

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
RICHMOND DIVISION**

SAMSUNG ELECTRONICS CO., LTD., and
SAMSUNG ELECTRONICS AMERICA,
INC.,

Plaintiffs,

v.

NVIDIA CORPORATION, VELOCITY
MICRO, INC. D/B/A VELOCITY MICRO,
AND VELOCITY HOLDINGS, LLC

Defendants.

CIVIL ACTION NO. 3:14-CV-00757-REP

JURY TRIAL DEMANDED

FIRST AMENDED COMPLAINT

Plaintiffs Samsung Electronics Company, Ltd. (“SEC”) and Samsung Electronics America, Inc. (“SEA”) (collectively “Samsung”), by and through their undersigned attorneys, hereby file this First Amended Complaint against NVIDIA Corporation (“NVIDIA”), Velocity Micro, Inc. d/b/a Velocity Micro, and Velocity Holdings, LLC (collectively “Velocity”). All defendants will be referred to collectively as “Defendants.” Samsung states as follows:

THE PARTIES

1. Plaintiff SEC is a multi-national corporation organized under the laws of Korea with its principal place of business located at 416 Maetan-3dong, Yeongtong-gu, Suwon-City, Gyeonggi-do, Korea 443-742.
2. Plaintiff SEA is a corporation organized and existing under the laws of the state of New York with its principal place of business in Ridgefield Park, New Jersey and is a wholly-owned subsidiary of SEC.
3. Defendant NVIDIA is a Delaware corporation with its headquarters located at 2701 San Tomas Expressway, Santa Clara, California 95050. NVIDIA imports into the United

States, offers for sale, sells and/or uses in the United States graphics processing units (GPUs), system on a chip (SOC) units, graphics cards, and mobile computing devices such as tablet computers.

4. Defendant Velocity Micro, Inc., which does business in Virginia as Velocity Micro, is a corporation organized and existing under the laws of Delaware with its principal place of business located at 7510 Whitepine Road, Richmond, Virginia 23237. The State Corporation Commission of the Commonwealth of Virginia lists Velocity Micro, Inc.'s principal office as 9030 Stony Point Parkway, Suite 400, Richmond, Virginia, 23235. Velocity Micro, Inc. incorporates NVIDIA GPUs, SOCs, and/or graphics cards in products that it offers for sale, sells and/or uses in the United States.

5. Defendant Velocity Holdings, LLC is a limited liability corporation organized and existing under the laws of Virginia with its principal place of business located at 825 Grove Rd. Suite 3, Midlothian, Virginia 23114. The members of Velocity Holdings, LLC reside in the Eastern District of Virginia. Velocity Holdings, LLC is a manufacturer of computers that it offers for sale, sells and/or uses in the United States.

SAMSUNG

6. From its inception as a small business in Taegu, Korea, Samsung has grown to become one of the world's leading electronics companies, specializing in digital products, semiconductors, memory, and system integration. Today, Samsung's innovative consumer products are widely recognized and appreciated across the globe. Samsung designs, develops, manufacturers, and sells leading consumer electronics, including mobile phones, smartphones, tablet computers, and laptop computers.

7. Samsung has a long history of groundbreaking innovation across a wide range of technologies. During the 1970s and 1980s, Samsung's core technology businesses diversified and expanded globally. For example, Samsung began production of personal computers in 1983 and selected telecommunications and semiconductors as core business lines in 1988. **About Samsung.**¹ During this period, Samsung additionally challenged itself to restructure old businesses and enter new ones with the aim of becoming one of the world's top five electronics companies.

8. Samsung's commitment to innovation is demonstrated in part by the billions of dollars in research and development expenditures incurred over the years. From 2005 through 2010 alone, Samsung invested more than \$35 billion in research and development. More than a quarter of all Samsung employees—over 55,100 engineers overall—are engaged in cutting-edge research and development projects.

9. Samsung's commitment to innovation and investment in research and development is demonstrated by the fact that SEC has in its portfolio over 40,000 United States utility patents and over 4,000 design patents. Samsung is consistently ranked ahead of other technology companies in terms of the number of issued patents obtained in the United States, with over 4,000 U.S. utility patents issued each year in recent years.

10. Samsung is the assignee and owner of the patents at issue in this action, which relate to semiconductor technologies and computing devices: U.S. Patent No. 5,860,158 (the "**158 Patent**"), U.S. Patent No. 6,262,938 (the "**938 Patent**"), U.S. Patent No. 6,287,902 (the "**902 Patent**"), U.S. Patent No. 6,819,602 (the "**602 Patent**"), U.S. Patent No. 8,252,675 (the "**675 Patent**"), U.S. Patent No. 6,804,724 (the "**724 Patent**"), U.S. Patent No. 7,073,054 (the

¹ Bolded terms or references are defined in the text of this First Amended Complaint or in the section entitled "References."

“**054 Patent**”), and U.S. Patent No. 5,777,854 (the “**854 Patent**”) (collectively the “**Asserted Patents**”).

11. Samsung has expended significant resources and efforts to become a pioneer in the area of mobile devices including smartphones, tablets, and computers. Samsung’s research and development successes have propelled the company to its status as one of the world’s leading electronics companies.

12. As the Android operating system has grown, Samsung has grown with it to become the leading supplier of Android-based devices, including both Android-based smartphones and Android-based tablet computers.

13. Samsung has also continuously innovated in the design and manufacturing of semiconductor products. Samsung established its first semiconductor fabrication facility in 1984 and began solidifying its position as a leading company in semiconductor technology. Samsung’s semiconductor research and development has led numerous industry innovations. Just one year after its initial semiconductor facility was established, Samsung established the industry’s first 6 inch fabrication facility in 1985. In 1992, Samsung developed the world’s first 64Mb DRAM. In 1998, Samsung began shipping the world’s first 128 Mb flash memory, and in 2006 Samsung launched the world’s first 32GB solid state disk drive.

14. Because of Samsung’s commitment to semiconductor research and development, Samsung is now recognized as one of the world’s leading semiconductor manufacturers. Samsung’s semiconductor foundry labs include state-of-the-art facilities that support volume production of chips using 90 nm, 65 nm, 45/40 nm, and 32/28 nm processes.

15. Samsung's deep experience and comprehensive knowledge of high-volume manufacturing technology has led to numerous innovations in the design and manufacturing of graphics technologies and computing devices.

16. Without the ability to enforce its intellectual property rights, such as those relating to the semiconductor technologies and computing devices at issue in this action, Samsung would not be able to sustain the extensive commitment to research and development that has enabled it to lead the way into numerous improvements across a broad range of technologies.

NVIDIA

17. NVIDIA designs, develops, manufactures, imports, and sells GPUs, SOCs, and graphics cards for a wide range of products including mobile devices and desktop systems. NVIDIA creates and uses reference graphics card designs for incorporating NVIDIA GPUs and SOCs into graphics cards, in addition to designing, manufacturing, using and selling graphics cards.

18. NVIDIA additionally manufactures, or contracts others to manufacture, mobile processors for smartphones and tablets. NVIDIA sells tablet computers under the name "SHIELD Tablet." NVIDIA's tablet computers use the Android operating system and compete directly with Samsung tablet computers that also incorporate the Android operating system.

19. NVIDIA sells and offers to sell products and services throughout the United States, including in this Judicial District, through its website and through major electronics retailers in North America. NVIDIA introduces products and services that infringe the **Asserted Patents** knowing that they would be sold in this Judicial District and elsewhere in the United States.

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