

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

SEMCON IP INC.,)	
)	
)	
Plaintiff,)	
)	Case No. 2:16-cv-439
v.)	
)	JURY TRIAL DEMANDED
STMICROELECTRONICS INC. and)	
STMICROELECTRONICS N.V.,)	
)	
Defendants.)	

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Semcon IP Inc. (“Semcon” or “Plaintiff”), for its Complaint against Defendants STMicroelectronics Inc. and STMicroelectronics N.V. (together “Defendants” or “STMicroelectronics”) alleges as follows:

THE PARTIES

1. Semcon is a corporation organized and existing under the laws of the State of Texas, with its principal place of business located at 100 W. Houston Street, Marshall, Texas 75670.

2. STMicroelectronics Inc. is a Delaware corporation with its principal place of business located at 750 Canyon Drive, Suite 300, Coppell, Texas 75019. STMicroelectronics, Inc. is registered to do business in the State of Texas and may be served with process through its registered agent, CT Corp System, 1999 Bryan St., Suite 900, Dallas, Texas 75201-3136.

3. STMicroelectronics N.V. is a foreign corporation with headquarters located at 39 Chemin du Champ des Filles Plan-Les-Quates, Geneva 1118BH Switzerland. Upon information

and belief, STMicroelectronics N.V. does business in Texas, directly or through intermediaries, and maintains its principal place of business in Switzerland.

JURISDICTION

4. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 1, *et seq.* This Court has jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

5. This Court has personal jurisdiction over Defendants. Defendants conduct business in this judicial district and have committed acts of patent infringement in this judicial district, have induced acts of patent infringement by others in this district, and/or have contributed to patent infringement by others in this judicial district, the State of Texas, and elsewhere in the United States.

6. Venue is proper in this district pursuant to 28 U.S.C. §§ 1391(b), 1391(c) and 1400(b) because, among other things, Defendants are subject to personal jurisdiction in this judicial district, Defendants have regularly conducted business in this judicial district, and certain of the acts complained of herein occurred in this judicial district.

PATENTS-IN-SUIT

Power Management Patents

7. On August 29, 2006, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 7,100,061 (the "'061 Patent") entitled "Adaptive Power Control." A true and correct copy of the '061 Patent is attached hereto as Exhibit A.

8. On September 29, 2009, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 7,596,708 (the "'708 Patent") entitled "Adaptive Power Control Integration System." A true and correct copy of the '708 Patent is attached hereto as Exhibit B.

9. On October 22, 2013, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,566,627 (the “’627 Patent”) entitled “Adaptive Power Control.” A true and correct copy of the ’627 Patent is attached hereto as Exhibit C.

10. On August 14, 2014, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,806,247 (the “’247 Patent”) entitled “Adaptive Power Control”. A true and correct copy of the ’247 Patent is attached hereto as Exhibit D.

Bus Controller Patent

11. On November 2, 1999, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 5,978,876 (the “’876 Patent”) entitled “System and Method for Controlling Communications Between Subsystems.” A true and correct copy of the ’876 Patent is attached hereto as Exhibit E.

12. Semcon is the sole and exclusive owner of all rights, title and interest in the ’061 Patent, ’708 Patent, ’627 Patent, ’247 Patent, (collectively, the “Power Management Patents”) and ’876 Patent (collectively, the “patents-in-suit”), and holds the exclusive right to take all actions necessary to enforce its rights to the patents-in-suit, including the filing of this patent infringement lawsuit. Semcon also has the right to recover all damages for past, present, and future infringement of the patents-in-suit and to seek injunctive relief as appropriate under the law.

FACTUAL ALLEGATIONS

13. The Power Management Patents generally cover methods for controlling the power used by a computer, specifically, the adjustment of the clock frequency and voltage supply to a processor to conserve processor power and extend battery life. The claims of the Power Management Patents generally call for the frequency generator and power management

logic to be located on the processor itself, rather than in a separate component that would consume power.

14. Non-party ARM Holdings (“ARM”) licenses chip designs and ARM instruction set architectures to third parties, who design their own products that implement one of those architectures including system on chip (“SoC”) architectures that incorporate memory, interfaces, radios, etc. The ARM architecture is the most widely used architecture in smartphones and other mobile devices and is widely used in other products such as televisions.

15. The ARM Intelligent Energy Management (“IEM”) and Intelligent Energy Controller (“IEC”) are incorporated into ARM-based SoCs and associated software to perform power management for the processor on the SoC. The IEC performs Dynamic Voltage and Frequency Scaling (DVFS)—a technique where the voltage used in a component is increased or decreased in order to increase performance or conserve power, depending on the circumstances—which includes power management techniques. ARM IEC and IEM are incorporated into processors implementing the ARM Cortex architecture, including, but not limited to, the ARM Cortex-A5, Cortex-A7, and Cortex-A9 architectures. ARM Cortex processors are incorporated into chips made by numerous manufacturers, including STMicroelectronics.

16. STMicroelectronics has infringed and is continuing to infringe the Power Management Patents by making, using, selling, offering to sell, and/or importing, and by actively inducing others to make, use, sell, offer to sell, and/or importing, chips utilizing SoCs that incorporate ARM processors that use DVFS for power management, including at least the ARM Cortex-A5, Cortex-A7, and Cortex-A9 processors.

17. The '876 Patent generally covers a type of CPU control bus for controlling communications between devices within a computer. More specifically, the '876 Patent teaches and discloses a communications control system that provides dynamic centralized control of subsystem communications. The '876 Patent relies, *inter alia*, on a dedicated controller to allow direct communications between subsystems. The controller, such as a Direct Memory Access Controller (DMAC), monitors all subsystem communications and determines the communication needs of the system. The controller then dynamically assigns communications channels to pairs of subsystems based on these determinations to arrive at the most effective main control bus utilization according to current system-wide communications needs.

18. Among the advantages of the invention taught and disclosed in the '876 Patent are: (i) the system processor is freed from having to manage the system bus through the use of a dedicated controller; and (ii) the controller can more intelligently regulate bus traffic than is possible using a traditional master/slave system.

19. STMicroelectronics has infringed and is continuing to infringe the Bus Controller Patent by making, using, selling, offering to sell and/or importing, and by actively inducing others to make, use, sell, offer to sell and/or importing, chips utilizing a Direct Memory Access Controller that meets the limitation of the claims.

COUNT I
(Infringement of the '061 Patent)

20. Paragraphs 1 through 19 are incorporated by reference as if fully set forth herein.

21. Semcon has not licensed or otherwise authorized Defendants to make, use, offer for sale, sell, or import any products that embody the inventions of the '061 Patent.

22. Defendants have and continue to directly infringe the '061 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by

making, using, offering to sell, selling and/or importing into the United States products that satisfy each and every limitation of one or more claims of the '061 Patent. Such products include any and all chipsets with ARM Cortex-A5, Cortex-A7, and Cortex-A9 processor designs that use DVFS for power management. Upon information and belief, these products include at least the SPEAr1300 series microprocessors including the SPEAr1340.

23. Defendants have and continue to indirectly infringe one or more claims of the '061 Patent by knowingly and intentionally inducing others to directly infringe, or contributing to the direct infringement of others, either literally or under the doctrine of equivalents, by making, using, offering to sell, selling and/or importing into the United States infringing products, which products include STMicroelectronics chipset products such as the SPEAr1300 series microprocessors including the SPEAr1340.

24. Defendants, with knowledge that these products, or the use thereof, infringe the '061 Patent at least as of the date of this Complaint, knowingly and intentionally induced, and continue to knowingly and intentionally induce, direct infringement of the '061 Patent by supplying these chips to others for inclusion in their products.

25. Defendants induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability that others, including end users, infringe the '061 Patent, but while remaining willfully blind to the infringement.

26. Defendants contributorily infringe with knowledge that these products, or the use thereof, infringe the '061 Patent at least as of the date of this Complaint. Defendants knowingly and intentionally contributed to the direct infringement of the '061 Patent by others, by supplying these chipset products, that embody a material part of the claimed invention of the

'061 Patent, that are known by the Defendant to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses.

27. Semcon has suffered damages as a result of Defendants' direct and indirect infringement of the '061 Patent in an amount to be proved at trial.

28. Semcon has suffered, and will continue to suffer, irreparable harm as a result of Defendants' infringement of the '061 patent, for which there is no adequate remedy at law, unless Defendants' infringement is enjoined by this Court.

COUNT II
(Infringement of the '708 Patent)

29. Paragraphs 1 through 28 are incorporated by reference as if fully set forth herein.

30. Semcon has not licensed or otherwise authorized Defendants to make, use, offer for sale, sell, or import any products that embody the inventions of the '708 Patent.

31. Defendants have and continue to directly infringe the '708 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering to sell, selling, and/or importing into the United States products that satisfy each and every limitation of one or more claims of the '708 Patent. Such products include any and all chipsets with ARM Cortex-A5, Cortex-A7, and Cortex-A9 processor designs that use DVFS for power management. Upon information and belief, these products include at least the SPEAr1300 series microprocessors including the SPEAr1340.

32. Defendants have and continue to indirectly infringe one or more claims of the '708 Patent by knowingly and intentionally inducing others to directly infringe, or contributing to the direct infringement of others, either literally or under the doctrine of equivalents, by making, using, offering to sell, selling, and/or importing into the United States infringing

products, which products include STMicroelectronics chipset products such as the SPEAr1300 series microprocessors including the SPEAr1340.

33. Defendants, with knowledge that these products, or the use thereof, infringe the '708 Patent at least as of the date of this Complaint, knowingly and intentionally induced, and continue to knowingly and intentionally induce, direct infringement of the '708 Patent by supplying these chips to others for inclusion in their products.

34. Defendants induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability that others, including end users, infringe the '708 Patent, but while remaining willfully blind to the infringement.

35. Defendants contributorily infringe with knowledge that these products, or the use thereof, infringe the '708 Patent at least as of the date of this Complaint. Defendants knowingly and intentionally contributed to the direct infringement of the '708 Patent by others, by supplying these chipset products, that embody a material part of the claimed invention of the '708 Patent, that are known by the Defendant to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses.

36. Semcon has suffered damages as a result of Defendants' direct and indirect infringement of the '708 Patent in an amount to be proved at trial.

37. Semcon has suffered, and will continue to suffer, irreparable harm as a result of Defendants' infringement of the '708 Patent, for which there is no adequate remedy at law, unless Defendants' infringement is enjoined by this Court.

COUNT III
(Infringement of the '627 Patent)

38. Paragraphs 1 through 37 are incorporated by reference as if fully set forth herein.

39. Semcon has not licensed or otherwise authorized Defendants to make, use, offer for sale, sell, or import any products that embody the inventions of the '627 Patent.

40. Defendants have and continue to directly infringe the '627 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering to sell, selling, and/or importing into the United States products that satisfy each and every limitation of one or more claims of the '627 Patent. Such products include any and all chipsets with ARM Cortex-A5, Cortex-A7, and Cortex-A9 processor designs that use DVFS for power management. Upon information and belief, these products include at least the SPEAr1300 series microprocessors including the SPEAr1340.

41. Defendants have and continue to indirectly infringe one or more claims of the '627 Patent by knowingly and intentionally inducing others to directly infringe, or contributing to the direct infringement of others, either literally or under the doctrine of equivalents, by making, using, offering to sell, selling, and/or importing into the United States infringing products, which products include STMicroelectronics chipset products such as the SPEAr1300 series microprocessors including the SPEAr1340.

42. Defendants, with knowledge that these products, or the use thereof, infringe the '627 Patent at least as of the date of this Complaint, knowingly and intentionally induced, and continue to knowingly and intentionally induce, direct infringement of the '627 Patent by supplying these chips to others for inclusion in their products.

43. Defendants induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high

probability that others, including end users, infringe the '627 Patent, but while remaining willfully blind to the infringement.

44. Defendants contributorily infringe with knowledge that these products, or the use thereof, infringe the '627 Patent at least as of the date of this Complaint. Defendants knowingly and intentionally contributed to the direct infringement of the '627 Patent by others, by supplying these chipset products, that embody a material part of the claimed invention of the '627 Patent, that are known by the Defendant to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses.

45. Semcon has suffered damages as a result of Defendants' direct and indirect infringement of the '627 Patent in an amount to be proved at trial.

46. Semcon has suffered, and will continue to suffer, irreparable harm as a result of Defendants' infringement of the '627 Patent, for which there is no adequate remedy at law, unless Defendants' infringement is enjoined by this Court.

COUNT IV
(Infringement of the '247 Patent)

47. Paragraphs 1 through 46 are incorporated by reference as if fully set forth herein.

48. Semcon has not licensed or otherwise authorized Defendants to make, use, offer for sale, sell, or import any products that embody the inventions of the '247 Patent.

49. Defendants have and continue to directly infringe the '247 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering to sell, selling, and/or importing into the United States products that satisfy each and every limitation of one or more claims of the '247 Patent. Such products include any and all chipsets with ARM Cortex-A5, Cortex-A7, and Cortex-A9 processor designs

that use DVFS for power management. Upon information and belief, these products include at least the SPEAr1300 series microprocessors including the SPEAr1340.

50. Defendants have and continue to indirectly infringe one or more claims of the '247 Patent by knowingly and intentionally inducing others to directly infringe, or contributing to the direct infringement of others, either literally or under the doctrine of equivalents, by making, using, offering to sell, selling, and/or importing into the United States infringing products, which products include STMicroelectronics chipset products such as the SPEAr1300 series microprocessors including the SPEAr1340.

51. Defendants, with knowledge that these products, or the use thereof, infringe the '247 Patent at least as of the date of this Complaint, knowingly and intentionally induced, and continue to knowingly and intentionally induce, direct infringement of the '247 patent by supplying these chips to others for inclusion in their products.

52. Defendants induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability that others, including end users, infringe the '247 Patent, but while remaining willfully blind to the infringement.

53. Defendants contributorily infringe with knowledge that these products, or the use thereof, infringe the '247 Patent at least as of the date of this Complaint. Defendants knowingly and intentionally contributed to the direct infringement of the '247 Patent by others, by supplying these chipset products, that embody a material part of the claimed invention of the '247 Patent, that are known by the Defendant to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses.

54. Semcon has suffered damages as a result of Defendants' direct and indirect infringement of the '247 Patent in an amount to be proved at trial.

55. Semcon has suffered, and will continue to suffer, irreparable harm as a result of Defendants' infringement of the '247 Patent, for which there is no adequate remedy at law, unless Defendants' infringement is enjoined by this Court.

COUNT V
(Infringement of the '876 Patent)

56. Paragraphs 1 through 55 are incorporated by reference as if fully set forth herein.

57. Semcon has not licensed or otherwise authorized Defendants to make, use, offer for sale, sell, or import any products that embody the inventions of the '876 Patent.

58. Defendants have and continue to directly infringe the '876 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering to sell, selling and/or importing into the United States products that satisfy each and every limitation of one or more claims of the '876 Patent, including the use of prioritized channels for direct memory access. Upon information and belief, these products include at least the STM32L151 product line of microcontrollers including the STM32L151CB; STM32L151CB-A; STM32L151CC; STM32L151QC; STM32L151QD; STM32L151QE; STM32L151R6; STM32L151R6-A; STM32L151R8; STM32L151R8-A; STM32L151rB; STM32L151RB-A; STM32L151RC; STM32L151RC-A; STM32L151RD; STM32L151RE; STM32L151UC; STM32L151V8; STM32L151V8-A; STM32L151VB; STM32L151VB-A; STM32L151VC; STM32L151VC-A; STM32L151VD; STM32L151VD-X; STM32L151VE; STM32L151ZC; STM32L151ZD; STM32L151ZE; SPEAR; STM8, and SPC56 product lines.

59. Defendants have and continue to indirectly infringe one or more claims of the '876 Patent by knowingly and intentionally inducing others to directly infringe, or contributing

to the direct infringement of others, either literally or under the doctrine of equivalents, by making, using, offering to sell, selling and/or importing into the United States infringing products, which products include STMicroelectronics microcontrollers, such as the STM32L151 product line of microcontrollers including the STM32L151CB; STM32L151CB-A; STM32L151CC; STM32L151QC; STM32L151QD; STM32L151QE; STM32L151R6; STM32L151R6-A; STM32L151R8; STM32L151R8-A; STM32L151rB; STM32L151RB-A; STM32L151RC; STM32L151RC-A; STM32L151RD; STM32L151RE; STM32L151UC; STM32L151V8; STM32L151V8-A; STM32L151VB; STM32L151VB-A; STM32L151VC; STM32L151VC-A; STM32L151VD; STM32L151VD-X; STM32L151VE; STM32L151ZC; STM32L151ZD; and STM32L151ZE.

60. Defendants, with knowledge that these products, or the use thereof, infringe the '876 Patent at least as of the date of this Complaint, knowingly and intentionally induced, and continue to knowingly and intentionally induce, direct infringement of the '876 patent by supplying these chips to others for inclusion in their products.

61. Defendants induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability that others, including end users, infringe the '876 Patent, but while remaining willfully blind to the infringement.

62. Defendants contributorily infringe with knowledge that these products, or the use thereof, infringe the '876 Patent at least as of the date of this Complaint. Defendants knowingly and intentionally contributed to the direct infringement of the '876 Patent by others, by supplying these microcontrollers, that embody a material part of the claimed invention of the

'876 Patent, that are known by the Defendant to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses.

63. Semcon has suffered damages as a result of Defendants' direct and indirect infringement of the '876 Patent in an amount to be proved at trial.

64. Semcon has suffered, and will continue to suffer, irreparable harm as a result of Defendants' infringement of the '876 Patent, for which there is no adequate remedy at law, unless Defendants' infringement is enjoined by this Court.

DEMAND FOR JURY TRIAL

Plaintiff hereby demands a jury for all issues so triable.

PRAYER FOR RELIEF

WHEREFORE, Semcon prays for relief against Defendants as follows:

- a. Entry of judgment declaring that Defendants have directly and/or indirectly infringed one or more claims of each of the patents-in-suit;
- b. An order pursuant to 35 U.S.C. § 283 permanently enjoining Defendants, their officers, agents, servants, employees, attorneys, and those persons in active concert or participation with them, from further acts of infringement of the patents-in-suit;
- c. An order awarding damages sufficient to compensate Semcon for Defendants' infringement of the patents-in-suit, but in no event less than a reasonable royalty, together with interest and costs;
- d. Entry of judgment declaring that this case is exceptional and awarding Semcon its costs and reasonable attorney fees under 35 U.S.C. § 285; and
- e. Such other and further relief as the Court deems just and proper.

Dated: April 25, 2016

Respectfully submitted,

MCKOOL SMITH, P.C.

/s/ Samuel F. Baxter

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