IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS SHERMAN DIVISION

KT IMAGING USA, LLC,

Plaintiff Civil Action No.: 4:20-cv-337

-against-

Jury Trial Demanded

HP INC.,

Defendant

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff KT Imaging USA, LLC ("KTI" or "Plaintiff"), by way of this Complaint against Defendant HP Inc. ("HP" 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. On information and belief, Defendant HP Inc. ("HP") is a Delaware corporation with its principal place of business located at 1501 Page Mill Road, Palo Alto, CA 94304.

JURISDICTION AND VENUE

- 3. This is an action under the patent laws of the United States, 35 U.S.C. §§ 1, et seq., for infringement by HP of claims of 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").
- 4. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).
- 5. HP Inc. is subject to personal jurisdiction of this Court because, inter alia, HP Inc. on

information and belief (i) has committed acts of patent infringement in the State of Texas, (ii) has continuous business contact in the State of Texas, (iii) owns, manages, and operates facilities in the State of Texas, and (iv) actively employees and seeks the services of Texas residents in this judicial district. For example, HP Inc. operates a location at 2800 North Dallas Parkway, Suite 200, Plano, TX 75093.

6. Venue is proper in this judicial district under 35 U.S.C. § 1400(b) because HP Inc. has a regular and established place of business at 2800 North Dallas Parkway, Suite 200, Plano, TX 75093 and commits acts of infringement in this judicial district.

BACKGROUND

- 7. 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."
- 8. 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."
- 9. 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."
- 10. 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."
- 11. 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.

- 12. By letter dated June 21, 2019, KTI notified HP of the existence of the '544, '322, and '602 Patents, and of infringement thereof by HP. KTI's letter identified exemplary infringing HP products and an exemplary infringed claim for each of these patents.
- 13. HP has had notice of the '481 Patent at least as of the time of filing of this Complaint.
- 14. HP 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 tablets and laptop computers 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 HP

- 15. Plaintiff incorporates the preceding paragraphs as if fully set forth herein.
- 16. On information and belief, HP 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.
- 17. For example, on information and belief, HP 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 Elitebook 2530p product. *See* Ex. 1 (HP Elitebook 2530p Front Facing Image Sensor Module). The front facing 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. 2-3 (both HP Elitebook 2530p Front Facing Image Sensor Module). The image sensor module further comprises a photosensitive chip mounted to the upper surface of the substrate. *See* Ex. 4 (HP Elitebook 2530p Front Facing Image Sensor Module). 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. 5 (HP Elitebook 2530p Front Facing Image Sensor Module). 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. 1, 4, 6 (HP Elitebook 2530p Front Facing Image Sensor Module). 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 Exs. 1, 7 (HP Elitebook 2530p Front Facing Image Sensor Module). 18. On information and belief, HP 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, distributers, 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.

- 19. On information and belief, HP has committed the foregoing infringing activities without a license.
- 20. On information and belief, HP knew the '544 Patent existed, knew of an exemplary infringed claim of the '544 Patent, and knew of exemplary infringing HP products while

committing the foregoing infringing acts thereby willfully, wantonly and deliberately infringing the '544 Patent.

COUNT II: INFRINGEMENT OF THE '322 PATENT BY HP

- 21. Plaintiff incorporates the preceding paragraphs as if fully set forth herein.
- 22. On information and belief, HP 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.
- 23. For example, on information and belief, HP has infringed and continues to infringe at least claim 1 of the '322 Patent by including an image sensor module in the Elitebook 2530p product. See Ex. 1 (HP Elitebook 2530p Front Facing Image Sensor Module). The image sensor module in the Accused Products comprises a substrate having an upper surface, and a lower surface on which second electrodes are formed, and 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. 1-4, 8 (HP Elitebook 2530p Front Facing Image Sensor Module). The image sensor module 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 Exs. 3-4, 8. The image sensor module 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 Ex. 1, 9 (HP Elitebook

- 2530p Front Facing Image Sensor Module). The image sensor module of the Accused Product 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. 1, 7.
- 24. On information and belief, HP 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, distributers, 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.
- 25. On information and belief, HP has committed the foregoing infringing activities without a license.
- 26. On information and belief, HP knew the '322 Patent existed, knew of an exemplary infringed claim of the '322 Patent, and knew of exemplary infringing HP 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 HP

- 27. Plaintiff incorporates the preceding paragraphs as if fully set forth herein.
- 28. On information and belief, HP 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.
- 29. For example, on information and belief, HP 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 Elitebook 810 G2 product. *See* Ex. 10 (Elitebook 810 G2 Front Facing Image Sensor Module). 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. 10-14 (all Elitebook 810 G2 Front Facing Image Sensor Module). 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* Ex. 10, 15 (Elitebook 810 G2 Front Facing Image Sensor Module).

- 30. On information and belief, HP 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, distributers, 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.
- 31. On information and belief, HP has committed the foregoing infringing activities without a license.

32. On information and belief, HP knew the '602 Patent existed, knew of an exemplary infringed claim of the '602 Patent, and knew of exemplary infringing HP products while committing the foregoing infringing acts while committing the foregoing infringing acts, thereby willfully, wantonly and deliberately infringing the '602 Patent.

COUNT IV: INFRINGEMENT OF THE '481 PATENT BY HP

- 33. Plaintiff incorporates the preceding paragraphs as if fully set forth herein.
- 34. On information and belief, HP 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.
- 35. For example, on information and belief, HP 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 Elitebook 8740W product. See Ex. 16 (Elitebook 8740W Front Facing Image Sensor Module). 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 Exs. 17-19 (all Elitebook 8740W Front Facing Image Sensor Module). 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 Exs. 20-21 (both Elitebook 8740W Front Facing Image Sensor Module).
- 36. On information and belief, HP 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, distributers, 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.

37. On information and belief, HP has committed the foregoing infringing activities without a license.

PRAYER FOR RELIEF

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

- A. Entry of judgment in favor of KTI against HP on all counts;
- B. Entry of judgment that HP has infringed the Patent-in-Suit;
- C. Entry of judgment that HP's infringement of the '544, '322, and '602 Patents has been willful;
 - D. An order permanently enjoining HP from infringing the Patent-in-Suit;
- E. Award of compensatory damages adequate to compensate KTI for HP's infringement of the Patent-in-Suit, in no event less than a reasonable royalty trebled as provided by 35 U.S.C. § 284;
- F. Award of reasonable attorneys' fees and expenses against HP pursuant to 35 U.S.C. § 285;
 - G. KTI's costs;
 - H. Pre-judgment and post-judgment interest on KTI's award; and

I. 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.

Respectfully submitted, Dated: April 20, 2020

/s/ Stafford Davis

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