

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

FUNDAMENTAL INNOVATION
SYSTEMS INTERNATIONAL LLC,

Plaintiff,

vs.

LENOVO (UNITED STATES), INC.;
LENOVO HOLDING COMPANY INC.;
LENOVO GROUP LTD., and MOTOROLA
MOBILITY LLC,

Defendants.

Civil Action No. 20-cv-551-CFC

JURY TRIAL DEMANDED

**AMENDED COMPLAINT FOR PATENT INFRINGEMENT
AND JURY DEMAND**

Plaintiff Fundamental Innovation Systems International LLC (“Plaintiff” or “Fundamental”), by and through its undersigned counsel, brings this action against Defendants Lenovo (United States), Inc., Lenovo Holding Company, Inc., Lenovo Group Ltd., and Motorola Mobility LLC (collectively “Defendant” or “Lenovo”) to prevent Lenovo’s continued infringement of Plaintiff’s patents without authorization and to recover damages resulting from such infringement.

PARTIES

1. Plaintiff is a Delaware limited liability company with a place of business located at 2990 Long Prairie Road, Suite B, Flower Mound, Texas 75022.

2. Plaintiff is the owner by assignment of all right, title, and interest in U.S. Patent 6,936,936 (the “’936 Patent”), Nos. 7,239,111 (the “’111 Patent”), 8,624,550 (the “’550 Patent”), 7,453,233 (the “’233 Patent”), 7,834,586 (the “’586 Patent”), 8,232,766 (the “’766 Patent”), and 7,986,127 (the “’127 Patent”) (collectively, the “Patents-in-Suit”).

3. On information and belief, Defendant Lenovo (United States), Inc. is a Delaware

corporation with a place of business at 8001 Development Dr., Morrisville, NC 27560. Lenovo (United States), Inc. may be served through its registered agent The Corporation Trust Company, Corporation Trust Center, 1209 Orange St., Wilmington, Delaware, 19801.

4. On information and belief, Defendant Lenovo Holding Company, Inc. is a Delaware corporation with a place of business at 1009 Think Place, Morrisville, North Carolina 27560. Lenovo Holding Company, Inc. may be served through its registered agent The Corporation Trust Company, Corporation Trust Center, 1209 Orange St., Wilmington, Delaware, 19801.

5. On information and belief, Defendant Lenovo Group Ltd. is a corporation organized and existing under the laws of the People's Republic of China with its principal place of business at No. 6 Chuang Ye Road, Haidian District, Shangdi Information, Industry Base, 100085 Beijing, China.

6. On information and belief, Defendant Motorola Mobility LLC is a corporation organized and existing under the law of Delaware and with a place of business at 222 W. Merchandise Mart Plaza, Suite 1800, Chicago, Illinois 60654. Motorola Mobility LLC may be served through its registered agent The Corporation Trust Company, Corporation Trust Center, 1209 Orange St., Wilmington, Delaware, 19801.

7. On information and belief, Lenovo directly and/or indirectly imports, develops, designs, manufactures, uses, distributes, markets, offers to sell and/or sells products and services in the United States, including in this district, and otherwise purposefully directs activities to the same.

JURISDICTION AND VENUE

8. This is an action for patent infringement arising under the patent laws of the United States of America, 35 U.S.C. § 1, *et seq.*, including 35 U.S.C. § 271. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

9. This Court has personal jurisdiction over Lenovo (United States), Inc., Lenovo

Holding Company, Inc., and Motorola Mobility LLC based at least on their incorporation in the State of Delaware.

10. This Court has personal jurisdiction over Lenovo Group Ltd. pursuant to due process and/or the Delaware Long Arm Statute, due at least to its substantial business in this State, including: (A) at least part of its own infringing activities alleged herein; and (B) regularly doing or soliciting business, engaging in other persistent conduct, and/or deriving substantial revenue from infringing goods offered for sale, sold, and imported and services provided to Delaware residents vicariously through and/or in concert with its subsidiaries, intermediaries, and/or agents.

11. Venue is proper in this judicial district under 28 U.S.C. § 1400(b) with respect to Lenovo (United States), Inc., Lenovo Holding Company, Inc. and Motorola Mobility LLC because they are incorporated in, and therefore reside in, the State of Delaware.

12. Venue is proper in this judicial district under 28 U.S.C. § 1391 with respect to Lenovo Group Ltd. because it is not a resident in the United States, and thus may be sued in any judicial district, including this one.

FACTUAL ALLEGATIONS

The Patents-in-Suit

13. The Patents-in-Suit relate to, among other things, novel techniques for using Universal Serial Bus (“USB”) in connection with mobile devices to both facilitate data communication and allow for the charging of certain classes of devices. This technology represented a fundamental break from previous techniques for mobile device charging and has provided for faster charging times, longer battery life, improved user experiences and a dramatic increase in performance and features.

14. The Patents-in-Suit resulted from a large scale research and development program at Research In Motion Limited (“RIM”), later reorganized as BlackBerry Limited (“BlackBerry”). At the time of inventions, RIM was a global leader and pioneer in the field of

wireless mobile communications. The company was founded in 1984 and revolutionized the mobile industry when it launched the BlackBerry® 850 in 1999. Fundamental is responsible for protecting and licensing seminal BlackBerry innovations in the field of USB charging.

15. The value of the inventions claimed by the Patents-in-Suit has been widely recognized. Over thirty companies have taken licenses to the Patents-in-Suit, including many of Lenovo's competitors.

Lenovo's Accused Products and Infringement

16. On information and belief, Lenovo makes, uses, sells, offers for sale and/or imports infringing laptops in the United States that include a charging adapter, including but not limited to the ThinkPad E595, ThinkPad E590, ThinkPad E495, ThinkPad E490, ThinkPad X395, ThinkPad L380, ThinkPad E15, ThinkPad E14, ThinkPad P53s, ThinkPad T590, ThinkPad T580, ThinkPad T570, ThinkPad T560, ThinkPad T495s, ThinkPad T495, ThinkPad T490s, ThinkPad T490, ThinkPad T480, ThinkPad T480s, ThinkPad T470, ThinkPad T470s, ThinkPad T470p, ThinkPad T460, ThinkPad T460s, ThinkPad T460p, ThinkPad A745, ThinkPad L13 Yoga, ThinkPad X1 Yoga, 300e Chromebook, 100e Chromebook, C340 Chromebook, S145-15, S340, S345-14, L340, IdeaPad S740, IdeaPad S540, IdeaPad 330S, IdeaPad 130, IdeaPad 5, IdeaPad 1, Yoga C630, Yoga C740, Yoga 730, Yoga C940, Yoga C930, Yoga Y540, Flex, and other models that include similar functionality ("Accused Lenovo Charging Adapters"). On information and belief, Lenovo makes, uses, sells, offers for sale and/or imports infringing USB charging adapters in the United States under the Motorola brand, including but not limited to the Motorola Turbopower Flip 18W Wall Charger, Motorola SPN5970A TurboPower Wall Charger, Motorola SA18C30151 Wall Charger and other models that include similar functionality to the extent not licensed to the Patents-in-Suit ("Accused Motorola Charging Adapters").

17. On information and belief, Lenovo makes, uses, sells, offers for sale and/or imports infringing tablets in the United States, including but not limited to the Tab M10, Smart Tab M10, Tab E10, Smart Tab P10, Tab M8, Tab E8, Tab M7, Tab E7, Tab 4, Yoga Smart Tab,

and other models that include similar functionality (“Accused Lenovo Mobile Devices”). On information and belief, Lenovo makes, uses, sells, offers for sale and/or imports infringing mobile phones in the United States under the Motorola brand, including but not limited to the edge +, g power, razr, g⁷ power, g stylus, and other models that include similar functionality to the extent not licensed to the Patents-in-Suit (“Accused Motorola Mobile Devices”).

18. Lenovo operates the following website in the United States in connection with its sale of the Accused Motorola Charging Adapters and Accused Motorola Mobile Devices: <https://www.motorola.com>.

19. The Accused Lenovo Charging Adapters and Accused Motorola Charging Adapters are referred to herein as “the Accused Charging Adapters.”

20. The Accused Lenovo Mobile Devices and Accused Motorola Mobile Devices are referred to herein as “the Accused Mobile Devices.”

21. The Accused Mobile Devices and Accused Charging Adapters are referred to herein as “the Accused Products.”

22. The Accused Mobile Devices include USB interfaces, USB communication paths and charging sub-systems that are operably connected to the USB interface. The charging sub-systems are configured to receive power and use the power to charge a battery. The mobile devices are able to detect an identification signal received via the USB interface, which may be an abnormal USB data condition and is different than USB enumeration, such as a voltage on the D+ line and on the D- line of the USB communication path. The identification signal enables the device to draw current unrestricted by a USB specification limit.

23. The Accused Charging Adapters include USB charging adapters that are designed to provide power to a mobile device. The charging adapters include a Vbus line and a USB communication path. The charging adapters are configured to generate an identification signal, such as a voltage on a D+ line and on a D- line, that indicates to the mobile device that it is receiving power from a source that is not a USB host or hub. The charging adapters are able to supply current to a mobile device without regard to at least one associated condition specified in

a USB specification. The charging adapters also receive power from a power socket and include a power converter that regulates the received power to generate a DC power output.

Lenovo's Knowledge of the Patents-in-Suit and Infringement

24. On December 14, 2015, Fundamental sent a letter to Lenovo, which indicated that Fundamental owned the Patents-in-Suit and suggested to Lenovo that it should take a license. On March 21, 2016, representatives from Fundamental met with representatives from Lenovo in Raleigh, North Carolina and presented claim charts demonstrating how Lenovo infringed the Patents-in-Suit. These charts were sent to Lenovo after the meeting.

25. On March 6, 2017, Fundamental met again with Lenovo in Raleigh, North Carolina and presented additional charts further demonstrating how Lenovo infringed the Patents-in-Suit. These charts were sent to Lenovo after the meeting. Subsequently, Fundamental and Lenovo had additional meetings and Fundamental sent numerous follow-up communications to Lenovo. Over the past four years, Lenovo has not provided Fundamental with any analysis to justify any belief that it did not infringe the Patents-in-Suit nor has it stopped infringing. Fundamental's provision of actual notice of infringement entitles Fundamental to past damages pursuant to 35 U.S.C. §287, at least as of the date that notice was provided.

26. After having received notice of the Patents-in-Suit, Lenovo has continued to make, use, sell, offer for sale, and import into the United States the Accused Products. Lenovo's making, using, selling, offering to sell and importing of the Accused Products into the United States constitute direct infringement under 35 U.S.C. § 271(a). On information and belief, Lenovo also directly infringes one or more method claims in the Patents-in-Suit by testing, repairing, and using the Accused Products in the United States.

27. After having received notice of the Patents-in-Suit, Lenovo continued to advertise and distribute the Accused Products, offer technical assistance, and publish user manuals, specifications, promotional literature or instructions to customers, partners, and/or end users, advising them to use the Accused Products in a manner that directly infringes the Patents-in-Suit. On information and belief, by such acts, Lenovo actively induced, and continues to actively

induce, direct infringement of the Patents-in-Suit, in violation of 35 U.S.C. § 271(b). For example, Lenovo's customers who purchase the Accused Products and operate the Accused Products in accordance with instructions provided by Lenovo, directly infringe one or more claims of the Patents-in-Suit. Lenovo provides such instructions through, for example, user guides and manuals, including but not limited to user guides and manuals located at <https://support.lenovo.com/us/en/> and <https://support.motorola.com/us/en/home>. The following User Guides exemplify how Lenovo instructs users how to operate the Accused Products in an infringing manner: ThinkPad E490/E495/E490s/R490/S3-490 User Guide at p. 6 (available at https://download.lenovo.com/pccbbs/mobiles_pdf/e490_e495_e490s_ug_v2_en.pdf?linkTrack=PSP:ProductInfo:UserGuide), ThinkPad E14/R14/E15/S3 Gen 2 User Guide at p. 4 (available at https://download.lenovo.com/pccbbs/mobiles_pdf/e14_r14_e15_s3gen2_ug_v2_en.pdf?linkTrack=PSP:ProductInfo:UserGuide), ThinkPad T490, T590, P43s, and P53s User Guide at p. 6 (available at https://download.lenovo.com/pccbbs/mobiles_pdf/t490_t590_p43s_p53s_ug_v2_en.pdf?linkTrack=PSP:ProductInfo:UserGuide), ThinkPad T460 User Guide at pp. 5-6 (available at https://download.lenovo.com/pccbbs/mobiles_pdf/t460_ug_en.pdf?linkTrack=PSP:ProductInfo:UserGuide), Lenovo IdeaPad S740-14IIL User Guide at p. 3 (available at https://download.lenovo.com/consumer/mobiles_pub/ideapad_s740_14iil_ug_en_201909.pdf?linkTrack=PSP:ProductInfo:UserGuide).

28. On information and belief, Lenovo has further actively induced infringement by remaining willfully blind to its customers' infringement despite believing there to be a high probability its customers, among others, infringe the Patents-in-Suit.

FIRST CLAIM FOR RELIEF

(Infringement of U.S. Patent No. 6,936,936)

29. Fundamental re-alleges and incorporates by reference the allegations of the preceding paragraphs of this Complaint as if fully set forth herein.

30. The '936 Patent, titled "Multifunctional Charger System and Method," was duly

and legally issued on August 30, 2005. A true and correct copy of the '936 Patent is attached as Exhibit A.

31. The '936 Patent names Daniel M. Fischer, Dan G. Radut, Michael F. Habicher, Quang A. Luong, and Jonathan T. Malton as co-inventors.

32. The '936 Patent has been in full force and effect since its issuance. Fundamental owns by assignment the entire right, title, and interest in and to the '936 Patent, including the exclusive right to seek damages for past, current and future infringement thereof.

33. Lenovo has been, and currently is, directly infringing the '936 Patent by making, using, selling, offering to sell, and/or importing into the United States the Accused Charging Adapters. Lenovo's products infringe at least claims 13 and/or 25 of the '936 Patent.

34. The Accused Lenovo Charging Adapters include a USB adapter for providing a source of power to a mobile device through a USB port.

3. Always On USB 3.1 connector Gen 1

With the Always On USB feature enabled, the Always On USB 3.1 connector Gen 1 can charge a USB-compatible device when the computer is on, off, in sleep mode, or in hibernation mode.

Notes:

- By default, **Always On USB** is enabled and **Charge in Battery Mode** is disabled in UEFI BIOS.
- When the computer is off or in hibernation mode, and **Charge in Battery Mode** is disabled in UEFI BIOS, ensure that you have connected the computer to ac power.

To enable the Always On USB feature, do the following:

1. Enter the UEFI BIOS menu. See "Enter the UEFI BIOS menu" on page 31.
2. Click **Config** → **USB** → **Always On USB** to enable the Always On USB feature.

ThinkPad E495 User Manual at p. 6.

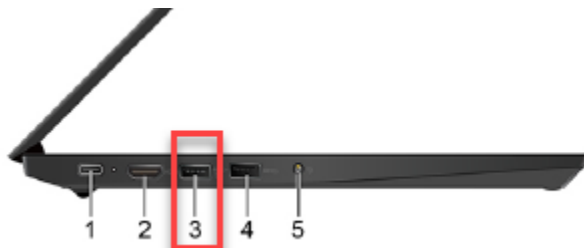
35. The Accused Lenovo Charging Adapters include a plug unit that can be plugged into an electrical socket to receive energy from the socket.



36. The Accused Lenovo Charging Adapters also include a power converter that regulates energy from the power socket and converts the 100-240v AC voltage to a 5v DC voltage that can be output from the charging adapter.



37. The Accused Lenovo Charging Adapters also include a USB connector that is electrically connected to the power converter and that is able to deliver power to a mobile device through a USB cable.



ThinkPad E495 User Manual at p. 5.

38. The USB connector is also electrically connected to an identification subsystem. The identification subsystem provides an identification signal that consists of voltages on the D+ and D- lines of the USB connector.

39. The identification subsystem includes a USB controller that is operable to provide a voltage level to one or more data lines in the USB connector. For example, when the laptop is powered off and connected to an electrical outlet, the USB controller provides voltages on the D+ and D- lines that indicate to a mobile device that the Accused Lenovo Charging Adapter is a

dedicated charging port.

40. The Accused Motorola Charging Adapters include a USB adapter for providing a source of power to a mobile device through a USB port. The Accused Motorola Charging Adapters include a plug unit that can be plugged into an electrical socket to receive energy from the socket.



41. The Accused Motorola Charging Adapters also include a power converter that regulates energy from the power socket and converts the 100-240v AC voltage to a 5v DC voltage that can be output from the charging adapter.



42. The Accused Motorola Charging Adapters also include a USB connector that is electrically connected to the power converter and that is able to deliver power to a mobile device through a USB cable.



43. The USB connector is also electrically connected to an identification subsystem. The identification subsystem provides an identification signal that consists of voltages on the D+ and D- lines of the USB connector. The identification subsystem comprises a hardwired connection of a voltage level to one or more data lines in the primary USB connector.

44. On information and belief, Lenovo has been, and currently is, inducing infringement of the '936 Patent, in violation of 35 U.S.C. § 271(b), by knowingly encouraging or aiding others to make, use, sell, or offer to sell the Accused Products in the United States, or to import the Accused Products into the United States, without license or authority from Fundamental, with knowledge of or willful blindness to the fact that Lenovo's actions will induce others, including but not limited to its customers, partners, and/or end users, to directly infringe the '936 patent. Lenovo induces others to infringe the '936 Patent by encouraging and facilitating others to perform actions that Lenovo knows to be acts of infringement of the '936 Patent with specific intent that those performing the acts infringe the '936 Patent.

45. As a result of Lenovo's infringement of the '936 Patent, Fundamental has been damaged. Fundamental is entitled to recover for damages sustained as a result of Lenovo's wrongful acts in an amount to be determined. Fundamental has complied with the requirements of 35 U.S.C. § 287(a) at least because Fundamental provided Lenovo with written notice of the

infringement as discussed above.

46. In addition, Lenovo's infringing acts have caused and are causing immediate and irreparable harm to Fundamental.

47. On information and belief, Lenovo has had actual knowledge of its infringement of the '936 Patent since no later than March 21, 2016. On information and belief, Lenovo's infringement of the '936 Patent has been and continues to be deliberate and willful, and, therefore, this is an exceptional case warranting an award of treble damages and attorney's fees to Fundamental pursuant to 35 U.S.C. §§ 284-285.

SECOND CLAIM FOR RELIEF

(Infringement of U.S. Patent No. 7,239,111)

48. Fundamental re-alleges and incorporates by reference the allegations of the preceding paragraphs of this Complaint as if fully set forth herein.

49. The '111 Patent, titled "Universal Serial Bus Adapter for a Mobile Device," was duly and legally issued on July 3, 2007. A true and correct copy of the '111 Patent is attached as Exhibit B.

50. The '111 Patent names Daniel M. Fischer, Dan G. Radut, Michael F. Habicher, Quang A. Luong, and Jonathan T. Malton as co-inventors.

51. The '111 Patent has been in full force and effect since its issuance. Fundamental owns by assignment the entire right, title, and interest in and to the '111 Patent, including the exclusive right to seek damages for past, current and future infringement thereof.

52. On information and belief, Lenovo has been, and currently is, directly infringing the '111 Patent by making, using, selling, offering to sell, and/or importing into the United States the Accused Charging Adapters. On information and belief, Lenovo's products infringe at least claim 1 of the '111 Patent.

53. The Accused Lenovo Charging Adapters are charging adapters that are able to provide power to a mobile device.

3. Always On USB 3.1 connector Gen 1

With the Always On USB feature enabled, the Always On USB 3.1 connector Gen 1 can charge a USB-compatible device when the computer is on, off, in sleep mode, or in hibernation mode.

Notes:

- By default, **Always On USB** is enabled and **Charge in Battery Mode** is disabled in UEFI BIOS.
- When the computer is off or in hibernation mode, and **Charge in Battery Mode** is disabled in UEFI BIOS, ensure that you have connected the computer to ac power.

To enable the Always On USB feature, do the following:

1. Enter the UEFI BIOS menu. See “Enter the UEFI BIOS menu” on page 31.
2. Click **Config** → **USB** → **Always On USB** to enable the Always On USB feature.

ThinkPad E495 User Manual at p. 6.

54. The Accused Lenovo Charging Adapters include a plug unit that can be plugged into an electrical socket to receive energy from the socket.



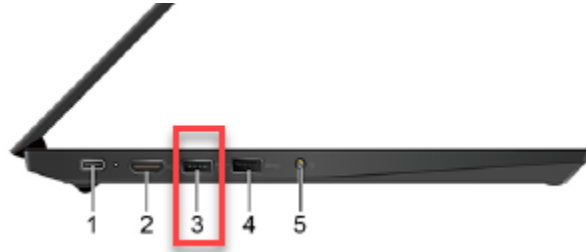
55. The Accused Lenovo Charging Adapters include a power converter that converts AC voltage from an electrical outlet to a DC voltage for output from the charging adapter.



56. The Accused Lenovo Charging Adapters include an identification subsystem that

is configured to generate an identification signal that consists of voltages on D+ and D- lines. These voltages indicate to a mobile device that the power socket is not a USB host or hub.

57. The Accused Lenovo Charging Adapters also include a USB connector, e.g., a type A connector, that is coupled to the power converter through a Vbus line and to the identification subsystem. The USB connector is configured to couple the power output and identification signal to a mobile device, through a USB cable.



ThinkPad E495 User Manual at p. 5.

58. The Accused Motorola Charging Adapters are charging adapters that are able to provide power to a mobile device. The charging adapters include a plug unit that can be plugged into an electrical socket to receive energy from the socket.



59. The Accused Motorola Charging Adapters include a power converter that converts AC voltage from an electrical outlet to a DC voltage for output from the charging

adapter.



60. The Accused Motorola Charging Adapters include an identification subsystem that is configured to generate an identification signal that consists of voltages on D+ and D- lines. These voltages indicate to a mobile device that the power socket is not a USB host or hub.

61. The Accused Motorola Charging Adapters also include a USB connector, e.g., a type A connector, that is coupled to the power converter through a Vbus line and to the identification subsystem. The USB connector is configured to couple the power output and identification signal to a mobile device, through a USB cable.



62. On information and belief, Lenovo has been, and currently is, inducing infringement of the '111 Patent, in violation of 35 U.S.C. § 271(b), by knowingly encouraging or aiding others to make, use, sell, or offer to sell the Accused Charging Adapters in the United States, or to import the Accused Charging Adapters into the United States, without license or

authority from Fundamental, with knowledge of or willful blindness to the fact that Lenovo's actions will induce others, including but not limited to its customers, partners, and/or end users, to directly infringe the '111 patent. Lenovo induces others to infringe the '111 Patent by encouraging and facilitating others to perform actions that Lenovo knows to be acts of infringement of the '111 Patent with specific intent that those performing the acts infringe the '111 Patent.

63. As a result of Lenovo's infringement of the '111 Patent, Fundamental has been damaged. Fundamental is entitled to recover for damages sustained as a result of Lenovo's wrongful acts in an amount to be determined. Fundamental has complied with the requirements of 35 U.S.C. § 287(a) at least because Fundamental provided Lenovo with written notice of the infringement as discussed above.

64. In addition, Lenovo's infringing acts have caused and are causing immediate and irreparable harm to Fundamental.

65. On information and belief, Lenovo has had actual knowledge of its infringement of the '111 Patent since no later than March 21, 2016. On information and belief, Lenovo's infringement of the '111 Patent has been and continues to be deliberate and willful, and, therefore, this is an exceptional case warranting an award of treble damages and attorney's fees to Fundamental pursuant to 35 U.S.C. §§ 284-285.

THIRD CLAIM FOR RELIEF

(Infringement of U.S. Patent No. 8,624,550)

66. Fundamental re-alleges and incorporates by reference the allegations of the preceding paragraphs of this Complaint as if fully set forth herein.

67. The '550 Patent, titled "Multifunctional Charger System and Method," was duly and legally issued on January 7, 2014. A true and correct copy of the '550 Patent is attached as Exhibit C.

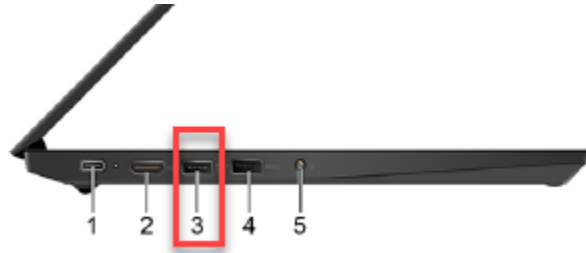
68. The '550 Patent names Daniel M. Fischer, Dan G. Radut, Michael F. Habicher,

Quang A. Luong, and Jonathan T. Malton as co-inventors.

69. The '550 Patent has been in full force and effect since its issuance. Fundamental owns by assignment the entire right, title, and interest in and to the '550 Patent, including the exclusive right to seek damages for past, current and future infringement thereof.

70. Lenovo has been, and currently is, directly infringing the '550 Patent by making, using, selling, offering to sell, and/or importing into the United States the Accused Charging Adapters. On information and belief, Lenovo's products infringe at least claim 1 of the '550 Patent.

71. The Accused Lenovo Charging Adapters are charging adapters that include a USB VBUS line and D+/D- lines that are a USB communication path.



ThinkPad E495 User Manual at p. 5.

3. Always On USB 3.1 connector Gen 1

With the Always On USB feature enabled, the Always On USB 3.1 connector Gen 1 can charge a USB-compatible device when the computer is on, off, in sleep mode, or in hibernation mode.

Notes:

- By default, **Always On USB** is enabled and **Charge in Battery Mode** is disabled in UEFI BIOS.
- When the computer is off or in hibernation mode, and **Charge in Battery Mode** is disabled in UEFI BIOS, ensure that you have connected the computer to ac power.

To enable the Always On USB feature, do the following:

1. Enter the UEFI BIOS menu. See "Enter the UEFI BIOS menu" on page 31.
2. Click **Config** → **USB** → **Always On USB** to enable the Always On USB feature.

ThinkPad E495 User Manual at p. 6.

72. The Accused Lenovo Charging Adapters are configured to supply current on the VBUS line of greater than 500 mA, which is without regard to the current limits in the USB

specification.

73. The Accused Motorola Charging Adapters are charging adapters that include a USB VBUS line and D+/D- lines that are a USB communication path.



74. The Accused Motorola Charging Adapters are configured to supply current on the VBUS line of greater than 500 mA, which is without regard to the current limits in the USB specification.

75. On information and belief, Lenovo has been, and currently is, inducing infringement of the '550 Patent, in violation of 35 U.S.C. § 271(b), by knowingly encouraging or aiding others to make, use, sell, or offer to sell the Accused Charging Adapters in the United States, or to import the Accused Charging Adapters into the United States, without license or authority from Fundamental, with knowledge of or willful blindness to the fact that Lenovo's actions will induce others, including but not limited to its customers, partners, and/or end users, to directly infringe the '550 patent. Lenovo induces others to infringe the '550 Patent by encouraging and facilitating others to perform actions that Lenovo knows to be acts of infringement of the '550 Patent with specific intent that those performing the acts infringe the '550 Patent.

76. As a result of Lenovo's infringement of the '550 Patent, Fundamental has been damaged. Fundamental is entitled to recover for damages sustained as a result of Lenovo's wrongful acts in an amount to be determined. Fundamental has complied with the requirements of 35 U.S.C. § 287(a) at least because Fundamental provided Lenovo with written notice of the

infringement as discussed above.

77. In addition, Lenovo's infringing acts have caused and are causing immediate and irreparable harm to Fundamental.

78. On information and belief, Lenovo has had actual knowledge of its infringement of the '550 Patent since no later than March 21, 2016. On information and belief, Lenovo's infringement of the '550 Patent has been and continues to be deliberate and willful, and, therefore, this is an exceptional case warranting an award of treble damages and attorney's fees to Fundamental pursuant to 35 U.S.C. §§ 284-285.

FOURTH CLAIM FOR RELIEF

(Infringement of U.S. Patent No. 7,453,233)

79. Fundamental re-alleges and incorporates by reference the allegations of the preceding paragraphs of this Complaint as if fully set forth herein.

80. The '233 Patent, titled "Adapter System and Method for Powering a Device," was duly and legally issued on November 18, 2008. A true and correct copy of the '233 Patent is attached as Exhibit D.

81. The '233 Patent names Daniel M. Fischer, Dan G. Radut, Michael F. Habicher, Quang A. Luong, and Jonathan T. Malton as co-inventors.

82. The '233 Patent has been in full force and effect since its issuance. Fundamental owns by assignment the entire right, title, and interest in and to the '233 Patent, including the exclusive right to seek damages for past, current and future infringement thereof.

83. Lenovo has been, and currently is, directly infringing the '233 Patent by making, using, selling, offering to sell, and/or importing into the United States the Accused Charging Adapters. On information and belief, Lenovo's products infringe at least claim 1 of the '233 Patent.

84. The Accused Lenovo Charging Adapters are charging adapters that are able to provide power to a mobile device.

3. Always On USB 3.1 connector Gen 1

With the Always On USB feature enabled, the Always On USB 3.1 connector Gen 1 can charge a USB-compatible device when the computer is on, off, in sleep mode, or in hibernation mode.

Notes:

- By default, **Always On USB** is enabled and **Charge in Battery Mode** is disabled in UEFI BIOS.
- When the computer is off or in hibernation mode, and **Charge in Battery Mode** is disabled in UEFI BIOS, ensure that you have connected the computer to ac power.

To enable the Always On USB feature, do the following:

1. Enter the UEFI BIOS menu. See “Enter the UEFI BIOS menu” on page 31.
2. Click **Config** → **USB** → **Always On USB** to enable the Always On USB feature.

ThinkPad E495 User Manual at p. 6.

85. The Accused Lenovo Charging Adapters include a plug unit that can be plugged into an electrical socket to receive energy from the socket.



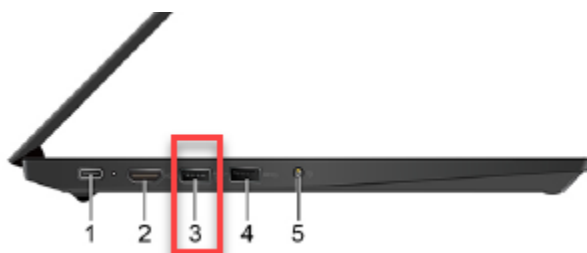
86. The products also include a power converter that converts the AC voltage from the electrical outlet to a DC voltage that can be output from the charging adapter.



87. The Accused Lenovo Charging Adapters include an identification subsystem that

is configured to generate an identification signal that consists of voltages on the D+ and D-. These voltages indicate to the mobile device that the adapter is configured to send substantial energy, for example, more than 500 mA, through the USB connector before completing device enumeration.

88. The Accused Lenovo Charging Adapters also include a USB connector, e.g., a type A connector, that is coupled to the power converter through a Vbus line and to the identification subsystem. The USB connector is configured to couple the power output and identification signal to a mobile device, through a USB cable.



ThinkPad E495 User Manual at p. 5.

89. The Accused Motorola Charging Adapters are charging adapters that are able to provide power to a mobile device. The Accused Motorola Charging Adapters include a plug unit that can be plugged into an electrical socket to receive energy from the socket.



90. The products also include a power converter that converts the AC voltage from the electrical outlet to a DC voltage that can be output from the charging adapter.



91. The Accused Motorola Charging Adapters include an identification subsystem that is configured to generate an identification signal that consists of voltages on the D+ and D-. These voltages indicate to the mobile device that the adapter is configured to send substantial energy, for example, more than 500 mA, through the USB connector before completing device enumeration.

92. The Accused Motorola Charging Adapters also include a USB connector, e.g., a type A connector, that is coupled to the power converter through a Vbus line and to the identification subsystem. The USB connector is configured to couple the power output and identification signal to a mobile device, through a USB cable.



93. On information and belief, Lenovo has been, and currently is, inducing

infringement of the '233 Patent, in violation of 35 U.S.C. § 271(b), by knowingly encouraging or aiding others to make, use, sell, or offer to sell the Accused Products in the United States, or to import the Accused Products into the United States, without license or authority from Fundamental, with knowledge of or willful blindness to the fact that Lenovo's actions will induce others, including but not limited to its customers, partners, and/or end users, to directly infringe the '233 patent. Lenovo induces others to infringe the '233 Patent by encouraging and facilitating others to perform actions that Lenovo knows to be acts of infringement of the '233 Patent with specific intent that those performing the acts infringe the '233 Patent.

94. As a result of Lenovo's infringement of the '233 Patent, Fundamental has been damaged. Fundamental is entitled to recover for damages sustained as a result of Lenovo's wrongful acts in an amount to be determined. Fundamental has complied with the requirements of 35 U.S.C. § 287(a) at least because Fundamental provided Lenovo with written notice of the infringement as discussed above.

95. In addition, Lenovo's infringing acts have caused and are causing immediate and irreparable harm to Fundamental.

96. On information and belief, Lenovo has had actual knowledge of its infringement of the '233 Patent since no later than March 21, 2016. On information and belief, Lenovo's infringement of the '233 Patent has been and continues to be deliberate and willful, and, therefore, this is an exceptional case warranting an award of treble damages and attorney's fees to Fundamental pursuant to 35 U.S.C. §§ 284-285.

FIFTH CLAIM FOR RELIEF

(Infringement of U.S. Patent No. 7,834,586)

97. Fundamental re-alleges and incorporates by reference the allegations of the preceding paragraphs of this Complaint as if fully set forth herein.

98. The '586 Patent, titled "Multifunctional Charger System and Method," was duly and legally issued on November 16, 2010. A true and correct copy of the '586 Patent is attached

as Exhibit E.

99. The '586 Patent names Daniel M. Fischer, Dan G. Radut, Michael F. Habicher, Quang A. Luong, and Jonathan T. Malton as co-inventors.

100. The '586 Patent has been in full force and effect since its issuance. Fundamental owns by assignment the entire right, title, and interest in and to the '586 Patent, including the exclusive right to seek damages for past, current and future infringement thereof.

101. Lenovo has been, and currently is, directly infringing the '586 Patent by making, using, selling, offering to sell, and/or importing into the United States the Accused Mobile Devices. On information and belief, Lenovo's products infringe at least claim 1 of the '586 Patent.

102. The Accused Mobile Devices are mobile devices that include a USB interface configured to allow reception of a USB cable through electrical connections in a connector on the device.



Lenovo Tab M10.

Charge up

Use a Motorola charger to charge up your phone.



Motorola g power User Guide.

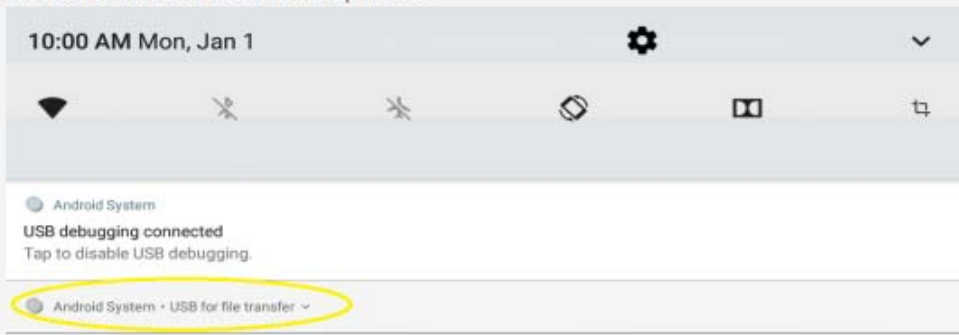
103. For example, the Accused Mobile Devices can be connected to a computer through a USB cable and communicate using the USB protocol:

Connecting your device to your computer

Connect your device and computer using a USB cable.

Slide down from the top of the screen. You will see "USB for file transfer" in the notifications bar.

Tap **USB for file transfer** for other options.



Lenovo Tab M10 User Guide at p. 14.

USB

To load music, pictures, videos, documents, or other files from your computer, connect your phone to your computer with a USB cable. To change the type of USB connection, swipe the status bar down and tap **Android System > USB Preferences > File transfer**.

Motorola g power User Guide.

104. The Accused Mobile Devices receive power on a Vbus line of the USB interface, which is operably connected to a charging subsystem that includes a power management chip and/or charging chip. The charging subsystem is also connected to a battery and is configured to charge the battery using power supplied to the mobile device on the Vbus.

105. The Accused Mobile Devices are capable of detecting an identification signal at a D+ and a D- data line of the USB interface, the identification signal being different than USB enumeration. Specifically, when connected to a charging adapter, the Accused Mobile Devices detect voltages on the D+ and D- lines that are different than USB enumeration.

106. On information and belief, Lenovo has been, and currently is, inducing infringement of the '586 Patent, in violation of 35 U.S.C. § 271(b), by knowingly encouraging or aiding others to make, use, sell, or offer to sell the Accused Mobile Devices in the United States, or to import the Accused Mobile Devices into the United States, without license or authority from Fundamental, with knowledge of or willful blindness to the fact that Lenovo's actions will induce others, including but not limited to its customers, partners, and/or end users, to directly infringe the '586 patent. Lenovo induces others to infringe the '586 Patent by encouraging and facilitating others to perform actions that Lenovo knows to be acts of infringement of the '586 Patent with specific intent that those performing the acts infringe the '586 Patent.

107. On information and belief, Lenovo has been, and currently is, contributorily infringing the '586 Patent, in violation of 35 U.S.C. § 271(c), by selling or offering for sale, in this judicial district and throughout the United States, components that embody a material part of the inventions described in the '586 Patent, are known by Lenovo to be especially made or especially adapted for use in infringement of the '586 Patent, and are not staple articles of commerce or commodities suitable for substantial, non-infringing use, including at least the Accused Mobile Devices. Lenovo's actions contribute to the direct infringement of the Patents-in-Suit by others, including customers of the Accused Mobile Devices, in violation of 35 U.S.C. § 271(c).

108. As a result of Lenovo's infringement of the '586 Patent, Fundamental has been damaged. Fundamental is entitled to recover for damages sustained as a result of Lenovo's wrongful acts in an amount to be determined. Fundamental has complied with the requirements of 35 U.S.C. § 287(a) at least because Fundamental provided Lenovo with written notice of the infringement as discussed above.

109. In addition, Lenovo's infringing acts have caused and are causing immediate and irreparable harm to Fundamental.

110. On information and belief, Lenovo has had actual knowledge of its infringement of the '586 Patent since no later than March 21, 2016. On information and belief, Lenovo's infringement of the '586 Patent has been and continues to be deliberate and willful, and, therefore, this is an exceptional case warranting an award of treble damages and attorney's fees to Fundamental pursuant to 35 U.S.C. §§ 284-285.

SIXTH CLAIM FOR RELIEF

(Infringement of U.S. Patent No. 8,232,766)

111. Fundamental re-alleges and incorporates by reference the allegations of the preceding paragraphs of this Complaint as if fully set forth herein.

112. The '766 Patent, titled "Multifunctional Charger System and Method," was duly and legally issued on July 31, 2012. A true and correct copy of the '766 Patent is attached as Exhibit F.

113. The '766 Patent names Daniel M. Fischer, Dan G. Radut, Michael F. Habicher, Quang A. Luong, and Jonathan T. Malton as co-inventors.

114. The '766 Patent has been in full force and effect since its issuance. Fundamental owns by assignment the entire right, title, and interest in and to the '766 Patent, including the exclusive right to seek damages for past, current and future infringement thereof.

115. Lenovo has been, and currently is, directly infringing the '766 Patent by making, using, selling, offering to sell, and/or importing into the United States the Accused Mobile Devices. On information and belief, Lenovo's products infringe at least claim 1 of the '766 Patent.

116. The Accused Mobile Devices are mobile devices that include D+ and D- lines that are a USB communication path.



Lenovo Tab M10.

Charge up

Use a Motorola charger to charge up your phone.



Motorola g power User Guide.

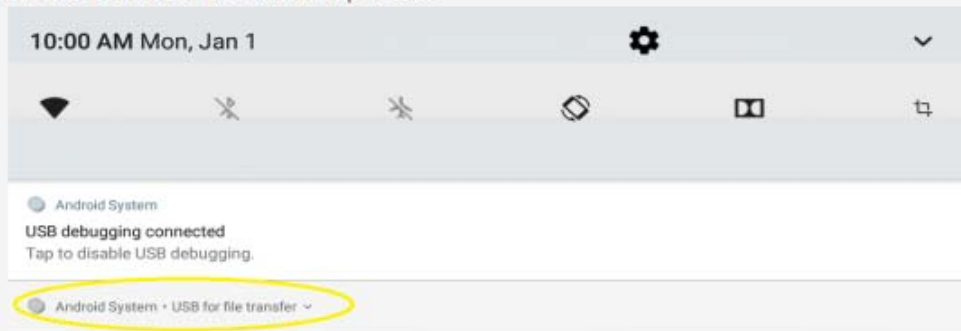
117. The D+ and D- lines in the Accused Mobile Devices can be connected to a USB 2.0 port on a PC to communicate data with the PC.

Connecting your device to your computer

Connect your device and computer using a USB cable.

Slide down from the top of the screen. You will see "USB for file transfer" in the notifications bar.

Tap **USB for file transfer** for other options.



Lenovo Tab M10 User Guide at p. 14.

USB

To load music, pictures, videos, documents, or other files from your computer, connect your phone to your computer with a USB cable. To change the type of USB connection, swipe the status bar down and tap **Android System > USB Preferences > File transfer**.

Motorola g power User Guide.

118. The Accused Mobile Devices also have a charging subsystem, which includes a power management chip and/or charging chip, that is enabled to draw current unrestricted by at least one predetermined USB Specification limit. The enablement is in response to the detection of voltages on the D+ and D- lines.

119. The voltages are an abnormal USB data condition because normal USB data conditions involve differential signaling, and not signals where both the D+ and D- are driven high.

120. On information and belief, Lenovo has been, and currently is, inducing infringement of the '766 Patent, in violation of 35 U.S.C. § 271(b), by knowingly encouraging or aiding others to make, use, sell, or offer to sell the Accused Mobile Devices in the United States, or to import the Accused Mobile Devices into the United States, without license or authority from Fundamental, with knowledge of or willful blindness to the fact that Lenovo's actions will induce others, including but not limited to its customers, partners, and/or end users, to directly infringe the '766 patent. Lenovo induces others to infringe the '766 Patent by encouraging and

facilitating others to perform actions that Lenovo knows to be acts of infringement of the '766 Patent with specific intent that those performing the acts infringe the '766 Patent.

121. On information and belief, Lenovo has been, and currently is, contributorily infringing the '766 Patent, in violation of 35 U.S.C. § 271(c), by selling or offering for sale, in this judicial district and throughout the United States, components that embody a material part of the inventions described in the '766 Patent, are known by Lenovo to be especially made or especially adapted for use in infringement of the '766 Patent, and are not staple articles of commerce or commodities suitable for substantial, non-infringing use, including at least the Accused Mobile Devices. Lenovo's actions contribute to the direct infringement of the Patents-in-Suit by others, including customers of the Accused Mobile Devices, in violation of 35 U.S.C. § 271(c).

122. As a result of Lenovo's infringement of the '766 Patent, Fundamental has been damaged. Fundamental is entitled to recover for damages sustained as a result of Lenovo's wrongful acts in an amount to be determined. Fundamental has complied with the requirements of 35 U.S.C. § 287(a) at least because Fundamental provided Lenovo with written notice of the infringement as discussed above.

123. In addition, Lenovo's infringing acts have caused and are causing immediate and irreparable harm to Fundamental.

124. On information and belief, Lenovo has had actual knowledge of its infringement of the '766 Patent since no later than March 21, 2016. On information and belief, Lenovo's infringement of the '766 Patent has been and continues to be deliberate and willful, and, therefore, this is an exceptional case warranting an award of treble damages and attorney's fees to Fundamental pursuant to 35 U.S.C. §§ 284-285.

SEVENTH CLAIM FOR RELIEF

(Infringement of U.S. Patent No. 7,986,127)

125. Fundamental re-alleges and incorporates by reference the allegations of the

preceding paragraphs of this Complaint as if fully set forth herein.

126. The '127 Patent, titled "Communication Device With A USB Port For Charging," was duly and legally issued on July 26, 2011. A true and correct copy of the '127 Patent is attached as Exhibit G.

127. The '127 Patent names Daniel M. Fischer, Dan G. Radut, Michael F. Habicher, Quang A. Luong, and Jonathan T. Malton as co-inventors.

128. The '127 Patent has been in full force and effect since its issuance. Fundamental owns by assignment the entire right, title, and interest in and to the '127 Patent, including the exclusive right to seek damages for past, current and future infringement thereof.

129. Lenovo has been, and currently is, directly infringing the '127 Patent by making, using, selling, offering to sell, and/or importing into the United States the Accused Mobile Devices. On information and belief, Lenovo's products infringe at least claim 1 of the '127 Patent.

130. The Accused Mobile Devices are mobile communication devices that include a charging subsystem. The Accused Mobile Devices include a USB port.



Lenovo Tab M10.

Charge up

Use a Motorola charger to charge up your phone.



Motorola g power User Guide.

131. The USB port in the identified products is capable of detecting an identification signal and in response drawing current without waiting for enumeration. Specifically, when connected to a charging adapter, the Accused Mobile Devices detect voltages on the D+ and D- lines that are different than USB enumeration and in response are able to draw current in excess of 500 mA.

132. On information and belief, Lenovo has been, and currently is, inducing infringement of the '127 Patent, in violation of 35 U.S.C. § 271(b), by knowingly encouraging or aiding others to make, use, sell, or offer to sell the Accused Mobile Devices in the United States, or to import the Accused Mobile Devices into the United States, without license or authority from Fundamental, with knowledge of or willful blindness to the fact that Lenovo's actions will induce others, including but not limited to its customers, partners, and/or end users, to directly infringe the '127 patent. Lenovo induces others to infringe the '127 Patent by encouraging and facilitating others to perform actions that Lenovo knows to be acts of infringement of the '127 Patent with specific intent that those performing the acts infringe the '127 Patent.

133. On information and belief, Lenovo has been, and currently is, contributorily infringing the '127 Patent, in violation of 35 U.S.C. § 271(c), by selling or offering for sale, in this judicial district and throughout the United States, components that embody a material part of the inventions described in the '127 Patent, are known by Lenovo to be especially made or especially adapted for use in infringement of the '127 Patent, and are not staple articles of commerce or commodities suitable for substantial, non-infringing use, including at least the

Accused Mobile Devices. Lenovo's actions contribute to the direct infringement of the Patents-in-Suit by others, including customers of the Accused Mobile Devices, in violation of 35 U.S.C. § 271(c).

134. As a result of Lenovo's infringement of the '127 Patent, Fundamental has been damaged. Fundamental is entitled to recover for damages sustained as a result of Lenovo's wrongful acts in an amount to be determined. Fundamental has complied with the requirements of 35 U.S.C. § 287(a) at least because Fundamental provided Lenovo with written notice of the infringement as discussed above.

135. In addition, Lenovo's infringing acts have caused and are causing immediate and irreparable harm to Fundamental.

136. On information and belief, Lenovo has had actual knowledge of its infringement of the '127 Patent since no later than March 21, 2016. On information and belief, Lenovo's infringement of the '127 Patent has been and continues to be deliberate and willful, and, therefore, this is an exceptional case warranting an award of treble damages and attorney's fees to Fundamental pursuant to 35 U.S.C. §§ 284-285.

PRAAYER FOR RELIEF

WHEREFORE, Fundamental prays for judgment against Lenovo as follows:

- A. That Lenovo has infringed, and continues to infringe, each of the Patents-in-Suit;
- B. That Lenovo pay Fundamental damages adequate to compensate Fundamental for Lenovo's infringement of the Patents-in-Suit, together with interest and costs under 35 U.S.C. § 284;
- C. That Lenovo be ordered to pay pre-judgment and post-judgment interest on the damages assessed;
- D. That Lenovo be ordered to pay supplemental damages to Fundamental, including interest, with an accounting, as needed;
- E. That Lenovo's infringement is willful and that the damages awarded to

Fundamental should be trebled;

F. That this is an exceptional case under 35 U.S.C. § 285 and that Lenovo pay Fundamental's attorney's fees and costs in this action;

G. That Lenovo be enjoined from directly and indirectly infringing the Patents-in-Suit; and

H. That Fundamental be awarded such other and further relief, including other monetary and equitable relief, as this Court deems just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Federal Rule of Civil Procedure 38(b), Fundamental hereby demands a trial by jury on all issues triable by jury.

Dated: June 2, 2020

Respectfully submitted,

Of Counsel:

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