No. 6,546,508 (“the ’508 Patent”), entitled “Method and Apparatus for Fault Detection of a

Processing Tool in an Advanced Process Control (APC) Framework.” A copy of the ’508 Patent is attached hereto as Exhibit 3.

20. Vantage Micro owns all substantial right, title, and interest in the ’508 Patent, and holds the right to sue and recover damages for infringement thereof, including past infringement.

21. On May 1, 20018, the USPTO duly and legally issued U.S. Patent No. 9,959,593 (“the ’593 Patent”), entitled “Memory Controller Having Plurality of Channels that Provides Simultaneous Access to Data When Accessing Unified Graphics Memory.” A copy of the ’593 Patent is attached hereto as Exhibit 4.

22. Vantage Micro owns all substantial right, title, and interest in the ’593 Patent, and holds the right to sue and recover damages for infringement thereof, including past infringement.

COUNT I - INFRINGEMENT OF U.S. PATENT NO. 6,678,838

23. Vantage Micro incorporates and realleges the preceding paragraphs as if fully set forth herein.

24. At least as of May 9, 2019, Vantage Micro placed STMicro on actual notice of the ’838 Patent and actual notice that its actions constituted and continued to constitute infringement of the ’838 Patent. Vantage Micro has had actual knowledge of the ’838 Patent and its own infringement of the ’838 Patent since at least that time.

25. STMicro has infringed one or more claims of the ’838 Patent, including but not limited to Claim 11, pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, at least by making, using, selling, importing, and/or offering to sell electronic products wherein multiple masters (including but not limited to computer processors, processor cores, graphics processors, and noncore master peripherals) write data to a memory (including but not limited to

shared memory), where the memory includes information to associate a master with the data (“’838 Infringing Products”). Examples of the ’838 Infringing Products include the SPEAr1310.

26. Discovery is expected to uncover the full extent of STMicro’s infringement of the ’838 Patent beyond the ’838 Infringing Products already identified through public information.

27. Attached hereto as Exhibit 5, and incorporated by reference herein, is a claim chart detailing how the SPEAr1310 embedded MPU, which is an example of an ’838 Infringing Product, satisfies each element of independent Claim 11 of the ’838 patent. On information and belief, any use of the SPEAr1310 as an embedded MPU necessarily practices the method of Claim 11 of the ’838 Patent.

28. On information and belief, STMicro has induced infringement of one or more claims of the ’838 Patent, including but not limited to Claim 11, pursuant to 35 U.S.C. § 271(b), by encouraging its customers of the ’838 Infringing Products and other third parties (including, *inter alia*, the downstream customers of its customers) to make, use, sell, offer to sell, and/or import in the United States without authorization the ’838 Infringing Products (or products of which the ’838 Infringing Products are components) as described above. STMicro has engaged in acts of inducement with the knowledge (at least as of May 9, 2019) that such actions constituted infringement of one or more claims of the ’838 Patent and the specific intent to encourage that infringement.

29. STMicro’s acts of inducement include, *inter alia*: providing the ’838 Infringing Products to its customers and other third parties and intending them to use the ’838 Infringing Products; providing information, advertising, and instructions for these products through its own and third-party websites (*see, e.g.*, https://www.st.com/content/st_com/en/products/microcontrollers-microprocessors/legacy-

[mpus/spear-arm-cortex-a9-microprocessors.html#overview](https://www.st.com/content/st_com/en/contact-us.html)); providing potential customers with instructions on how to obtain these products (*see, e.g.,* https://www.st.com/content/st_com/en/contact-us.html); and providing support and training to enable customers to use the products in an infringing way (*see, e.g.,* <https://www.st.com/en/development-tools.html>).

30. On information and belief, STMicro has contributed to infringement of one or more claims of the '838 Patent under 35 U.S.C. § 271(c), including but not limited to Claim 11, by offering to sell or selling within the United States and/or importing into the United States without authorization one or more component of the '838 Infringing Products (or products of which the '838 Infringing Products are components) with the knowledge (at least as of May 9, 2019) that such component(s) are especially made or especially adapted for use in infringement of the '838 Patent and are not are staple articles of commerce suitable for substantial non-infringing use.

31. STMicro has directly and indirectly infringed the '838 Patent and is thus liable for infringement of the '838 Patent pursuant to 35 U.S.C. § 271.

32. Vantage Micro has suffered, and continues to suffer, damages as a result of STMicro's infringement of the '838 Patent.

33. STMicro continued to infringe the '838 Patent from at least May 9, 2019 until its expiration, despite being on notice of the '838 Patent and its infringement. STMicro has therefore infringed the '838 Patent knowingly, willfully, deliberately, and in disregard of Plaintiff's patent rights since at least May 9, 2019, at least by infringing with actual knowledge of its direct and indirect infringement or while remaining willfully blind to the fact of its direct

and indirect infringement. As a result of at least this conduct, Vantage Micro is entitled to enhanced damages under 35 U.S.C. § 284 and to attorneys' fees and costs under 35 U.S.C. § 285.

34. Vantage Micro reserves the right to modify its infringement theories as discovery progresses in this case. Vantage Micro shall not be estopped for purposes of its infringement contentions or its claim constructions by the claim charts that it provides with this Complaint. Vantage Micro intends the claim chart (Exhibit 5) for the '838 patent to satisfy the notice requirements of Rule 8(a)(2) of the Federal Rule of Civil Procedure. The claim chart is not Vantage Micro's preliminary or final infringement contentions or preliminary or final claim construction positions.

COUNT II - INFRINGEMENT OF U.S. PATENT NO. 7,414,606

35. Vantage Micro incorporates and realleges the preceding paragraphs as if fully set forth herein.

36. At least as of May 9, 2019, Vantage Micro placed STMicro on actual notice of the '606 Patent and actual notice that its actions constituted and continue to constitute infringement of the '606 Patent.

37. STMicro has infringed and continues to infringe one or more claims of the '606 Patent, including but not limited to Claim 6, pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, selling, offering to sell, and/or importing in the United States without authority products, devices, systems, and/or components of systems that detect, or support the detection of, monitors, including, but not limited to, Liquid Crystal Display ("LCD"), Light-Emitting Diode ("LED"), and Plasma Display Panel ("PDP") monitors using various connection interfaces or "ports," including, but not limited to, High-Definition Multimedia Interface ("HDMI"), DisplayPort ("DP"), and/or Digital Visual Interface ("DVI") connections

that support or comply with the HDMI, DP, and/or DVI specification (“’606 Infringing Products”). The ’606 Infringing Products include, without limitation, STMicro’s microprocessors and microcontrollers (e.g., STM32Fxxx series, STM32Gxxx series, STM32Hxxx series, STM32MPxxx series, Spearxxx series, and SPC series), set-top box and multimedia SoCs, processors, and decoders (e.g., STiH237, STiH301, STiH305, STiH310, STiH312, STiH314, STiH318, STiH410, STiH412, STiH414, STiH418, and STi7111), display and monitor controllers (e.g., FLI326xxx series such as FLI32626H, and STDPxxxx series such as STDP7310, STDP8028, and STDP9310), ESD solutions (e.g., HDMI2Cx series such as HDMI2C1-13HDS, HDMI2C1-14HDS, and HDMI2C1-6C1), evaluation kits (e.g., STEVAL-CCH003V2 and STEVAL-CCH002V2), firmware, software, and evaluation board solutions (e.g., STSW-USBC2DP, STEVAL-USBC2DP, STM32G081B-EVAL, STM32373C-EVAL, and STM32 embedded software such as STM32Cube), adapter boards and bridge solutions (e.g., UM2048), and discovery kits (e.g., STM32MP157A-DK1 and STM32MP157C-DK2).

38. Discovery is expected to uncover the full extent of STMicro’s infringement of the ’606 Patent beyond the ’606 Infringing Products already identified through public information.

39. Attached hereto as Exhibit 6, and incorporated by reference herein, is a claim chart detailing how a representative STMicro product (STMicro’s evaluation board STM32G081B-EVAL installed with STM32Gxxx microcontroller and STM32Cube firmware/software package) satisfies each element of Claim 6 of the ’606 Patent.

40. On information and belief, STMicro has induced and continues to induce infringement of one or more claims of the ’606 Patent, including but not limited to Claim 6, pursuant to 35 U.S.C. § 271(b) by encouraging its customers and other third parties such as users, distributors, wholesalers, and retailers of the ’606 Infringing Products to make, use, sell,

offer to sell, and/or import in the United States without authorization the '606 Infringing Products (or products of which the '606 Infringing Products are components). STMicro has engaged in acts of inducement with the knowledge (at least as of May 9, 2019) that such actions constituted infringement of one or more claims of the '606 Patent and the specific intent to encourage that infringement.

41. STMicro's acts of inducement include, without limitation: providing the '606 Infringing Products to its customers and other third parties and intending them to use the '606 Infringing Products; providing information, advertising, and instructions for these products through its own websites (*see, e.g.*, <https://www.st.com/en/microcontrollers-microprocessors/stm32-32-bit-arm-cortex-mcus.html> (advertising STM32, one of the '606 Infringing Products)) and offering such products for sale through its own and third-party websites https://www.st.com/content/st_com/en/sample_and_buy/sample-and-buy/buy-from-estore.html (offering an "eStore" through which the '606 Infringing Products can be purchased); *see also* <https://www.digikey.com/en/product-highlight/s/stmicroelectronics/stm32-kits> (offering the '606 Infringing Products for sale through a third-party website)); encouraging customers and other third parties to communicate directly with STMicro representatives about the '606 Infringing Products for purposes of technical assistance and repair as well as sales and marketing (*see, e.g.*, https://www.st.com/content/st_com/en/support/support-home.html (providing consumers with a number of support options through which technical issues and concerns regarding the '606 Infringing Products); *see also* <https://www.st.com/en/development-tools/hardware-development-tools-for-stm32.html>

(providing software tools and firmware upgrade for the '606 Infringing Products)); encouraging customers and other third parties to use the '606 Infringing Products (e.g.,

https://www.st.com/resource/en/product_training/STM32F7_Peripheral_HDMI_CEC.pdf

(encouraging customers to use the '606 Infringing Products); *see also*

https://www.st.com/content/ccc/resource/sales_and_marketing/promotional_material/brochure/2c/60/38/4d/97/c4/41/aa/brstm32f7.pdf/files/brstm32f7.pdf/jcr:content/translations/en.brstm32f7.p

[df](#) (encouraging customers to use the '606 Infringing Products); and

[https://www.st.com/en/touch-and-display-controllers/multi-port-analog-and-digital-](https://www.st.com/en/touch-and-display-controllers/multi-port-analog-and-digital-controllers.html)

[controllers.html](#) (promoting the benefits of the '606 Infringing Products)); and providing

instructions on how to use the '606 Infringing Products (e.g.,

<https://www.st.com/en/development-tools/hardware-development-tools.html#overview> and

<https://www.st.com/en/development-tools/b-lcdad-hdmi1.html#resource> (offering users product specifications, user manuals, hardware resources including board manufacturing specifications, bill of materials, and schematics for using the '606 Infringing Products)).

42. For example, STMicro's technical documentation supplied with a '606 Infringing Product, the STM32G081B-EVAL evaluation board installed with STM32Gxxx microcontroller and STM32Cube firmware/software package, offers user instructions on configuring the STM32G081B-EVAL evaluation board for use with HDMI, DisplayPort, and/or DVI connections, and thus to detect a HDMI-compliant, DisplayPort-compliant, and/or DVI-compliant monitor (*see, e.g.*, Section "6.7.4 HDMI CEC" at page 27 and Section "7 Connectors," at pages 32-47, Evaluation Board with STM32G081RB MCU User Manual ("User Manual"), *available at*

https://www.st.com/content/ccc/resource/technical/document/user_manual/group1/4b/02/64/7e/4

[4/2e/4d/62/DM00496637/files/DM00496637.pdf/jcr:content/translations/en.DM00496637.pdf](https://www.courts.gov/4/2e/4d/62/DM00496637/files/DM00496637.pdf/jcr:content/translations/en.DM00496637.pdf)

(last accessed Aug. 6, 2019)).

43. On information and belief, STMicro has contributed to, and continues to contribute to, infringement of one or more claims of the '606 Patent, including but not limited to Claim 6, pursuant to 35 U.S.C. § 271(c) by offering to sell or selling within the United States, importing and/or supplying in the United States without authority one or more components of the '606 Infringing Products (or products of which the '606 Infringing Products are components) with the knowledge (at least as of May 9, 2019) that such components are especially made or especially adapted for use in an infringement of the '606 Patent and are not staple articles of commerce suitable for substantial non-infringing use.

44. STMicro has directly and indirectly infringed the '606 Patent and is thus liable for infringement of the '606 Patent pursuant to 35 U.S.C. § 271.

45. Vantage Micro has suffered, and continues to suffer, damages as a result of STMicro's infringement of the '606 Patent.

46. STMicro continued to infringe the '606 Patent from at least May 9, 2019 until its expiration, despite being on notice of the '606 Patent and its infringement. STMicro has therefore infringed the '606 Patent knowingly, willfully, deliberately, and in disregard of Plaintiff's patent rights since at least May 9, 2019, at least by infringing with actual knowledge of its direct and indirect infringement or while remaining willfully blind to the fact of its direct and indirect infringement. As a result of at least this conduct, Vantage Micro is entitled to enhanced damages under 35 U.S.C. § 284 and to attorneys' fees and costs under 35 U.S.C. § 285.

47. Vantage Micro reserves the right to modify its infringement theories as discovery progresses in this case. Vantage Micro shall not be estopped for purposes of its infringement

contentions or its claim constructions by the claim charts that it provides with this Complaint. Vantage Micro intends the claim chart (Exhibit 6) for the '606 Patent to satisfy the notice requirements of Rule 8(a)(2) of the Federal Rule of Civil Procedure. The claim chart is not Vantage Micro's preliminary or final infringement contentions or preliminary or final claim construction positions.

COUNT III - INFRINGEMENT OF U.S. PATENT NO. 6,546,508

48. Vantage Micro incorporates and realleges the preceding paragraphs as if fully set forth herein.

49. At least as of the filing of this Complaint, Vantage Micro placed STMicro on actual notice of the '508 Patent and actual notice that its actions constituted and continue to constitute infringement of the '508 Patent. STMicro has had actual knowledge of the '508 Patent and its own infringement of the '508 Patent since at least that time.

50. On information and belief, STMicro has infringed at least Claim 1 of the '508 Patent, pursuant to 35 U.S.C. § 271(g), by importing into the United States, selling, offering to sell, or using within the United States semiconductor devices (or products in which such semiconductor devices are component(s)) that STMicro or a corporate affiliate of STMicro has manufactured, created, or otherwise produced overseas using a process that performs at least the method of Claim 1 of the '508 Patent ("'508 Infringing Products").

51. Attached hereto as Exhibit 7, and incorporated by reference herein, is a claim chart detailing how STMicro's overseas process satisfies each element of Claim 1 of the '508 Patent.

52. On information and belief, the '508 Infringing Products are neither materially changed by subsequent processes nor become trivial and nonessential components of another product.

53. On information and belief, to the extent that STMicro does not itself import the '508 Infringing Products into the United States, STMicro aids and abets others' importation of the '508 Infringing Products into the United States by at least providing others with information or documents required for the import/export process (including, but not limited to, bill of lading forms and information contained therein, or other certifications required by law) and assisting others with the logistics of importation (including but not limited to delivery, loading, shipping, or other transport) with the specific intent that the information and other support be used to import STMicro products into the United States.

54. Discovery is expected to uncover the full extent of STMicro's infringement of the '508 Patent.

55. Vantage Micro has suffered, and continues to suffer, damages as a result of STMicro's infringement of the '508 Patent.

56. Vantage Micro reserves the right to modify its infringement theories as discovery progresses in this case. Vantage Micro shall not be estopped for purposes of its infringement contentions or its claim constructions by the claim charts that it provides with this Complaint. Vantage Micro intends the claim chart (Exhibit 7) for the '508 Patent to satisfy the notice requirements of Rule 8(a)(2) of the Federal Rule of Civil Procedure. The claim chart is not Vantage Micro's preliminary or final infringement contentions or preliminary or final claim construction positions.

COUNT IV - INFRINGEMENT OF U.S. PATENT NO. 9,959,593

57. Vantage Micro incorporates and realleges the preceding paragraphs as if fully set forth herein.

58. At least as of May 9, 2019, Vantage Micro placed STMicro on actual notice of the '593 Patent and actual notice that its actions constituted and continued to constitute infringement of the '593 Patent. STMicro has had actual knowledge of the '593 Patent and its own infringement of the '593 Patent since at least that time

59. STMicro has infringed one or more claims of the '593 Patent, including but not limited to Claim 1, pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, selling, offering to sell, and/or importing in the United States without authority, products, devices, systems, and/or components of systems that control, or include a memory controller that controls, memory channels to provide simultaneous access to data for CPU and data for clients in a unified system/graphics memory ("'593 Infringing Products"). The '593 Infringing Products include, without limitation, at least STMicro's SPEArxxxx series (e.g., SPEAr1340 and Spear6xx), STi series (e.g., STi7xxx) STI series (e.g., STIH4xx), STM series (e.g., STM32xxx) and SPC series (e.g., SPXxx).

60. Discovery is expected to uncover the full extent of STMicro's infringement of the '593 Patent beyond the '593 Infringing Products already identified through public information.

61. Attached hereto as Exhibit 8, and incorporated by reference herein, is a claim chart detailing how the STMicro SPEAr1340, which is a '593 Infringing Product, satisfies each element of independent Claim 1 of the '593 Patent. On information and belief, any use of the SPEAr1340 necessarily practices the claimed method of at least one claim of the '593 Patent.

62. On information and belief, STMicro has induced and continues to induce infringement of one or more claims of the '593 Patent, including but not limited to Claim 1, pursuant to 35 U.S.C. § 271(b) by encouraging its customers and other third parties (including, *inter alia*, the downstream customers of its customers) such as users, distributors, wholesalers, and retailers of the '593 Infringing Products to make, use, sell, offer to sell, and/or import in the United States without authorization the '593 Infringing Products (or products of which the '593 Infringing Products are components). STMicro has engaged in acts of inducement with the knowledge (at least as of May 14, 2019) that such actions constituted infringement of one or more claims of the '593 Patent and the specific intent to encourage that infringement.

63. STMicro's acts of inducement include, without limitation: providing the '593 Infringing Products to its customers and other third parties and intending them to use the '593 Infringing Products with hardware, software, and other infrastructure that enable and/or make use of these products; providing information, advertising, and instructions for these products through its own websites (*see, e.g.*, <https://www.st.com/en/microcontrollers-microprocessors/spear-arm-cortex-a9-microprocessors.html> (advertising some of the '593 Infringing Products) and offering such products for sale through its own and third-party websites https://www.st.com/content/st_com/en/sample_and_buy/sample-and-buy/buy-from-estore.html (offering an "eStore" through which the '593 Infringing Products can be purchased); *see also* <https://www.digikey.com/product-detail/en/stmicroelectronics/EVALSP1340HDM/497-12999-ND/3196301> (offering the '593 Infringing Products for sale through a third-party website)); encouraging customers and other third parties to communicate directly with STMicro representatives about the '593 Infringing Products for purposes of technical assistance and repair as well as sales and marketing (*see, e.g.*, https://www.st.com/content/st_com/en/support/support-

[home.html](#) (providing consumers with a number of support options through which technical issues and concerns regarding the '593 Infringing Products); *see also*

<https://www.st.com/en/development-tools/spear-processor-software-development-tools.html>

(providing software tools and firmware upgrade for the '593 Infringing Products)); encouraging customers and other third parties to use the '593 Infringing Products (e.g.,

<https://www.electronicdatasheets.com/download/62074.pdf?format=pdf> (promoting the '593

Infringing Products to encourage customers to realize the benefits in using shared memory); *see also*

https://www.st.com/content/ccc/resource/sales_and_marketing/promotional_material/brochure/2c/60/38/4d/97/c4/41/aa/brstm32f7.pdf/files/brstm32f7.pdf/jcr:content/translations/en.brstm32f7.p

[df](#) (encouraging customers to use the '593 Infringing Products)); and providing instructions on

how to use the '593 Infringing Products (e.g.,

https://www.st.com/content/ccc/resource/technical/document/application_note/d2/3e/e7/30/55/7b/46/35/CD00254658.pdf/files/CD00254658.pdf/jcr:content/translations/en.CD00254658.pdf

(offering user instructions on configuring the multiport memory controller for use with different types of memories)).

64. For example, STMicro's technical documentation supplied with a '593 Infringing Product, SPEAr1340, offers user instructions on configuring the SPEAr1340 for controlling memory channels to provide simultaneous access to data for CPU and data for clients in a unified system/graphics memory (*see, e.g.*, Section 2.4 and Section 5.12, SPEAr1340 Dual-core Cortex A9 HMI Embedded MPU Datasheet ("Datasheet"), *available at*

<https://www.electronicdatasheets.com/download/62074.pdf?format=pdf> (last accessed Aug. 6, 2019)).

65. On information and belief, STMicro has contributed to infringement of one or more claims of the '593 Patent, including but not limited to Claim 1, pursuant to 35 U.S.C. § 271(c) by offering to sell or selling within the United States and/or importing into the United States without authorization one or more components of the '593 Infringing Products (or products of which the '593 Infringing Products are components) with the knowledge (at least as of May 9, 2019) that such components are especially made or especially adapted for use in an infringement of the '593 Patent and are not staple articles of commerce suitable for substantial non-infringing use.

66. STMicro has directly and indirectly infringed the '593 Patent and is thus liable for infringement of the '593 Patent pursuant to 35 U.S.C. § 271.

67. Vantage Micro has suffered, and continues to suffer, damages as a result of STMicro's infringement of the '593 Patent.

68. STMicro continued to infringe the '593 Patent from at least May 9, 2019 until its expiration, despite being on notice of the '593 Patent and its infringement. STMicro has therefore infringed the '593 Patent knowingly, willfully, deliberately, and in disregard of Plaintiff's patent rights since at least May 9, 2019, at least by infringing with actual knowledge of its direct and indirect infringement or while remaining willfully blind to the fact of its direct and indirect infringement. As a result of at least this conduct, Vantage Micro is entitled to enhanced damages under 35 U.S.C. § 284 and to attorneys' fees and costs under 35 U.S.C. § 285.

69. Vantage Micro reserves the right to modify its infringement theories as discovery progresses in this case. Vantage Micro shall not be estopped for purposes of its infringement contentions or its claim constructions by the claim charts that it provides with this Complaint. Vantage Micro intends the claim chart (Exhibit 8) for the '593 Patent to satisfy the notice

requirements of Rule 8(a)(2) of the Federal Rule of Civil Procedure. The claim chart is not Vantage Micro's preliminary or final infringement contentions or preliminary or final claim construction positions.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff Vantage Micro demands judgment for itself and against Defendant STMicro as follows:

- a. A judgment that STMicro has infringed, and continues to infringe, one or more claims of each of the Asserted Patents;
- b. A judgment that STMicro has induced infringement, and continues to induce infringement, of one or more claims of each of the Asserted Patents other than the '508 Patent;
- c. A judgment that STMicro has contributed to, and continues to contribute, to the infringement of one or more claims of each of the Asserted Patents other than the '508 Patent;
- d. A judgment that STMicro has willfully infringed one or more claims of each of the Asserted Patents;
- e. A judgment awarding Vantage Micro all damages adequate to compensate for STMicro's infringement, and in no event less than a reasonable royalty for STMicro's acts of infringement, including all pre-judgment and post-judgment interest at the maximum rate allowed by law;
- f. A judgment awarding Vantage Micro treble damages pursuant to 35 U.S.C. § 284 as a result of STMicro's willful conduct;
- g. A judgment and order finding that this is an exceptional case within the meaning of 35 U.S.C. § 285 and awarding Vantage Micro its reasonable attorneys' fees; and
- h. A judgment awarding Vantage Micro such other relief as the Court may deem just and equitable.

DEMAND FOR JURY TRIAL

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Plaintiff Vantage Micro demands a trial by jury of this action.

Dated: October 7, 2019

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