



Plaintiff, Atlas Global Technologies LLC (“Atlas”), for its Complaint against Defendant ASUSTeK Computer, Inc. (“ASUS”), requests a trial by jury and alleges as follows upon actual knowledge with respect to itself and its own acts and upon information and belief as to all other matters:

**NATURE OF THE ACTION**

1. This is an action for patent infringement brought by Atlas as the owner of the patents asserted in this Complaint. Atlas alleges that ASUS infringes U.S. Patent Nos. 9,763,259 (“the ’259 Patent”); 9,825,738 (“the ’738 Patent”); 9,848,442 (“the ’442 Patent”); 9,912,513 (“the ’513 Patent”); 9,917,679 (“the ’679 Patent”); 10,020,919 (“the ’919 Patent”); 10,153,886 (“the ’886 Patent”); and 10,756,851 (“the ’851 Patent”) (collectively, the “Asserted Patents”).

2. Atlas alleges that ASUS both directly and indirectly infringes each of the Asserted Patents by making, using, offering for sale, selling and/or importing the Accused Products described below, in the United States without a license to do so. Atlas further alleges that ASUS induces infringement by other third parties through their use of the ASUS Accused Products as directed and instructed by ASUS. Atlas seeks damages and other relief for ASUS’s prior and continued infringement of the Asserted Patents.

**THE PARTIES**

3. Atlas is a limited liability company organized under the laws of Texas with its principal place of business at 4413 Spicewood Springs Rd., Suite 101, Austin, TX 78759.

4. Atlas is the assignee and owner of the Asserted Patents through assignment on February 19, 2021, from Newracom, Inc., (“Newracom”) to Atlas. Newracom was the original owner of the Asserted Patents through assignment from the named inventors.

5. On information and belief, Defendant ASUS is a Taiwanese corporation with its principal place of business at LiDe Building at No. 15, LiDe Rd., Beitou Dist., Taipei City 112, Taiwan, R.O.C.

### **JURISDICTION**

6. This is an action arising under the patent laws of the United States, 35 U.S.C. §§ 1, *et seq.* Accordingly, this Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

7. This Court has personal jurisdiction over ASUS. Atlas is informed and believes, and on that basis alleges, that ASUS conducts business and has committed acts of patent infringement and/or has induced acts of patent infringement by others in this judicial district, the State of Texas, and elsewhere in the United States. ASUS has purposefully directed infringing activities at residents of the State of Texas, and this litigation results from those infringing activities. ASUS regularly sells (either directly or indirectly), its products within this district. For example, ASUS has placed and continues to place infringing products into the stream of commerce via an established distribution channel with the knowledge or understanding that such products are being and will continue to be sold in this Judicial District and the State of Texas. ASUS is subject to this Court's specific and/or general personal jurisdiction pursuant to due process and/or the Texas Long Arm Statute, due at least to its substantial and pervasive business in this State and judicial district, including at least part of its infringing activities alleged herein and deriving substantial revenue from goods sold to Texas residents.

### **VENUE**

8. Venue is proper in this judicial district pursuant to 28 U.S.C. § 1400(b), 28 U.S.C. § 1391(c), and *Brunette Mach. Works, Ltd. v. Kockum Indus., Inc.*, 406 U.S. 706 (1972).

9. ASUS has admitted that venue is proper in this judicial district in other cases. *See UNM Rainforest Innovations v. ASUSTeK Computer Inc.*, 6:20-cv-142-ADA (W.D. Tex.), Dkt. 39 at §14.

### **THE 802.11 STANDARD**

10. Wireless Local Area Networks (WLANs) have become ubiquitous with the rise of mobile telecommunication devices. These wireless networks operate using an unlicensed band of 2.4 GHz, 5 GHz, and/or 6 GHz. The operation of WLANs is standardized by the Institute of Electrical and Electronics Engineers (“IEEE”) Part 11 under the name of “Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications,” also known as “Wi-Fi.”

11. After an original Wi-Fi standard was published in 1999, new standard versions have been published by amendments. For example, the IEEE standard 802.11a (IEEE Std 802.11a-1999) was published in 1999, the IEEE standard 802.11b (IEEE Std 802.11b-1999) was published in 1999, and the IEEE standard 802.11g (IEEE Std 802.11g-2003) was published in 2003. Subsequently, the IEEE standard 802.11n (IEEE Std 802.11n-2009) for enhancements for higher throughput (HT) was published in 2009, and the IEEE standard 802.11 ac (IEEE 802.11 ac-2013) for enhancements for very high throughput (VHT) was published in 2013. These prior versions of the 802.11 standard are called legacy standards.

12. As wireless devices proliferated, the need arose to improve the performance of Wi-Fi in high-density scenarios. To address this issue, an IEEE task group began working on a new standard high efficiency (HE) WLAN to enhance the throughput-per-area of Wi-Fi. This standard became known as 802.11ax, commonly called “Wi-Fi 6.” The first draft of the 802.11ax Standard was published in March 2016. The IEEE approved the final version of the 802.11ax-2021 Standard on February 9, 2021.

13. Wi-Fi 6 provides numerous benefits over previous Wi-Fi standards, which the industry has recognized and actively promoted. For example, Qualcomm has stated that Wi-Fi 6 provides “up to 4x increase in capacity,” “higher efficiency,” and “improved coverage & performance” over previous Wi-Fi standards. <https://www.qualcomm.com/media/documents/files/802-11ax-wi-fi-with-unprecedented-capacity.pdf>. Intel has stated that Wi-Fi 6 offers 9.6 Gbps of maximum throughput, whereas Wi-Fi 5 offered a maximum throughput of 3.5 Gbps. <https://www.intel.com/content/www/us/en/gaming/resources/wifi-6.html>. Intel has also stated that Wi-Fi 6 can result in up to 75% less latency. *Id.* Cisco has stated that Wi-Fi 6 “lets access points support more clients in dense environments and provide[s] a better experience for typical wireless LAN networks.” <https://www.cisco.com/c/en/us/products/collateral/wireless/white-paper-c11-740788.html>.

14. ASUS has marketed the benefits of Wi-Fi 6 to its customers and has touted its products as Wi-Fi 6 Certified. <https://www.asus.com/content/WiFi6/>. According to ASUS, “WiFi 6 technology provides up to 4X greater network capacity to lower the latency in traffic-dense environments. Previous generation WiFi 5 (802.11ac) can only handle one device at a time on each network channel, which is an inefficient use of available bandwidth. OFDMA supported in the WiFi 6 divides each channel into small sub-channels, allowing signals from multiple devices to be bundled together and transmitted simultaneously, reducing latency for a smoother, more responsive WiFi experience.” <https://www.asus.com/content/WiFi6/>. In addition, “[t]hese sub-channels have a reduced bandwidth that gives them up to an 80% range improvement”, resulting in “fewer WiFi dead spots and faster, more reliable WiFi connections for your devices, throughout your home.” <https://www.asus.com/content/WiFi6/>. ASUS actively markets and promotes the

advantages of Wi-Fi 6 and provides testing data to support its claims that Wi-Fi 6 produces significant advantages relative to prior generations of Wi-Fi technology.

### **NEWRACOM**

15. The Asserted Patents were all invented and developed by engineers at Newracom, a leader and pioneer in wireless communication technology. Newracom was founded in 2014 by a group of 28 former employees of the Electronics & Telecommunications Research Institute (“ETRI”), a research institution funded by the government of Korea.

16. Newracom was a major contributor to the 802.11ax-2021 Standard, providing numerous technical contributions to that Standard which have proven to be highly beneficial in improving the bandwidth of wireless transmissions, while minimizing latency among the devices connected to the wireless local area network. Notably, Newracom has been acknowledged as one of the leaders in both number of technical submissions and the number of submissions ultimately adopted by the 802.11ax Task Group. According to an IAM Industry Report dated April 25, 2018, Newracom was recognized as the world’s fourth most active technical contributor to the 802.11ax Standard, behind only Qualcomm, Intel, and Huawei. See <https://www.iam-media.com/ieees-empirical-record-success-and-innovation-following-patent-policy-updates>. The contributions provided by Newracom have led to over 175 United States patents relating to the 802.11ax Standard.

### **ASUS’S KNOWLEDGE OF NEWRACOM’S PATENTS**

17. ASUS has known that Newracom possessed patents relating to the 802.11ax Standard since at least March 11, 2015. On that date, Newracom submitted a Letter of Assurance for Essential Patent Claims (“LOA”) to the IEEE. In the LOA, Newracom stated that it “may own,

control, or have the ability to license Patent Claims that might be or become Essential Patent Claims.”

### **ASUS’S USE OF THE PATENTED TECHNOLOGY**

18. On information and belief, ASUS makes, uses, sells, and/or offers to sell in the United States, and/or imports into the United States various devices with Wi-Fi capabilities. For example, ASUS makes, uses, and sells access points that support Wi-Fi 6. ASUS’s devices with Wi-Fi 6 capability include software and hardware on the devices that implement the claims of the Asserted Patents. The ASUS website identifies laptops, desktops, mini PCs, routers, adapters, and motherboards that operate as Wi-Fi 6 products. <https://www.asus.com/content/WiFi6/>.

19. The Accused Products include all ASUS products that comply with the 802.11ax-2021 Standard, including but not limited to the following ASUS products:

<b>Router Products</b>	<b>Model Number</b>
ROG RAPTURE GT-AXE11000	ROG RAPTURE GT-AXE11000
ROG Rapture GT-AX11000	GT-AX11000
ROG Rapture GT-AX11000 Call of Duty Black Ops 4 Edition	GT-AX11000
AX6600 Tri Band WiFi Router	XT8
Wireless-AX6000 Dual Band Gigabit Router	RT-AX88U
AX5400 Dual Band WiFi 6 Gaming Router	RT-AX82U Gundam Edition
AX5700 Dual Band WiFi 6 Gaming Router	RT-AX86U Zaku II Edition
WiFi 6 AZ2700 Router	RT-AX68U
ASUS WiFi 6 Router	RT-AX82U
ASUS WiFi 6 Router	RT-AX86U
ASUS WiFi 6 Router	RT-AX3000

ASUS WiFi 6 Router	RT-AX58U
ASUS WiFi 6 Router	RT-AX55
ASUS WiFi 6 Router	RT-AX89X
ASUS WiFi 6 Router	RT-AX56U
ASUS WiFi 6 Router	RT-AX92U
ASUS WiFi 6 Router	RT-AX88U
ASUS ZenWiFi ET8	ET8 (W-2-PK)
ASUS ZenWiFi AX (XT8)	XT8 (B-1-PK), XT8 (B-2-PK), XT8 (W-2-PK),
ASUS ZenWiFi AX Mini (XD4)	XD4 (B-3-PK)
AiMesh AX6100 WiFi System	RT-AX92U (2-PK)
AX3000 Dual Band PCI-E WiFi 6	PCE-AX3000
AX3000 Dual Band PCI-E WiFi 6	PCE-AX58BT

Phone Products	Model Number
ASUS PHONE	ASUS_I002D
ASUS PHONE	I003D
ASUS PHONE	ASUS_I003DD
Zenfone 8	ZS590KS

Computer Products	Model Number
ROG Strix G15	G512L, GL512L, GL542L, PX512L, G15CK
ROG Strix G17	G712L, GL712L, GL742L, PX712L
ASUS TUF Gaming F17	FX706L, TUF706L, TUF766L, FX766L, MW706L



ROG Strix SCAR 17	G732L, GL732L, G742L
ROG Strix SCAR 15	G532L, GL532L, G542L
ROG Zephyrus Duo 15	GX550L
ASUS TUF Gaming F15	FX506L, TUF506L, TUF566L, FX566L, MW506L
ROG Zephyrus M15	GU502L, GU532L, PZ502L
ROG Zephyrus S17	GX701L, GX735L
ROG Zephyrus S15	GX502L, GX532L
ROG Zephyrus G	GU502D, GA502D
ROG Zephyrus G14	GA401I
Zephyrus G15	GA502I
ROG Zephyrus G	GU502D, GA502D
ASUS TUF Gaming F17	FX706L, TUF706L, TUF766L, FX766L, MW706L
ROG Zephyrus G14	GA401I
ASUS TUF Gaming F15	FX506L, TUF506L, TUF566L, FX566L, MW506L
ROG Strix G17	G712L, GL712L, GL742L, PX712L
ROG Strix G15	G512L, GL512L, GL542L, PX512L
ROG Strix SCAR 17	G732L, GL732L, G742L
ROG Strix SCAR 15	G532L, GL532L, G542L
ROG Zephyrus M15	GU502L, GU532L, PZ502L
ROG Zephyrus S17	GX701L, GX735L
ROG Zephyrus S15	GX502L, GX532L
ROG Zephyrus Duo 15	GX550L
Zephyrus G15	GA502I

ROG Strix GT35	G35C, G35CZ
ROG Strix GT15	G15C
ROG Strix GA15	GA15DH
ProArt StudioBook 15	H500
ProArt StudioBook 17	H700
ProArt StudioBook Pro X	W730
ProArt StudioBook Pro 17	W700
ProArt StudioBook Pro 15	W500
ProArt StudioBook One	W590
ZenBook Duo 14	UX482
ZenBook Pro Duo 15 OLED	UX582
ZenBook 13 OLED	UX325
ZenBook 13 OLED	UM325
ZenBook 14	UM425
ZenBook Flip 13 OLED	UX363
ZenBook Flip S13 OLED	UX371
ZenBook Pro 15 OLED	UX535
ZenBook 14	UX425
ZenBook 14	UX435
ZenBook Pro 15	UX535
ZenBook Pro Duo	UX581
ZenBook S	UX393
ZenBook Flip 13	UX363
ZenBook 13	UX325

ZenBook 14	UX434
ZenBook Duo	UX481
ASUS ZenBook 15	UX534
ASUS ZenBook 13	UX334
ASUS Chromebook Flip	C536
ASUS Chromebook Detachable CM3	CM3000
ASUS Chromebook Flip CX5	CX5500
ASUS Chromebook Flip CM5	CM5500
ASUS Chromebook CX9	CX9400
ASUS Chromebook Flip	C214
ASUS Chromebook	C204
ASUS Chromebook Flip	C436
ASUS Chromebook Flip	C433
ASUS Chromebook Flip	C434
ASUS Chromebook	C423
ASUS Chromebook	C523
ASUS Chromebook	C403
ASUS Chromebook	C223
Z590 WIFI GUNDAM EDITION	
PRIME Z590-P WIFI	
TUF GAMING B560M-PLUS WIFI	
TUF GAMING Z590-PLUS WIFI	
TUF GAMING B550M (WI-FI) ZAKU II EDITION	
TUF GAMING H570-PRO WIFI	

ROG STRIX B560-A GAMING WIFI	
ROG STRIX Z590-A GAMING WIFI	
Pro WS WRX80E-SAGE SE WIFI	
TUF GAMING B550M-PLUS (WI-FI)	
TUF GAMING B550-PLUS (WI-FI)	
ROG STRIX B550-XE GAMING WIFI	
ROG Crosshair VIII Dark Hero	
TUF GAMING X5790-PRO (WI-FI)	
PRIME B550M-A (WI-FI)	
ROG STRIX B550-I GAMING	
TUF GAMING H470-PRO (WI-FI)	
TUF GAMING B460-PRO (WI-FI)	
ROG STRIX B550-E GAMING	
ROG STRIX B550-F GAMING	
TUF GAMING B460M-PLUS (WI-FI)	
TUF GAMING Z490-PLUS (WI-FI)	
ROG STRIX Z490-I GAMING	
ROG STRIX Z490-E GAMING	
ROG MAXIMUS XII HERO (WI-FI)	
ROG MAXIMUS XII FORMULA	
ROG Zenith II Extreme Alpha	
ROG Zenith II Extreme	
ROG Rampage VI Extreme Encore	
ROG Strix TRX40-E Gaming	

ROG Strix X299-E Gaming II	
Prime X299 Edition 30	
ROG Crosshair VIII Formula	
ROG Crosshair VIII Hero (WI-FI)	
ROG Crosshair VIII Impact	
ROG Strix X570-E Gaming	
ROG Strix X570-I Gaming	
VivoMini	VC66-C2
MiniPC	PN62S
ASUS ZenBook Flip 15	Q538EI
ASUS ZenBook Flip 15	Q528
ASUS VivoBook Flip 14	TP412
VivoBook Flip 14	TP470
VivoBook 17	S712
VivoBook 15	M513
VivoBook 14	K413
VivoBook 15	K513
ASUS VivoBook S15	S532
VivoBook S15 (11th Gen Intel)	S533
VivoBook S14 (11th Gen Intel)	S433
VivoBook S15 (11th Gen Intel)	S532
ASUS VivoBook S15	S533
ASUS BR1100F	BR1100F
ASUS BR1100C	BR1100C

ExpertBook B9 B9450CEA (11th Gen Intel)	B9 B9450CEA
ExpertBook B1	B1400
ExpertBook B1	B1500
ASUS ExpertBook B9	B9450
ROG Strix G17	G713 G713QR-ES96, G713QM-ES74, G713QM-ES94
ROG Strix G15	G513 G513QR-ES96
ROG Strix G15	G513 G513QM-ES74
ROG Strix SCAR 15	G533
G533QS-XS98Q	
ROG Strix SCAR 15	G533 G533QS-DS76
ROG Strix SCAR 15	G533 G533QR-DS76Q
ROG Zephyrus Duo 15 SE	GX551 GX551QS-XS99
ROG Zephyrus G15	GA503
GA503QS-XS98Q-WH	
ROG Zephyrus G15	GA503
GA503QS-BS96Q	
ROG Zephyrus G15	GA503
GA503QM-BS94Q	
ROG Mothership	GZ700 GZ700GX-XB98K
ROG Flow X13	GV301 GV301QH-XS98-B
ROG Flow X13	GV301GV301QH-DS96

**FIRST COUNT**

**(Infringement of U.S. Patent No. 9,763,259)**

20. Atlas incorporates by reference the allegations set forth in Paragraphs 1-19 of this Complaint as though fully set forth herein.

21. The '259 Patent, entitled "Sounding Method," was duly and lawfully issued on September 12, 2017. Atlas is the owner of all right, title, and interest in the '259 Patent. The '259 Patent was filed on September 22, 2015 as Application No. 14/862,078 and claims the benefit of Korean Patent Application No. 10-2015-0116576, filed on August 19, 2015, and U.S. Provisional Application No. 62/054,270, filed on September 23, 2014. *See* <https://patentimages.storage.googleapis.com/ff/7b/3b/738dfc1959ff2d/US9763259.pdf>.

22. The '259 Patent relates to multi-user ("MU") sounding and feedback in a wireless network. MU transmission requires channel information for the devices to access their subchannels that have been assigned by an Access Point ("AP"). The Accused Products support and implement a sounding method as a non-AP station device on the wireless network that receives wireless communications from an AP. The Accused Products are configured to receive a null data packet announcement ("NDPA") frame from a transmitting device. The Accused Products are designed to then receive a null data packet ("NDP") frame from the AP after receiving the NDPA frame. In response, the Accused Products are designed to transmit to the AP a feedback frame including subchannel information measured on a first subchannel after receiving the NDP frame. The first subchannel is a subchannel that has been allocated to the first receiving device by an AP from among a plurality of subchannels through which signal transmissions may occur. The Accused Products are designed such that, when transmitting the feedback frame, the non-AP station device will transmit the feedback frame to the AP while a second feedback frame including subchannel

information measured on a second subchannel is transmitted simultaneously to the AP by a second non-AP station device, the second subchannel being a subchannel that has been allocated to the second receiving device among the plurality of subchannels by the AP.

23. ASUS directly infringes the '259 Patent under 35 U.S.C. § 271(a) by making, using, selling, and/or offering to sell in the United States, and/or importing into the United States products that directly infringe the '259 Patent, including the above identified Accused Products. The Accused Products infringe at least claim 1 of the '259 Patent by practicing the 802.11ax Standard. The ASUS Accused Products operate as Station devices that are designed by ASUS and operate consistent with the requirements of 802.11ax. This includes the ability to generate and send multi-user ("MU") uplink ("UL") transmissions in response to a request by an Access Point ("AP").

24. In addition to directly infringing the '259 method claims by using infringing products in the United States, ASUS also indirectly infringes the '259 claims. Where acts constituting direct infringement of the '259 Patent are not performed by ASUS, such acts constituting direct infringement of the '259 Patent are performed by ASUS's customers or end-users who act at the direction and/or control of ASUS, with ASUS's knowledge.

25. Atlas is informed and believes, and on that basis alleges, that ASUS indirectly infringes at least claim 1 of the '259 Patent by active inducement in violation of 35 U.S.C. § 271(b), by at least manufacturing, supplying, distributing, selling, and/or offering for sale the Accused Products to their customers with the knowledge and intent that use of those products would constitute direct infringement of the '259 Patent.

26. For example, ASUS advertises to its customers that it sells products that comply with the 802.11ax Standard. *See* <https://www.asus.com/us/Mobile/Phones/ZenFone/Zenfone-8/techspec/>. ASUS also instructs its customers on how to connect the Accused Products to Wi-Fi



networks so that they may practice the 802.11ax Standard. As an example, the “User Guide” of the Zenfone 8 assists users in connecting to a wireless network as part of the process for setting up the device. *See* <https://docs.ASUS.com/bundle/R550-QSG-800-72433-001-RevA/resource/R550-QSG-800-72433-001-RevA.pdf>. Once the Accused Products connect to a Wi-Fi network, they will automatically implement the 802.11ax Standard based upon the hardware and software provided in the Accused Products, if the WLAN network to which they connect supports the 802.11ax Standard.

27. ASUS’s acts of infringement have cause damage to Atlas, and Atlas is entitled to recover from ASUS (or any successor entity to ASUS) the damages sustained by Atlas as a result of ASUS’s wrongful acts in an amount subject to proof at trial.

## **SECOND COUNT**

### **(Infringement of U.S. Patent No. 9,825,738)**

28. Atlas incorporates by reference the allegations set forth in Paragraphs 1-27 of this Complaint as though fully set forth herein.

29. The ’738 Patent, entitled “Acknowledgement Method and Multi User Transmission Method,” was duly and lawfully issued on November 21, 2017. Atlas is the owner of all right, title, and interest in the ’738 Patent. The ’738 Patent was filed on April 3, 2015 as Application No. 14/678,724 and claims the benefit of U.S. Provisional Application No. 61/981,427, filed on April 18, 2014, and U.S. Provisional Application No. 61/975,622, filed on April 4, 2014. *See* <https://patentimages.storage.googleapis.com/b4/cb/6e/1969e989e11ae4/US9825738.pdf>.

30. The ’738 Patent is directed to improvements related to trigger frames, which are used to solicit and schedule simultaneous transmissions from multiple user devices on a wireless local area network. The concept of trigger frames to solicit and synchronize multi-user uplink

frames was first introduced into the wireless standard as part of 802.11ax, and Newracom was a key contributor to those concepts. The '738 Patent covers a method of operating a station device in a wireless network that supports both multi-user downlink transmissions and multi-user uplink transmissions. In the '738 invention embodied in Claim 9, the station device receives a physical downlink frame transmitted to a plurality of station devices as part of a downlink multi-user transmission. Included in the downlink multi-user frame is uplink setup information that is to be used by the stations when responding to the downlink multi-user frame. The setup information includes information that is common to the multiple stations joining in the uplink multi-user transmission. The setup information also includes dedicated information that is specific to each responding station. The common information includes information that is a function of a total number of space time streams to be used to perform the simultaneous transmission of the uplink frames by each of the stations participating in the uplink multi-user transmission. The station transmits an uplink frame to the access point in response to receiving the uplink setup information simultaneously with uplink frames from one or more other stations in the wireless network. After transmitting the uplink frame to the access point, the station receives an acknowledgement frame from the access point.

31. ASUS directly infringes the '738 Patent under 35 U.S.C. § 271(a) by making, using, selling, and/or offering to sell in the United States, and/or importing into the United States products that directly infringe the '738 Patent, including the above identified Accused Products. The Accused Products infringe at least claim 9 of the '738 Patent by practicing the 802.11ax Standard.

32. ASUS also indirectly infringes at least claim 9 of the '738 Patent. Where acts constituting direct infringement of the '738 Patent are not performed by ASUS, such acts

constituting direct infringement of the '738 Patent are performed by ASUS's customers or end-users who act at the direction and/or control of ASUS, with ASUS's knowledge.

33. Atlas is informed and believes, and on that basis alleges, that ASUS indirectly infringes at least claim 9 of the '738 Patent by active inducement in violation of 35 U.S.C. § 271(b), by at least manufacturing, supplying, distributing, selling, and/or offering for sale the Accused Products to their customers with the knowledge and intent that use of those products would constitute direct infringement of the '738 Patent.

34. For example, ASUS advertises to its customers that it sells products that comply with the 802.11ax Standard. *See* <https://www.asus.com/us/Mobile/Phones/ZenFone/Zenfone-8/techspec/>. ASUS also instructs its customers on how to connect the Accused Products to Wi-Fi networks so that they may practice the 802.11ax Standard. As an example, the "User Guide" of the Zenfone 8 assists users in connecting to a wireless network as part of the process for setting up the device. *See* <https://docs.ASUS.com/bundle/R550-QSG-800-72433-001-RevA/resource/R550-QSG-800-72433-001-RevA.pdf>. Once the Accused Products connect to a Wi-Fi network, they will automatically implement the 802.11ax Standard based upon the hardware and software provided in the Accused Products, if the WLAN network to which they connect supports the 802.11ax Standard.

35. ASUS's acts of infringement have cause damage to Atlas, and Atlas is entitled to recover from ASUS (or any successor entity to ASUS) the damages sustained by Atlas as a result of ASUS's wrongful acts in an amount subject to proof at trial.

**THIRD COUNT**

**(Infringement of U.S. Patent No. 9,848,442)**

36. Atlas incorporates by reference the allegations set forth in Paragraphs 1-35 of this Complaint as though fully set forth herein.

37. The '442 Patent, entitled "Method for Transmitting and Receiving Frame in Wireless Local Area Network," was duly and lawfully issued on December 19, 2017. Atlas is the owner of all right, title, and interest in the '442 Patent. The '442 Patent was filed on November 10, 2015 as Application No. 14/937,284 and claims the benefit of U.S. Provisional Application No. 62/077,771, filed on November 10, 2014. *See* <https://patentimages.storage.googleapis.com/7e/52/0f/569a3a08af772e/US9848442.pdf>.

38. The '442 Patent relates to setting a physical layer ("PHY") level network allocation vector ("NAV") when receiving a high-efficiency ("HE") physical layer protocol data unit ("PPDU") and setting a medium access control ("MAC") level NAV when receiving a legacy PPDU. The 802.11ax Standard provides criteria for determining whether a received PPDU originated from a basic service set ("BSS") to which the device belongs or originated from a BSS to which the device does not belong. According to the 802.11ax Standard, when a device receives an HE PPDU, the device will set a PHY-level virtual carrier sensing using duration information included in the PHY header of the PPDU. When a device receives a legacy PPDU, the device will set a MAC-level virtual carrier sensing using duration information included in the MAC header of the PPDU. Depending on the value of the virtual carrier sensing, the device will then attempt to obtain a transmission opportunity.

39. ASUS directly infringes the '442 Patent under 35 U.S.C. § 271(a) by making, using, selling, and/or offering to sell in the United States, and/or importing into the United States products

that directly infringe the '442 Patent, including the above identified Accused Products. The Accused Products infringe at least claim 8 of the '442 Patent by practicing the 802.11ax Standard.

40. In addition to directly infringing the '442 apparatus claims by making, selling and using infringing products in the United States, ASUS also indirectly infringes the '442 Patent claims. Where acts constituting direct infringement of the '442 Patent are not performed by ASUS, such acts constituting direct infringement of the '442 Patent are performed by ASUS's customers or end-users who act at the direction and/or control of ASUS, with ASUS's knowledge.

41. Atlas is informed and believes, and on that basis alleges, that ASUS indirectly infringes at least claim 8 of the '442 Patent by active inducement in violation of 35 U.S.C. § 271(b), by at least manufacturing, supplying, distributing, selling, and/or offering for sale the Accused Products to their customers with the knowledge and intent that use of those products would constitute direct infringement of the '442 Patent.

42. For example, ASUS advertises to its customers that it sells products that comply with the 802.11ax Standard. *See* <https://www.asus.com/us/Mobile/Phones/ZenFone/Zenfone-8/techspec/>. ASUS also instructs its customers on how to connect the Accused Products to Wi-Fi networks so that they may practice the 802.11ax Standard. As an example, the "User Guide" of the Zenfone 8 assists users in connecting to a wireless network as part of the process for setting up the device. *See* <https://docs.ASUS.com/bundle/R550-QSG-800-72433-001-RevA/resource/R550-QSG-800-72433-001-RevA.pdf>. Once the Accused Products connect to a Wi-Fi network, they will automatically implement the 802.11ax Standard based upon the hardware and software provided in the Accused Products, if the WLAN network to which they connect supports the 802.11ax Standard.

43. ASUS's acts of infringement have caused damage to Atlas, and Atlas is entitled to recover from ASUS (or any successor entity to ASUS) the damages sustained by Atlas as a result of ASUS's wrongful acts in an amount subject to proof at trial.

#### **FOURTH COUNT**

##### **(Infringement of U.S. Patent No. 9,912,513)**

44. Atlas incorporates by reference the allegations set forth in Paragraphs 1-43 of this Complaint as though fully set forth herein.

45. The '513 Patent, entitled "System and Method for Synchronization for OFDMA Transmission," was duly and lawfully issued on March 6, 2018. Atlas is the owner of all right, title, and interest in the '513 Patent. The '513 Patent was filed on July 6, 2016 as Application No. 15/203,717 as a continuation of Application No. 14/868,303, filed on September 28, 2015 (which resulted in U.S. Patent No. 9,413,581), and further claims the benefit of U.S. Provisional Application No. 62/061,503, filed on October 8, 2014. See <https://patentimages.storage.googleapis.com/13/74/f6/7f6ce09c401f49/US9912513.pdf>.

46. The '513 Patent generally relates to 802.11ax downlink ("DL") trigger frames sent by access points and received by stations that indicate the guard interval duration of the expected uplink ("UL") responsive frames sent by the stations. In MU OFDMA, stations may simultaneously transmit uplink frames where each field within an uplink frame includes: (1) a guard interval (sometimes referred to as a "cyclic prefix") and then (2) one or more symbols. But if the guard interval durations are not uniform amongst all the stations, the symbols will not be synchronized, and the access point may have greater difficulty correctly decoding the frames received from the stations. To ensure all the stations use the same guard interval duration, the

access point may transmit a trigger frame with information for a guard interval (“GI”) duration to be used for at least some symbols of a subsequent UL frame.

47. ASUS directly infringes the ’513 Patent under 35 U.S.C. § 271(a) by making, using, selling, and/or offering to sell in the United States, and/or importing into the United States products that directly infringe the ’513 Patent, including the above identified Accused Products. The Accused Products infringe at least claim 1 of the ’513 Patent by practicing the 802.11ax Standard.

48. In addition to directly infringing the ’513 apparatus claims by making, selling and using infringing products in the United States, ASUS also indirectly infringes the ’513 Patent claims. Where acts constituting direct infringement of the ’513 Patent are not performed by ASUS, such acts constituting direct infringement of the ’513 Patent are performed by ASUS’s customers or end-users who act at the direction and/or control of ASUS, with ASUS’s knowledge.

49. Atlas is informed and believes, and on that basis alleges, that ASUS indirectly infringes at least claim 1 of the ’513 Patent by active inducement in violation of 35 U.S.C. § 271(b), by at least manufacturing, supplying, distributing, selling, and/or offering for sale the Accused Products to their customers with the knowledge and intent that use of those products would constitute direct infringement of the ’513 Patent.

50. For example, ASUS advertises to its customers that it sells products that comply with the 802.11ax Standard. *See* <https://www.asus.com/us/Mobile/Phones/ZenFone/Zenfone-8/techspec/>. ASUS also instructs its customers on how to connect the Accused Products to Wi-Fi networks so that they may practice the 802.11ax Standard. As an example, the “User Guide” of the Zenfone 8 assists users in connecting to a wireless network as part of the process for setting up the device. *See* <https://docs.ASUS.com/bundle/R550-QSG-800-72433-001-RevA/resource/R550-QSG-800-72433-001-RevA.pdf>. Once the Accused Products connect to a Wi-Fi network, they will

automatically implement the 802.11ax Standard based upon the hardware and software provided in the Accused Products, if the WLAN network to which they connect supports the 802.11ax Standard.

51. ASUS's acts of infringement have caused damage to Atlas, and Atlas is entitled to recover from ASUS (or any successor entity to ASUS) the damages sustained by Atlas as a result of ASUS's wrongful acts in an amount subject to proof at trial.

### **FIFTH COUNT**

#### **(Infringement of U.S. Patent No. 9,917,679)**

52. Atlas incorporates by reference the allegations set forth in Paragraphs 1-51 of this Complaint as though fully set forth herein.

53. The '679 Patent, entitled "Method and Apparatus for Transmitting Response Frame Based on Type in a High Efficiency Wireless LAN," was duly and lawfully issued on March 13, 2018. Atlas is the owner of all right, title, and interest in the '679 Patent. The '679 Patent was filed on November 3, 2015 as Application No. 14/931,753 and claims the benefit of U.S. Provisional Application No. 62/080,026, filed on November 14, 2014, and U.S. Provisional Application No. 62/074,514, filed on November 3, 2014. *See* <https://patentimages.storage.googleapis.com/17/b5/81/214a1f0874d6c4/US9917679.pdf>.

54. The '679 Patent generally relates to 802.11ax responsive UL transmission. The 802.11ax station receives a downlink (DL) frame from an Access Point that identifies the type of UL frame for the station to provide as an Acknowledgement. The types may be either a single-user (SU) type or a multiple-user (MU) type frame. The station transmits to the AP an uplink frame of the type specified by the AP in the DL frame. If the UL frame corresponds to a MU type, a plurality of stations transmit the UL frame simultaneously.



55. ASUS directly infringes the '679 Patent under 35 U.S.C. § 271(a) by making, using, selling, and/or offering to sell in the United States, and/or importing into the United States products that directly infringe the '679 Patent, including the above identified Accused Products. The Accused Products infringe at least claim 1 of the '679 Patent by practicing the 802.11ax Standard.

56. ASUS also indirectly infringes the '679 Patent claims. Where acts constituting direct infringement of the '679 Patent are not performed by ASUS, such acts constituting direct infringement of the '679 Patent are performed by ASUS's customers or end-users who act at the direction and/or control of ASUS, with ASUS's knowledge.

57. Atlas is informed and believes, and on that basis alleges, that ASUS indirectly infringes at least claim 1 of the '679 Patent by active inducement in violation of 35 U.S.C. § 271(b), by at least manufacturing, supplying, distributing, selling, and/or offering for sale the Accused Products to their customers with the knowledge and intent that use of those products would constitute direct infringement of the '679 Patent.

58. For example, ASUS advertises to its customers that it sells products that comply with the 802.11ax Standard. *See* <https://www.asus.com/us/Mobile/Phones/ZenFone/Zenfone-8/techspec/>. ASUS also instructs its customers on how to connect the Accused Products to Wi-Fi networks so that they may practice the 802.11ax Standard. As an example, the "User Guide" of the Zenfone 8 assists users in connecting to a wireless network as part of the process for setting up the device. *See* <https://docs.ASUS.com/bundle/R550-QSG-800-72433-001-RevA/resource/R550-QSG-800-72433-001-RevA.pdf>. Once the Accused Products connect to a Wi-Fi network, they will automatically implement the 802.11ax Standard based upon the hardware and software provided

in the Accused Products, if the WLAN network to which they connect supports the 802.11ax Standard.

59. ASUS's acts of infringement have caused damage to Atlas, and Atlas is entitled to recover from ASUS (or any successor entity to ASUS) the damages sustained by Atlas as a result of ASUS's wrongful acts in an amount subject to proof at trial.

### **SIXTH COUNT**

#### **(Infringement of U.S. Patent No. 10,020,919)**

60. Atlas incorporates by reference the allegations set forth in Paragraphs 1-59 of this Complaint as though fully set forth herein.

61. The '919 Patent, entitled "Protection Methods for Wireless Transmissions," was duly and lawfully issued on July 10, 2018. Atlas is the owner of all right, title, and interest in the '919 Patent. The '919 Patent was filed on April 25, 2017 as Application No. 15/497,094 as a continuation of Application No. 15/291,947, filed on October 12, 2016 (which resulted in U.S. Patent No. 9,667,394), and further claims the benefit of U.S. Provisional Application No. 62/333,192, filed on May 7, 2016, U.S. Provisional Application No. 62/333,077, filed on May 6, 2016, U.S. Provisional Application No. 62/331,380, filed on May 3, 2016, and U.S. Provisional Application No. 62/240,419, filed on October 12, 2015. *See* <https://patentimages.storage.googleapis.com/c3/70/58/d1b5e3ee57d660/US10020919.pdf>.

62. The '919 Patent generally relates to an access point soliciting Channel State Information ("CSI") from one or more stations using a Null Data Packet Announcement (indicating which stations should send CSI) followed by a Null Data Packet, after which either a single station responds, or multiple stations wait for an indication they should respond (in response to a polling or trigger frame). The '919 Patent discloses a CSI feedback procedure, also known as

sounding procedure, consists of a transmission, by the beamformer (such as an AP), of a non-data packet announcement (NDPA) transmission followed by non-data packet (NDP). In response to the NDPA transmission and the NDP, a beamformee (such as a station) transmits CSI feedback to the beamformer. The '919 Patent teaches multiple procedures for providing CSI feedback, including: (1) a single user provides CSI feedback using a UL Single-User (SU) MIMO transmission, or (2) a plurality of users provide CSI feedback simultaneously using an UL MU transmission. The procedure used is indicated by a number of per-station information fields in the NDPA frame. The NDPA frame contains parameters for CSI feedback as well as list of STAs that are directed to participate in the CSI feedback process. Thus, the '919 Patent teaches a technique which supports UL MU transmission while avoiding the overhead of a trigger frame when only soliciting CSI information from a single station.

63. ASUS directly infringes the '919 Patent under 35 U.S.C. § 271(a) by making, using, selling, and/or offering to sell in the United States, and/or importing into the United States products that directly infringe the '919 Patent, including the above identified Accused Products. The Accused Products infringe at least claim 1 of the '919 Patent by practicing the 802.11ax Standard.

64. ASUS also indirectly infringes the '919 Patent claims. Where acts constituting direct infringement of the '919 Patent are not performed by ASUS, such acts constituting direct infringement of the '919 Patent are performed by ASUS's customers or end-users who act at the direction and/or control of ASUS, with ASUS's knowledge.

65. Atlas is informed and believes, and on that basis alleges, that ASUS indirectly infringes at least claim 1 of the '919 Patent by active inducement in violation of 35 U.S.C. § 271(b), by at least manufacturing, supplying, distributing, selling, and/or offering for sale the Accused

Products to their customers with the knowledge and intent that use of those products would constitute direct infringement of the '919 Patent.

66. For example, ASUS advertises to its customers that it sells products that comply with the 802.11ax Standard. *See* <https://www.asus.com/us/Mobile/Phones/ZenFone/Zenfone-8/techspec/>. ASUS also instructs its customers on how to connect the Accused Products to Wi-Fi networks so that they may practice the 802.11ax Standard. As an example, the "User Guide" of the Zenfone 8 assists users in connecting to a wireless network as part of the process for setting up the device. *See* <https://docs.ASUS.com/bundle/R550-QSG-800-72433-001-RevA/resource/R550-QSG-800-72433-001-RevA.pdf>. Once the Accused Products connect to a Wi-Fi network, they will automatically implement the 802.11ax Standard based upon the hardware and software provided in the Accused Products, if the WLAN network to which they connect supports the 802.11ax Standard.

67. ASUS's acts of infringement have cause damage to Atlas, and Atlas is entitled to recover from ASUS (or any successor entity to ASUS) the damages sustained by Atlas as a result of ASUS's wrongful acts in an amount subject to proof at trial.

### **SEVENTH COUNT**

#### **(Infringement of U.S. Patent No. 10,153,886)**

68. Atlas incorporates by reference the allegations set forth in Paragraphs 1-67 of this Complaint as though fully set forth herein.

69. The '886 Patent, entitled "Apparatus and Method for Downlink and Uplink Multi-User Transmissions," was duly and lawfully issued on December 11, 2018. Atlas is the owner of all right, title, and interest in the '886 Patent. The '886 Patent was filed on November 15, 2016 as Application No. 15/352,435 as a continuation of Application No. 15/078,920, filed on March 23,

2016 (which resulted in U.S. Patent No. 9,531,520), and further claims the benefit of U.S. Provisional Application No. 62/140,349, filed on March 30, 2015, and U.S. Provisional Application No. 62/137,138, filed on March 23, 2015. *See* <https://patentimages.storage.googleapis.com/a4/f0/b1/13636bb6f9836a/US10153886.pdf>.

70. The '886 Patent is directed to important improvements related to triggering mechanisms for soliciting and scheduling multi-user uplink transmissions that were first implemented in 802.11ax. As noted above, Newracom was a key contributor to the concepts and implementation details of triggering frames. The '886 Patent recites both method and apparatus claims directed to a receiving station device, in which the station receives a downlink frame from an access point and identifies scheduling information in the MAC header of the downlink frame that solicits an uplink response frame from the station. In response to receipt of the scheduling information in the MAC header of the downlink frame, the receiving device generates an uplink response that includes a single high efficiency long training (HE-LTF) field that consists of a single OFDM symbol and transmits the uplink response frame using the scheduling information provided in the downlink frame.

71. ASUS directly infringes the '886 Patent under 35 U.S.C. § 271(a) by making, using, selling, and/or offering to sell in the United States, and/or importing into the United States products that directly infringe the '886 Patent, including the above identified Accused Products. The Accused Products infringe at least claim 9 of the '886 Patent by practicing the 802.11ax Standard.

72. ASUS also indirectly infringes certain claims of the '886 Patent. Where acts constituting direct infringement of the '886 Patent are not performed by ASUS, such acts constituting direct infringement of the '886 Patent are performed by ASUS's customers or end-users who act at the direction and/or control of ASUS, with ASUS's knowledge.

73. Atlas is informed and believes, and on that basis alleges, that ASUS indirectly infringes at least claim 9 of the '886 Patent by active inducement in violation of 35 U.S.C. § 271(b), by at least manufacturing, supplying, distributing, selling, and/or offering for sale the Accused Products to their customers with the knowledge and intent that use of those products would constitute direct infringement of the '886 Patent.

74. For example, ASUS advertises to its customers that it sells products that comply with the 802.11ax Standard. *See* <https://www.asus.com/us/Mobile/Phones/ZenFone/Zenfone-8/techspec/>. ASUS also instructs its customers on how to connect the Accused Products to Wi-Fi networks so that they may practice the 802.11ax Standard. As an example, the "User Guide" of the Zenfone 8 assists users in connecting to a wireless network as part of the process for setting up the device. *See* <https://docs.ASUS.com/bundle/R550-QSG-800-72433-001-RevA/resource/R550-QSG-800-72433-001-RevA.pdf>. Once the Accused Products connect to a Wi-Fi network, they will automatically implement the 802.11ax Standard based upon the hardware and software provided in the Accused Products, if the WLAN network to which they connect supports the 802.11ax Standard.

75. ASUS's acts of infringement have cause damage to Atlas, and Atlas is entitled to recover from ASUS (or any successor entity to ASUS) the damages sustained by Atlas as a result of ASUS's wrongful acts in an amount subject to proof at trial.

### **EIGHTH COUNT**

#### **(Infringement of U.S. Patent No. 10,756,851)**

76. Atlas incorporates by reference the allegations set forth in Paragraphs 1-75 of this Complaint as though fully set forth herein.

77. The '851 Patent, entitled "Multiplexing Acknowledgment Messages in Response to Downlink Frames," was duly and lawfully issued on August 25, 2020. Atlas is the owner of all right, title, and interest in the '851 Patent. The '851 Patent was filed on November 28, 2018 as Application No. 16/203,501 as a continuation of Application No. 15/151,433, filed on May 10, 2016 (which resulted in U.S. Patent No. 10,181,930), and further claims the benefit of U.S. Provisional Application No. 62/193,305, filed on July 16, 2015, U.S. Provisional Application No. 62/191,623, filed on July 13, 2015, U.S. Provisional Application No. 62/160,527, filed on May 12, 2015, and U.S. Provisional Application No. 62/159,346, filed on May 10, 2015. *See* <https://patentimages.storage.googleapis.com/f0/f1/7d/15808407b884d4/US10756851.pdf>.

78. The '851 Patent generally relates to a wireless communication system in which a plurality of acknowledgement messages from multiple station devices are multiplexed and transmitted simultaneously in response to multi-user downlink frames. The multi-user downlink transmission includes a control extension in a control field that includes scheduling information used by a plurality of station devices for the multi-user uplink acknowledgement. More specifically, the control extension includes scheduling information for a trigger-based response.

79. ASUS directly infringes the '851 Patent under 35 U.S.C. § 271(a) by making, using, selling, and/or offering to sell in the United States, and/or importing into the United States products that directly infringe the '851 Patent, including the above identified Accused Products. The Accused Products infringe at least claim 1 of the '851 Patent by practicing the 802.11ax Standard.

80. ASUS also indirectly infringes the '851 Patent claims. Where acts constituting direct infringement of the '851 Patent are not performed by ASUS, such acts constituting direct infringement of the '851 Patent are performed by ASUS's customers or end-users who act at the direction and/or control of ASUS, with ASUS's knowledge.

81. Atlas is informed and believes, and on that basis alleges, that ASUS indirectly infringes at least claim 1 of the '851 Patent by active inducement in violation of 35 U.S.C. § 271(b), by at least manufacturing, supplying, distributing, selling, and/or offering for sale the Accused Products to their customers with the knowledge and intent that use of those products would constitute direct infringement of the '851 Patent.

82. For example, ASUS advertises to its customers that it sells products that comply with the 802.11ax Standard. *See* <https://www.asus.com/us/Mobile/Phones/ZenFone/Zenfone-8/techspec/>. ASUS also instructs its customers on how to connect the Accused Products to Wi-Fi networks so that they may practice the 802.11ax Standard. As an example, the "User Guide" of the Zenfone 8 assists users in connecting to a wireless network as part of the process for setting up the device. *See* <https://docs.ASUS.com/bundle/R550-QSG-800-72433-001-RevA/resource/R550-QSG-800-72433-001-RevA.pdf>. Once the Accused Products connect to a Wi-Fi network, they will automatically implement the 802.11ax Standard based upon the hardware and software provided in the Accused Products, if the WLAN network to which they connect supports the 802.11ax Standard.

83. ASUS's acts of infringement have cause damage to Atlas, and Atlas is entitled to recover from ASUS (or any successor entity to ASUS) the damages sustained by Atlas as a result of ASUS's wrongful acts in an amount subject to proof at trial.

#### **PRAYER FOR RELIEF**

WHEREFORE, Plaintiff prays for judgment and seeks relief against ASUS as follows:

(a) For judgment that U.S. Patent Nos. '259, '738, '442, '513, '679, '919, '886, and '851 have been and continue to be infringed by ASUS;



- (b) For an accounting of all damages sustained by Plaintiff as the result of ASUS's acts of infringement;
- (c) For finding that ASUS's infringement is willful and enhancing damages pursuant to 35 U.S.C. § 284;
- (d) For a mandatory future royalty payable on each and every future sale by ASUS of a product that is found to infringe one or more of the Asserted Patents and on all future products that are not colorably different from products found to infringe;
- (e) For an award of attorneys' fees pursuant to 35 U.S.C. § 285 or otherwise permitted by law;
- (f) For all costs of suit; and
- (g) For such other and further compensatory relief as the Court may deem just and proper.

**DEMAND FOR JURY TRIAL**

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure and Local Rule CV-38, Plaintiff demands a trial by jury of this action.

Dated: September 28, 2021

Respectfully submitted,

/s/ Max L. Tribble, Jr.

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