

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

PARKERVISION, INC.,  
Plaintiff,

vs.

INTEL CORPORATION,  
Defendant.

Civil Action No. 6:20-cv-562-ADA

**JURY TRIAL DEMANDED**

**ANSWER, AFFIRMATIVE DEFENSES, AND COUNTERCLAIMS TO SECOND  
AMENDED COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff ParkerVision, Inc.'s ("ParkerVision") patent infringement claims against Defendant Intel Corporation ("Intel") have no merit, and Intel's products do not use ParkerVision's purported inventions in the patents asserted in this case, as evidenced by findings by courts in Germany that the same accused chips in this case do not infringe ParkerVision's closely related European Patent No. 1 135 853 (the "EP '853 patent"), and that the EP '853 patent is invalid. *See* Munich Regional Court, Apr. 25, 2019, 7 O 2141/17, Final Judgment (trans.) (Ger.) at 19; Bundespatentgericht [BPatG] [Federal Patent Court], Dec. 16, 2019, 5 Ni 19/17 (EP), Decision on Costs and Determination of the Value in Dispute (trans.) (Ger.) at 10, 15.

Accordingly, and as alleged herein, Intel hereby answers ParkerVision's Second Amended Complaint for Patent Infringement, D.I. 49, as follows. To the extent any allegation by ParkerVision is not expressly admitted, it is denied.

**NATURE OF THE ACTION**<sup>1</sup>

1. This paragraph states legal conclusions to which no response is required. To the extent a further response is required, Intel denies that it has infringed any asserted patent, directly or indirectly. Intel denies any remaining allegations in this paragraph.

**PARTIES**

2. Intel lacks knowledge or information sufficient to form a belief as to the truth of the allegations in paragraph 2, and therefore denies the same.

3. Intel admits that it is a corporation organized and existing under the laws of Delaware with a place of business at 2200 Mission College Boulevard, Santa Clara, California 95054.

4. Intel admits that it has facilities at 1300 S. Mopac Expressway, Austin, Texas 78746; 6500 River Place Blvd, Bldg. 7, Austin, Texas 78730; and 5113 Southwest Parkway, Austin, Texas 78735. To the extent a further response is required, Intel denies any remaining allegations in this paragraph.

5. Intel admits that it has a Texas registered agent located at CT Corporation System, 1999 Bryan Street, Suite 900, Dallas, Texas 75201. To the extent a further response is required, Intel denies any remaining allegations in this paragraph.

6. Intel admits that since 1989, it has been registered to do business in the State of Texas under Texas Taxpayer Number 19416727436. To the extent a further response is required, Intel denies any remaining allegations in this paragraph.

**JURISDICTION AND VENUE**

7. This paragraph states legal conclusions to which no response is required. To the extent a further response is required, Intel admits that this Court has subject matter

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<sup>1</sup> For ease of reference, Intel uses the headings used in ParkerVision's Second Amended Complaint. In so doing, Intel does not admit any of the allegations contained in those headings.

jurisdiction over ParkerVision's allegations of patent infringement. Intel denies any remaining allegations in this paragraph.

8. This paragraph states legal conclusions to which no response is required. To the extent a further response is required, Intel admits that it has recruited and employs some Texas residents. Intel denies any remaining allegations in this paragraph.

9. Intel denies that it has infringed any asserted patent, directly or indirectly. Moreover, this paragraph states legal conclusions to which no response is required. To the extent a further response is required, Intel denies any remaining allegations in this paragraph.

10. This paragraph states legal conclusions to which no response is required. To the extent a further response is required, Intel admits that it conducts business within this judicial district; that it has facilities in this judicial district; that it receives income from its operations in this judicial district; and that it employs Texas residents within this judicial district. Intel denies that it has infringed any asserted patent, directly or indirectly. Intel denies any remaining allegations in this paragraph.

11. This paragraph states legal conclusions to which no response is required. To the extent a further response is required, Intel denies any remaining allegations in this paragraph.

12. This paragraph states legal conclusions to which no response is required. To the extent a further response is required, Intel admits that Intel Corporation is a named party in this action and that it has a place of business in this district, specifically, 1300 S. Mopac Expressway, Austin, Texas 78746. Intel also admits that it is registered to do business in the State of Texas. Intel specifically denies that it has committed acts of infringement in this district or anywhere else. Intel further denies that venue is convenient in this district and/or division, and denies that venue will be proper or convenient in this district and/or divisions for all matters where Intel is a named party; given the extent of Intel's operations in other states,

transfer out of this district and/or division would be appropriate in this case and would presumably be appropriate in other cases, and nothing herein should be read as a waiver of Intel's right to request transfer out of this district and/or division in this case or future cases as may be appropriate. Except as so expressly admitted, Intel denies the remaining allegations in this paragraph.

13. This paragraph states legal conclusions to which no response is required. To the extent a further response is required, Intel denies any remaining allegations in this paragraph.

14. Intel admits that it has facilities in Austin and that it has employees at those facilities but, as of this filing, Intel has not identified any connection between those employees and this case. The remaining statements in this paragraph are legal conclusions to which no response is required. To the extent a further response is required, Intel denies any remaining allegations in this paragraph.

15. Intel admits that its website describes its operations in Austin as follows: "Located in the capitol city of Texas, Intel Austin is an important research and development center for the Intel technology that is changing the way we live, work, and play. Among the innovations developed in Austin are core technologies for next-generation microprocessors, platforms and base software; groundbreaking silicon solutions for computing and communications devices, which includes handheld computing and cellular communications; and cutting-edge network storage products." To the extent a further response is required, Intel denies any remaining allegations in this paragraph.

16. Intel admits that the third-party website cited in paragraph 16 of the Second Amended Complaint purports to list H-1B labor condition applications for "Employer Name" "Intel Corporation" at "Worksite City" "Austin, TX." Intel lacks knowledge and information sufficient to form a belief as to the truth of the statements on the cited third-party website at

this time, and therefore denies the same. The remaining statements in this paragraph are legal conclusions to which no response is required. To the extent any other response to the allegations in this paragraph is required, Intel denies such allegations.

17. Intel admits that its website lists job openings for positions in Austin, Texas. To the extent any other response to the allegations in this paragraph is required, Intel denies such allegations.

18. Intel admits that it is a party to *Flash-Control, LLC v. Intel Corp.*, Case No. 1:19-cv-1107 (W.D. Tex.) and *VLSI Tech. LLC v. Intel Corp.*, Case No. 1:19-cv-977 (W.D. Tex.). To the extent any other response to the allegations in this paragraph is required, Intel denies such allegations.

#### **BACKGROUND**

19. Intel lacks knowledge or information sufficient to respond to ParkerVision's allegations in this paragraph, and therefore denies such allegations on that basis.

20. Intel lacks knowledge or information sufficient to respond to ParkerVision's allegations in this paragraph, and therefore denies such allegations on that basis.

21. Intel lacks knowledge or information sufficient to respond to ParkerVision's allegations in this paragraph, and therefore denies such allegations on that basis.

22. Intel denies the allegations of paragraph 22, including, without limitation, the assertion that ParkerVision allegedly "developed an innovative method of RF direct conversion by a process of sampling a RF carrier signal and transferring energy to create a down-converted baseband signal." Intel lacks knowledge or information sufficient to respond to ParkerVision's assertions regarding the time frame in which ParkerVision was allegedly working on this technology, and therefore denies such allegations on that basis. Intel denies any remaining allegations in this paragraph.

23. Intel lacks knowledge or information sufficient to respond to ParkerVision's assertions regarding the creation of prototype chips or conduction of tests, and therefore denies such allegations on that basis. Intel denies that ParkerVision's "technology led to improved RF receiver performance, lower power consumption, reduced size and integration benefits" and further denies that ParkerVision's technology allowed "RF transceivers [to] be built smaller, cheaper and with greater improved performance." Intel denies any remaining allegations in this paragraph.

24. Intel denies that ParkerVision's technology represented "innovation[]" and further denies that ParkerVision developed technologies novel or useful in the areas of "additional RF down-conversion technologies, RF up-conversion technologies and other related direct-conversion technologies," or "complementary wireless communications technologies involving interactions, processes, and controls between the baseband processor and the transceiver." Intel denies that ParkerVision's technology "improved" or "enhanced the operation of transceivers that incorporated ParkerVision's down-converter and up-converter technologies." Intel lacks knowledge or information sufficient to respond to ParkerVision's assertions regarding the size of its patent portfolio, and therefore denies such allegations on that basis. Intel denies any remaining allegations in this paragraph.

25. Denied.

#### **INTEL CHIPS**

26. Intel admits that Intel and/or its affiliates have manufactured and sold radio frequency ("RF") transceiver chips and/or modems, including the Intel PMB 5750, PMB 5757 and PMB 5762 (collectively, the "RF Transceiver Chips"), outside the United States in Asia, and that those same chips may be incorporated by third parties into smartphones. Intel objects to ParkerVision's belated attempt to broaden this case beyond the RF Transceiver Chips to include "near field communication devices, smart watches, personal area networks, cable

modems, smart meters, DSL modems, Bluetooth devices and/or Wi-Fi devices” referenced in Paragraph 26 through its amended definition of “Intel Chips.” Intel’s investigation into near field communication devices, smart watches, personal area networks, cable modems, smart meters, DSL modems, Bluetooth devices and/or Wi-Fi devices is ongoing, and on that basis, Intel denies any allegations relating to such products. To the extent any other response to the allegations in this paragraph is required, Intel denies such allegations.

27. Intel admits that its RF Transceiver Chips have been incorporated by third parties into devices such as Apple iPhones. Intel further admits that its RF Transceiver Chips offer, among other things, the ability to connect to a cellular network. To the extent any other response to the allegations in this paragraph is required, Intel denies such allegations.

28. Intel admits that the PMB 5750 has been incorporated by third parties into the Apple iPhone 7 and 7 Plus. Intel admits that the PMB 5757 has been incorporated by third parties into the Apple iPhone 8, 8 Plus, and X. Intel admits that the PMB 5762 has been incorporated by third parties into the Apple iPhone XR, XS, and XS Max. To the extent any other response to the allegations in this paragraph is required, Intel denies such allegations.

29. Intel admits that a paper titled “A Digital Multimode Polar Transmitter Supporting 40MHz LTE Carrier Aggregation in 28 nm CMOS,” was published in connection with the 2017 IEEE International Solid-State Circuits Conference. The content of that paper is reflected in the paper itself. To the extent any other response to the allegations in this paragraph is required, Intel denies such allegations.

30. This paragraph states legal conclusions to which no response is required. To the extent a further response is required, Intel denies any remaining allegations in this paragraph.

31. Intel states that Apple acquired assets related to Intel's RF Transceiver Chips in December 2019. To the extent any other response to the allegations in this paragraph is required, Intel denies such allegations.

**THE ASSERTED PATENTS**

**United States Patent No. 6,049,706**

32. Intel admits that U.S. Patent No. 6,049,706 (the "'706 patent") is entitled "Integrated Frequency Translation and Selectivity" and was issued on April 11, 2000 but denies that it is a valid or duly and legally issued patent. To the extent any other response to the allegations in this paragraph is required, Intel denies such allegations.

33. This paragraph states legal conclusions to which no response is required. To the extent a further response is required to any allegations in this paragraph, Intel denies that the '706 patent is valid and enforceable, and further denies any remaining allegations in this paragraph.

34. Intel lacks knowledge or information sufficient to respond to ParkerVision's allegations in this paragraph, and therefore denies such allegations on that basis.

**United States Patent No. 7,050,508**

35. Intel admits that U.S. Patent No. 7,050,508 (the "'508 patent") is entitled "Method and System for Frequency Up-Conversion with a Variety of Transmitter Configurations" and was issued on May 23, 2006 but denies that it is a valid or duly and legally issued patent. To the extent any other response to the allegations in this paragraph is required, Intel denies such allegations.

36. This paragraph states legal conclusions to which no response is required. To the extent a further response is required to any allegations in this paragraph, Intel denies that the '508 patent is valid and enforceable, and further denies any remaining allegations in this paragraph.



37. Intel lacks knowledge or information sufficient to respond to ParkerVision's allegations in this paragraph, and therefore denies such allegations on that basis.

**United States Patent No. 8,190,108**

38. Intel admits that U.S. Patent No. 8,190,108 (the "'108 patent") is entitled "Method and System for Frequency Up-Conversion" and was issued on May 29, 2012 but denies that it is a valid or duly and legally issued patent. To the extent any other response to the allegations in this paragraph is required, Intel denies such allegations.

39. This paragraph states legal conclusions to which no response is required. To the extent a further response is required to any allegations in this paragraph, Intel denies that the '108 patent is valid and enforceable, and further denies any remaining allegations in this paragraph.

40. Intel lacks knowledge or information sufficient to respond to ParkerVision's allegations in this paragraph, and therefore denies such allegations on that basis.

**CLAIMS FOR RELIEF**

**COUNT I – Alleged Infringement of United States Patent No. 6,049,706**

41. Intel repeats and incorporates its Answers to paragraphs 1 to 40 as though fully set forth herein.

42. Intel denies each and every allegation in paragraph 42.

43. Intel denies each and every allegation in paragraph 43.

44. This paragraph, which merely parrots language directly from the claims and specification of the '706 patent and makes no effort to address the actual functioning of Intel's products, states legal conclusions to which no response is required. Intel denies that it infringes any valid and enforceable claim of the '706 patent. To the extent a further response is required to any allegations in this paragraph, Intel denies such allegations.

45. This paragraph, which merely parrots language directly from the claims and specification of the '706 patent and makes no effort to address the actual functioning of Intel's

products, states legal conclusions to which no response is required. Intel denies that it infringes any valid and enforceable claim of the '706 patent. To the extent a further response is required to any allegations in this paragraph, Intel denies such allegations.

46. Intel denies each and every allegation in paragraph 46.

**COUNT II – Alleged Infringement of United States Patent No. 7,050,508**

47. Intel repeats and incorporates its Answers to paragraphs 1 to 46 as though fully set forth herein.

48. Intel denies each and every allegation in paragraph 48.

49. Intel denies each and every allegation in paragraph 49.

50. This paragraph, which merely parrots language directly from the claims and specification of the '508 patent and makes no effort to address the actual functioning of Intel's products, states legal conclusions to which no response is required. Intel denies that it infringes any valid and enforceable claim of the '508 patent. To the extent a further response is required to any allegations in this paragraph, Intel denies such allegations.

51. This paragraph, which merely parrots language directly from the claims and specification of the '508 patent and makes no effort to address the actual functioning of Intel's products, states legal conclusions to which no response is required. Intel denies that it infringes any valid and enforceable claim of the '508 patent. To the extent a further response is required to any allegations in this paragraph, Intel denies such allegations.

52. Intel denies each and every allegation in paragraph 52.

**COUNT III – Alleged Infringement of United States Patent No. 8,190,108**

53. Intel repeats and incorporates its Answers to paragraphs 1 to 52 as though fully set forth herein.

54. Intel denies each and every allegation in paragraph 54.

55. Intel denies each and every allegation in paragraph 55.

56. This paragraph, which merely parrots language directly from the claims and specification of the '108 patent and makes no effort to address the actual functioning of Intel's products, states legal conclusions to which no response is required. Intel denies that it infringes any valid and enforceable claim of the '108 patent. To the extent a further response is required to any allegations in this paragraph, Intel denies such allegations.

57. This paragraph, which merely parrots language directly from the claims and specification of the '108 patent and makes no effort to address the actual functioning of Intel's products, states legal conclusions to which no response is required. Intel denies that it infringes any valid and enforceable claim of the '108 patent. To the extent a further response is required to any allegations in this paragraph, Intel denies such allegations.

58. Intel denies each and every allegation in paragraph 58.

#### **JURY DEMANDED**

Intel demands a trial by jury on all issues so triable.

#### **RESPONSE TO PRAYER FOR RELIEF**

Intel denies that it has infringed the asserted patents, directly or indirectly. Intel denies that ParkerVision is entitled to any of the grounds for relief enumerated in the Second Amended Complaint or any other relief, and respectfully requests that the Court enter judgment against ParkerVision on ParkerVision's claims. To the extent the Prayer for Relief includes any factual allegations, Intel denies those allegations.

#### **AFFIRMATIVE AND OTHER DEFENSES**

WHEREFORE, having answered ParkerVision's Second Amended Complaint, Intel asserts the following defenses set forth below. By pleading these defenses, Intel does not concede that it has the burden of proof as to any of them.

Intel reserves the right to allege additional affirmative defenses that become known through the course of discovery.

**FIRST DEFENSE: FAILURE TO STATE A CLAIM**

59. The Second Amended Complaint, and each purported claim for relief asserted therein, fails to state a claim upon which relief can be granted.

**SECOND DEFENSE: NON-INFRINGEMENT**

60. Intel does not make, use, test, sell, offer for sale, or import into the United States, and has not made, used, tested, sold, offered for sale or imported into the United States, any products or methods that infringe any valid and enforceable claim of the '706, '508, and '108 patents, either directly or indirectly, literally or through the doctrine of equivalents, or otherwise.

**THIRD DEFENSE: INVALIDITY**

61. One or more claims of the '706, '508, and '108 patents are invalid for failure to meet the conditions of patentability and/or otherwise comply with one or more provisions of 35 U.S.C. §§ 101, 102, 103, 112, and/or 116.

**FOURTH DEFENSE: UNENFORCEABILITY**

62. The '706, '508, and '108 patents and the claims therein are unenforceable against Intel.

**FIFTH DEFENSE: EQUITABLE ESTOPPEL, WAIVER, ACQUIESCENCE,  
UNCLEAN HANDS**

63. ParkerVision's claims for relief are barred, in whole or in part, under principles of equity, including but not limited to estoppel, waiver, acquiescence, and/or unclean hands. For example, ParkerVision has engaged in serial litigation in which it has unsuccessfully asserted related patents against multiple parties, including against Intel's SMARTi chip products that ParkerVision has also accused of infringement in this case. In Germany, courts have found the accused Intel chips at issue here to have not infringed the EP '853 patent, which is a closely related patent to at least the '706 patent asserted in this litigation, and also determined that the EP '853 patent would likely have been found invalid. *See* Munich Regional

Court, 7 O 241/17, Final Judgement (trans.) (Ger.) at 19, Apr. 25, 2019; *see also* Bundespatentgericht [BPatG] [Federal Patent Court], 5 Ni 19/17 (EP), Decision on Costs and Determination of the Value in Dispute (Ger.) (trans.) at 10, 15, Dec. 16, 2019. In light of ParkerVision's serial and unsuccessful patent litigation campaign, ParkerVision's claims should therefore be barred, in whole or in part, under the principles of equity, including the doctrine of unclean hands.

64. As a further example, in 2011, MaxTak Capital Advisors, LLC, MaxTak Partners LP, and David Greenbaum sued ParkerVision for fraud, alleging that ParkerVision "made numerous public statements omitting material facts and deliberately misrepresenting: (a) d2p's [i.e., ParkerVision's "direct-to-power" technology] effectiveness and value; (b) the interest expressed by OEMs and other manufacturers in developing and commercializing products integrating d2p technology; (c) ParkerVision's financial results; and (d) the Company's prospects for developing profitable sales of its d2p technology." *See MaxTak Capital Advisors, et al. v. ParkerVision, Inc., et al.*, Case No. 2:11-cv-07549, D.I. 1 ¶ 33 (D.N.J. Dec. 28, 2011). On information and belief, the ParkerVision d2p technology at issue in *MaxTak* relates to the same RF technology that ParkerVision claims to have invented in its Second Amended Complaint in this case. *See, e.g.*, D.I. 49 ¶¶ 19-25 (Second Amended Complaint); *see also* D.I. 1 ¶¶ 20-31 (Complaint). On information and belief, ParkerVision has likewise misrepresented its RF technology in its Second Amended Complaint in this case, and ParkerVision's claims should therefore be barred, in whole or in part, under the principles of equity, including the doctrine of unclean hands.

#### **SIXTH DEFENSE: PROSECUTION HISTORY ESTOPPEL AND DISCLAIMER**

65. ParkerVision is estopped, based on statements, representations, and admissions made during prosecution of the patent applications that led to the '706, '508, and '108 patents

from asserting that the claims of the aforementioned patents are infringed by Intel or Intel's products, services, including the doctrine of equivalents.

**SEVENTH DEFENSE: LIMITATION ON DAMAGES**

66. ParkerVision's claims for monetary damages are limited by the statute of limitations and/or limited to acts of infringement occurring within six years of the date of initiating this suit under 35 U.S.C. § 286.

**EIGHTH DEFENSE: FAILURE TO MARK**

67. To the extent ParkerVision, its predecessors, or licensees of any asserted patent failed to comply with the marking requirements set forth in 35 U.S.C. § 287, the relief sought by ParkerVision is barred, in whole or in part.

**COUNTERCLAIMS TO SECOND AMENDED COMPLAINT FOR PATENT INFRINGEMENT**

Counterclaim Plaintiff Intel Corporation ("Intel") alleges the following Counterclaims in response to Counterclaim Defendant ParkerVision, Inc.'s ("ParkerVision") Second Amended Complaint (D.I. 49) for patent infringement.

**THE PARTIES**

1. Counterclaim Plaintiff Intel is a corporation organized and existing under the laws of the State of Delaware, with a place of business at 2200 Mission College Boulevard, Santa Clara, California 95054.

2. Counterclaim Defendant ParkerVision alleges in its Second Amended Complaint that it is a Florida corporation with its principal place of business at 9446 Philips Highway, Jacksonville, Florida 32256.

**JURISDICTION AND VENUE**

3. These Counterclaims arise under Title 35 of the United States Code. The Court has subject matter jurisdiction over these Counterclaims pursuant to 28 U.S.C. §§ 1331, 1338(a), 2201, and 2202.

4. ParkerVision is subject to personal jurisdiction in this District because ParkerVision filed its Complaint, First Amended Complaint, and Second Amended Complaint in this District.

5. Venue is proper in this District because ParkerVision filed its Complaint, First Amended Complaint, and Second Amended Complaint in this District.

### **FACTUAL BACKGROUND**

6. In this Second Amended Complaint, ParkerVision alleges that it is the owner of U.S. Patent Nos. 6,049,706 (“’706 patent”); 7,050,508 (“’508 patent”); 8,190,108 (“’108 patent”).

7. In its Second Amended Complaint, ParkerVision alleges that Intel’s PMB 5750, PMB 5757, and PMB 5762 (collectively, the “RF Transceiver Chips”) infringe the ’706, ’508, and ’108 patents.

8. Intel denies each and every such infringement allegation.

9. As a result of ParkerVision’s actions and statements, including the filing of the Second Amended Complaint, an actual and justiciable controversy exists between ParkerVision and Intel with regard to the validity and infringement of the ’706, ’508, and ’108 patents.

10. A judicial determination is necessary and appropriate at this time given ParkerVision’s allegations against Intel and in order for Intel to ascertain its rights and duties with respect to the ’706, ’508, and ’108 patents.

### **FIRST COUNTERCLAIM**

#### **(Declaratory Judgement of Non-Infringement of U.S. Patent No. 6,049,706)**

11. Intel repeats and re-alleges each and every allegation set forth in the foregoing Paragraphs as if fully set forth herein.

12. Intel counterclaims against ParkerVision pursuant to the patent laws of the United States, Title 35 of the United States Code, and the Declaratory Judgments Act, 28 U.S.C. §§ 2201 and 2202.

13. In its Second Amended Complaint, ParkerVision alleges that Intel is directly infringing, literally and/or under the doctrine of equivalents, the '706 patent, and that the '706 patent is valid and enforceable.

14. An actual controversy exists between ParkerVision and Intel by virtue of the allegations in ParkerVision's Second Amended Complaint and Intel's Answer as to the validity and infringement of the '706 patent.

15. The RF Transceiver Chips, including the accused Intel PMB 5750, PMB 5757, and PMB 5762, do not meet all of the elements of any of the claims of the '706 patent, and therefore Intel does not infringe the claims of the '706 patent.

16. For example, Intel does not infringe at least Claim 1 of the '706 patent because the RF Transceiver Chips, including the accused Intel PMB 5750, PMB 5757, and PMB 5762, do not use, include, and/or incorporate an apparatus for down-converting and filtering comprising at least one or more of the following limitations: (i) a frequency translator, comprising a down-convert and delay module to under-sample an input signal to produce an input sample of a down-converted image of said input signal, and to delay said input sample; (ii) a filter, comprising: (iii) at least a portion of said down-convert and delay module; (iv) at least one delay module to delay instances of an output signal; and (v) an adder to combine at least said delayed input sample with at least one of said delayed instances of said output signal to generate an instance of said output signal; and (vi) wherein said down-convert and delay module under-samples said input signal according to a control signal, wherein a frequency of said control signal is equal to a frequency of said input signal plus or minus a frequency of said



down-converted image, divided by  $n$ , where  $n$  represents a harmonic or sub-harmonic of said input signal.

17. Moreover, the PMB 5750 chip that ParkerVision accuses of infringement in its Second Amended Complaint was already found not to infringe European Patent No. 1 135 853 (“EP ’853”) in a proceeding in Germany at least because “there is no sampling means according to the patent.” *See* Munich Regional Court, 7 O 2141/17, Final Judgment (trans.) (Ger.) at 19, Apr. 25, 2019. The EP ’853 patent claims priority to U.S. Patent No. 6,061,551 (“’551 patent”) and the ’706 patent incorporates by reference the ’551 patent. In addition, the EP ’853 patent, like Claim 1 of the ’706 patent, includes claims that require “sampling.” *See id.* at 4 (“[A] sampling means for sampling the input signal at a sampling frequency ....”).

18. Intel does not infringe the ’706 patent because Intel does not make, use, test, sell, offer for sale, or import into the United States, and has not made, used, tested, sold, offered for sale, or imported into the United States, any products or methods that infringe any valid claim of the ’706 patent, either directly or indirectly, literally or through the doctrine of equivalents, or otherwise.

19. Intel is entitled to a declaratory judgment that it has not infringed, and is not infringing, directly or indirectly (either literally, under the doctrine of equivalents, or otherwise) any valid, patent-eligible claim of the ’706 patent.

### **SECOND COUNTERCLAIM**

#### **(Declaratory Judgment of Invalidity of U.S. Patent No. 6,049,706)**

20. Intel repeats and re-alleges each and every allegation set forth in the foregoing Paragraphs as if fully set forth herein.

21. Intel counterclaims against ParkerVision pursuant to the patent laws of the United States, Title 35 of the United States Code, and the Declaratory Judgments Act, 28 U.S.C. §§ 2201 and 2202.

22. In its Second Amended Complaint, ParkerVision alleges that Intel is directly infringing, literally and/or under the doctrine of equivalents, the '706 patent, and that the '706 patent is valid and enforceable.

23. An actual controversy exists between ParkerVision and Intel by virtue of the allegations in ParkerVision's Second Amended Complaint and Intel's Answer as to the validity and infringement of the '706 patent.

24. Intel contests the validity and enforceability of the '706 patent, and does not infringe the '706 patent at least because the claims of the '706 patent are invalid under 35 U.S.C. §§ 102, 103, 112, and/or 116.

25. For example, "A 900-MHz RF Front-End with Integrated Discrete-Time Filtering" by Shen, D.H. et al. ("Shen") renders obvious, at least under ParkerVision's alleged infringement theory, at least Claim 1 of the '706 patent under 35 U.S.C. § 103. Under ParkerVision's apparent infringement theory, Shen discloses and/or renders obvious every element of Claim 1. Intel will provide final invalidity contentions consistent with the schedule ordered by the Court and following ParkerVision's final infringement contentions.

26. In addition, the German Federal Patent Court found that all elements of ParkerVision's related EP '853 patent are disclosed in Shen, and rejected ParkerVision's argument that it invented a "fundamentally different approach to energy transmission down-conversion." *See* Bundespatentgericht [BPatG] [Federal Patent Court], 5 Ni 19/17 (EP), Decision on Costs and Determination of the Value in Dispute (Ger.) (trans.) at 10, Dec. 16, 2019. The EP '853 patent claims priority to U.S. Patent No. 6,061,551 ("551 patent") and the '706 patent incorporates by reference the '551 patent. In addition, the EP '853 patent, like Claim 1 of the '706 patent, includes claims that require "sampling." *See* Munich Regional Court, 7 O 2141/17, Final Judgment (trans.) (Ger.) at 4, Apr. 25, 2019. Shen likewise discloses and/or renders obvious the elements of at least Claim 1 of the '706 patent, and therefore

invalidates that claim. Intel will provide final invalidity contentions consistent with the schedule ordered by the Court and following ParkerVision's final infringement contentions.

27. Intel is entitled to a declaratory judgment that the claims of the '706 patent are invalid, including, without limitation, under 35 U.S.C. §§ 102, 103, 112, and/or 116.

### **THIRD COUNTERCLAIM**

#### **(Declaratory Judgment of Non-Infringement of U.S. Patent No. 8,190,108)**

28. Intel repeats and re-alleges each and every allegation set forth in the foregoing Paragraphs as if fully set forth herein.

29. Intel counterclaims against ParkerVision pursuant to the patent laws of the United States, Title 35 of the United States Code, and the Declaratory Judgments Act, 28 U.S.C. §§ 2201 and 2202.

30. In its Second Amended Complaint, ParkerVision alleges that Intel is directly infringing, literally and/or under the doctrine of equivalents, the '108 patent, and that the '108 patent is valid and enforceable.

31. An actual controversy exists between ParkerVision and Intel by virtue of the allegations in ParkerVision's Second Amended Complaint and Intel's Answer as to the validity and infringement of the '108 patent.

32. The RF Transceiver Chips, including the accused Intel PMB 5750, PMB 5757, and PMB 5762, do not meet all of the elements of any of the claims of the '108 patent, and therefore Intel does not infringe the claims of the '108 patent.

33. For example, Intel does not infringe at least Claim 8 of the '108 patent because the RF Transceiver Chips, including the accused Intel PMB 5750, PMB 5757, and PMB 5762, do not use, include, and/or incorporate a frequency conversion module comprising at least one or more of the following limitations: (i) a first switch configured to up-convert a signal based on a control signal and a bias signal, (ii) wherein said signal are routed to said frequency conversion module via a second switch, (iii) wherein said signal is transmitted by an antenna

connected to a third switch, (iv) further comprising a pulse shaper; and (v) an oscillating signal generator; (vi) wherein the oscillating signal generator comprises a voltage controlled oscillator configured to generate an oscillating signal; and (vii) wherein the pulse shaper is configured to generate a string of pulses based on the oscillating signal.

34. Intel does not infringe the '108 patent because Intel does not make, use, test, sell, offer for sale, or import into the United States, and has not made, used, tested, sold, offered for sale, or imported into the United States, any products or methods that infringe any valid claim of the '108 patent, either directly or indirectly, literally or through the doctrine of equivalents, or otherwise.

35. Intel is entitled to a declaratory judgment that it has not infringed, and is not infringing, directly or indirectly (either literally, under the doctrine of equivalents, or otherwise) any valid, patent-eligible claim of the '108 patent.

#### **FOURTH COUNTERCLAIM**

##### **(Declaratory Judgment of Invalidity of U.S. Patent No. 8,190,108)**

36. Intel repeats and re-alleges each and every allegation set forth in the foregoing Paragraphs as if fully set forth herein.

37. Intel counterclaims against ParkerVision pursuant to the patent laws of the United States, Title 35 of the United States Code, and the Declaratory Judgments Act, 28 U.S.C. §§ 2201 and 2202.

38. In its Second Amended Complaint, ParkerVision alleges that Intel is directly infringing, literally and/or under the doctrine of equivalents, the '108 patent, and that the '108 patent is valid and enforceable.

39. An actual controversy exists between ParkerVision and Intel by virtue of the allegations in ParkerVision's Second Amended Complaint and Intel's Answer as to the validity and infringement of the '108 patent.

40. Intel contests the validity and enforceability of the '108 patent, and does not infringe the '108 patent at least because the claims of the '108 patent are invalid under 35 U.S.C. §§ 102, 103, 112, and/or 116.

41. For example, U.S. Patent No. 5,239,686 (“Downey”) in combination with **Error! Reference source not found.**(“Sedra”) and U.S. Patent No. 2,730,624 (“Hahnel”) renders obvious, at least under ParkerVision’s alleged infringement theory, at least Claim 8 of the '108 patent under 35 U.S.C. § 103. At least under ParkerVision’s apparent infringement theory, Downey discloses and/or renders obvious every element of Claim 8. To the extent ParkerVision contends that Downey does not disclose a switch that up-converts a signal, those elements are disclosed and/or rendered obvious by at least Sedra. To the extent ParkerVision contends that Downey does not disclose a pulse shaper, wherein the pulse shaper is configured to generate a string of pulses based on an oscillating signal, those elements are disclosed and/or rendered obvious by at least Hahnel. Intel will provide final invalidity contentions consistent with the schedule ordered by the Court and following ParkerVision’s final infringement contentions.

42. Intel is entitled to a declaratory judgment that the claims of the '108 patent are invalid, including, without limitation, under 35 U.S.C. §§ 102, 103, 112, and/or 116.

#### **FIFTH COUNTERCLAIM**

##### **(Declaratory Judgment of Non-Infringement of U.S. Patent No. 7,050,508)**

43. Intel repeats and re-alleges each and every allegation set forth in the foregoing Paragraphs as if fully set forth herein.

44. Intel counterclaims against ParkerVision pursuant to the patent laws of the United States, Title 35 of the United States Code, and the Declaratory Judgments Act, 28 U.S.C. §§ 2201 and 2202.

45. In its Second Amended Complaint, ParkerVision alleges that Intel is directly infringing, literally and/or under the doctrine of equivalents, the '508 patent, and that the '508 patent is valid and enforceable.

46. An actual controversy exists between ParkerVision and Intel by virtue of the allegations in ParkerVision's Second Amended Complaint and Intel's Answer as to the validity and infringement of the '508 patent.

47. The RF Transceiver Chips, including the accused Intel PMB 5750, PMB 5757, and PMB 5762, do not meet all of the elements of any of the claims of the '508 patent, and therefore Intel does not infringe the claims of the '508 patent.

48. For example, Intel does not infringe at least Claim 3 of the '508 patent because the RF Transceiver Chips, including the accused Intel PMB 5750, PMB 5757, and PMB 5762, do not use, include, and/or incorporate an apparatus for up-conversion comprising at least one or more of the following limitations: (i) pulse shaping means for shaping a string of pulses from a reference signal; (ii) aperture generation means coupled to said pulse shaping means for generating a string of multiple pulses from said string of pulses; (iii) gating means for gating a bias signal under the control of said string of multiple pulses to generate a periodic signal having a plurality of harmonics at least one of which is at a desired frequency; (iv) where said aperture generation means comprises; (v) input means for receiving said string of pulses; (vi) logic gating means for outputting said string of pulses; and (vii) first delaying means for delaying said string of pulses for a first period of time.

49. Intel does not infringe the '508 patent because Intel does not make, use, test, sell, offer for sale, or import into the United States, and has not made, used, tested, sold, offered for sale, or imported into the United States, any products or methods that infringe any valid claim of the '508 patent, either directly or indirectly, literally or through the doctrine of equivalents, or otherwise.

50. Intel is entitled to a declaratory judgment that it has not infringed, and is not infringing, directly or indirectly (either literally, under the doctrine of equivalents, or otherwise) any valid, patent-eligible claim of the '508 patent.

**SIXTH COUNTERCLAIM**

**(Declaratory Judgment of Invalidity of U.S. Patent No. 7,050,508)**

51. Intel repeats and re-alleges each and every allegation set forth in the foregoing Paragraphs as if fully set forth herein.

52. Intel counterclaims against ParkerVision pursuant to the patent laws of the United States, Title 35 of the United States Code, and the Declaratory Judgments Act, 28 U.S.C. §§ 2201 and 2202.

53. In its Second Amended Complaint, ParkerVision alleges that Intel is directly infringing, literally and/or under the doctrine of equivalents, the '508 patent, and that the '508 patent is valid and enforceable.

54. An actual controversy exists between ParkerVision and Intel by virtue of the allegations in ParkerVision's Second Amended Complaint and Intel's Answer as to the validity and infringement of the '508 patent.

55. Intel contests the validity and enforceability of the '508 patent, and does not infringe the '508 patent at least because the claims of the '508 patent are invalid under 35 U.S.C. §§ 102, 103, 112, and/or 116.

56. For example, U.S. Patent No. 5,786,715 ("Halepete") in combination with U.S. Patent No. 5,606,738 ("Onodera") renders obvious, at least under ParkerVision's alleged infringement theory, at least Claim 3 of the '508 patent under 35 U.S.C. § 103. At least under ParkerVision's apparent infringement theory, Halepete discloses and/or renders obvious every element of Claim 3. To the extent ParkerVision contends that Halepete does not disclose a gating means, that element is disclosed and/or rendered obvious by at least Onodera. Intel will

provide final invalidity contentions consistent with the schedule ordered by the Court and following ParkerVision's final infringement contentions.

57. Intel is entitled to a declaratory judgment that the claims of the '508 patent are invalid, including, without limitation, under 35 U.S.C. §§ 102, 103, 112, and/or 116.

**DEMAND FOR JURY TRIAL**

Intel demands a trial by jury on all issues triable of right by a jury raised in ParkerVision's Second Amended Complaint, Intel's Answer, and Intel's Counterclaims pursuant to the Federal Rules of Civil Procedure.

**PRAYER FOR RELIEF**

WHEREFORE, Intel denies that ParkerVision is entitled to any relief, including, without limitation, as described in the "Prayer for Relief" section of ParkerVision's Second Amended Complaint.

Intel prays for:

- A. A judgment in favor of Intel dismissing with prejudice ParkerVision's Second Amended Complaint in its entirety and denying the relief requested therein;
- B. A declaration that the '706, '508, and '108 patents are not infringed by Intel;
- C. A declaration that the claims of the '706, '508, and '108 patents are invalid;
- D. A finding that this is an exceptional case under 35 U.S.C. § 285, including an award to Intel of attorneys' fees, costs, and disbursements incurred in defending this action; and
- E. Such other and further relief as the Court deems just and proper.



Dated: June 10, 2021

Respectfully submitted,

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**ATTORNEYS FOR DEFENDANT  
INTEL CORPORATION**

**CERTIFICATE OF SERVICE**

I hereby certify that all counsel of record are being served with a copy of the foregoing document via the Court's CM/ECF system per Local Civil Rule CV-5(b)(1) on June 10, 2021.

/s/ J. Stephen Ravel  
J. Stephen Ravel