

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

KT IMAGING USA, LLC,

Plaintiff

-against-

MICROSOFT CORPORATION,

Defendant

Civil Action No.: 6:21-cv-01000

Jury Trial Demanded

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff KT Imaging USA, LLC (“KTI” or “Plaintiff”), by way of this Complaint against Defendant Microsoft Corporation (“Microsoft” or “Defendant”), alleges as follows:

PARTIES

1. Plaintiff KT Imaging USA, LLC is a limited liability company organized and existing under the laws of the State of Texas, having its principal place of business at 106 E 6th Street, Suite 900, Austin, TX 78701.
2. Defendant Microsoft is a corporation organized and existing under the laws of the State of Washington. Microsoft maintains a regular and established place of business in this Judicial District at 10900 Stonelake Boulevard, Suite 225, Austin, Texas 78759, and Concord Park II 401 East Sonterra Boulevard, Suite 300, San Antonio, Texas 78258. Microsoft is registered to do business in the State of Texas and has been since at least 1986. Microsoft may be served with process through its registered agent, the Corporation Service Company dba CSC – Lawyers Incorporating Service Company, at 211 East 7th Street, Suite 620, Austin, Texas 78701.
3. On information and belief, Defendant Microsoft, either itself and/or through the activities

of its subsidiaries, makes, uses, sells, offers for sale, and/or imports throughout the United States, including within this District, products that infringe the Patents-in-Suit, defined below.

JURISDICTION AND VENUE

4. This is an action under the patent laws of the United States, 35 U.S.C. §§ 1, *et seq.*, for infringement by Microsoft of claims of U.S. Patent No. 6,590,269; U.S. Patent No. 6,876,544; U.S. Patent No. 7,196,322; U.S. Patent No. 8,004,602; and U.S. Patent No. 8,314,481 (collectively “the Patents-in-Suit”).

5. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

6. Microsoft is subject to personal jurisdiction of this Court because, *inter alia*, on information and belief, (i) Microsoft maintains a regular and established place of business in this Judicial District located at 10900 Stonelake Boulevard, Suite 225, Austin, Texas 78759, and Concord Park II 401 East Sonterra Boulevard, Suite 300, San Antonio, Texas 78258; (ii) Microsoft sells products and services to customers in this Judicial District; (iii) the patent infringement claims arise directly from Microsoft’s continuous and systematic activity in this Judicial District; and (iv) actively employs and seeks the services of Texas residents in this Judicial District.

7. Venue is proper as to Microsoft in this Judicial District under 28 U.S.C. § 1400(b) because, *inter alia*, on information and belief, Microsoft has a regular and established place of business in this Judicial District located at 10900 Stonelake Boulevard, Suite 225, Austin, Texas 78759, and Concord Park II 401 East Sonterra Boulevard, Suite 300, San Antonio, Texas 78258, and has committed acts of patent infringement in this Judicial District and/or has contributed to or induced acts of patent infringement by others in this Judicial District.

BACKGROUND

8. On July 8, 2003, the United States Patent and Trademark Office duly and lawfully issued U.S. Patent No. 6,590,269 (“the ’269 Patent”), entitled “Package Structure for a Photosensitive Chip.”

9. On April 5, 2005, the United States Patent and Trademark Office duly and lawfully issued U.S. Patent No. 6,876,544 (“the ’544 Patent”), entitled “Image Sensor Module and Method for Manufacturing the Same.”

10. On March 27, 2007, the United States Patent and Trademark Office duly and lawfully issued U.S. Patent No. 7,196,322 (“the ’322 Patent”), entitled “Image Sensor Package.”

11. On August 23, 2011, the United States Patent and Trademark Office duly and lawfully issued U.S. Patent No. 8,004,602 (“the ’602 Patent”), entitled “Image Sensor Structure And Integrated Lens Module Thereof.”

12. On November 20, 2012, the United States Patent and Trademark Office duly and lawfully issued U.S. Patent No. 8,314,481 (“the ’481 Patent”), entitled “Substrate Structure for an Image Sensor Package and Method for Manufacturing the Same.”

13. KTI is the assignee and owner of the right, title, and interest in and to the Patents-in-Suit, including the right to assert all causes of action arising under said patents and the right to any remedies for infringement of them.

14. By letter dated February 6, 2020, KTI notified Microsoft of the existence of the Patents-in-Suit, notified Microsoft that it infringes the ’269 Patent, the ’544 Patent, the ’322 Patent, and the ’481 Patent, identified exemplary infringed claims and infringing products, and invited Microsoft to hold a licensing discussion with KTI.

15. By email dated September 21, 2020, KTI provided sample claim charts to Microsoft for the ’269 Patent, the ’544 Patent, the ’322 Patent, and the ’481 Patent.

16. Microsoft has infringed and continues to infringe the Patents-in-Suit by making, using, selling, or offering for sale in the United States, or importing into the United States mobile devices, such as smartphones, tablets, and laptops with front and/or rear image sensors. Attachment A to this Complaint provides a non-exhaustive listing of Accused Products. Attachment B to this Complaint provides a listing of Exhibits comprising exemplary teardown images for certain Accused Products.

COUNT I: INFRINGEMENT OF THE '544 PATENT BY MICROSOFT

17. Plaintiff incorporates the preceding paragraphs as if fully set forth herein.

18. On information and belief, Microsoft has infringed the '544 Patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, offering to sell, selling in the United States or importing into the United States the Accused Products and all other products with substantially similar imaging sensors.

19. For example, on information and belief, Microsoft has infringed and continues to infringe at least claim 1 of the '544 Patent by including an image sensor module to be mounted to a printed circuit board in the Microsoft Surface Go 2 product. *See* Exs. 1 and 2 (Microsoft Surface Go 2 main front facing image sensor). The image sensor module in the Accused Products comprises a substrate having an upper surface formed with a plurality of first connection points and a lower surface formed with a plurality of second connection points, which is electrically connected to the printed circuit board. *See* Exs. 1, 3, and 4 (Microsoft Surface Go 2 main front facing image sensor). The image sensor module further comprises a photosensitive chip mounted to the upper surface of the substrate. *See* Ex. 3 (cross-sectional image of the Microsoft Surface Go 2 main front facing image sensor). The image sensor module further comprises a plurality of wires for electrically connecting the photosensitive chip to the first connection points on the upper surface of the substrate. *See* Ex. 4 (Microsoft Surface Go 2 main front facing image

sensor). The image sensor module further comprises a frame layer mounted to the upper surface of the substrate to surround the photosensitive chip, an inner edge of the frame layer being formed with an internal thread from top to bottom, and a transparent layer being fixed by the frame layer such that the photosensitive chip may receive optical signals passing through the transparent layer. *See Exs. 2 and 3* (cross-sectional image of the Microsoft Surface Go 2 main front facing image sensor). The image sensor module further comprises a lens barrel formed with a chamber at a center thereof and an external thread at an outer edge thereof, the external thread being screwed to the internal thread of the frame layer, wherein the lens barrel has a through hole and an aspheric lens from top to bottom. *See Ex. 2* (cross-sectional image of the Microsoft Surface Go 2 main front facing image sensor).

20. On information and belief, Microsoft has induced infringement of the '544 Patent pursuant to 35 U.S.C. § 271(b), by actively and knowingly inducing, directing, causing, and encouraging others, including, but not limited to, its partners, resellers, distributors, customers, and end users, to make, use, sell, and/or offer to sell in the United States, and/or import into the United States, the Accused Products by, among other things, providing the accused products and incorporated image sensor technology, specifications, instructions, manuals, advertisements, marketing materials, and technical assistance relating to the installation, set up, use, operation, and maintenance of said products.

21. On information and belief, Microsoft has committed the foregoing infringing activities without a license.

22. On information and belief, Microsoft knew the '544 Patent existed and knew of exemplary infringing Microsoft products while committing the foregoing infringing acts thereby willfully, wantonly and deliberately infringing the '544 Patent.

COUNT II: INFRINGEMENT OF THE '322 PATENT BY MICROSOFT

23. Plaintiff incorporates the preceding paragraphs as if fully set forth herein.

24. On information and belief, Microsoft has infringed the '322 Patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, offering to sell, selling in the United States or importing into the United States the Accused Products and all other products with substantially similar imaging sensors.

25. For example, on information and belief, Microsoft has infringed and continues to infringe at least claim 1 of the '322 Patent by including an image sensor module in the Microsoft Surface Go 2 product. *See Ex. 2* (cross-sectional image of the Microsoft Surface Go 2 main front facing image sensor). The image sensor module structure in the Accused Products comprises a substrate having an upper surface, and a lower surface on which second electrodes are formed. *See Ex. 3* (cross-sectional image of the Microsoft Surface Go 2 main front facing image sensor). The image sensor module structure in the Accused Products further comprises a frame layer arranged on the upper surface of the substrate, a cavity formed between the frame layer and substrate, and a plurality of first electrodes are formed on the frame layer. *See Ex. 4* (Microsoft Surface Go 2 main front facing image sensor). The image sensor module structure in the Accused Products further comprises a photosensitive chip mounted on the upper surface of the substrate and located within the cavity, and electrically connected to the first electrodes of the frame layer. *See Ex. 4* (Microsoft Surface Go 2 main front facing image sensor). The image sensor module structure in the Accused Products further comprises a lens holder having an upper end face, a lower end face, and an opening penetrating through the lens holder from the upper end face to the lower end face, the upper end of the opening formed with an internal thread and the lower end of the opening formed with a breach, so that the internal diameter of the upper end of the opening is smaller than the lower end of the opening, the lens holder adhered on the upper

surface of the substrate by glue, wherein, the frame layer is located within the breach of the lens holder. *See* Exs. 2 and 4 (Microsoft Surface Go 2 main front facing image sensor). The image sensor module structure of the Accused Products further comprises a lens barrel having an upper end face, a lower end face, and an external thread screwed to the internal thread of the lens holder. *See* Ex. 2 (cross-sectional image of the Microsoft Surface Go 2 main front facing image sensor).

26. On information and belief, Microsoft has induced infringement of the '322 Patent pursuant to 35 U.S.C. § 271(b), by actively and knowingly inducing, directing, causing, and encouraging others, including, but not limited to, its partners, resellers, distributors, customers, and end users, to make, use, sell, and/or offer to sell in the United States, and/or import into the United States, the Accused Products by, among other things, providing the accused products and incorporated image sensor technology, specifications, instructions, manuals, advertisements, marketing materials, and technical assistance relating to the installation, set up, use, operation, and maintenance of said products.

27. On information and belief, Microsoft has committed the foregoing infringing activities without a license.

28. On information and belief, Microsoft knew the '322 Patent existed and knew of exemplary infringing Microsoft products while committing the foregoing infringing acts while committing the foregoing infringing acts, thereby willfully, wantonly and deliberately infringing the '322 Patent.

COUNT III: INFRINGEMENT OF THE '602 PATENT BY MICROSOFT

29. Plaintiff incorporates the preceding paragraphs as if fully set forth herein.

30. On information and belief, Microsoft has infringed the '602 Patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, offering to sell, selling

in the United States, or importing into the United States the Accused Products and all other products with substantially similar imaging sensors.

31. For example, on information and belief, Microsoft has infringed and continues to infringe at least claim 1 of the '602 Patent by including an image sensor structure with an integrated lens module in the Microsoft LifeCam HD-3000 product. *See* Ex. 5 (cross-sectional image of the Microsoft LifeCam HD-3000 image sensor) The image sensor structure in the Accused Products comprises a chip having a plurality of light-sensing elements arranged on a light sensing area of a first surface of the chip, a plurality of first conducting pads arranged around the light-sensing area and electrically connected to the light-sensing elements, and at least one conducting channel passing through the chip and electrically connected to the first conducting pads at one end as well as extending along with a second surface of the chip. *See* Exs. 5-7 (Microsoft LifeCam HD-3000 image sensor). The image sensor structure in the Accused Products comprises a lens module comprising a holder having a through hole and a contact surface on a bottom of the holder, wherein the contact surface is combined with the first surface, and at least one lens completely embedded inside the through hole and integrated with the holder. *See* Exs. 5 and 6 (Microsoft LifeCam HD-3000 image sensor).

32. On information and belief, Microsoft has induced infringement of the '602 Patent pursuant to 35 U.S.C. § 271(b), by actively and knowingly inducing, directing, causing, and encouraging others, including, but not limited to, its partners, resellers, distributors, customers, and end users, to make, use, sell, and/or offer to sell in the United States, and/or import into the United States, the Accused Products by, among other things, providing the accused products and incorporated image sensor technology, specifications, instructions, manuals, advertisements, marketing materials, and technical assistance relating to the installation, set up, use, operation,

and maintenance of said products.

33. On information and belief, Microsoft has committed the foregoing infringing activities without a license.

COUNT IV: INFRINGEMENT OF THE '269 PATENT BY MICROSOFT

34. Plaintiff incorporates the preceding paragraphs as if fully set forth herein.

35. On information and belief, Microsoft has infringed the '269 Patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, offering to sell, selling in the United States, or importing into the United States the Accused Products and all other products with substantially similar imaging sensors.

36. For example, on information and belief, Microsoft has infringed and continues to infringe at least claim 2 of the '269 Patent by including a package structure for a photosensitive chip in the Microsoft Surface Pro 7 product. *See* Ex. 8 (cross-sectional image of the Microsoft Surface Pro 7 main front facing package structure). The package structure in the Accused Products comprises a substrate having an upper surface and a lower surface opposite to the upper surface. *See* Ex. 8 (cross-sectional image of the Microsoft Surface Pro 7 main front facing package structure). The package structure in the Accused Products comprises a frame layer having a first surface and a second surface opposite to the first surface, the frame layer being formed on the substrate with the first surface contacting the upper surface of the substrate, so as to form a cavity together with the substrate. *See* Exs. 8 and 9 (Microsoft Surface Pro 7 main front facing package structure). The package structure in the Accused Products comprises a photosensitive chip placed on the upper surface of the substrate and within the cavity. *See* Ex. 8 (cross-sectional image of the Microsoft Surface Pro 7 main front facing package structure). The package structure in the Accused Products comprises a plurality of wires for electrically connecting the substrate to the photosensitive chip. *See* Ex. 10 (Microsoft Surface Pro 7 main

front facing package structure). The package structure in the Accused Products comprises a transparent layer arranged on the frame layer to cover the photosensitive chip, wherein the second surface of the frame layer is formed with a depression in which the transparent layer is placed to cover the photosensitive chip. *See* Ex. 8 (cross-sectional image of the Microsoft Surface Pro 7 main front facing package structure). The package structure in the Accused Products comprises a plurality of projections each having a suitable height and formed within the depression of the frame layer. *See* Ex. 9 (Microsoft Surface Pro 7 main front facing package structure).

37. On information and belief, Microsoft has induced infringement of the '269 Patent pursuant to 35 U.S.C. § 271(b), by actively and knowingly inducing, directing, causing, and encouraging others, including, but not limited to, its partners, resellers, distributors, customers, and end users, to make, use, sell, and/or offer to sell in the United States, and/or import into the United States, the Accused Products by, among other things, providing the accused products and incorporated image sensor technology, specifications, instructions, manuals, advertisements, marketing materials, and technical assistance relating to the installation, set up, use, operation, and maintenance of said products.

38. On information and belief, Microsoft has committed the foregoing infringing activities without a license.

39. On information and belief, Microsoft knew the '269 Patent existed and knew of exemplary infringing Microsoft products while committing the foregoing infringing acts while committing the foregoing infringing acts, thereby willfully, wantonly and deliberately infringing the '269 Patent.

COUNT V: INFRINGEMENT OF THE '481 PATENT BY MICROSOFT

40. Plaintiff incorporates the preceding paragraphs as if fully set forth herein.

41. On information and belief, Microsoft has infringed the '481 Patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, offering to sell, selling in the United States, or importing into the United States the Accused Products and all other products with substantially similar imaging sensors.

42. For example, on information and belief, Microsoft has infringed and continues to infringe at least claim 1 of the '481 Patent by including a substrate structure for an image sensor package in the Microsoft Surface Pro 7 product. *See* Ex. 8 (cross-sectional image of the Microsoft Surface Pro 7 main front facing image sensor). The substrate structure in the Accused Products comprises a bottom base having an upper surface formed with a plurality of first electrodes, and a lower surface formed with a plurality of second electrodes, wherein an insulation layer is coated between first electrodes and in direct surface contact with the upper surface of the bottom base. *See* Ex. 8 (cross-sectional image of the Microsoft Surface Pro 7 main front facing image sensor). The substrate structure in the Accused Products comprises a frame layer arranged on and in direct surface contact with the first electrodes and the insulation layer to form a cavity together with the bottom base, wherein the insulation layer is interposed between the bottom base and the frame layer. *See* Ex. 8 (cross-sectional image of the Microsoft Surface Pro 7 main front facing image sensor).

43. On information and belief, Microsoft has induced infringement of the '481 Patent pursuant to 35 U.S.C. § 271(b), by actively and knowingly inducing, directing, causing, and encouraging others, including, but not limited to, its partners, resellers, distributors, customers, and end users, to make, use, sell, and/or offer to sell in the United States, and/or import into the United States, the Accused Products by, among other things, providing the accused products and incorporated image sensor technology, specifications, instructions, manuals, advertisements,

marketing materials, and technical assistance relating to the installation, set up, use, operation, and maintenance of said products.

44. On information and belief, Microsoft has committed the foregoing infringing activities without a license.

On information and belief, Microsoft knew the '481 Patent existed and knew of exemplary infringing Microsoft products while committing the foregoing infringing acts while committing the foregoing infringing acts, thereby willfully, wantonly and deliberately infringing the '481 Patent.

PRAYER FOR RELIEF

WHEREFORE, KTI prays for judgment in its favor against Microsoft for the following relief:

- A. Entry of judgment in favor of KTI against Microsoft on all counts;
- B. Entry of judgment that Microsoft has infringed the Patents-in-Suit;
- C. Entry of judgment that Microsoft's infringement of the '269 Patent, the '544 Patent, the '322 Patent, and the '481 Patent has been willful;
- D. An order permanently enjoining Microsoft from infringing the Patents-in-Suit;
- E. Award of compensatory damages adequate to compensate KTI for Microsoft's infringement of the '602 Patent, in no event less than a reasonable royalty as provided by 35 U.S.C. § 284;
- F. Award of compensatory damages adequate to compensate KTI for Microsoft's infringement of the '269 Patent, the '544 Patent, the '322 Patent, and the '481 Patent, in no event less than a reasonable royalty trebled as provided by 35 U.S.C. § 284;

- G. Award of reasonable attorneys' fees and expenses against Microsoft pursuant to 35 U.S.C. § 285;
- H. KTI's costs;
- I. Pre-judgment and post-judgment interest on KTI's award; and
- J. All such other and further relief as the Court deems just or equitable.

DEMAND FOR JURY TRIAL

Pursuant to Rule 38 of the Fed. R. Civ. Proc., Plaintiff hereby demands trial by jury in this action of all claims so triable.

Dated: September 28, 2021

Respectfully submitted,

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