

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

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ADVANCED SILICON TECHNOLOGIES, LLC	:
Plaintiff,	:
	:
v.	:
	:
VOLKSWAGEN AG, VOLKSWAGEN GROUP	:
OF AMERICA, INC., VOLKSWAGEN GROUP	:
OF AMERICA CHATTANOOGA	:
OPERATIONS LLC, AUDI AG,	:
AND AUDI OF AMERICA, LLC,	:
	:
Defendants.	:
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Civil Action No.

Jury Trial Demanded

COMPLAINT

Advanced Silicon Technologies, LLC (“Advanced Silicon” or “Plaintiff”), brings this action for patent infringement against Defendants Volkswagen AG, Volkswagen Group of America, Inc., Volkswagen Group of America Chattanooga Operations LLC, Audi AG, Audi of America, LLC (collectively, “Volkswagen” or “Defendant”), and alleges as follows:

NATURE OF THE ACTION

1. This is an action for patent infringement under the patent laws of the United States, Title 35 of the United States Code. Advanced Silicon seeks remedies for Defendant’s infringement of Advanced Silicon’s U.S. Patent Nos. 6,339,428 (“the ’428 Patent”), 6,546,439 (“the ’439 Patent”), 6,630,935 (“the ’935 Patent”), and 8,933,945 (“the ’945 Patent”) (collectively, the “Patents-in-Suit”).

THE PARTIES

2. Advanced Silicon is a Delaware limited liability company, with a principal place of business at 118 Maplewood Avenue Unit C-2/Box 8, Portsmouth, NH 03801.

3. Upon information and belief, Volkswagen AG is a corporation organized and existing under the laws of Germany, with its principal place of business at Brieffach 1849, D-38436, Wolfsburg, Germany.

4. Upon information and belief, Volkswagen Group of America, Inc. is a New Jersey corporation headquartered at 2200 Ferdinand Porsche Drive, Herndon, VA 20171 and a registered agent at Corporation Service Company, 2711 Centerville Road, Suite 400, Wilmington, DE 19808.

5. Upon information and belief, Volkswagen Group of America Chattanooga Operations LLC is a Tennessee corporation headquartered at 8001 Volkswagen Drive, Chattanooga, TN 37416.

6. Upon information and belief, Audi AG is a corporation organized and existing under the laws of Germany, with its principal place of business at Ettinger Strasse, D-85045, Ingolstadt, Germany.

7. Upon information and belief, Audi of America, LLC is a registered trade name of Volkswagen Group of America, Inc., which has the principal place of business registration at 2200 Ferdinand Porsche Drive, Herndon, VA 20171.

JURISDICTION AND VENUE

8. This action arises under the Patent Act, 35 U.S.C. § 1 *et seq.*

9. Subject matter jurisdiction is proper in this Court under 28 U.S.C. §§ 1331 and 1338.

10. Venue in this district is proper under 28 U.S.C. §§ 1400(b) and 1391(b) and (c).

11. This court has personal jurisdiction over Volkswagen by virtue of, *inter alia*, (i) maintaining a regular place of business and a continuing presence in this jurisdiction; (ii)

committing at least a portion of the infringements alleged herein within this district; and (iii) regularly doing business or soliciting business, engaging in other persistent courses of conduct and/or deriving substantial revenue from good and services provided to individuals in this district at least at the Volkswagen dealership, Smith Volkswagen, located at 4304 Kirkwood Hwy, Wilmington, DE 19808 and the Audi dealership, Audi Wilmington, located at 1300 N. Union Street. Wilmington, DE 19806.

THE PATENTS

12. United States Patent No. 6,339,428 (“the ’428 Patent”) is entitled “Method and Apparatus for Compressed Texture Caching in a Video Graphics System,” and issued January 15, 2002 to inventors Mark C. Fowler, Paul Vella, and Michael T. Wright. The ’428 Patent issued from United States Patent Application No. 09/356,398 filed on July 16, 1999. A copy of the ’428 Patent is attached hereto as Exhibit A.

13. United States Patent No. 6,546,439 (“the ’439 Patent”) is entitled “Method and System for Improved Data Access,” and issued April 8, 2003 to inventors Geoffrey S. Strongin and Qadeer A. Qureshi. The ’439 Patent issued from United States Patent Application No. 09/207,970 filed on December 9, 1998. A copy of the ’439 Patent is attached hereto as Exhibit B.

14. United States Patent No. 6,630,935 (“the ’935 Patent”) is entitled “Geometric Engine Including a Computational Module for use in a Video Graphics Controller,” and issued October 7, 2003 to inventors Ralph Clayton Taylor, Michael Andrew Mang, and Michael Mantor. The ’935 Patent issued from United States Patent Application No. 09/556,474 filed on April 21, 2000. A copy of the ’935 Patent is attached as Exhibit C.

15. United States Patent No. 8,933,945 (“the ’945 Patent”) is entitled “Dividing Work Among Multiple Graphics Pipelines Using a Super-Tiling Technique,” and issued January

13, 2015 to inventors Mark M. Leather and Eric Demers. The '945 Patent issued from United States Patent Application No. 10/459,797 filed on June 12, 2003. The '945 Patent claims priority to U.S. provisional application serial number 60/429,641 filed on November 27, 2002. A copy of the '945 Patent is attached as Exhibit D.

16. Advanced Silicon is the lawful assignee and owner of all right, title and interest in and to the '428 Patent, the '439 Patent, the '935 Patent, and the '945 Patent (collectively, the "Patents-in-Suit").

INFRINGEMENT OF THE PATENTS-IN-SUIT

17. Volkswagen has infringed and continues to infringe at least four of Advanced Silicon's patents that cover important aspects of automotive infotainment systems, head-end units, navigation systems, graphics processors, microprocessors, integrated circuits, and other computing and graphics-capable electronic devices, and automobiles containing such components.

18. Advanced Silicon incorporates by reference in its allegations herein certain claim charts comparing the independent claims of the Patents-in-Suit to certain automotive infotainment systems and the automobiles containing same.

19. Exhibits E through I include charts comparing the exemplary independent claims of the Patents-in-Suit to the exemplary products Audi TT Infotainment system and the Audi TT vehicles containing same and/or the Volkswagen Golf Infotainment system and the Volkswagen Golf vehicles containing same.

20. Advanced Silicon believes that the Volkswagen Golf Infotainment and Audi TT Infotainment systems and vehicles containing the same are exemplary of numerous other Volkswagen products because such other devices feature the same or substantially similar

infringing functionality. Accordingly, on information and belief, numerous other devices that are covered by the claims of the Patents-in-Suit have been imported, made, used, sold, and/or offered for sale by Volkswagen.

COUNT I
(Volkswagen's Infringement of the '428 Patent)

21. Paragraphs 1 through 20 are incorporated by reference as if fully restated herein.
22. Advanced Silicon is the assignee and lawful owner of all right, title and interest in and to the '428 Patent.
23. The '428 Patent is valid and enforceable.
24. Defendants have infringed, and are still infringing, one or more claims of the '428 Patent in at least this District by making, using, offering to sell, selling and/or importing products that infringe one or more claims of the '428 Patent literally or by the doctrine of equivalence. Exemplary products include Defendants' vehicles and electronic control units that are used within its vehicles that include a graphics processor and/or microprocessor, including, without limitation, the Volkswagen Golf Infotainment system, 2015 Volkswagen Golf vehicle, Audi TT Infotainment system, and 2016 Audi TT vehicle containing the same infringe the '428 Patent.
25. Advanced Silicon is asserting at least claims 1 – 6, 8 – 9, 10 – 14, 16 – 17, and 25 – 29 of the '428 Patent against the Defendants.
26. Exhibit E includes charts comparing the exemplary independent claims 1, 10, and 25 of the '428 Patent to the exemplary products Volkswagen Golf Infotainment system and the 2015 Volkswagen Golf vehicles containing the same. Exhibit F includes charts comparing the exemplary independent claims 1, 10, and 25 of the '428 Patent to the exemplary products Audi TT Infotainment system and the 2016 Audi TT vehicles containing the same. Accordingly, the

Volkswagen Golf Infotainment and Audi TT Infotainment systems and vehicles containing the same directly infringe at least independent claims 1, 10, and 25 of the '428 Patent.

27. Defendants, directly or through their agents, customers, and/or intermediaries, have made, used, sold, tested, imported, provided, supplied, distributed, and or/ offered for sale products, services, methods, or processes (for example automotive infotainment systems, head-end units, navigation systems, graphics processors, microprocessors, integrated circuits, and other computing and graphics-capable electronic devices, and automobiles containing such components) that directly infringe, literally and/or under the doctrine of equivalents, or which employ systems, components, and/or processes that make use of systems or processes that directly infringe, literally and/or under the doctrine of equivalents, at least exemplary claims 1 – 6, 8 – 9, 10 – 14, 16 – 17, and 25 – 29 of the '428 Patent.

28. Advanced Silicon is entitled to recover damages adequate to compensate for Defendants' infringement.

COUNT II
(Volkswagen's Infringement of the '439 Patent)

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

30. Advanced Silicon is the assignee and lawful owner of all right, title and interest in and to the '439 Patent.

31. The '439 Patent is valid and enforceable.

32. Defendants have infringed, and are still infringing, one or more claims of the '439 Patent in at least this District by making, using, offering to sell, selling and/or importing products that infringe one or more claims of the '439 Patent literally or by the doctrine of equivalence. Exemplary products include Defendants' vehicles and electronic control units that are used within its vehicles that include a graphics processor and/or microprocessor, including, without

limitation, Defendants' Audi TT Infotainment system, and 2016 Audi TT vehicle containing the same infringe the '439 Patent.

33. Advanced Silicon is asserting at least claims 1 – 11, and 14- 16 of the '439 Patent against the Defendants.

34. Exhibit G includes charts comparing the exemplary independent claim 1 of the '439 Patent to the exemplary products the Audi TT Infotainment system and the 2016 Audi TT vehicles containing the same. Accordingly, the Audi TT Infotainment system and vehicles containing the same directly infringe at least independent claim 1 of the '439 Patent.

35. Defendants, directly or through their agents, customers, and/or intermediaries, have made, used, sold, tested, imported, provided, supplied, distributed, and or/ offered for sale products, services, methods, or processes (for example automotive infotainment systems, head-end units, navigation systems, graphics processors, microprocessors, integrated circuits, and other computing and graphics-capable electronic devices, and automobiles containing such components) that directly infringe, literally and/or under the doctrine of equivalents, or which employ systems, components, and/or processes that make use of systems or processes that directly infringe, literally and/or under the doctrine of equivalents, at least exemplary claims 1 – 11, and 14 – 16 of the '439 Patent.

36. Advanced Silicon is entitled to recover damages adequate to compensate for Defendants' infringement.

COUNT III
(Volkswagen's Infringement of the '935 Patent)

37. Paragraphs 1 through 36 are incorporated by reference as if fully restated herein.

38. Advanced Silicon is the assignee and lawful owner of all right, title and interest in and to the '935 Patent.

39. The '935 Patent is valid and enforceable.

40. Defendants have infringed, and are still infringing, one or more claims of the '935 Patent in at least this District by making, using, offering to sell, selling and/or importing products that infringe one or more claims of the '935 Patent literally or by the doctrine of equivalence. Exemplary products include Defendants' vehicles and electronic control units that are used within its vehicles that include a graphics processor and/or microprocessor, including, without limitation, Defendants' Volkswagen Golf Infotainment system, 2015 Volkswagen Golf vehicle containing the same infringe the '935 Patent.

41. Advanced Silicon is asserting at least the exemplary claims 1, 2, and 4 – 8 of the '935 Patent against the Defendants.

42. Exhibit H includes a chart comparing the exemplary independent claim 1 of the '935 Patent to the exemplary products Volkswagen Golf Infotainment system and the 2015 Volkswagen Golf vehicles containing the same. Accordingly, the Volkswagen Golf Infotainment systems and vehicles containing the same directly infringe at least independent claim 1 of the '935 Patent.

43. Defendants, directly or through their agents, customers, and/or intermediaries, have made, used, sold, tested, imported, provided, supplied, distributed, and or/ offered for sale products, services, methods, or processes (for example automotive infotainment systems, head-end units, navigation systems, graphics processors, microprocessors, integrated circuits, and other computing and graphics-capable electronic devices, and automobiles containing such components) that directly infringe, literally and/or under the doctrine of equivalents, or which employ systems, components, and/or processes that make use of systems or processes that

directly infringe, literally and/or under the doctrine of equivalents, at least exemplary claims 1, 2, and 4 – 8 of the '935 Patent.

44. Advanced Silicon is entitled to recover damages adequate to compensate for Defendants' infringement.

COUNT IV
(Volkswagen's Infringement of the '945 Patent)

45. Paragraphs 1 through 44 are incorporated by reference as if fully restated herein.

46. Advanced Silicon is the assignee and lawful owner of all right, title and interest in and to the '945 Patent.

47. The '945 Patent is valid and enforceable.

48. Defendants have infringed, and are still infringing, one or more claims of the '945 Patent in at least this District by making, using, offering to sell, selling and/or importing products that infringe one or more claims of the '945 Patent literally or by the doctrine of equivalence. Exemplary products include Defendants' vehicles and electronic control units that are used within its vehicles that include a graphics processor and/or microprocessor, including, without limitation, Defendants' Audi TT Infotainment system, and 2016 Audi TT vehicle containing the same infringe the '945 Patent.

49. Advanced Silicon is asserting at least claims 1 – 11 and 21 of the '945 Patent against the Defendants.

50. Exhibit I includes a chart comparing exemplary independent claims 1 and 21 of the '945 Patent to the exemplary products Audi TT Infotainment system and the 2016 Audi TT vehicles containing the same. Accordingly, the Audi TT Infotainment systems and vehicles containing the same directly infringe at least independent claims 1 and 21 of the '945 Patent.

51. Defendants, directly or through their agents, customers, and/or intermediaries, have made, used, sold, tested, imported, provided, supplied, distributed, and or/ offered for sale products, services, methods, or processes (for example automotive infotainment systems, head-end units, navigation systems, graphics processors, microprocessors, integrated circuits, and other computing and graphics-capable electronic devices, and automobiles containing such components) that directly infringe, literally and/or under the doctrine of equivalents, or which employ systems, components, and/or processes that make use of systems or processes that directly infringe, literally and/or under the doctrine of equivalents, at least claims 1- 11, and 21 of the '945 Patent.

52. Advanced Silicon is entitled to recover damages adequate to compensate for Defendants' infringement.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests the following relief:

- a) A judgment that the '428 Patent, the '439 Patent, the '935 Patent, and the '945 Patent are valid and enforceable.
 - b) A judgment that Defendants have infringed one or more claims of the '428 Patent;
 - c) A judgment that Defendants have infringed one or more claims of the '439 Patent;
 - d) A judgment that Defendants have infringed one or more claims of the '935 Patent;
 - e) A judgment that Defendants have infringed one or more claims of the '945 Patent;
- and
- f) A judgment that awards Plaintiff all appropriate damages under 35 U.S.C. § 284 for Defendants' past infringement, and any continuing or future infringement of the Patents-in-Suit, up until the date such judgment is entered, including pre and post

judgment interest, costs, and disbursements as justified under 35 U.S.C. § 284 and, if necessary, to adequately compensate Plaintiff for Defendants' infringement, an accounting:

- i. that this case be declared exceptional within the meaning of 35 U.S.C. § 285 and that Plaintiff be awarded its reasonable attorneys' fees against Defendants that it incurs in prosecuting this action;
- ii. that Plaintiff be awarded costs, and expenses that it incurs in prosecuting this action; and
- iii. that Plaintiff be awarded such further relief at law or in equity as the Court deems just and proper.

DEMAND FOR JURY TRIAL

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

Dated: December 21, 2015

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