

**IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF TEXAS  
DALLAS DIVISION**

CARUCEL INVESTMENTS, L.P.,

*Plaintiff,*

vs.

FIAT CHRYSLER AUTOMOBILES US  
LLC AND FIAT CHRYSLER  
AUTOMOBILES N.V.,

*Defendant.*

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CIVIL ACTION NO. \_\_\_\_\_

**JURY TRIAL DEMANDED**

**PLAINTIFF’S ORIGINAL COMPLAINT  
FOR PATENT INFRINGEMENT**

Plaintiff, Carucel Investments, L.P. (“Carucel Investments” or “Plaintiff”) files this Original Complaint against Defendants Fiat Chrysler Automobiles US LLC and Fiat Chrysler Automobiles N.V. (“Defendants” or “Fiat Chrysler”) for infringement of U.S. Patent No. 7,221,904 (the “’904 Patent”), U.S. Patent No. 7,848,701 (the “’701 Patent”), U.S. Patent No. 7,979,023 (the “’023 Patent”), U.S. Patent No. 8,463,177 (the “’177 Patent”) and U.S. Patent No. 8,718,543 (the “’543 Patent”) (together the “Asserted Patents”).

**THE PARTIES**

1. Plaintiff Carucel Investments, L.P. is a Delaware limited partnership with its principal place of business at 507 Maggie Trail, Lucas, TX 75002.
2. Plaintiff Carucel Investments, L.P. is the exclusive owner of the ’904 Patent, the ’701 Patent, the ’023 Patent, the ’177 Patent, and the ’543 Patent.
3. The ’904 Patent entitled “MOBILE COMMUNICATION SYSTEM WITH MOVING BASE STATION” is generally directed to a moving base station which is interposed

between a moving mobile telephone unit and a fixed base station. A true and correct copy of the '904 Patent is attached as Exhibit A.

4. The '701 Patent entitled "MOBILE COMMUNICATION SYSTEM WITH MOVING BASE STATION" is generally directed to a moving base station which is interposed between a moving mobile telephone unit and a fixed base station. A true and correct copy of the '701 Patent is attached as Exhibit B.

5. The '023 Patent entitled "MOBILE COMMUNICATION SYSTEM WITH MOVING BASE STATION" is generally directed to a moving base station which is interposed between a moving mobile telephone unit and a fixed base station. A true and correct copy of the '023 Patent is attached as Exhibit C.

6. The '177 Patent entitled "MOBILE COMMUNICATION SYSTEM WITH MOVING BASE STATION" is generally directed to a moving base station which is interposed between a moving mobile telephone unit and a fixed base station. A true and correct copy of the '177 Patent is attached as Exhibit D.

7. The '543 Patent entitled "MOBILE COMMUNICATION SYSTEM WITH MOVING BASE STATION" is generally directed to a moving base station which is interposed between a moving mobile telephone unit and a fixed base station. A true and correct copy of the '543 Patent is attached as Exhibit E.

8. On information and belief, Fiat Chrysler Automobiles US LLC ("FCA US LCC") is a limited liability company organized under the laws of Delaware, with its principal place of business at 1000 Chrysler Drive, Auburn Hills, Michigan 48326. On information and belief, FCA US LLC is owned by holding company Fiat Chrysler Automobiles N.V., a Dutch corporation headquartered in London, United Kingdom. On information and belief, FCA US LCC was formed upon the acquisition of American automaker Chrysler by Fiat (through its

Italian corporate predecessor, Fiat S.p.A.). FCA US LCC has a registered agent for service, The Corporation Trust Company, located at the Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801. This Defendant does business in the State of Texas and in the Northern District of Texas.

9. On information and belief, FCA US LCC engages in commerce by designing, engineering, manufacturing, distributing, and selling new and unused vehicles under the Chrysler, Dodge, Jeep and Ram brands. On information and belief, one major division of FCA US LCC includes Mopar, its automotive-parts and accessories division.

10. On information and belief, Fiat Chrysler Automobiles N.V., the corporate parent of FCA US LLC, is organized under the laws of the Netherlands, with its principal place of business located at 25 St. James's Street, London SW1A 1HA, United Kingdom. On information and belief, this Defendant does business in the State of Texas and in the Northern District of Texas.

11. On information and belief, Fiat Chrysler Automobiles N.V. sells vehicles in the United States through its U.S. subsidiary FCA US LLC. On information and belief, Fiat Chrysler Automobiles N.V. also owns numerous European-based automotive brands in addition to FCA US LLC's American brands. On information and belief, through its subsidiary, FCA Italy, these include Italian-based brands including Alfa Romeo, Fiat Automobiles, Fiat Professional, Lancia, and Abarth. On information and belief, Fiat Chrysler Automobiles N.V. also owns Ferrari and Maserati.

### **JURISDICTION AND VENUE**

12. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 1, *et seq.*

13. This Court has jurisdiction over the subject matter of this action under 28 U.S.C. §§ 1331 and 1338(a).

14. This Court has personal jurisdiction over the Defendants. On information and belief, Defendants conduct business and has committed acts of patent infringement in this District, the State of Texas, and elsewhere in the United States. On information and belief, Defendants conduct business within the State of Texas, directly or through intermediaries, which activities give rise to at least a portion of the infringements alleged herein and include: (i) manufacturing, distributing, offering for sale, selling, and advertising its vehicles with a mobile wireless router that acts as a mobile Wi-Fi hotspot that infringe the Asserted Patents in the State of Texas and the Northern District of Texas; and (ii) purposefully and voluntarily placing its infringing vehicles in the stream of commerce with knowledge that, through Defendants' established distribution channels, its accused vehicles with a mobile wireless router that acts as a mobile Wi-Fi hotspot will be sold and purchased by consumers in the State of Texas and the Northern District of Texas.

15. Venue is proper in the Northern District of Texas pursuant to 28 U.S.C. §§ 1391(c) and 1400(b) as to each Defendant because, among other things, (i) Defendants are subject to personal jurisdiction in this District; (ii) Defendants have a regular and established place of business in Texas and in this District— including a regional business center (the Chrysler Southwest Business Center located in Addison, Texas); (iii) on information and belief, Defendants provide new vehicle warranty services on FCA US LLC products, including the accused vehicles/products, to new FCA US LLC customers through its independent dealerships located in this District; (iv) Defendants have purposely transacted business involving the accused vehicles with a mobile wireless router that acts as a mobile Wi-Fi hotspot in this District, including the manufacture, distribution, marketing, and sale of its vehicles with a mobile wireless

router that acts as a mobile Wi-Fi hotspot that infringe the Asserted Patents to one or more customers in Texas; and (iv) certain of the infringing acts complained of herein occurred in this District.

16. On information and belief, Defendants are the owners of the webpage: <http://media.fcanorthamerica.com/newsrelease.do?id=866&mid>, which states that “[t]welve North American Regional Business Centers are responsible for all sales, service, parts, service contracts and dealer initiatives: . . . Southwest Business Center (Dallas) . . . .”

17. On information and belief, Defendants are the owners of the webpage: <https://www.mopar.com/chrysler/en-us/care/warranty.html>, which allows new and/or potential FCA US LLC customers to access and review a copy of the warranty booklet for their specific vehicle.

18. By way of illustration only, the Chrysler Warranty Booklet attached hereto as Exhibit F states that “[t]he warranties contained in this booklet are the only express warranties that FCA US LLC (“FCA US”) makes for your vehicle.” (Exhibit F, p. 4). On information and belief, Defendant provides this warranty booklet or a similar warranty booklet to new and/or potential FCA US LLC customers, including customers that purchase FCA US LLC vehicles (i.e., Chrysler, Dodge, Jeep and Ram) in the Northern District of Texas. The Chrysler Warranty Booklet directs questions regarding a vehicle’s warranty coverage to an authorized dealer. (*See* Exhibit F, p. 7). The Chrysler Warranty Booklet further provides that “[w]arranty service must be done by an authorized Chrysler, Dodge, Jeep or Ram dealer.” (Exhibit F, p. 23). On information and belief, FCA US LLC warrants to the original and each subsequent owner of new FCA US LLC vehicles that any authorized FCA US LLC dealer (i.e., an authorized Chrysler, Dodge, Jeep or Ram dealer) will make any repairs or replacement necessary to correct defects in

material or workmanship arising during the warranty period. Upon information and belief, all such warranty work is paid for and supervised by FCA US LLC.

19. On information and belief, the authorized FCA US LLC dealerships located within this District (e.g., Metroplex Chrysler Dodge Jeep Ram FIAT located in Dallas, Texas; Forest Lane Chrysler Dodge Jeep Ram located in Dallas, Texas; Clay Cooley Chrysler Jeep Dodge Ram located in Dallas, Texas; Grapevine Dodge Chrysler Jeep located in Grapevine, Texas; Don Davis Dodge Chrysler Jeep located in Arlington, Texas; Autonation Chrysler Dodge Jeep Ram North Richland Hills located in North Richland Hills, Texas; Moritz Chrysler/Jeep/Dodge located in Fort Worth, Texas; Meador Dodge Chrysler Jeep Ram located in Fort Worth, Texas; Lone Star Chrysler, Dodge, Jeep Autoplex located in Cleburne, Texas; and Williams Chrysler Dodge Jeep located in Weatherford, Texas) are Defendants' exclusive agents, instrumentalities, and representatives within this District for the provision of all new warranty service within this District for FCA US LLC vehicles (i.e., Chrysler, Dodge, Jeep and Ram) sold both within the District and outside the District. Upon information and belief, if a FCA US LLC customer located within this District needs to have new car warranty repairs performed within the District, Defendants require the FCA US LLC customer to have the work performed at one of their authorized FCA US LLC dealers in the District.

20. On information and belief, Defendants are subject to this Court's jurisdiction pursuant to due process and/or the Texas Long Arm Statute, due at least to their substantial business in this State and District, including: (i) at least part of their infringing activities alleged herein; and (ii) regularly doing or soliciting business, engaging in other persistent conduct, and/or deriving substantial revenue from goods sold and services provided to Texas residents.

## **FIAT CHRYSLER VEHICLES INCLUDING A MOBILE WI-FI HOTSPOT**

21. Wi-Fi is a technology for radio wireless local area networking of devices based on the Institute of Electrical and Electronics Engineers (“IEEE”) 802.11 standards.

22. On information and belief, at least some of the accused Fiat Chrysler vehicles include an Uconnect Web Wi-Fi (“Uconnect Wi-Fi”) which is a mobile wireless router that acts as a mobile Wi-Fi hotspot.<sup>1</sup> A mobile unit (e.g., Wi-Fi enabled tablet, laptop) within the accused Fiat Chrysler vehicle moves relative to a plurality of fixed radio ports (e.g., cellular radio ports included in cellular base stations operated by cellular carriers).<sup>2</sup> The Fiat Chrysler vehicles are constructed to move with traffic at a rate of speed which is comparable to the speed of the traffic because vehicles operate on roadways in traffic and typically move with a rate of speed comparable to traffic. As the Uconnect Wi-Fi is installed in and connected to the Fiat Chrysler vehicle, the Uconnect Wi-Fi and the mobile devices connected to the Uconnect Wi-Fi also move with traffic. Since the Uconnect Wi-Fi is installed in the same accused Fiat Chrysler vehicle as the mobile unit, it moves in accordance with the movement of the mobile unit.

23. On information and belief, the Uconnect Wi-Fi and/or the Novatel Expedite E725 3.1 Mbps PCI Express Mini Card Embedded Module, which includes embedded diversity receive antennas, receive cellular signals through multiple antennas including at least two spatially separated cellular antennas.<sup>3</sup>

24. On information and belief, the Uconnect Wi-Fi and/or at least some of the accused Fiat Chrysler vehicles include a Novatel Expedite E725 3.1 Mbps PCI Express Mini Card Embedded Module which includes a Qualcomm cellular transceiver chipset that supports

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<sup>1</sup> See Exhibit G, Uconnect User’s Manual Supplement, p. 16.

<sup>2</sup> See *id.* at pp. 8 - 15.

<sup>3</sup> See Exhibit H, available at <http://www.gsmfavorites.com/gsmhardware/1novatelexpeditee725/>. (identifying a key feature of the Novatel Expedite E725 3.1 Mbps PCI Express Mini Card Embedded Module to be the embedded diversity receive antenna).

EV-DO Revision A Networks (backwards compatible to Rev 0 and 1xRTT) CDMA 800 MHz and CDMA 1900 MHz cellular communication.<sup>4</sup> On information and belief, the transceiver chip includes a receiver adapted to receive a plurality of signals, each of the plurality of signals transmitted from each of the plurality of fixed radio ports (e.g. cellular radio ports included in cellular base stations) within a frequency band having a lower limit greater than 300 megahertz. On information and belief, each of the foregoing cellular standards transmits within a frequency band having a lower limit greater than 300 megahertz. On information and belief, the transceiver chip includes a diversity receiver. The receiver is configured to receive cellular RF signals (fixed port signals) through at least two of the separated antennas. The cellular RF signals are output from a cellular radio port (fixed port) included in a cellular base station.

25. On information and belief, the Uconnect Wi-Fi provides Wi-Fi service and therefore includes a Wi-Fi transmitter adapted to transmit within the frequency band (a Wi-Fi transmitter operating at 2.4 GHz) a resultant RF signal to the mobile unit in accordance with at least one of the plurality of signals. The Uconnect Wi-Fi is a mobile hotspot that provides Internet services to Wi-Fi enabled mobile devices via cellular networks. Thus, the Wi-Fi signals (radio frequency signals) correspond to the received cellular signals (received fixed port signals) and include data extracted from the received cellular signals.

26. On information and belief, the Uconnect Wi-Fi includes a processor programmed to maximize an amount of transferred information to the mobile unit by evaluating a quality of each of the plurality of signals transmitted from the plurality of fixed radio ports.

27. On information and belief, the Uconnect Wi-Fi includes a Novatel Expedite E725 3.1 Mbps PCI Express Mini Card Embedded Module that includes a processor (controller). Upon

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<sup>4</sup> See Exhibit H, available at <http://www.gsmfavorites.com/gsmhardware/1novatelexpeditee725/>; see also Exhibit I, available at <http://investor.novatelwireless.com/releasedetail.cfm?ReleaseID=333467>.



information and belief, the Embedded Module's processor is programmed to align and combine the cellular signals received through the multiple antennas.

### **COUNT I**

(INFRINGEMENT OF U.S. PATENT NO. 7,221,904)

28. Carucel Investments incorporates paragraphs 1 through 27 herein by reference.

29. The '904 Patent is valid, enforceable, and was duly and legally issued by the United States Patent and Trademark Office on May 22, 2007 after full and fair examination.

30. Carucel Investments is the owner of all rights, title, and interest in and to the '904 Patent and has standing to bring this lawsuit for infringement of the '904 Patent.

31. Defendants have and continue to directly infringe one or more claims of the '904 Patent in this judicial district and elsewhere in Texas and the United States, including at least claims 22, 23, 28, 29, 30, 31, 32, 33, 34, 35, 40, 50 and 51 by, among other things, making, using, offering for sale, selling and/or importing accused Fiat Chrysler vehicles with a mobile wireless router that acts as a mobile Wi-Fi hotspot.

32. Defendants directly infringe the '904 Patent by making, using, offering for sale, selling and/or importing the accused Fiat Chrysler vehicles with a mobile wireless router that acts as a mobile Wi-Fi hotspot. Defendants are thereby liable for direct infringement.

33. Defendants have had knowledge of the '904 Patent, at least as early as service of this Complaint.

34. By way of illustration only, the accused Fiat Chrysler vehicles with a mobile wireless router that acts as a mobile Wi-Fi hotspot include each and every element of claim 22 of the '904 Patent. For example, at least some of the accused Fiat Chrysler vehicles include a

Uconnect Web Wi-Fi (“Uconnect Wi-Fi”) which is a mobile wireless router that acts as a mobile Wi-Fi hotspot in the Fiat Chrysler vehicle.<sup>5</sup>

35. The accused Fiat Chrysler vehicles include “[a]n apparatus adapted to move in accordance with a movement of a mobile unit moving relative to a plurality of fixed radio ports.” For example, the Uconnect User’s Manual Supplement provides that “[t]he WiFi Hotspot feature provides the vehicle passengers with an internet access hot spot in the vehicle, using the radio as an access point. The hot spot will allow WiFi enabled in-vehicle devices (such as a laptop or any other portable enabled media device) to wirelessly connect to the internet.”<sup>6</sup> The Uconnect Wi-Fi and the mobile units will move with the vehicle as it moves in traffic and relative to a plurality of fixed radio ports (within cellular base stations).

36. The accused Fiat Chrysler vehicles include “a receiver adapted to receive a plurality of signals, each of the plurality of signals transmitted from each of the plurality of fixed radio ports within a frequency band having a lower limit greater than 300 megahertz.” For example, at least some of the accused Fiat Chrysler vehicles and/or the Uconnect Wi-Fi includes a Novatel Expedite E725 3.1 Mbps PCI Express Mini Card Embedded Module which includes a Qualcomm cellular transceiver chipset that supports EV-DO Revision A Networks (backwards compatible to Rev 0 and 1xRTT) CDMA 800 MHz and CDMA 1900 MHz cellular communication.<sup>7</sup> On information and belief, the transceiver chip includes a receiver adapted to receive a plurality of signals, each of the plurality of signals transmitted from each of the plurality of fixed radio ports (e.g. cellular radio ports included in cellular base stations) within a frequency band having a lower limit greater than 300 megahertz. On information and belief,

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<sup>5</sup> See Exhibit G, Uconnect User’s Manual Supplement, p. 16.

<sup>6</sup> See *id.*, at pp. 8 - 15.

<sup>7</sup> See Exhibit I, available at <http://investor.novatelwireless.com/releasedetail.cfm?ReleaseID=333467>; see also Exhibit H, available at <http://www.gsmfavorites.com/gsmhardware/1novatelexpeditee725/>.

each of the foregoing cellular standards transmits within a frequency band having a lower limit greater than 300 megahertz.

37. The accused Fiat Chrysler vehicles include “a transmitter adapted to transmit, within the frequency band, a resultant signal to the mobile unit in accordance with at least one of the plurality of signals.” For example, the Uconnect Wi-Fi provides Wi-Fi service and therefore includes a Wi-Fi transmitter adapted to transmit within the frequency band (a Wi-Fi transmitter operating at 2.4 GHz) a resultant RF signal to the mobile unit in accordance with at least one of the plurality of signals. The Uconnect Wi-Fi is a mobile hotspot that provides Internet services to Wi-Fi enabled mobile devices via cellular networks. Thus, the Wi-Fi signals (radio frequency signals) correspond to the received cellular signals (received fixed port signals).

38. The accused Fiat Chrysler vehicles also include “a processor adapted to maximize an amount of transferred information to the mobile unit by evaluating a quality of each of the plurality of signals transmitted from the plurality of fixed radio ports.” On information and belief, the Uconnect Wi-Fi includes a processor programmed to maximize an amount of transferred information to the mobile unit by evaluating a quality of each of the plurality of signals transmitted from the plurality of fixed radio ports.

39. Carucel Investments has been damaged as a result of Defendants’ infringing conduct described in this Count. Defendants are, thus, liable to Carucel Investments in an amount that adequately compensate it for Defendants’ infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284 and attorney fees under 35 U.S.C. § 285.

## **COUNT II**

(INFRINGEMENT OF U.S. PATENT NO. 7,848,701)

40. Carucel Investments incorporates paragraphs 1 through 39 herein by reference.

41. The '701 Patent is valid, enforceable, and was duly and legally issued by the United States Patent and Trademark Office on December 7, 2010 after full and fair examination.

42. Carucel Investments is the owner of all rights, title, and interest in and to the '701 Patent and has standing to bring this lawsuit for infringement of the '701 Patent.

43. Defendants have and continue to directly infringe one or more claims of the '701 Patent in this judicial district and elsewhere in Texas and the United States, including at least claims 10, 15, 16, 17, 18, 31, 33, 34 and 35 by, among other things, making, using, offering for sale, selling and/or importing accused Fiat Chrysler vehicles with a mobile wireless router that acts as a mobile Wi-Fi hotspot.

44. Defendants directly infringe the '701 Patent by making, using, offering for sale, selling and/or importing the accused Fiat Chrysler vehicles with a mobile wireless router that acts as a mobile Wi-Fi hotspot. Defendants are thereby liable for direct infringement.

45. Defendants have had knowledge of the '701 Patent, at least as early as service of this Complaint.

46. By way of illustration only, the accused Fiat Chrysler vehicles with a mobile wireless router that acts as a mobile Wi-Fi hotspot include each and every element of claim 10 of the '701 Patent. For example, at least some of the accused Fiat Chrysler vehicles include an Uconnect Web Wi-Fi ("Uconnect Wi-Fi") which is a mobile wireless router that acts as a mobile Wi-Fi hotspot in the Fiat Chrysler vehicle.<sup>8</sup>

47. The accused Fiat Chrysler vehicles include "[a] movable base station configured to move relative to Earth." For example, the Uconnect User's Manual Supplement provides that "[t]he WiFi Hotspot feature provides the vehicle passengers with an internet access hot spot in the vehicle, using the radio as an access point. The hot spot will allow WiFi enabled in-vehicle

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<sup>8</sup> See Exhibit G, Uconnect User's Manual Supplement, p. 16.

devices (such as a laptop or any other portable enabled media device) to wirelessly connect to the internet.”<sup>9</sup> The Uconnect Wi-Fi and the mobile units will move with the vehicle as it moves in traffic and relative to Earth.

48. The accused Fiat Chrysler vehicles include “a plurality of spatially separated antennas.” For example, the Uconnect Wi-Fi and/or the Novatel Expedite E725 3.1 Mbps PCI Express Mini Card Embedded Module, which includes embedded diversity receive antennas, and, therefore, receives cellular signals through multiple antennas including at least two spatially separated cellular antennas.<sup>10</sup> Additionally, at least some of the accused Fiat Chrysler vehicles and/or the Uconnect Wi-Fi includes a Novatel Expedite E725 3.1 Mbps PCI Express Mini Card Embedded Module which includes a Qualcomm cellular transceiver chipset that supports EV-DO Revision A Networks (backwards compatible to Rev 0 and 1xRTT) CDMA 800 MHz and CDMA 1900 MHz cellular communication.<sup>11</sup> On information and belief, the Qualcomm cellular transceiver chipset includes a receiver configured to receive multiple RF signals, e.g., 3G and CDMA signals (cellular signals) through separate antennas.

49. The accused Fiat Chrysler vehicles include “a receiver configured to receive fixed port signals from a fixed port through the plurality of spatially separated antennas.” For example, at least some of the accused Fiat Chrysler vehicles and/or the Uconnect Wi-Fi includes a Novatel Expedite E725 3.1 Mbps PCI Express Mini Card Embedded Module which includes a Qualcomm cellular transceiver chipset that supports EV-DO Revision A Networks (backwards compatible to Rev 0 and 1xRTT) CDMA 800 MHz and CDMA 1900 MHz cellular

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<sup>9</sup> See *id.*, at pp. 8 - 15.

<sup>10</sup> See Exhibit H, available at <http://www.gsmfavorites.com/gsmhardware/1novatelexpeditee725/> (identifying a key feature of the Novatel Expedite E725 3.1 Mbps PCI Express Mini Card Embedded Module to be the embedded diversity receive antenna).

<sup>11</sup> See Exhibit I, available at <http://investor.novatelwireless.com/releasedetail.cfm?ReleaseID=333467>; see Exhibit H, available at <http://www.gsmfavorites.com/gsmhardware/1novatelexpeditee725/>.

communication.<sup>12</sup> On information and belief, the transceiver chip includes a receiver configured to receive a plurality of signals transmitted from a fixed port (e.g. cellular radio port included in a cellular base station).

50. The accused Fiat Chrysler vehicles include “a controller configured to align and combine the received fixed port signals.” For example, the Uconnect Wi-Fi includes a Novatel Expedite E725 3.1 Mbps PCI Express Mini Card Embedded Module that includes a processor (controller). Upon information and belief, the Embedded Module’s processor is programmed to align and combine the cellular signals received through the multiple antennas.

51. The accused Fiat Chrysler vehicles also include “a transmitter configured to transmit radio frequency signals to a mobile device corresponding to the received fixed port signals.” For example, the Uconnect Wi-Fi provides Wi-Fi service and therefore includes a Wi-Fi transmitter adapted to transmit radio frequency signals to the mobile unit that correspond to the received fixed port signals. The Uconnect Wi-Fi is a mobile hotspot that provides Internet services to Wi-Fi enabled mobile devices via cellular networks. Thus, the Wi-Fi signals (radio frequency signals) correspond to the received cellular signals (received fixed port signals).

52. Carucel Investments has been damaged as a result of Defendants’ infringing conduct described in this Count. Defendants are, thus, liable to Carucel Investments in an amount that adequately compensate it for Defendants’ infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284 and attorney fees under 35 U.S.C. § 285.

### **COUNT III**

(INFRINGEMENT OF U.S. PATENT NO. 7,979,023)

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<sup>12</sup> See Exhibit I, available at <http://investor.novatelwireless.com/releasedetail.cfm?ReleaseID=333467>; see also Exhibit H, available at <http://www.gsmfavorites.com/gsmhardware/1novatelexpeditee725/>.

53. Carucel Investments incorporates paragraphs 1 through 52 herein by reference.

54. The '023 Patent is valid, enforceable, and was duly and legally issued by the United States Patent and Trademark Office on July 12, 2011 after full and fair examination.

55. Carucel Investments is the owner of all rights, title, and interest in and to the '023 Patent and has standing to bring this lawsuit for infringement of the '023 Patent.

56. Defendants have and continue to directly infringe one or more claims of the '023 Patent in this judicial district and elsewhere in Texas and the United States, including at least claims 11, 16, 17, 18, 19, 20, 21, 22 and 23 by, among other things, making, using, offering for sale, selling and/or importing accused Fiat Chrysler vehicles with a mobile wireless router that acts as a mobile Wi-Fi hotspot.

57. Defendants directly infringe the '023 Patent by making, using, offering for sale, selling and/or importing the accused Fiat Chrysler vehicles with a mobile wireless router that acts as a mobile Wi-Fi hotspot. Defendants are thereby liable for direct infringement.

58. Defendants have had knowledge of the '023 Patent, at least as early as service of this Complaint.

59. By way of illustration only, the accused Fiat Chrysler vehicles with a mobile wireless router that acts as a mobile Wi-Fi hotspot include each and every element of claim 11 of the '023 Patent. For example, at least some of the accused Fiat Chrysler vehicles include an Uconnect Web Wi-Fi ("Uconnect Wi-Fi") which is a mobile wireless router that acts as a mobile Wi-Fi hotspot in the Fiat Chrysler vehicle.<sup>13</sup>

60. The accused Fiat Chrysler vehicles include "[a]n apparatus configured to move relative to Earth." For example, the Uconnect User's Manual Supplement provides that "[t]he WiFi Hotspot feature provides the vehicle passengers with an internet access hot spot in the

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<sup>13</sup> See Exhibit G, Uconnect User's Manual Supplement, p. 16.

vehicle, using the radio as an access point. The hot spot will allow WiFi enabled in-vehicle devices (such as a laptop or any other portable enabled media device) to wirelessly connect to the internet.”<sup>14</sup> The Uconnect Wi-Fi and the mobile units will move with the vehicle as it moves in traffic and relative to a Earth.

61. The accused Fiat Chrysler vehicles include “a plurality of spatially separated antennas.” For example, the Uconnect Wi-Fi and/or the Novatel Expedite E725 3.1 Mbps PCI Express Mini Card Embedded Module, which includes embedded diversity receive antennas, and, therefore, receives cellular signals through multiple antennas including at least two spatially separated cellular antennas.<sup>15</sup> Additionally, at least some of the accused Fiat Chrysler vehicles and/or the Uconnect Wi-Fi includes a Novatel Expedite E725 3.1 Mbps PCI Express Mini Card Embedded Module which includes a Qualcomm cellular transceiver chipset that supports EV-DO Revision A Networks (backwards compatible to Rev 0 and 1xRTT) CDMA 800 MHz and CDMA 1900 MHz cellular communication.<sup>16</sup> On information and belief, the Qualcomm cellular transceiver chipset includes a receiver configured to receive multiple RF signals, e.g., 3G and CDMA signals (cellular signals) through separate antennas.

62. The accused Fiat Chrysler vehicles include “a receiver configured to receive fixed port signals from a fixed port through the plurality of spatially separated antennas.” For example, at least some of the accused Fiat Chrysler vehicles and/or the Uconnect Wi-Fi includes a Novatel Expedite E725 3.1 Mbps PCI Express Mini Card Embedded Module which includes a Qualcomm cellular transceiver chipset that supports EV-DO Revision A Networks (backwards

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<sup>14</sup> See *id.*, at pp. 8 - 15.

<sup>15</sup> See Exhibit H, available at <http://www.gsmfavorites.com/gsmhardware/1novatelexpeditee725/> (identifying a key feature of the Novatel Expedite E725 3.1 Mbps PCI Express Mini Card Embedded Module to be the embedded diversity receive antenna).

<sup>16</sup> See Exhibit I, available at <http://investor.novatelwireless.com/releasedetail.cfm?ReleaseID=333467>; see also Exhibit H, available at <http://www.gsmfavorites.com/gsmhardware/1novatelexpeditee725/>.



compatible to Rev 0 and 1xRTT) CDMA 800 MHz and CDMA 1900 MHz cellular communication.<sup>17</sup> On information and belief, the transceiver chip includes a receiver adapted to receive a plurality of signals from a fixed port (e.g. cellular radio port included in cellular base stations).

63. The accused Fiat Chrysler vehicles also include “a transmitter configured to transmit radio frequency signals to a mobile device corresponding to the received fixed port signals.” For example, the Uconnect Wi-Fi provides Wi-Fi service and therefore includes a Wi-Fi transmitter adapted to transmit RF signals to the mobile unit that correspond to the received fixed port signals. The Uconnect Wi-Fi is a mobile hotspot that provides Internet services to Wi-Fi enabled mobile devices via cellular networks. Thus, the Wi-Fi signals (radio frequency signals) correspond to the received cellular signals (received fixed port signals).

64. Carucel Investments has been damaged as a result of Defendants’ infringing conduct described in this Count. Defendants are, thus, liable to Carucel Investments in an amount that adequately compensate it for Defendants’ infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284 and attorney fees under 35 U.S.C. § 285.

#### **COUNT IV**

(INFRINGEMENT OF U.S. PATENT NO. 8,463,177)

65. Carucel Investments incorporates paragraphs 1 through 64 herein by reference.

66. The ‘177 Patent is valid, enforceable, and was duly and legally issued by the United States Patent and Trademark Office on June 11, 2013 after full and fair examination.

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<sup>17</sup> See Exhibit I, available at <http://investor.novatelwireless.com/releasedetail.cfm?ReleaseID=333467>; see also Exhibit H, available at <http://www.gsmfavorites.com/gsmhardware/1novatelexpeditee725/>.

67. Carucel Investments is the owner of all rights, title, and interest in and to the '177 Patent and has standing to bring this lawsuit for infringement of the '177 Patent.

68. Defendants have and continue to directly infringe one or more claims of the '177 Patent in this judicial district and elsewhere in Texas and the United States, including at least claims 16, 21, 22, 23, 24, 25, 26, 27, 28, 30, 31, 47, 48, 49, 51, 52, and 53 by, among other things, making, using, offering for sale, selling and/or importing accused Fiat Chrysler vehicles with a mobile wireless router that acts as a mobile Wi-Fi hotspot.

69. Defendants directly infringe the '177 Patent by making, using, offering for sale, selling and/or importing the accused Fiat Chrysler vehicles with a mobile wireless router that acts as a mobile Wi-Fi hotspot. Defendants are thereby liable for direct infringement.

70. Defendants have had knowledge of the '177 Patent, at least as early as service of this Complaint.

71. By way of illustration only, the accused Fiat Chrysler vehicles with a mobile wireless router that acts as a mobile Wi-Fi hotspot practices every step in the method described in claim 16 of the '177 Patent. For example, at least some of the accused Fiat Chrysler vehicles include an Uconnect Web Wi-Fi ("Uconnect Wi-Fi") which is a mobile wireless router that acts as a mobile Wi-Fi hotspot in the Fiat Chrysler vehicle.<sup>18</sup>

72. The accused Fiat Chrysler vehicles receive "fixed port signals from a fixed port through a plurality of spatially separated antennas moving relative to Earth." For example, the Uconnect Wi-Fi and/or the Novatel Expedite E725 3.1 Mbps PCI Express Mini Card Embedded Module, which includes embedded diversity receive antennas, and, therefore, receives cellular

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<sup>18</sup> See Exhibit G, Uconnect User's Manual Supplement, p. 16.

signals through multiple antennas including at least two spatially separated cellular antennas.<sup>19</sup> Additionally, at least some of the accused Fiat Chrysler vehicles and/or the Uconnect Wi-Fi includes a Novatel Expedite E725 3.1 Mbps PCI Express Mini Card Embedded Module which includes a Qualcomm cellular transceiver chipset that supports EV-DO Revision A Networks (backwards compatible to Rev 0 and 1xRTT) CDMA 800 MHz and CDMA 1900 MHz cellular communication.<sup>20</sup> On information and belief, the Qualcomm cellular transceiver chipset includes a receiver configured to receive multiple RF signals, e.g., 3G and CDMA signals (cellular signals) through separate antennas. The cellular signals are received while the accused Fiat Chrysler vehicle and antennas are moving relative to Earth.

73. The accused Fiat Chrysler vehicles also transmit, “to a mobile device, radio frequency signals corresponding to the received fixed port signals.” For example, the Uconnect Wi-Fi provides Wi-Fi service and therefore includes a Wi-Fi transmitter that transmits RF signals to the mobile unit that correspond to the received port signals. The Uconnect Wi-Fi is a mobile hotspot that provides Internet services to Wi-Fi enabled mobile devices via cellular networks. Thus, the Wi-Fi signals (radio frequency signals) correspond to the received cellular signals (received fixed port signals).

74. Carucel Investments has been damaged as a result of Defendants’ infringing conduct described in this Count. Defendants are, thus, liable to Carucel Investments in an amount that adequately compensate it for Defendants’ infringements, which, by law, cannot be

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<sup>19</sup> See Exhibit H, *available at* <http://www.gsmfavorites.com/gsmhardware/1novatelexpeditee725/> (identifying a key feature of the Novatel Expedite E725 3.1 Mbps PCI Express Mini Card Embedded Module to be the embedded diversity receive antenna).

<sup>20</sup> See Exhibit I, *available at* <http://investor.novatelwireless.com/releasedetail.cfm?ReleaseID=333467>; *see also* Exhibit H, *available at* <http://www.gsmfavorites.com/gsmhardware/1novatel-expeditee725/>.

less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284 and attorney fees under 35 U.S.C. § 285.

### **COUNT V**

(INFRINGEMENT OF U.S. PATENT NO. 8,718,543)

75. Carucel Investments incorporates paragraphs 1 through 74 herein by reference.

76. The '543 Patent is valid, enforceable, and was duly and legally issued by the United States Patent and Trademark Office on May 6, 2014 after full and fair examination.

77. Carucel Investments is the owner of all rights, title, and interest in and to the '543 Patent and has standing to bring this lawsuit for infringement of the '543 Patent.

78. Defendants have and continue to directly infringe one or more claims of the '543 Patent in this judicial district and elsewhere in Texas and the United States, including at least claims 10, 12, 13, 18, 19, 20, 21, 23, 25, 26, 44, 45, 49, 50, 51, 52, 53, 54, and 55 by, among other things, making, using, offering for sale, selling and/or importing accused Fiat Chrysler vehicles with a mobile wireless router that acts as a mobile Wi-Fi hotspot.

79. Defendants directly infringe the '543 Patent by making, using, offering for sale, selling and/or importing the accused Fiat Chrysler vehicles with a mobile wireless router that acts as a mobile Wi-Fi hotspot. Defendants are thereby liable for direct infringement.

80. Defendants have had knowledge of the '543 Patent, at least as early as service of this Complaint.

81. By way of illustration only, the accused Fiat Chrysler vehicles with a mobile wireless router that acts as a mobile Wi-Fi hotspot include each and every element of claim 10 of the '543 Patent. For example, at least some of the accused Fiat Chrysler vehicles include an

Uconnect Web Wi-Fi (“Uconnect Wi-Fi”) which is a mobile wireless router that acts as a mobile Wi-Fi hotspot in the Fiat Chrysler vehicle.<sup>21</sup>

82. The accused Fiat Chrysler vehicles include “a plurality of spatially separated antennas.” For example, the Uconnect Wi-Fi and/or the Novatel Expedite E725 3.1 Mbps PCI Express Mini Card Embedded Module, which includes embedded diversity receive antennas, and, therefore, receives cellular signals through multiple antennas including at least two spatially separated cellular antennas.<sup>22</sup> Additionally, at least some of the accused Fiat Chrysler vehicles and/or the Uconnect Wi-Fi includes a Novatel Expedite E725 3.1 Mbps PCI Express Mini Card Embedded Module which includes a Qualcomm cellular transceiver chipset that supports EV-DO Revision A Networks (backwards compatible to Rev 0 and 1xRTT) CDMA 800 MHz and CDMA 1900 MHz cellular communication.<sup>23</sup> On information and belief, the Qualcomm cellular transceiver chipset includes a receiver configured to receive multiple cellular signals, e.g., 3G and CDMA signals (cellular signals) through separate antennas.

83. The accused Fiat Chrysler vehicles include “a receiver configured to receive, through the plurality of spatially separated antennas, a plurality of cellular signals from a plurality of base station interface circuits.” For example, at least some of the accused Fiat Chrysler vehicles and/or the Uconnect Wi-Fi includes a Novatel Expedite E725 3.1 Mbps PCI Express Mini Card Embedded Module which includes a Qualcomm cellular transceiver chipset that supports EV-DO Revision A Networks (backwards compatible to Rev 0 and 1xRTT)

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<sup>21</sup> See Exhibit G, Uconnect User’s Manual Supplement, p. 16.

<sup>22</sup> See Exhibit H, available at <http://www.gsmfavorites.com/gsmhardware/1novatelexpeditee725/> (identifying a key feature of the Novatel Expedite E725 3.1 Mbps PCI Express Mini Card Embedded Module to be the embedded diversity receive antenna).

<sup>23</sup> See Exhibit I, available at <http://investor.novatelwireless.com/releasedetail.cfm?ReleaseID=333467>; see also Exhibit H, available at <http://www.gsmfavorites.com/gsmhardware/1novatelexpeditee725/>.

CDMA 800 MHz and CDMA 1900 MHz cellular communication.<sup>24</sup> On information and belief, the transceiver chip includes a receiver configured to receive a plurality of signals transmitted from a plurality of base station interface circuits (e.g. cellular circuits included in cellular base stations).

84. The accused Fiat Chrysler vehicles also include “a transmitter configured to transmit a mobile device radio frequency signal to a mobile device moving relative to Earth while the apparatus is moving relative to the plurality of base station radio interface circuits and relative to Earth, the mobile device radio frequency signal including data extracted from the cellular signals.” For example, the Uconnect Wi-Fi provides Wi-Fi service and therefore includes a Wi-Fi transmitter configured to transmit a radio frequency signal to the mobile unit where the radio frequency signal includes data from the received cellular signals. The Uconnect Wi-Fi is a mobile hotspot that provides Internet services to Wi-Fi enabled mobile devices via cellular networks. Thus, the Wi-Fi signal (radio frequency signal) includes data extracted from the received cellular signals. Additionally, the Uconnect User’s Manual Supplement provides that “[t]he WiFi Hotspot feature provides the vehicle passengers with an internet access hot spot in the vehicle, using the radio as an access point. The hot spot will allow WiFi enabled in-vehicle devices (such as a laptop or any other portable enabled media device) to wirelessly connect to the internet.”<sup>25</sup> The Uconnect Wi-Fi and the mobile units will move with the vehicle as it moves in traffic and relative to a plurality of base station interface circuits of cellular base stations.

85. Carucel Investments has been damaged as a result of Defendants’ infringing conduct described in this Count. Defendants are, thus, liable to Carucel Investments in an

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<sup>24</sup> See Exhibit I, available at <http://investor.novatelwireless.com/releasedetail.cfm?ReleaseID=333467>; see also Exhibit H, available at <http://www.gsmfavorites.com/gsmhardware/1novatelexpeditee725/>.

<sup>25</sup> See Exhibit G, Uconnect User’s Manual Supplement, pp. 8 - 15.

amount that adequately compensate it for Defendants' infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284 and attorney fees under 35 U.S.C. § 285.

### **JURY DEMAND**

86. Carucel Investments hereby requests a trial by jury pursuant to Rule 38 of the Federal Rules of Civil Procedure.

### **PRAYER FOR RELIEF**

87. Carucel Investments requests that the Court find in its favor and against Defendants, and that the Court grant Carucel Investments the following relief:

- a. Judgment that one or more claims of the '904, '701, '023, '177, and '543 Patents have been infringed, either literally and/or under the doctrine of equivalents, by Defendants;
- b. Judgment that Defendants account for and pay to Carucel Investments all damages to and costs incurred by Carucel Investments because of Defendants' infringing activities and other conduct complained of herein;
- c. That Carucel Investments be granted pre-judgment and post-judgment interest on the damages caused by Defendants' infringing activities and other conduct complained of herein; and
- d. That Carucel Investments be granted such other and further relief as the Court may deem just and proper under the circumstances.

Dated: December 18, 2018

Respectfully submitted,

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