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

IOT INNOVATIONS LLC,

Plaintiff,

v.

TP-LINK LIANZHOU CO., LTD. (f/k/a TP-LINK TECHNOLOGIES CO., LTD.)

and

TP-LINK CORPORATION LTD. (upon information and belief, f/k/a TP-LINK INTERNATIONAL LTD.),

and

TP-LINK INTERNATIONAL LTD. (to the extent it still exists).

Defendants.

Civil Action No. 2:23-cv-00453

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff IoT Innovations LLC (hereinafter, "IoT Innovations" or "Plaintiff") files this Complaint for Patent Infringement against Defendants TP-Link Lianzhou Co., Ltd. (f/k/a TP-Link Technologies Co., Ltd.), TP-Link Corporation Ltd. (upon information and belief, f/k/a TP-Link International Ltd.), and TP-Link International Ltd. (to the extent it still exists) (collectively, hereinafter, "TP-Link" or "Defendants") alleging, based on its own knowledge as to itself and its own actions, and based on information and belief as to all other matters, as follows:

NATURE OF THE ACTION

1. This is a patent infringement action to stop TP-Link's infringement of the following United States Patents (collectively, the "Asserted Patents") issued by the United States Patent and Trademark Office ("USPTO"):

	U.S. Patent No.	Title	
A.	7,280,830 (the "'830 patent")	Automatic Registration Services Provided Through A Home Relationship Established Between A Device And A Local Area Network	https://patentcenter.uspto.gov/applications/10859735 https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/7280830
В.	7,593,428 (the "'428 patent")	Apparatus, And Associated Method, For Forming, And Operating Upon, Multiple- Checksum-Protected Data Packet	https://patentcenter.uspto.gov/applications/11621545 https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/7593428
C.	7,567,580 (the "'580 patent")	Edge Side Assembler	https://patentcenter.uspto.gov/applications/11787977 https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/7567580
D.	8,972,576 (the "'576 patent")	Establishing A Home Relationship Between A Wireless Device And A Server In A Wireless Network	https://patentcenter.uspto.gov/applications/10833381 https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/8972576
E.	7,474,667 (the "'667 patent")	Multi-Path Gateway Communications Device	https://patentcenter.uspto.gov/applications/11879576 https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/7474667
F.	8,085,796 (the "'796 patent")	Methods, Systems, And Products For Virtual Personalized Networks	https://patentcenter.uspto.gov/a pplications/12126137 https://image- ppubs.uspto.gov/dirsearch- public/print/downloadPdf/8085 796

	U.S. Patent No.	Title	
G.	7,379,464 (the "'464 patent")	Personal Digital Gateway	https://patentcenter.uspto.gov/a pplications/10306504
			https://image- ppubs.uspto.gov/dirsearch- public/print/downloadPdf/7379 464

2. IoT Innovations seeks injunctive relief and monetary damages.

PARTIES

- 3. IoT Innovations is a limited liability company formed under the laws of Texas with a registered office address located in Austin, Texas (Travis County).
- 4. On information and belief, defendant TP-Link Lianzhou Co., Ltd. (upon information and belief, f/k/a TP-Link Technologies Co., Ltd.) ("TP-Link Technologies") is a multi-national private limited company organized under the laws of the People's Republic of China ("PRC" or "China") with its principal place of business at South Building 5 Keyuan Road, Central Zone Science & Technology Park, Nanshan, Shenzhen, PRC, 518057. On information and belief, TP-Link Technologies is a related entity of TP-Link Corporation and TP-Link International (to the extent it still exists).
- 5. On information and belief, defendant TP-Link Corporation Ltd. (upon information and belief, f/k/a TP-Link International Ltd.) ("TP-Link Corporation") is a private limited company organized under the laws of Hong Kong with its principal place of business at Suite 901, New East Ocean Centre, Tsim Sha Tsui, Hong Kong, China. On information and belief, TP-Link Corporation is a related entity of TP-Link Technology.
- 6. On information and belief, defendant TP-Link International Ltd. ("TP-Link International") is or was a private limited company organized under the laws of Hong Kong with its principal place of business located at Room 901-902,9/F, New East Ocean Centre, 9 Science

Museum Road, Tsim Sha Tsui, Kwun Tong, KL, Hong Kong, China, 518057. TP-Link International and TP-Link Corporation are believed to share the same corporate office in Hong Kong, and in fact, upon information and belief, International may have been renamed to TP-Link Corporation. On information and belief, TP-Link International is a related entity of TP-Link Technologies and TP-Link Corporation.

7. TP-Link Technologies, TP-Link Corporation, and TP-Link International (to the extent it still exists, and if does not, with respect to its past activities) are referred to collectively as "TP-Link" or "Defendants," and on information and belief, have acted in concert with respect to the facts alleged herein such that any act of one is attributable to any and all of the others and vice versa.

JURISDICTION AND VENUE

- 8. IoT Innovations repeats and re-alleges the allegations in Paragraphs above as though fully set forth in their entirety.
- 9. This is an action for infringement of a United States patent arising under 35 U.S.C. §§ 271, 281, and 284–85, among others. This Court has subject matter jurisdiction of the action under 28 U.S.C. § 1331 and § 1338(a).
- 10. Venue is proper in this District pursuant to 28 U.S.C. § 1391 because, among other things, TP-Link is not a resident of the United States, and thus may be sued in any judicial district, including this one, pursuant to 28 U.S.C. § 1391(c)(3). *See also In re HTC Corporation*, 889 F.3d 1349, 1357 (Fed. Cir. 2018) ("The Court's recent decision in TC Heartland does not alter" the alien-venue rule.).
- 11. TP-Link is subject to this Court's specific and general personal jurisdiction under due process because of TP-Link's substantial business in this District, in the State of Texas, and in the

United States, including: (i) at least a portion of the infringements alleged herein; and (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct, or deriving substantial revenue from goods and services provided to individuals in this state, in this District, and in the United States.

- 12. Specifically, TP-Link intends to do and does business in, has committed acts of infringement in, and continues to commit acts of infringement in this District, in this State of Texas, and in the United States, directly, through intermediaries, by contributing to and through inducement of third parties, and offers its products or services, including those accused of infringement here, to customers and potential customers located in this state, including in this District, and in the United States.
- 13. TP-Link has purposefully directed infringing activities at residents of the State of Texas, and this litigation results from those infringing activities. TP-Link regularly sells (either directly or indirectly), its products within this District. For example, TP-Link has placed and continues to place the Accused 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 District and the State of Texas. TP-Link is subject to this Court's specific and/or general personal jurisdiction pursuant to due process and/or the Texas Long Arm Statute, due to its substantial and pervasive business in this State and District, including its infringing activities alleged herein, from which TP-Link derives substantial revenue from goods sold to Texas residents and consumers.
- 14. TP-Link offers products and services and conducts business in this District as described below.
 - 15. TP-Link ships and causes to be shipped into the District infringing products and

materials instructing its customers to perform infringing activities to its employees, exclusive and non-exclusive contractors, agents, and affiliates for installation, operation, and service at locations within this District.

- 16. TP-Link commits acts of infringement from this District, including, but not limited to, use of the Accused Products and inducement of third parties to use the Accused Products in an infringing manner.
- 17. TP-Link USA Corporation is an agent of the Defendants and a California corporation with a mailing address at 10 Mauchly, Irvine, CA 92618.

A. Personal Jurisdiction of TP-Link Technologies

18. Upon information and belief, TP-Link Technologies is subject to this Court's specific and general personal jurisdiction pursuant to due process and/or the Texas Long Arm Statute, based on its substantial business activities conducted in the State of Texas and this District, including: (1) its infringing activities, as alleged herein, by which TP-Link Technologies purposefully avails itself of the privilege of conducting its business activities in this State and this District and, thus, submits itself to the jurisdiction of this Court; and (2) regularly doing or soliciting business, engaging in other persistent conduct targeting residents of Texas and this District, and/or deriving substantial revenue from infringing goods offered for sale, sold, and imported to and targeting Texas residents and residents of this District vicariously through and/or in concert with its alter egos, intermediaries, agents, distributors, importers, customers, subsidiaries, and/or consumers. See Where to Buy, TP-Link, https://www.tp-link.com/us/where-to-buy/ (last visited Sept. 28, 2023). Such a presence furthers the development, design, manufacture, importation, distribution, sale, and use (including by inducement) of Accused Products in Texas, including in this District. For example, TP-Link Technologies is also the applicant for FCC

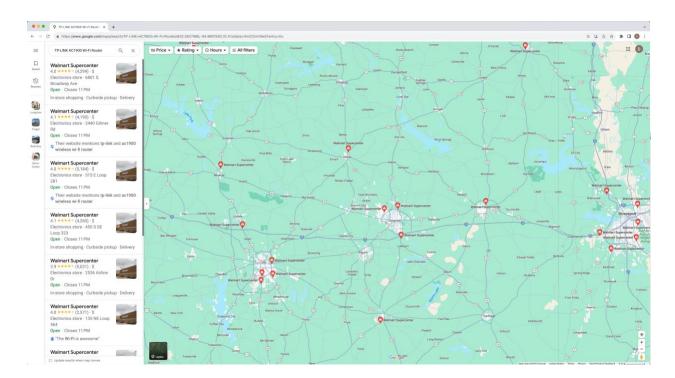
registrations for the sale and use of TP-Link Accused Products in the U.S., including being identified on labels as the manufacturing party. See, e.g., External Photo, FCCID.IO, https://fccid.io/TE7SR20/External-Photos/External-Photos-3187339.pdf (providing a copy of the labels for TP-Link model no. AC1900 TP-Link Smart Home Router with Touch Screen SR20); Label Location, FCCID.IO, https://fccid.io/TE7HS210V3/Label/HS210-label-and-location-4887177.pdf (providing a copy of the label for TP-Link model no. HS210 Kasa Smart Wi-Fi Light Switch, 3-Way); Label Location, FCCID.IO, https://fccid.io/TE7HS200V5/Label/HS200-labeland-location-4888665.pdf (providing a copy of the label for TP-Link model no. HS200 Kasa Smart Wi-Fi FCCID.IO, Light Switch, Singe Pole); also Label Location, see https://fccid.io/2AXJ4H100/Label/4-Label-and-location-5394498.pdf (providing a copy of the label for TP-Link model no. Tapo H100 Tapo Smart IoT HUB); Label Location, FCCID.IO, https://fccid.io/2AXJ4P105/Label/4-Label-and-location-6060817.pdf (providing a copy of the label for TP-Link model no. P105 Tapo Mini Smart Wi-Fi Plug); Label Location, FCCID.IO, https://fccid.io/2AXJ4T100/Label/4-Label-and-location-5806914.pdf (providing a copy of the label for TP-Link model no. T100 Tapo Smart Motion Sensor).

19. This Court has personal jurisdiction over TP-Link Technologies, directly and/or through the activities of TP-Link Technologies' intermediaries, agents, related entities, distributors, importers, customers, subsidiaries, and/or consumers, including through the activities of Defendants TP-Link Corporation and TP-Link International. Through direction and control of these various entities, TP-Link Technologies has committed acts of direct and/or indirect patent infringement within Texas, and elsewhere within the United States, giving rise to this action and/or has established minimum contacts with Texas such that personal jurisdiction over TP-Link Technologies would not offend traditional notions of fair play and substantial justice.

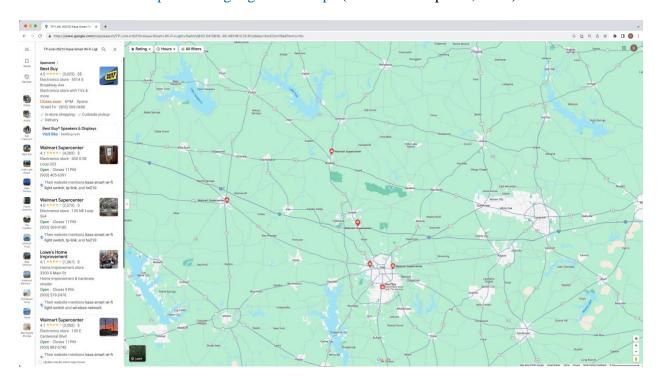
- 20. Upon information and belief, TP-Link Technologies controls or otherwise directs and authorizes all activities of its subsidiaries and related entities, including, but not limited to Defendant TP-Link Corporation, TP-Link International, and U.S.-based TP-Link USA. Directly via its agents in the U.S. and via at least distribution partners, retailers (including national retailers), reseller partners, solution partners, brand ambassadors, and other service providers, TP-Link Technologies has placed and continues to place infringing TP-Link Products into the U.S. stream of commerce. For example, import records show that TP-Link Technologies delivers TP-Link Products to TP-Link USA in the U.S. See, e.g., Supply Chain Intelligence, PANJIVA, Tp Link Technologies Co., Ltd., https://panjiva.com/Tp-Link-Technologies-Co-Ltd/27804596 (showing at least two shipments to "TP Link USA Corporation" in January of 2021 consisting of, for example, "Kasa smart bulb" and other networking products). TP-Link Technologies has placed such products into the stream of commerce with the knowledge and understanding that such products are, will be, and continue to be sold, offered for sale, and/or imported into this judicial district and the State of Texas. See Litecubes, LLC v. Northern Light Products, Inc., 523 F.3d 1353, 1369-70 (Fed. Cir. 2008) ("[T]he sale [for purposes of § 271] occurred at the location of the buyer."); see also Semcon IP Inc. v. Kyocera Corporation, No. 2:18-cv-00197-JRG, 2019 WL 1979930, at *3 (E.D. Tex. May 3, 2019) (denying accused infringer's motion to dismiss because plaintiff sufficiently plead that purchases of infringing products outside of the United States for importation into and sales to end users in the U.S. may constitute an offer to sell under § 271(a)).
- 21. Upon information and belief, TP-Link Technologies controls or otherwise directs and authorizes the activities of its related entities, including Defendants TP-Link Corporation and TP-Link International, directly via its agents and distribution partners, retailers (including national retailers), reseller partners, solution partners, brand ambassadors, and other service providers in

the U.S., TP-Link Technologies has placed and continues to place infringing products into the U.S. stream of commerce, including but not limited to the Accused Products. TP-Link Technologies has placed such products into the stream of commerce with the knowledge and understanding that such products are, will be, and continue to be sold, offered for sale, and/or imported into this District and the State of Texas. *See Litecubes*, *LLC*, 523 F.3d at 1369-70 ("[T]he sale [for purposes of § 271] occurred at the location of the buyer."); *see also Semcon IP Inc.*, No. 2:18-cv-00197-JRG, 2019 WL 1979930, at *3 (purchases of infringing products outside of the United States for importation into and sales to end users in the U.S. may constitute an offer to sell under § 271(a)).

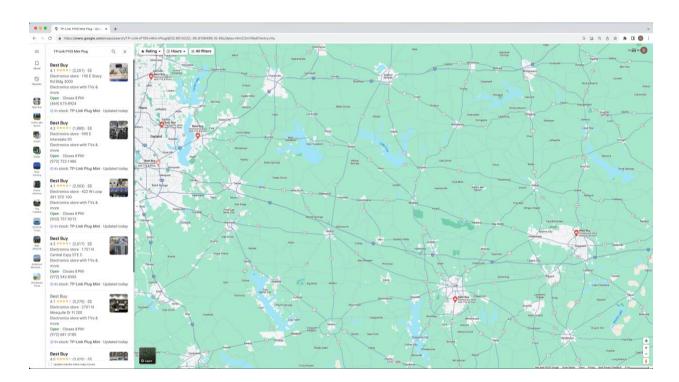
22. TP-Link Technologies utilizes established distribution channels to distribute, market, offer for sale, sell, service, and warrant infringing products directly to consumers and other users in the U.S., including providing links via its website to online stores, retailers, resellers, distributors, and solution partners offering such products and related services for sale. *See Where to Buy*, TP-Link, https://www.tp-link.com/us/where-to-buy/ (last visited Sept. 28, 2023). Such TP-Link Accused Products have been sold in retail stores, both brick-and-mortar and online, within this District and in Texas, including well-known and widely used retailers, such as Amazon.com, Target, Office Depot, Office Max, Walmart, Sam's Club, BestBuy, Sears, QVC, Micro Center, Costco, and Lowe's. For example, certain of the Accused Products are available for purchase at various retail stores in this District, including the Walmart Supercenter store locations in Marshall, Longview, and Tyler:



<u>FIG.1</u>: Google Maps search of locations with AC1900 Wi-Fi Router, GOOGLE MAPS, https://www.google.com/maps (last visited Sept. 28, 2023).

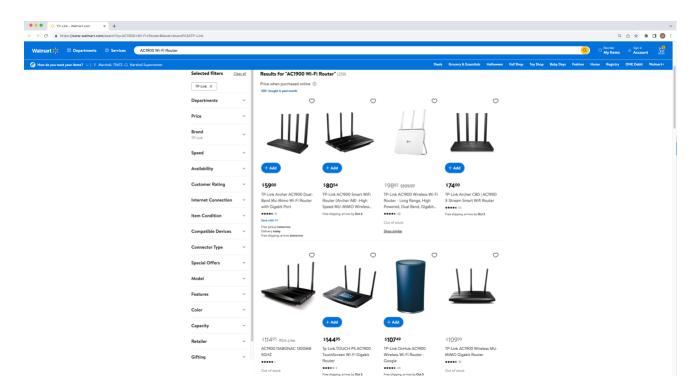


<u>FIG. 2</u>: Google Maps search of locations with TP-Link HS210 Kasa Smart Wi-Fi Light Switch, GOOGLE MAPS, https://www.google.com/maps (last visited Sept. 28, 2023).

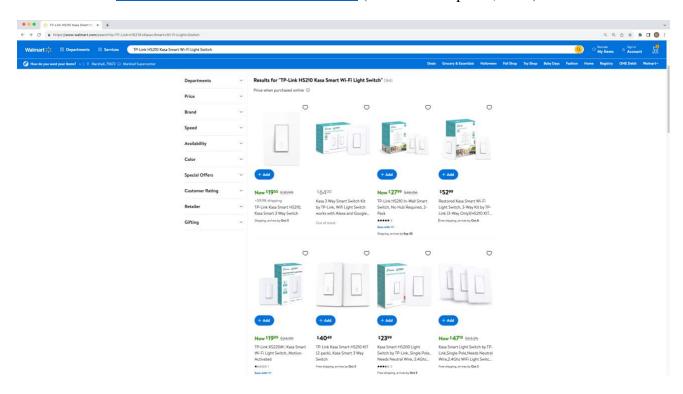


<u>FIG. 3</u>: Google Maps search of locations with TP-Link P105 Mini Plug, GOOGLE MAPS, https://www.google.com/maps (last visited Sept. 28, 2023).

23. Walmart sells many Accused Products, including the AC1900 Wi-Fi Router, TP-Link TOUCH P5 AC1900 TouchScreen Wi-Fi Gigabit Router, and the TP-Link Archer C80Q | AC1900 3-Stream Smart Wi-Fi Router; and the TP-Link HS210 Kasa Smart Wi-Fi Light Switch and HS200 Kasa Smart Wi-Fi Light Switch, at its store in Marshall:

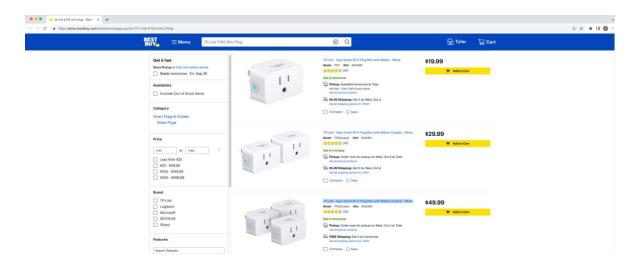


<u>FIG. 4</u>: WALMART, <u>https://www.walmart.com/search?q=AC1900+Wi-Fi+Router&facet=brand%3ATP-Link</u> (last visited Sept. 28, 2023).



<u>FIG. 5</u>: WALMART, <u>https://www.walmart.com/search?q=TP-Link+HS210+Kasa+Smart+Wi-Fi+Light+Switch</u> (last visited Sept. 28, 2023).

24. Best Buy sells many Accused Products, including the TP-Link Tapo Smart Wi-Fi Mini Plug, at its store in Tyler:



<u>FIG. 6</u>: BEST BUY, https://www.bestbuy.com/site/searchpage.jsp?st=TP-Link+P105+Mini+Plug (last visited Sept. 28, 2023).

- 25. Based on TP-Link Technologies connections and relationship with these national retailers and digital distribution platforms, TP-Link Technologies knows that Texas is a termination point of its established distribution channels, including the online and brick and mortar stores offering TP-Link Accused Products to users in Texas. TP-Link Technologies, therefore, has purposefully directed its activities at Texas, and should reasonably anticipate being brought in this Court, at least on this basis. *See Icon Health & Fitness, Inc. v. Horizon Fitness, Inc.*, 2009 WL 1025467, at (E.D. Tex. 2009) ("[a]s a result of contracting to manufacture products for sale in" national retailers' stores, the defendant "could have expected that it could be brought into court in the states where [the national retailers] are located").
- 26. Upon information and belief, TP-Link Technologies, alone and in concert with related entities Defendant TP-Link Corporation and Defendant TP-Link International, manufactures and purposefully places infringing TP-Link Accused Products in established distribution channels in

the stream of commerce, including in Texas, via distributors and reseller partners, such at least those listed on TP-Link's website. For example, TP-Link Technologies imports to Texas or through a related entity and directly sells and offers for sale infringing TP-Link Accused Products in Texas to distributor CDW Corporation ("CDW"), which has a distribution location at 5908 Headquarters Dr., Suite 200, Plano, TX 75024, which is in this District. See Locations, CDW, https://www.cdw.com/content/cdw/en/locations.html. CDW offers infringing TP-Link Accused Products for sale on its website, including for example the TP-Link TP-Link Kasa Smart Light Bulb KL125 and the TP-Link Archer C7 AC1750 Router. See e.g., TP-Link, CDW, https://www.cdw.com/product/tp-link-kasa-smart-kl125-new-kasa-smart-bulbmulticolor/7099178?pfm=rvi#TS (listing TP-Link Technologies Co. Ltd. as Manufactuer of the TP-Link Kasa Smart Bulb); TP-Link, CDW, https://www.cdw.com/product/tp-link-archer-c7- ac1750-wireless-router/3427520?pfm=rvi (listing TP-Link Technologies Co. Ltd. as Manufactuer of the TP-Link Archer C7 AC1750 Router); TP-Link, CDW, https://www.cdw.com/product/tplink-kasa-cam-outdoor-2k-hd-wi-fi-security-camera/6940100 (listing TP-Link Technologies Co. Ltd. as Manufactuer of TP-Link Kasa Smart Cam). Via this website, TP-Link Accused Products are offered for sale to consumers in the State of Texas.

27. These suppliers and distributors import, advertise, offer for sale and sell TP-Link Accused Products via their own websites to U.S. consumers, including to consumers in Texas. Based on TP-Link Technologies' connections and relationships, including supply contracts and other agreements with the U.S. and Texas-based distributors and suppliers, such as at least CDW, TP-Link Technologies knows and has known that Texas is a termination point of the established distribution channels for infringing TP-Link Accused Products. TP-Link Technologies, alone and in concert with related entities Defendant TP-Link Corporation and Defendant TP-Link

International has purposefully directed its activities at Texas, and should reasonably anticipate being brought in this Court, at least on this basis. *See Ultravision Technologies, LLC v. Holophane Europe Limited*, 2020 WL 3493626, at *5 (E.D. Tex. 2020) (finding sufficient to make a prima facie showing of personal jurisdiction allegations that "Defendants either import the products to Texas themselves or through a related entity"); *see also Bench Walk Lighting LLC v. LG Innotek Co., Ltd et al.*, Civil Action No. 20-51-RGA, 2021 WL 65071, at *7-8 (D. Del., Jan. 7, 2021) (denying motion to dismiss for lack of personal jurisdiction based on the foreign defendant entering into supply contract with U.S. distributor and the distributor sold and shipped defendant's products from the U.S. to a customer in the forum state).

28. In the alternative, this Court has personal jurisdiction over TP-Link Technologies under Federal Rule of Civil Procedure 4(k)(2), because the claims for patent infringement in this action arise under federal law; TP-Link Technologies is not subject to the jurisdiction of the courts of general jurisdiction of any state; and exercising jurisdiction over TP-Link Technologies is consistent with the U.S. Constitution.

B. Personal Jurisdiction of TP-Link Corporation

29. Upon information and belief, Defendant TP-Link Corporation is subject to this Court's specific and general personal jurisdiction pursuant to due process and/or the Texas Long Arm Statute, due to its substantial business in this State and this District, including: (1) its infringing activities alleged herein, which purposefully avail the Defendant of the privilege of conducting those activities in this State and this District and, thus, Defendant submits itself to the jurisdiction of this Court; and (2) regularly doing or soliciting business, engaging in other persistent conduct targeting residents of Texas and this District, and/or deriving substantial revenue from infringing Accused Products offered for sale, sold, and imported to and targeting Texas residents and

residents of this District vicariously through and/or in concert with its partners, alter egos, intermediaries, agents, distributors, importers, customers, subsidiaries, and/or consumers. For example, TP-Link Corporation and related entities Defendant TP-Link Technologies and Defendant TP-Link International manufacture, import, distribute, offer for sale, sell, and induce infringing use of Accused Products to distribution partners, retailers (including national retailers), reseller partners, solution partners, brand ambassadors, service providers, consumers, and other users.

30. This Court has personal jurisdiction over TP-Link Corporation, directly and/or indirectly via the activities of TP-Link Corporation's intermediaries, agents, related entities, distributors, importers, customers, subsidiaries, and/or consumers, including related entities Defendant TP- Link Technologies, and Defendant TP-Link International. Alone and in concert with or via direction and control of at least these entities, TP-Link Corporation has committed acts of direct and/or indirect patent infringement within Texas, and elsewhere within the United States, giving rise to this action and/or has established minimum contacts with Texas. For example, TP-Link Corporation is at least a related entity with TP-Link Technologies and TP-Link International in a global network of sales and distribution of TP-Link Accused Products that includes retail stores and distributors operating in Texas, including this District. See Choose Your Location, TP-LINK, https://www.tp-link.com/us/choose-your-location/ (last visited Sept. 28, 2023). TP-Link Corporation directly and via direction and control of or by its related entities participates in the manufacture, shipping, importing and distribution of TP-Link Accused Products to the U.S. For example, TP-Link Corporation is the applicant for FCC registrations for the sale and use of TP-Link Accused Products in the U.S., including being identified on labels as the manufacturing party. See, e.g., Label Location, FCCID.IO, https://fccid.io/2AXJ4C720/Label/13-Label-and-location6270201.pdf (providing a copy of the label for TP-Link model no. C720 Tapo Smart Floodlight Camera Label Diagram); Label Location, FCCID.IO, https://fccid.io/2AXJ4T315/Label/Labeland-Label-location-6344372.pdf (providing a copy of the label for TP-Link model no. T315 Tapo Smart **Temperature** & Humidity Monitor); Label Location, FCCID.IO, https://fccid.io/2AXJ4H200/Label/13-Label-and-location-6134967.pdf (providing a copy of the label for TP-Link model no. H200 Tapo Smart Hub); Label Location, FCCID.IO, https://fccid.io/2AXJ4H100/Label/4-Label-and-location-5394498.pdf (providing a copy of the label for TP-Link model no. Tapo H100 Tapo Smart IoT HUB); Label Location, FCCID.IO, https://fccid.io/2AXJ4P105/Label/4-Label-and-location-6060817.pdf (providing a copy of the label for TP-Link model no. P105 Tapo Mini Smart Wi-Fi Plug); Label Location, FCCID.IO, https://fccid.io/2AXJ4D230/Label/Label-and-Label-location-6440238.pdf (providing a copy of the label for TP-Link model no. Tapo Video Doorbell Camera); Label Location, FCCID.IO, https://fccid.io/2AXJ4D100C/Label/label-and-label-location-6491367.pdf (providing a copy of the label for TP-Link model no. Tapo Doorbell Chime).

31. As a part of TP-Link's global manufacturing and distribution network, TP-Link Corporation also purposefully places infringing TP-Link Accused Products in established distribution channels in the stream of commerce, including in Texas, via distribution partners, retailers (including national retailers), reseller partners, solution partners, brand ambassadors, service providers, consumers, and other users. For example, TP-Link Corporation provides tp-link.com, which directs users to purchase in the infringing products. *See TP-Link Privacy Policy*, TP-LINK, https://www.tp-link.com/us/about-us/privacy/ (indicating TP-Link Corporation Ltd. provides TP-Link branded hardware, firmware, and software and the TP-Link website); *see e.g.*, Smart Plugs, TP-LINK, https://www.tp-link.com/us/home-networking/smart-plug/tapo-p105/

(directing users to "Buy Now") (last visited Sept. 28, 2023); *Smart Sensors*, TP-LINK, https://www.tp-link.com/us/smart-home/smart-sensor/tapo-t315/ (directing users to "Buy Now"); *Smart Hub*, TP-LINK, https://www.tp-link.com/us/home-networking/smart-hub/tapo-h100/; (last visited Sept. 28, 2023); *see also* Therefore, TP-Link Corporation, alone and in concert with related entities Defendant TP-Link Technologies and Defendant TP-Link International has purposefully directed its activities at Texas, and should reasonably anticipate being named as a defendant in this Court on this basis.

- 32. TP-Link Corporation also recruits "TP-Link Brand Ambassadors" via a "Power User" program; these Brand Ambassadors are consumers and users of TP-Link Accused Products that are recruited in the U.S. based on their social media presence and amount of use of TP-Link Accused Products. *See TP-Link Brand Ambassador Program*, TP-Link, https://www.tp-link.com/us/brandambassador/ (last visited Sept. 28, 2023). These brand ambassadors (also known as "influencers") are compensated for promoting TP-Link Accused Products on social media and participating in marketing campaigns to raise awareness of TP-Link Accused Products and their respective brands, which, ultimately, increases sales.
- 33. TP-Link Technologies utilizes established distribution channels to distribute, market, offer for sale, sell, service, and warrant infringing products directly to consumers and other users in the U.S., including providing links via its website to online stores, retailers, resellers, distributors, and solution partners offering such products and related services for sale. *See Where to Buy*, TP-LINK, https://www.tp-link.com/us/where-to-buy/ (last visited Sept. 28, 2023). Such TP-Link Accused Products have been sold in retail stores, both brick-and-mortar and online, within this District and in Texas, including well-known and widely used retailers, such as Amazon.com, Target, Office Depot, Office Max, Walmart, Sam's Club, BestBuy, Sears, QVC, Micro Center,

Costco, and Lowe's. For example, certain of the Accused Products are available for purchase at various retail stores in this District, including the Walmart Supercenter store locations in Marshall, Longview, and Tyler. *See* FIGs. 1–3 (*supra*).

- 34. Walmart sells many Accused Products, including the AC1900 Wi-Fi Router, TP-Link TOUCH P5 AC1900 TouchScreen Wi-Fi Gigabit Router, and the TP-Link Archer C80Q | AC1900 3-Stream Smart Wi-Fi Router; and the TP-Link HS210 Kasa Smart Wi-Fi Light Switch and HS200 Kasa Smart Wi-Fi Light Switch, at its store in Marshall. *See* FIG. 4 and FIG. 5 (*supra*). Best Buy sells many Accused Products, including the TP-Link Tapo Smart Wi-Fi Mini Plug, at its store in Tyler. *See* FIG. 6 (*supra*).
- TP-Link Corporation also provides application software ("apps"), such as the "TP-35. Link Tapo," "TP-Link Kasa Smart," "TP-Link tpCamera," "tpPLC," "tpMiFi," and "Wi-Fi Toolkit" apps for download and use in conjunction with and as a part of the wireless communication network that connects the Accused Products and other network devices. These apps are available via digital distribution platforms for download by users and execution on See, Corporation smartphone devices. TP-Link Limited, GOOGLE e.g., PLAY, https://play.google.com/store/apps/developer?id=TP-Link+Corporation+Limited visited Sept. 28, 2023) (offering the TP-Link apps for download and indicating that the applications are offered by "TP-Link Corporation Limited").
- 36. This Court has personal jurisdiction over TP-Link Corporation, directly and/or through the activities of TP-Link Corporation's intermediaries, agents, related entities, distributors, importers, customers, subsidiaries, and/or consumers, including through the activities of Defendant TP-Link Technologies, and TP-Link International. Through its own conduct and through direction and control of these entities or operating under the control of these other

Defendants, TP-Link Corporation has committed acts of direct and/or indirect patent infringement within Texas, and elsewhere within the United States, giving rise to this action and/or has established minimum contacts with Texas such that personal jurisdiction over TP-Link Corporation would not offend traditional notions of fair play and substantial justice.

37. In the alternative, the Court has personal jurisdiction over TP-Link Corporation under Federal Rule of Civil Procedure 4(k)(2), because the claims for patent infringement in this action arise under federal law; TP-Link Corporation is not subject to the jurisdiction of the courts of general jurisdiction of any state; and exercising jurisdiction over TP-Link Corporation is consistent with the U.S. Constitution.

C. Person Jurisdiction of TP-Link International

38. Upon information and belief, Defendant TP-Link International is subject to this Court's specific and general personal jurisdiction pursuant to due process and/or the Texas Long Arm Statute, due to its substantial business in this State and this District, including: (1) its infringing activities alleged herein, which purposefully avail the Defendant of the privilege of conducting those activities in this State and this District and, thus, submits itself to the jurisdiction of this Court; and (2) regularly doing or soliciting business, engaging in other persistent conduct targeting residents of Texas and this District, and/or deriving substantial revenue from infringing goods offered for sale, sold, and imported and services provided to and targeting Texas residents and residents of this District vicariously through and/or in concert with its partners, alter egos, intermediaries, agents, distributors, importers, customers, subsidiaries, and/or consumers. For example, TP-Link International and related entities Defendant TP-Link Technologies and Defendant TP-Link Corporation manufacture, import, distribute, offer for sale, sell, and induce infringing use of TP-Link Accused Products to distribution partners, retailers (including national

retailers), reseller partners, solution partners, brand ambassadors, service providers, consumers, and other users.

- 39. This Court has personal jurisdiction over TP-Link International, directly and/or indirectly, via the activities of TP-Link International's intermediaries, agents, related entities, distributors, importers, customers, subsidiaries, and/or consumers, including related entities Defendant TP-Link Technologies and Defendant TP-Link Corporation. Alone and in concert with, or via direction and control of, at least these entities, TP-Link International has committed acts of direct and/or indirect patent infringement within Texas, and elsewhere within the United States, giving rise to this action and/or has established minimum contacts with Texas. TP-Link International also directly and via direction and control of or by its related entities participates in the manufacture, shipping, importing and distribution of TP-Link Accused Products to the U.S. As a part of TP-Link's global manufacturing and distribution network, TP-Link International also purposefully places infringing TP-Link Accused Products in established distribution channels in the stream of commerce, including in Texas, via distribution partners, retailers (including national retailers), reseller partners, solution partners, brand ambassadors, service providers, consumers, and other users. For example, TP-Link International owns the TP-Link trademarks found on the accused products. See https://tmsearch.uspto.gov/bin/gate.exe?f=doc&state=4803:h4pa68.3.10 (last visited Sept. 28, 2023). Therefore, TP-Link International, alone and in concert with related entities Defendant TP-Link Technologies and Defendant TP-Link Corporation, has purposefully directed its activities at Texas, and should reasonably anticipate being brought in this Court, at least on this basis.
- 40. TP-Link Technologies utilizes established distribution channels to distribute, market, offer for sale, sell, service, and warrant infringing products directly to consumers and other users

in the U.S., including providing links via its website to online stores, retailers, resellers, distributors, and solution partners offering such products and related services for sale. *See Where to Buy*, TP-Link, https://www.tp-link.com/us/where-to-buy/ (last visited Sept. 28, 2023). Such TP-Link Accused Products have been sold in retail stores, both brick-and-mortar and online, within this District and in Texas, including well-known and widely used retailers, such as Amazon.com, Target, Office Depot, Office Max, Walmart, Sam's Club, BestBuy, Sears, QVC, Micro Center, Costco, and Lowe's. For example, certain of the Accused Products are available for purchase at various retail stores in this District, including the Walmart Supercenter store locations in Marshall, Longview, and Tyler. *See FIGs.* 1–3 (*supra*).

- 41. Walmart sells many Accused Products, including the AC1900 Wi-Fi Router, TP-Link TOUCH P5 AC1900 TouchScreen Wi-Fi Gigabit Router, and the TP-Link Archer C80Q | AC1900 3-Stream Smart Wi-Fi Router; and the TP-Link HS210 Kasa Smart Wi-Fi Light Switch and HS200 Kasa Smart Wi-Fi Light Switch, at its store in Marshall. *See* FIG. 4 and FIG. 5 (*supra*). Best Buy sells many Accused Products, including the TP-Link Tapo Smart Wi-Fi Mini Plug, at its store in Tyler. *See* FIG. 6 (*supra*).
- 42. This Court has personal jurisdiction over TP-Link International, directly and/or through the activities of TP-Link International's intermediaries, agents, related entities, distributors, importers, customers, subsidiaries, and/or consumers, including through the activities of Defendant TP-Link Technologies and TP-Link Corporation. Through its own conduct and through direction and control of these entities or control by other Defendants, TP-Link International has committed acts of direct and/or indirect patent infringement within Texas, and elsewhere within the United States, giving rise to this action and/or has established minimum contacts with Texas such that personal jurisdiction over TP-Link International would not offend

traditional notions of fair play and substantial justice.

- 43. In the alternative, the Court has personal jurisdiction over TP-Link International under Federal Rule of Civil Procedure 4(k)(2), because the claims for patent infringement in this action arise under federal law; TP-Link International is not subject to the jurisdiction of the courts of general jurisdiction of any state; and exercising jurisdiction over TP-Link International is consistent with the U.S. Constitution.
- 44. On information and belief, Defendants TP-Link Technologies, TP-Link Corporation, and TP-Link International each have significant ties to, and presence in, the State of Texas and the Eastern District of Texas, making venue in this District both proper and convenient for this action.

THE ACCUSED PRODUCTS

- 45. IoT Innovations repeats and re-alleges the allegations in Paragraphs above as though fully set forth in their entirety.
- 46. Based upon public information, TP-Link owns, operates, advertises, and/or controls the website and domain www.tp-link.com, through which it advertises, sells, offers to sell, provides and/or educates customers about their products and services.
- 47. TP-Link uses, causes to be used, sells, offers for sale, provides, supplies, or distributes its home security platform and systems, including but not limited those marketed as TP-Link, which include, at least, TP-Link's Tapo Smart Home and/or Smart Home products, including without litigations, TP-Link Tapo and/or Kasa Smart IoT HUBs (including but not limited to the Tapo H100 and/or Tapo Smart Hub with Chime), TP-Link Kasa and/or Tapo Wi-Fi Smart Home Devices (including but not limited to the Tapo Smart Wi-Fi Plugs, Tapo Smart Wi-Fi Lightbulbs, Smart Sensors, and Smart Light Switches), TP-Link Tapo and/or Kasa Smart Home Routers (including but not limited to the SR20 Smart Home Router and AC1900 Wi-Fi Router + Touch

Screen), the TP-Link Tapo and/or Kasa Smart Home WiFi Cameras (including but not limited to the Tapo Smart Home WiFi Camera C200 C210 TC70), the TP-Link Smart Home Mobile Apps (including but not limited to the TP-Link Tapo App and the TP-Link Kasa App),¹ the TP-Link Server(s), and TP-Link's encryption technologies and its cellular and Wi-Fi capabilities, and their associated hardware and software and functionalities (the "Accused Products").²

- 48. TP-Link also instructs its customers, agents, employees, and affiliates regarding how to use the Accused Products for infringing purposes, including for the smart home functionality provided by the same. *See, e.g.*, TP-LINK, *How to Pair and Connect Tapo Sensors, Buttons and Other Devices to Tapo Hub*, https://www.tapo.com/us/faq/155/ (last visited Sept. 28, 2023); *User Guide*, TP-LINK, *Smart Home Router (SR20) AC1900 Wi-Fi Router + Smart Home Hub + Touch Screen*, https://static.tp-link.com/1910012101_SR20(EU)&(US)_V1_UserGuide.pdf (last visited Sept. 28, 2023).
- 49. The Accused Products are made outside the United States of America and then are imported into the United States, distributed, and sold to end-users via the Internet and via distribution partners, retailers, reseller partners, and solution partners. *See Where to Buy*, TP-LINK, https://www.tp-link.com/us/where-to-buy/ (last visited Sept. 28, 2023). Those sales occur in the United States, and throughout Texas, including in this District.
- 50. For these reasons and the additional reasons detailed below, the Accused Products practice at least one claim of each of the Asserted Patents.

¹ *TP-Link Corporation Ltd.*, GOOGLE PLAY, https://play.google.com/store/apps/developer?id=TP-Link+Corporation+Limited (last visited Sept. 28, 2023) (offering the TP-Link apps for download and indicating that the applications are offered by "TP-Link Corporation Limited").

² See infra List of Supporting Links, 29–49.

COUNT I: INFRINGEMENT OF U.S. PATENT NO. 7,280,830

- 51. Plaintiff repeats and re-alleges the allegations in the Paragraphs above as though fully set forth in their entirety.
- 52. The USPTO duly issued U.S. Patent No. 7,280,830 (hereinafter, the "'830 patent") on October 9, 2007 after full and fair examination of Application No. 10/859,735 which was filed on June 2, 2004. *See* '830 patent at p. 1.
- 53. IoT Innovations owns all substantial rights, interest, and title in and to the '830 patent, including the sole and exclusive right to prosecute this action and enforce the '830 patent against infringers and to collect damages for all relevant times.
- 54. The claims of the '830 patent are not directed to an abstract idea and are not limited to well-understood, routine, or conventional activity. Rather, the claimed inventions include inventive components that improve upon the function and operation of automatic registration of a new device through the establishment of a home relationship with a network server.
- 55. The written description of the '830 patent describes in technical detail each limitation of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.
- 56. TP-Link has directly infringed one or more claims of the '830 patent by using, providing, supplying, or distributing the Accused Products.
- 57. TP-Link has directly infringed, either literally or under the doctrine of equivalents, at least claim 1 of the '830 patent.
 - 58. For example, TP-Link, using the Accused Products and their associated hardware and

software and functionalities, performs a method for automatic registration of a new wireless device with a registration server, comprising: establishing a home relationship between the new wireless device and a network server, such that no additional configuration is required by a user of the new device to communicate over a network once the relationship is established, wherein establishing a home relationship includes, determining at the network server, that the wireless device is an owned device, wherein the owned device is previously known to the network server; automatically obtaining registration information for the new device; establishing a connection between a registration server and the network server; and sending the registration information from the network server to the registration server. See, e.g., Smart Hub, TP-LINK, https://www.tplink.com/us/home-networking/smart-hub/tapo-h100/ (last visited Sept. 28, 2023); Datasheet, TP-LINK, Tapo H100 Smart IoT Hub with Chime, https://static.tp-link.com/upload/productoverview/2022/202208/20220808/Tapo%20H100(US)1.0 Datasheet.pdf; see also YouTube, https://www.youtube.com/watch?v=21r2cPu12Ls (last visited Sept. 28, 2023); see also TP-Link Privacy Policy, TP-LINK, https://www.tp-link.com/us/about-us/privacy/; see also YouTube, https://www.youtube.com/watch?v=At4rjWpldjE (last accessed Sept. 18, 2023).

59. Since at least the time of receiving the original complaint in this action, TP-Link has also indirectly infringed the '830 patent by inducing others to directly infringe the '830 patent. TP-Link has induced end-users, including, but not limited to, TP-Link's employees, partners, or contractors, to directly infringe, either literally or under the doctrine of equivalents, the '830 patent by providing or requiring use of the Accused Products. TP-Link took active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Products in a manner that infringes one or more claims of the '830 patent, including, for example, claim 1 of the '830 patent. Such steps by TP-Link included, among other things, advising

or directing personnel, contractors, or end-users to use the Accused Products in an infringing manner; advertising and promoting the use of the Accused Products in an infringing manner; or distributing instructions that guide users to use the Accused Products in an infringing manner. TP-Link is performing these steps, which constitute induced infringement with the knowledge of the '830 patent and with the knowledge that the induced acts constitute infringement. TP-Link is aware that the normal and customary use of the Accused Products by others would infringe the '830 patent. TP-Link's inducement is ongoing. *See, e.g.*, TP-LINK, *How to Pair and Connect Tapo Sensors, Buttons and Other Devices to Tapo Hub*, https://www.tapo.com/us/faq/155/ (last visited Sept. 28, 2023).

- 60. Since at least the time of receiving the original complaint in this action, TP-Link has also indirectly infringed by contributing to the infringement of the '830 patent. TP-Link has contributed to the direct infringement of the '830 patent by their personnel, contractors, and customers. The Accused Products have special features that are specially designed to be used in an infringing way and that have no substantial uses other than ones that infringe one or more claims of the '830 patent, including, for example, claim 1 of the '830 patent. The special features constitute a material part of the invention of one or more of the claims of the '830 patent and are not staple articles of commerce suitable for substantial non-infringing use. TP-Link's contributory infringement is ongoing. See, e.g., TP-LINK, How to Pair and Connect Tapo Sensors, Buttons and Other Devices to Tapo Hub, https://www.tapo.com/us/faq/155/ (last visited Sept. 28, 2023).
- 61. TP-Link had knowledge of the '830 patent at least as of the date when they were notified of the filing of the original complaint in this action.
- 62. Furthermore, on information and belief, TP-Link has a policy or practice of not reviewing the patents of others, including instructing its employees to not review the patents of

others, and thus have been willfully blind of IoT Innovations' patent rights.

- 63. TP-Link's actions are at least objectively reckless as to the risk of infringing a valid patent and this objective risk was either known or should have been known by TP-Link.
- 64. TP-Link's direct infringement of one or more claims of the '830 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of IoT Innovations' rights under the patent.
- 65. IoT Innovations or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of one or more claims of the '830 patent.
- 66. IoT Innovations has been damaged as a result of the infringing conduct by TP-Link alleged above. Thus, TP-Link is liable to IoT Innovations in an amount that compensates it for such 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.
- 67. IoT Innovations has suffered irreparable harm, through its loss of market share and goodwill, for which there is no adequate remedy at law. IoT Innovations has and will continue to suffer this harm by virtue of TP-Link's infringement of the '830 patent. TP-Link's actions have interfered with and will interfere with IoT Innovations' ability to license technology. The balance of hardships favors IoT Innovations' ability to commercialize its own ideas and technology. The public interest in allowing IoT Innovations to enforce its right to exclude outweighs other public interests, which supports injunctive relief in this case.

COUNT II: INFRINGEMENT OF U.S. PATENT NO. 7,593,428

68. IoT Innovations repeats and re-alleges the allegations in the Paragraphs above as though fully set forth in their entirety.

- 69. The USPTO duly issued U.S. Patent No. 7,593,428 (hereinafter, the "'428 patent") on September 22, 2009, after full and fair examination of Application No. 11/621,545 which was filed on January 9, 2007. *See* '428 patent at p. 1.
- 70. IoT Innovations owns all substantial rights, interest, and title in and to the '428 patent, including the sole and exclusive right to prosecute this action and enforce it against infringers and to collect damages for all relevant times.
- 71. The claims of the '428 patent are not directed to an abstract idea and are not limited to well-understood, routine, or conventional activity. Rather, the claimed inventions include inventive components and functionalities that improve electronic communications by providing a for the detection and discarding of corrupted data in a data packet using additional checksums.
- 72. The written description of the '428 patent describes in technical detail each limitation of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.
- 73. TP-Link has directly infringed one or more claims of the '428 patent by making, using, selling, offering to sell, providing, supplying, or distributing the Accused Products.
- 74. TP-Link has directly infringed, either literally or under the doctrine of equivalents, at least claim 14 of the '428 patent.
- 75. For example, TP-Link, using the Accused Products and their associated hardware and software and functionalities, performs a method comprising receiving data from a data source at a transceiver station; and in response to programmed instructions in processing circuitry at the transceiver station; selecting a first portion of the data to be protected by a first checksum and

selecting a second portion of the data to be protected by a second checksum; performing a first checksum calculation upon the selected first portion and performing at least a second checksum calculation upon the selected second portion; and formatting the data into a packet-formatted data packet, wherein the packet-formatted data packet comprises the selected first portion, indicia associated with the first checksum calculation, the selected second portion, and indicia associated with the second checksum calculation. See, e.g., Smart Hub, TP-LINK, https://www.tplink.com/us/home-networking/smart-hub/tapo-h100/ (last visited Sept. 28, 2023); Specifications, TP-LINK, https://www.tapo.com/us/product/smart-hub/tapo-h100/#tapo-product-spec; Datasheet, TP-LINK, Tapo H100 Smart IoT Hub with Chime, https://static.tp-link.com/upload/productoverview/2022/202208/20220808/Tapo%20H100(US)1.0_Datasheet.pdf; Internal see also Photos, FCCID.IO, https://fccid.io/2AXJ4H100/Internal-Photos/7-Internal-Photos-6247137.pdf; https://fccid.io/2AXJ4H100/Test-Report/9-Antenna-Antenna Specifications, FCCID.IO. Specification-rev2-6247142.pdf.

- 76. IoT Innovations or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of one or more claims of the '428 patent.
- 77. IoT Innovations has been damaged as a result of the infringing conduct by TP-Link alleged above. Thus, TP-Link is liable to IoT Innovations in an amount that compensates it for such 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.

COUNT III: INFRINGEMENT OF U.S. PATENT NO. 7,567,580

78. IoT Innovations repeats and re-alleges the allegations in the Paragraphs above as though fully set forth in their entirety.

- 79. The USPTO duly issued U.S. Patent No. 7,567,580 (hereinafter, the "'580 patent") on July 28, 2009 after full and fair examination of Application No. 11/787,977 which was filed on April 18, 2007. *See* '580 patent at p. 1.
- 80. IoT Innovations owns all substantial rights, interest, and title in and to the '580 patent, including the sole and exclusive right to prosecute this action and enforce the '580 patent against infringers and to collect damages for all relevant times.
- 81. The claims of the '580 patent are not directed to an abstract idea and are not limited to well-understood, routine, or conventional activity. Rather, the claimed inventions include inventive components that improve upon the function, operation, and security of communications devices by sharing of personalized information by providing communications infrastructures to support and capitalize on the different communications devices of the user to provide up-to-date personalized information through a digital gateway.
- 82. The written description of the '580 patent describes in technical detail each limitation of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.
- 83. TP-Link has directly infringed one or more claims of the '580 patent by making, using, selling, offering to sell, providing, supplying, or distributing the Accused Products.
- 84. TP-Link has directly infringed, either literally or under the doctrine of equivalents, at least claim 1 of the '580 patent.
- 85. For example, TP-Link, using the Accused Products and their associated hardware and software and functionalities, performs a method, comprising: identifying data associated with a

common user of a personal digital gateway and of a communications device selected from a plurality of communications devices; locating remote data stored the selected communications device; querying to retrieve the remote data; integrating the data and the remote data; formatting the integrated data according to a presentation format associated with the selected communications device; and communicating the formatted, integrated data to at least one of the plurality of communications devices. *See*, *e.g.*, *Press News*, TP-LINK, *TP-Link® Powers the Home with All-in-one Smart Home Router and New Line of Connected Devices* (Jan. 6, 2016), https://www.tp-link.com/us/home-networking/smart-home-router/sr20/; *see also* YouTube, https://www.youtube.com/watch?v=otzCbJxnHUo (last visited Sept. 28, 2023).

- 86. IoT Innovations or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of one or more claims of the '580 patent.
- 87. IoT Innovations has been damaged as a result of the infringing conduct by TP-Link alleged above. Thus, TP-Link is liable to IoT Innovations in an amount that compensates it for such 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.

COUNT IV: INFRINGEMENT OF U.S. PATENT NO. 8,972,576

- 88. IoT Innovations repeats and re-alleges the allegations in the Paragraphs above as though fully set forth in their entirety.
- 89. The USPTO duly issued U.S. Patent No. 8,972,576 (hereinafter, the "'576 patent") on March 3, 2015 after full and fair examination of Application No. 10/833,381 which was filed on April 28, 2004. *See* '576 patent at p. 1.

- 90. IoT Innovations owns all substantial rights, interest, and title in and to the '576 patent, including the sole and exclusive right to prosecute this action and enforce it against infringers and to collect damages for all relevant times.
- 91. The claims of the '576 patent are not directed to an abstract idea and are not limited to well-understood, routine, or conventional activity. Rather, the claimed inventions include inventive components and functionalities that improve upon the function, operation, and security communications devices and networks by employing an improved network protocol that enables the establishment of a known, persistent relationship between a mobile wireless device and a wireless network that allows the device to communicate over the network absent further configuration once the relationship has been established.
- 92. The written description of the '576 patent describes in technical detail each limitation of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.
- 93. TP-Link has directly infringed and continues to directly infringe one or more claims of the '576 patent by making, using, selling, offering to sell, providing, supplying, or distributing the Accused Products. For instance, TP-Link has directly infringed and continues to directly infringe, either literally or under the doctrine of equivalents, at least claim 1 of the '576 patent.
- 94. As an example, TP-Link, using the Accused Products and their associated hardware and software and functionalities, performs a method for establishing a relationship between a mobile device and a server in a network, comprising; (a) detecting the presence of the mobile device; (b) in response to determining that the mobile device is unrecognized, automatically

notifying a network administrator; (c) in response to receiving authorization from the network administrator to establish the relationship, requesting authorization from the mobile device to authorize the establishment of the relationship; and (d) establishing the relationship between the mobile device and the network in response to receiving the authorization from the mobile device, such that no additional configuration is required by the mobile device to communicate over the network once the relationship has been established. *See, e.g., Smart Hub*, TP-LINK, https://www.tp-link.com/us/home-networking/smart-hub/tapo-h100/ (last visited Sept. 28, 2023); Datasheet, TP-LINK, Tapo H100 Smart IoT Hub with Chime, https://static.tp-link.com/upload/product-

overview/2022/202208/20220808/Tapo%20H100(US)1.0_Datasheet.pdf; see also YouTube, https://www.youtube.com/watch?v=21r2cPu12Ls (last visited Sept. 28, 2023).

95. Since at least the time of receiving the original complaint in this action, TP-Link has also indirectly infringed one or more claims of the '576 patent by inducing others to directly infringe said claims. TP-Link has induced end-users, including, but not limited to, TP-Link's employees, partners, or contractors, to directly infringe, either literally or under the doctrine of equivalents, the '576 patent by providing or requiring use of the Accused Products. TP-Link took active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Products in a manner that infringes one or more claims of the '576 patent, including, for example, claim 1. Such steps by TP-Link included, among other things, advising or directing personnel, contractors, or end-users to use the Accused Products in an infringing manner; advertising and promoting the use of the Accused Products in an infringing manner. TP-Link is performing these steps, which constitute induced infringement with the

knowledge of the '576 patent and with the knowledge that the induced acts constitute infringement. TP-Link is aware that the normal and customary use of the Accused Products by others would infringe the '576 patent. TP-Link's inducement is ongoing. *See, e.g.*, TP-LINK, *How to Pair and Connect Tapo Sensors, Buttons and Other Devices to Tapo Hub*, https://www.tapo.com/us/faq/155/ (last visited Sept. 28, 2023).

- 96. Since at least the time of receiving the original complaint in this action, TP-Link has also indirectly infringed by contributing to the infringement of the '576 patent. TP-Link has contributed to the direct infringement of the '576 patent by their personnel, contractors, and customers. The Accused Products have special features that are specially designed to be used in an infringing way and that have no substantial uses other than ones that infringe one or more claims of the '576 patent, including, for example, claim 1. The special features constitute a material part of the invention of one or more of the claims of the '576 patent and are not staple articles of commerce suitable for substantial non-infringing use. TP-Link's contributory infringement is ongoing. See, e.g., TP-LINK, How to Pair and Connect Tapo Sensors, Buttons and Other Devices to Tapo Hub, https://www.tapo.com/us/fag/155/ (last visited Sept. 28, 2023).
- 97. TP-Link had knowledge of the '576 patent at least as of the date when they were notified of the filing of the original complaint in this action.
- 98. Furthermore, on information and belief, TP-Link has a policy or practice of not reviewing the patents of others, including instructing its employees to not review the patents of others, and thus have been willfully blind of IoT Innovations' patent rights.
- 99. TP-Link's actions are at least objectively reckless as to the risk of infringing a valid patent and this objective risk was either known or should have been known by TP-Link.
 - 100. IoT Innovations or its predecessors-in-interest have satisfied all statutory obligations

required to collect pre-filing damages for the full period allowed by law for infringement of one or more claims of the '576 patent.

- 101. IoT Innovations has been damaged as a result of the infringing conduct by TP-Link alleged above. Thus, TP-Link is liable to IoT Innovations in an amount that compensates it for such 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.
- 102. IoT Innovations has suffered irreparable harm, through its loss of market share and goodwill, for which there is no adequate remedy at law. IoT Innovations has and will continue to suffer this harm by virtue of TP-Link's infringement of the '576 patent. TP-Link's actions have interfered with and will interfere with IoT Innovations' ability to license technology. The balance of hardships favors IoT Innovations' ability to commercialize its own ideas and technology. The public interest in allowing IoT Innovations to enforce its right to exclude outweighs other public interests, which supports injunctive relief in this case.

COUNT V: INFRINGEMENT OF U.S. PATENT NO. 7,474,667

- 103. Plaintiff repeats and re-alleges the allegations in the Paragraphs above as though fully set forth in their entirety.
- 104. The USPTO duly issued U.S. Patent No. 7,474,667 (hereinafter, the "'667 patent") on January 6, 2009 after full and fair examination of Application No. 11/879,576 which was filed on July 18, 2007. *See* '667 patent at p. 1. A Certificate of Correction was issued on January 1, 2013. *See id.* at p. 18.
- 105. IoT Innovations owns all substantial rights, interest, and title in and to the '667 patent, including the sole and exclusive right to prosecute this action and enforce it against infringers and to collect damages for all relevant times.

- 106. The claims of the '667 patent are not directed to an abstract idea and are not limited to well-understood, routine, or conventional activity. Rather, the claimed inventions include inventive components and functionalities that improve upon the function, operation, and security of communications devices.
- 107. The written description of the '667 patent describes in technical detail each limitation of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.
- 108. TP-Link has directly infringed one or more claims of the '667 patent by using, providing, supplying, or distributing the Accused Products.
- 109. TP-Link has directly infringed, either literally or under the doctrine of equivalents, at least claim 1 of the '667 patent.
- 110. For example, TP-Link, using the Accused Products and associated hardware and software and functionalities, performs a method for receiving a selection of a communications device from a plurality of communications devices associated with a common user, receiving the data associated with the selected communications device, accessing a database of rule-based profiles comprising configuration and presentation parameters for the plurality of communications devices, querying the database of rule-based profiles for the selected communications device, retrieving a profile associated with the selected communications device, integrating the data into the profile; and communicating the integrated data and the profile to the selected communications device. See, e.g., Datasheet, TP-LINK, Tapo H100 Smart IoT Hub with Chime, https://static.tp-link.com/upload/product-

overview/2022/202208/20220808/Tapo%20H100(US)1.0 Datasheet.pdf; Smart Plugs, TP-LINK, https://www.tp-link.com/us/home-networking/smart-plug/tapo-p105/ (last visited Sept. 28, 2023); P105 Datasheet, TP-LINK, Tapo Mini Smart Wi-Fi Plug, https://static.tplink.com/2020/202008/20200819/Tapo%20P105(US)1.0_Datasheet.pdf; User Guide, TP-LINK, Tapo Smart Wi-Fi Light Bulb Tapo L510/L530 Series, https://static.tplink.com/upload/manual/2023/202303/20230331/1910013377 Tapo%20L510&L530 UG V1.p df; see also YouTube, https://www.youtube.com/watch?v=Mbzdlxxn3cw (last visited Sept. 28, 2023); YOUTUBE, https://www.youtube.com/watch?v=ozBOifbkqGk (last visited Sept. 28, 2023).

- 111. IoT Innovations or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of one or more claims of the '667 patent.
- 112. IoT Innovations has been damaged as a result of the infringing conduct by TP-Link alleged above. Thus, TP-Link is liable to IoT Innovations in an amount that compensates it for such 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.

COUNT VI: INFRINGEMENT OF U.S. PATENT NO. 8,085,796

- 113. Plaintiff repeats and re-alleges the allegations in the Paragraphs above as though fully set forth in their entirety.
- 114. The USPTO duly issued U.S. Patent No. 8,085,796 (hereinafter, the "'796 patent") on December 27, 2011 after full and fair examination of Application No. 12/126,137 which was filed on May 23, 2008. *See* '796 patent at p. 1.
- 115. IoT Innovations owns all substantial rights, interest, and title in and to the '796 patent, including the sole and exclusive right to prosecute this action and enforce it against infringers and

to collect damages for all relevant times.

- 116. The claims of the '796 patent are not directed to an abstract idea and are not limited to well-understood, routine, or conventional activity. Rather, the claimed inventions include inventive components that improve upon the function, operation, and security of communications devices by sharing of personalized information by providing communications infrastructures to support and capitalize on the different communications devices of the user to provide up-to-date personalized information through a digital gateway.
- 117. The written description of the '796 patent describes in technical detail each limitation of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.
- 118. TP-Link has directly infringed one or more claims of the '796 patent by using, providing, supplying, or distributing the Accused Products.
- 119. TP-Link has directly infringed, either literally or under the doctrine of equivalents, at least claim 1 of the '796 patent.
- 120. For example, TP-Link, using the Accused Products and their associated hardware and software and functionalities, performs a method for selecting a selected communications device from a plurality of communications devices associated with a user, receiving data for communication between a personal digital gateway and the selected communications device, storing profiles for each of the plurality of communications devices, retrieving a profile associated with the selected communications device, interpreting the data for communication according to a rule-based engine, processing the data for communication according to an edge side assembler,

and sending the data for communication and the profile from the personal digital gateway to the selected communications device. *See, e.g., SR20 Kasa Smart Home Router*, TP-LINK, https://www.tp-link.com/us/home-networking/smart-home-router/sr20/; *Datasheet*, TP-LINK, Smart Home Hub + Touch Screen, https://static.tp-link.com/SR20(EU&US) V1_Datasheet.pdf, *Press News*, TP-LINK, *TP-Link® Powers the Home with All-in-one Smart Home Router and New Line of Connected Devices* (Jan. 6, 2016), https://www.tp-link.com/us/press/news/16334/ (last visited Sept. 28, 2023); *see also* YOUTUBE, https://www.youtube.com/watch?v=otzCbJxnHUo (last visited Sept. 28, 2023).

121. Since at least the time of receiving the original complaint in this action, TP-Link has also indirectly infringed one or more claims of the '796 patent by inducing others to directly infringe said claims. TP-Link has induced end-users, including, but not limited to, TP-Link's employees, partners, or contractors, to directly infringe, either literally or under the doctrine of equivalents, the '796 patent by providing or requiring use of the Accused Products. TP-Link took active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Products in a manner that infringes one or more claims of the '796 patent, including, for example, claim 1 of the '796 patent. Such steps by TP-Link included, among other things, advising or directing personnel, contractors, or end-users to use the Accused Products in an infringing manner; advertising and promoting the use of the Accused Products in an infringing manner; or distributing instructions that guide users to use the Accused Products in an infringing manner. TP-Link is performing these steps, which constitute induced infringement with the knowledge of the '796 patent and with the knowledge that the induced acts constitute infringement. TP-Link is aware that the normal and customary use of the Accused Products by others would infringe the '796 patent. TP-Link's inducement is ongoing. See, e.g., User Guide,

TP-Link, Smart Home Router (SR20) AC1900 Wi-Fi Router + Smart Home Hub + Touch Screen, https://static.tp-link.com/1910012101_SR20(EU)&(US)_V1_UserGuide.pdf.

- 122. Since at least the time of receiving the original complaint in this action, TP-Link has also indirectly infringed by contributing to the infringement of the '796 patent. TP-Link has contributed to the direct infringement of the '796 patent by their personnel, contractors, and customers. The Accused Products have special features that are specially designed to be used in an infringing way and that have no substantial uses other than ones that infringe one or more claims of the '796 patent, including, for example, claim 1 of the '796 patent. The special features constitute a material part of the invention of one or more of the claims of the '796 patent and are not staple articles of commerce suitable for substantial non-infringing use. TP-Link's contributory infringement is ongoing. See, e.g., User Guide, TP-LINK, Smart Home Router (SR20) AC1900 Wi-Fi Router Smart Home HubTouch Screen, https://static.tplink.com/1910012101 SR20(EU)&(US) V1 UserGuide.pdf.
- 123. TP-Link had knowledge of the '796 patent at least as of the date when they were notified of the filing of the original complaint in this action.
- 124. Furthermore, on information and belief, TP-Link has a policy or practice of not reviewing the patents of others, including instructing its employees to not review the patents of others, and thus have been willfully blind of IoT Innovations' patent rights.
- 125. TP-Link's actions are at least objectively reckless as to the risk of infringing a valid patent and this objective risk was either known or should have been known by TP-Link.
- 126. TP-Link's direct infringement of one or more claims of the '796 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of IoT Innovations' rights under the patent.

- 127. IoT Innovations or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of one or more claims of the '796 patent.
- 128. IoT Innovations has been damaged as a result of the infringing conduct by TP-Link alleged above. Thus, TP-Link is liable to IoT Innovations in an amount that compensates it for such 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.
- 129. IoT Innovations has suffered irreparable harm, through its loss of market share and goodwill, for which there is no adequate remedy at law. IoT Innovations has and will continue to suffer this harm by virtue of TP-Link's infringement of the '796 patent. TP-Link's actions have interfered with and will interfere with IoT Innovations' ability to license technology. The balance of hardships favors IoT Innovations' ability to commercialize its own ideas and technology. The public interest in allowing IoT Innovations to enforce its right to exclude outweighs other public interests, which supports injunctive relief in this case.

COUNT VII: INFRINGEMENT OF U.S. PATENT NO. 7,379,464

- 130. IoT Innovations repeats and re-alleges the allegations in the Paragraphs above as though fully set forth in their entirety.
- 131. The USPTO duly issued U.S. Patent No. 7,379,464 (hereinafter, the "'464 patent") on May 27, 2008, after full and fair examination of Application No. 10/306,504 which was filed on November 27, 2002. *See* '464 patent at p. 1.
- 132. IoT Innovations owns all substantial rights, interest, and title in and to the '464 patent, including the sole and exclusive right to prosecute this action and enforce it against infringers and to collect damages for all relevant times.

- 133. The claims of the '464 patent are not directed to an abstract idea and are not limited to well-understood, routine, or conventional activity. Rather, the claimed inventions include inventive components that improve upon the function, operation, and security of communications devices by sharing of personalized information by providing communications infrastructures to support and capitalize on the different communications devices of the user to provide up-to-date personalized information through a digital gateway.
- 134. The written description of the '464 patent describes in technical detail each limitation of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.
- 135. TP-Link has directly infringed and continues to directly infringe one or more claims of the '464 patent by making, using, selling, offering to sell, providing, supplying, or distributing the Accused Products. For instance, TP-Link has directly infringed and continues to directly infringe, either literally or under the doctrine of equivalents, at least claim 1 of the '464 patent.
- As an example, TP-Link, using the Accused Products and their associated hardware and software and functionalities, performs a method, comprising selecting a user's communications device from a plurality of communications devices to communicate data between a personal digital gateway and the selected communications device, the data associated with a common user of the personal digital gateway and of the selected communications device; storing profiles for each of the user's communications devices; retrieving a profile associated with the selected communications device; interpreting the data according to a rule-based engine to categorize the data as at least one of (1) data associated with an access agent, (2) data associated

with a configuration agent, (3) data associated with a security agent, and (4) data associated with a management agent; processing the data according to an edge side assembler; and communicating the data and the profile to the selected communications device. *See, e.g., SR20 Kasa Smart Home Router*, TP-LINK, https://www.tp-link.com/us/home-networking/smart-home-router/sr20/; *Datasheet*, TP-LINK, *Smart Home Router AC1900 Wi-Fi Router + Smart Home Hub + Touch Screen*, https://static.tp-link.com/SR20(EU&US) V1 Datasheet.pdf; *Press News*, TP-LINK, *TP-Link® Powers the Home with All-in-one Smart Home Router and New Line of Connected Devices* (Jan. 6, 2016), https://www.tp-link.com/us/press/news/16334/ (last visited Sept. 28, 2023); *see also* YouTube, https://www.youtube.com/watch?v=otzCbJxnHUo (last visited Sept. 28, 2023).

137. Since at least the time of receiving the original complaint in this action, TP-Link has also indirectly infringed and continues to indirectly infringe one or more claims of the '464 patent by inducing others to directly infringe said claims. TP-Link has induced end-users, including, but not limited to, TP-Link's employees, partners, or contractors, to directly infringe, either literally or under the doctrine of equivalents, the '464 patent by providing or requiring use of the Accused Products. TP-Link has taken active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Products in a manner that infringes one or more claims of the '464 patent, including, for example, claim 1. Such steps by TP-Link included, among other things, advising or directing personnel, contractors, or end-users to use the Accused Products in an infringing manner; advertising and promoting the use of the Accused Products in an infringing manner. TP-Link is performing these steps, which constitute induced infringement with the knowledge of the '464 patent and with the knowledge that the induced acts constitute infringement. TP-Link is aware that the normal and customary use of the Accused

Products by others would infringe the '464 patent. TP-Link's inducement is ongoing. *See, e.g., User Guide*, TP-Link, *Smart Home Router (SR20) AC1900 Wi-Fi Router + Smart Home Hub* + *Touch Screen*, https://static.tp-link.com/1910012101_SR20(EU)&(US)_V1_UserGuide.pdf.

- 138. Since at least the time of receiving the original complaint in this action, TP-Link has also indirectly infringed and continues to indirectly infringe by contributing to the infringement of the '464 patent. TP-Link has contributed to the direct infringement of the '464 patent by its personnel, contractors, and customers. The Accused Products have special features that are specially designed to be used in an infringing way and that have no substantial uses other than ones that infringe one or more claims of the '464 patent, including, for example, claim 1. The special features constitute a material part of the invention of one or more of the claims of the '464 patent and are not staple articles of commerce suitable for substantial non-infringing use. TP-Link's contributory infringement is ongoing. See, e.g., User Guide, TP-LINK, Smart Home Router (SR20) AC1900 Wi-Fi Router + Smart Home Hub + Touch Screen, https://static.tp-link.com/1910012101_SR20(EU)&(US)_V1_UserGuide.pdf.
- 139. TP-Link had knowledge of the '464 patent at least as of the date when they were notified of the filing of the original complaint in this action.
- 140. Furthermore, on information and belief, TP-Link has a policy or practice of not reviewing the patents of others, including instructing its employees to not review the patents of others, and thus have been willfully blind of IoT Innovations' patent rights.
- 141. TP-Link's actions are at least objectively reckless as to the risk of infringing a valid patent and this objective risk was either known or should have been known by TP-Link.
- 142. IoT Innovations or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of one

or more claims of the '464 patent.

- 143. IoT Innovations has been damaged as a result of the infringing conduct by TP-Link alleged above. Thus, TP-Link is liable to IoT Innovations in an amount that compensates it for such 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.
- 144. IoT Innovations has suffered irreparable harm, through its loss of market share and goodwill, for which there is no adequate remedy at law. IoT Innovations has and will continue to suffer this harm by virtue of TP-Link's infringement of the '464 patent. TP-Link's actions have interfered with and will interfere with IoT Innovations' ability to license technology. The balance of hardships favors IoT Innovations' ability to commercialize its own ideas and technology. The public interest in allowing IoT Innovations to enforce its right to exclude outweighs other public interests, which supports injunctive relief in this case.

JURY DEMAND

145. IoT Innovations hereby requests a trial by jury on all issues so triable by right.

PRAYER FOR RELIEF

- 146. IoT Innovations requests that the Court find in its favor and against TP-Link, and that the Court grant IoT Innovations the following relief:
 - Judgment that one or more claims of each of the Asserted Patents has been infringed,
 either literally or under the doctrine of equivalents, by TP-Link or others acting in
 concert therewith;
 - b. A permanent injunction enjoining TP-Link and its officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all others acting in concert therewith from infringement of the '830 patent, '576 patent, '796 patent,

- and '464 patent; or, in the alternative, an award of a reasonable ongoing royalty for future infringement of said patents by such entities;
- Judgment that TP-Link accounts for and pays to IoT Innovations all damages to and costs incurred by IoT Innovations because of TP-Link's infringing activities and other conduct complained of herein;
- d. Judgment that TP-Link's infringements be found willful as to the 830 patent, '576 patent, '796 patent, and '464 patent, and that the Court award treble damages for the period of such willful infringement pursuant to 35 U.S.C. § 284;
- e. Pre-judgment and post-judgment interest on the damages caused by TP-Link's infringing activities and other conduct complained of herein;
- f. That this Court declare this an exceptional case and award IoT Innovations its reasonable attorneys' fees and costs in accordance with 35 U.S.C. § 285; and
- g. All other and further relief as the Court may deem just and proper under the circumstances.

Dated: September 29, 2023 Respectfully submitted,

By: /s/ James F. McDonough, III

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List of Supporting Links

- 1. U.S. Patent No. 7,280,830, USTPO, https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/7280830.
- 2. U.S. Patent No. 7,593,428, USPTO, https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/7593428.
- 3. U.S. Patent No. 7,567,580, USPTO, https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/7567580.
- 4. U.S. Patent No. 8,972,576, USPTO, https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/8972576.
- 5. U.S. Patent No. 7,474,667, USPTO, https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/7474667.
- 6. U.S. Patent No. 8,085,796, USPTO, https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/8085796.
- 7. U.S. Patent No. 7,379,464, USPTO, https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/7379464.
- 8. *External Photo*, FCCID.IO, https://fccid.io/TE7SR20/External-Photos/External-Photos-3187339.pdf.
- 9. *Label Location*, FCCID.IO, https://fccid.io/TE7HS210V3/Label/HS210-label-and-location-4887177.pdf.
- 10. *Label Location*, FCCID.IO, https://fccid.io/TE7HS200V5/Label/HS200-label-and-location-4888665.pdf.
- 11. *Label Location*, FCCID.IO, https://fccid.io/2AXJ4H100/Label/4-Label-and-location-5394498.pdf.
- 12. *Label Location*, FCCID.IO, https://fccid.io/2AXJ4P105/Label/4-Label-and-location-6060817.pdf.
- 13. *Label Location*, FCCID.IO, https://fccid.io/2AXJ4T100/Label/4-Label-and-location-5806914.pdf.
- 14. Supply Chain Intelligence, PANJIVA, Tp Link Technologies Co., Ltd., https://panjiva.com/Tp-Link-Technologies-Co-Ltd/27804596.
- 15. Where to Buy, TP-LINK, https://www.tp-link.com/us/where-to-buy/
- 16. WALMART, https://www.walmart.com/search?q=AC1900+Wi-Fi+Router&facet=brand%3ATP-Link.

- 17. WALMART,https://www.walmart.com/search?q=TP-Link+HS210+Kasa+Smart+Wi-Fi+Light+Switch.
- 18. Best Buy, https://www.bestbuy.com/site/searchpage.jsp?st=TP-Link+P105+Mini+Plug.
- 19. Locations, CDW, https://www.cdw.com/content/cdw/en/locations.html.
- 20. *TP-Link*, CDW, https://www.cdw.com/product/tp-link-kasa-smart-kl125-new-kasa-smart-bulb-multicolor/7099178?pfm=rvi#TS.
- 21. *TP-Link*, CDW, https://www.cdw.com/product/tp-link-archer-c7-ac1750-wireless-router/3427520?pfm=rvi.
- 22. *TP-Link*, CDW, https://www.cdw.com/product/tp-link-kasa-cam-outdoor-2k-hd-wi-fi-security-camera/6940100.
- 23. *Label Location*, FCCID.IO, https://fccid.io/2AXJ4C720/Label/13-Label-and-location-6270201.pdf.
- 24. *Label Location*, FCCID.IO, https://fccid.io/2AXJ4T315/Label/Label-and-Label-location-6344372.pdf.
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- 27. *Label Location*, FCCID.IO, https://fccid.io/2AXJ4D100C/Label/label-and-label-location-6491367.pdf.
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- 30. *Smart Sensors*, TP-LINK, https://www.tp-link.com/us/smart-home/smart-sensor/tapo-t315/.
- 31. *Smart Hub*, TP-LINK, https://www.tp-link.com/us/home-networking/smart-hub/tapo-h100/
- 32. *TP-Link Brand Ambassador Program*, TP-Link, https://www.tp-link.com/us/brandambassador/.
- 33. *TP-Link Corporation Limited*, GOOGLE PLAY, https://play.google.com/store/apps/developer?id=TP-Link+Corporation+Limited.
- 34. Datasheet, TP-LINK, Tapo H100 Smart IoT Hub with Chime, https://static.tp-

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- 35. YOUTUBE, https://www.youtube.com/watch?v=21r2cPu12Ls.
- 36. YOUTUBE, https://www.youtube.com/watch?v=At4rjWpldjE.
- 37. TP-LINK, *How to Pair and Connect Tapo Sensors*, *Buttons and Other Devices to Tapo Hub*, https://www.tapo.com/us/faq/155/.
- 38. *Specifications*, TP-LINK, https://www.tapo.com/us/product/smart-hub/tapo-h100/#tapo-product-spec.
- 39. *Internal Photos*, FCCID.IO, https://fccid.io/2AXJ4H100/Internal-Photos/7-Internal-Photos-6247137.pdf.
- 40. *Antenna Specifications*, FCCID.IO, https://fccid.io/2AXJ4H100/Test-Report/9-Antenna-Specification-rev2-6247142.pdf.
- 41. TP-Link, *TP-Link*® *Powers the Home with All-in-one Smart Home Router and New Line of Connected Devices* (Jan. 6, 2016), https://www.tp-link.com/us/press/news/16334/.
- 42. *SR20 Kasa Smart Home Router*, TP-LINK,https://www.tp-link.com/us/home-networking/smart-home-router/sr20/.
- 43. YOUTUBE, https://www.youtube.com/watch?v=otzCbJxnHUo.
- 44. *Datasheet*, TP-Link, *Tapo P105 Mini Smart Wi-Fi Plug*, https://static.tp-link.com/2020/202008/20200819/Tapo%20P105(US)1.0_Datasheet.pdf.
- 45. User Guide, TP-LINK, Tapo Smart Wi-Fi Light Bulb Tapo L510/L530 Series, https://static.tp-link.com/upload/manual/2023/202303/20230331/1910013377_Tapo%20L510&L530_U G_V1.pdf.
- 46. YOUTUBE, https://www.youtube.com/watch?v=Mbzdlxxn3cw.
- 47. YOUTUBE, https://www.youtube.com/watch?v=ozBOifbkqGk.
- 48. Datasheet, TP-Link, Smart Home Router AC1900 Wi-Fi Router + Smart Home Hub + Touch Screen, https://static.tp-link.com/SR20(EU&US)_V1_Datasheet.pdf.
- 49. *User Guide*, TP-LINK, *Smart Home Router (SR20) AC1900 Wi-Fi Router + Smart Home Hub + Touch Screen*, https://static.tp-link.com/1910012101_SR20(EU)&(US)_V1_UserGuide.pdf.