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

TERRESTRIAL COMMS LLC, Plaintiff v. **BEST BUY CO., INC.,** Defendant	**Case No. 6:20-cv-00106** **JURY TRIAL DEMANDED**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Terrestrial Comms LLC ("Plaintiff" or "Terrestrial") hereby asserts the following claims for patent infringement against Defendant Best Buy Co., Inc. ("Defendant" or "BBY"), and alleges, on information and belief, as follows:

THE PARTIES

1. Terrestrial is a limited liability company organized and existing under the laws of the Texas with its principal place of business at 17330 Preston Road, Suite 200D, Dallas, Texas 75252.

2. Defendant is a corporation organized and existing under the laws of Minnesota with corporate address of 7601 Penn Avenue South, Richfield, Minnesota 55423.

JURISDICTION AND VENUE

3. This action arises under the patent laws of the United States, 35 U.S.C. § 1, *et seq*. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

4. Defendant has committed acts of infringement in this judicial district.

5. On information and belief, the Court has personal jurisdiction over Defendant because Defendant has committed, and continues to commit, acts of infringement in the state of Texas, has conducted business in the state of Texas, and/or has engaged in continuous and systematic activities in the state of Texas.

6. On information and belief, Defendant's instrumentalities that are alleged herein to infringe were and continue to be used, imported, offered for sale, and/or sold in the Western District of Texas.

7. Defendant has a regular established place of business in this judicial district at 11066 Pecan Park Blvd, Unit 300, Cedar Park, Texas 78613.

8. Venue is proper in the Western District of Texas pursuant to 28 U.S.C. § 1400(b).

ACUSED PRODUCTS

9. Upon information and belief, Defendant makes, uses, imports, sells, and/or offers for sale the Insignia Wireless Keyboard and Mouse Combo, (collectively the "Accused Products").

10. Upon information and belief, Defendant encourages and supports the use of the Accused Products through its online support and advertising.

THE PATENTS-IN_SUIT

11. On August 12, 2008, United States Patent No. 7,411,552 (the "'552 patent"), entitled "Grounded Antenna for a Wireless Communication Device and Method," was duly and lawfully issued by the U.S. Patent and Trademark Office.

12. Terrestrial is the assignee and owner of the right, title and interest in and to the '552 patent, including the right to assert all causes of action arising under said patents and the right to any remedies for infringement of them.

13. On December 6, 2005, United States Patent No. 6,973,133 (the "'133 patent"), entitled "Integrated Radio Frequency Interface," was duly and lawfully issued by the U.S. Patent and Trademark Office.

14. Terrestrial is the assignee and owner of the right, title and interest in and to the '133 patent, including the right to assert all causes of action arising under said patents and the right to any remedies for infringement of them.

15. On February 11, 2003, United States Patent No. 6,519,290 (the "'290 patent"), entitled "Integrated Radio Frequency Interface," was duly and lawfully issued by the U.S. Patent and Trademark Office.

16. Terrestrial is the assignee and owner of the right, title and interest in and to the '290 patent, including the right to assert all causes of action arising under said patents and the right to any remedies for infringement of them.

COUNT I – INFRINGEMENT OF U.S. PATENT NO. 7,411,552

17. Terrestrial repeats and realleges the allegations of paragraphs 1 through 15 as if fully set forth herein.

18. Claim 1 of the '552 Patent recites:

> 1. A wireless communication device, comprising:
>
> a substrate;
>
> a ground plane positioned on one side of the substrate;
>
> a wireless communication chip electrically connected to said ground plane and proximate thereto;
>
> an antenna having a first end and a second end, said first end electrically connected to said ground plane; and

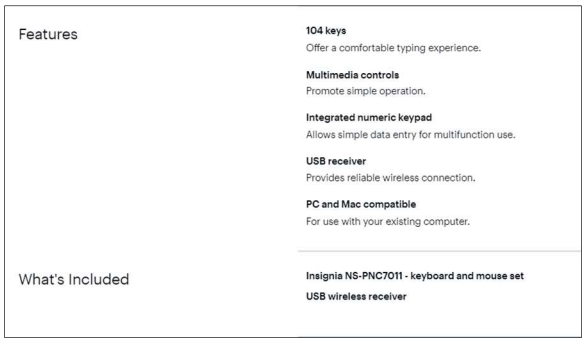
said second end comprising an open circuit.

19. Without license or authorization and in violation of 35 U.S.C. § 271(a), Defendant has infringed and continues to infringe the '552 Patent by making, using, importing, offering for sale, and/or selling the Accused Products.

20. As exemplified below, the Accused Products are a wireless communication device that communicates via Bluetooth and Wi-Fi.

A wireless communication device, comprising:

The Accused Instrument communicates via Wireless USB radio and Bluetooth.

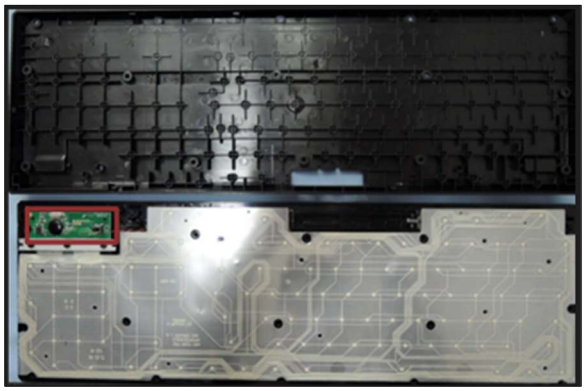


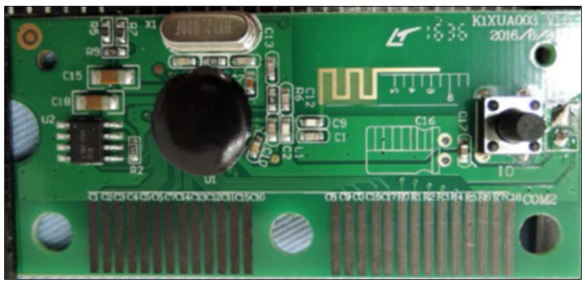
https://www.bestbuy.com/site/insignia-wireless-keyboard-and-mouse-black/5502800.p?skuId=5502800&ref=17&loc=11&CampaignID=1032052&SubscriberID=606795535

a substrate; a ground plane positioned on one side of the substrate;

The chipset of the Accused Instrument comprises of a substrate and a ground

plane positioned on one side of that substrate:





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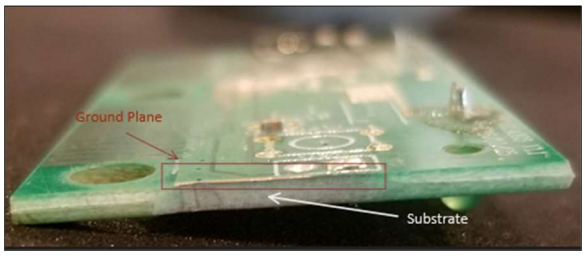
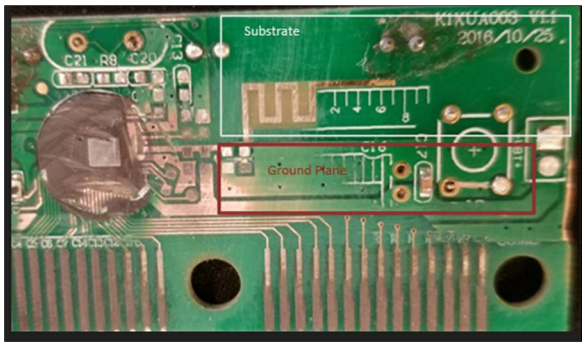
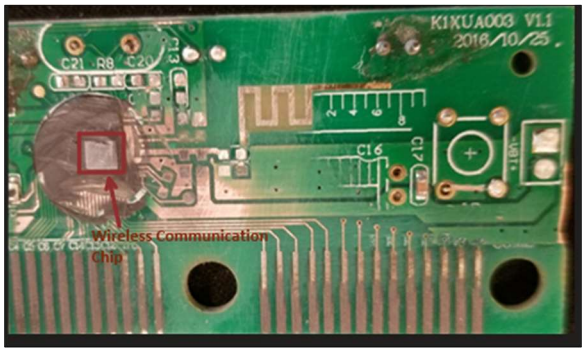


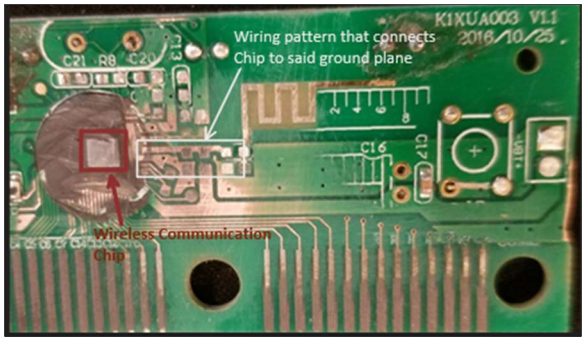


a wireless communication chip electrically connected to said ground plane and proximate thereto;

The Keyboard features a wireless communication chip that, through a wiring

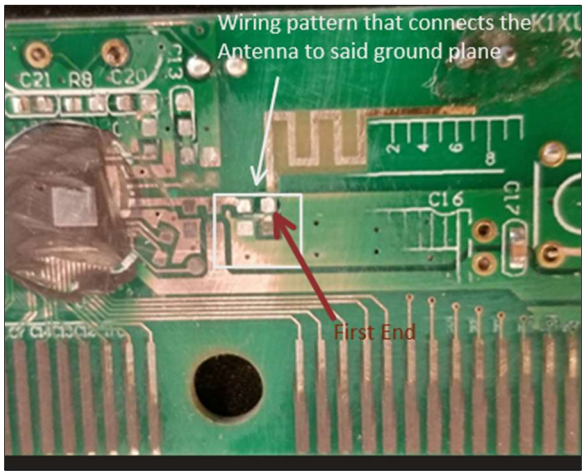
pattern, connects to said ground plane





an antenna having a first end and a second end, said first end electrically connected to said ground plane; and

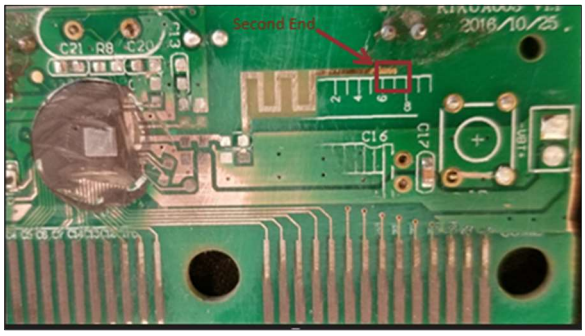
The Accused Products comprise an antenna having two ends, one electrically connected to said ground plane and another comprising an open circuit:



said second end comprising an open circuit.

The second end of the antenna comprises an open circuit (e.g. not electrically

connected).



21. Terrestrial is entitled to recover from Defendant the damages sustained by Terrestrial as a result of Defendant's infringement of the '552 Patent in an amount subject to proof at trial, 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 II – INFRINGEMENT OF U.S. PATENT NO. 6,973,133

22. Terrestrial repeats and realleges the allegations of paragraphs 1 through 15 as if fully set forth herein.

23. Claim 1 of the '133 Patent recites:

> 1. An apparatus comprising:
>
> a circuit configured to (i) communicate one or more Universal Serial Bus (USB) data signals via a wireless radio signal comprising a single frequency hopping sequence configured to support one or more USB devices and (ii) enumerate said one or more USB devices.

24. Without license or authorization and in violation of 35 U.S.C. § 271(a), Defendant has infringed and continues to infringe the '133 Patent by making, using, importing, offering for sale, and/or selling the Accused Products.

25. As exemplified below, the Accused Products are an apparatus comprising a circuit configured to communicate USB data signals over a wireless frequency.

An apparatus comprising:

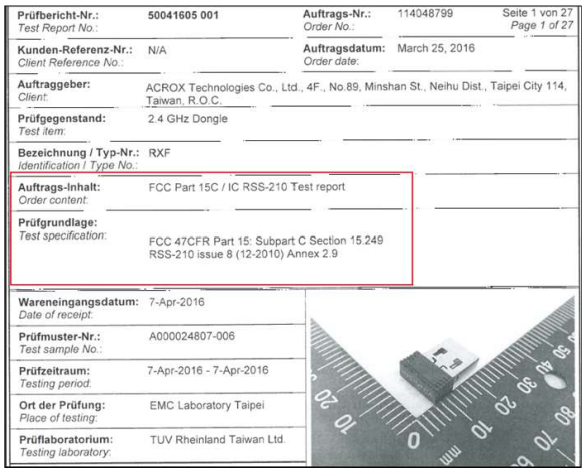
The Accused Products are an apparatus comprising a circuit configured to communicate USB data signals over a wireless frequency to one or more USB devices (e.g. keyboard and mouse) and to enumerate the USB devices.

https://www.insigniaproducts.com/pdp/NS-PNC7011/5502800

a circuit configured to (i) communicate one or more Universal Serial Bus (USB) data signals via a wireless radio signal comprising a single frequency hopping sequence configured to support one or more USB devices and

The Accused Products include a circuit configured to communicated one or more USB data signals to support one more USB devices.

The Accused Products include a USB Transceiver unit.



Prüfbericht-Nr.: *Test Report No.:*	**50041605 001**	**Auftrags-Nr.:** *Order No.:*	114048799	Seite 1 von 27 *Page 1 of 27*
Kunden-Referenz-Nr.: *Client Reference No.:*	N/A	**Auftragsdatum:** *Order date:*	March 25, 2016	
Auftraggeber: *Client:*	ACROX Technologies Co., Ltd., 4F., No.89, Minshan St., Neihu Dist., Taipei City 114, Taiwan, R.O.C.			
Prüfgegenstand: *Test item:*	2.4 GHz Dongle			
Bezeichnung / Typ-Nr.: *Identification / Type No.:*	RXF			
Auftrags-Inhalt: *Order content:*	FCC Part 15C / IC RSS-210 Test report			
Prüfgrundlage: *Test specification:*	FCC 47CFR Part 15: Subpart C Section 15.249 RSS-210 issue 8 (12-2010) Annex 2.9			
Wareneingangsdatum: *Date of receipt:*	7-Apr-2016			
Prüfmuster-Nr.: *Test sample No.:*	A000024807-006			
Prüfzeitraum: *Testing period:*	7-Apr-2016 - 7-Apr-2016			
Ort der Prüfung: *Place of testing:*	EMC Laboratory Taipei			
Prüflaboratorium: *Testing laboratory:*	TUV Rheinland Taiwan Ltd.			

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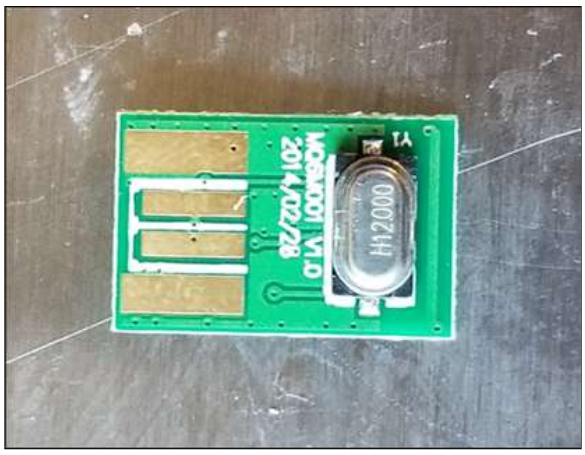
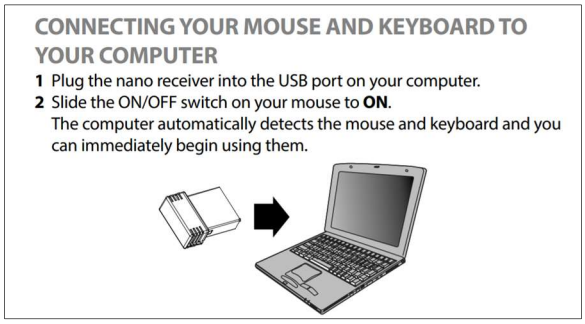


The circuit is a device configured to communicate via wireless radio frequency.

The circuit is operable to communicate with one or more USB devices.



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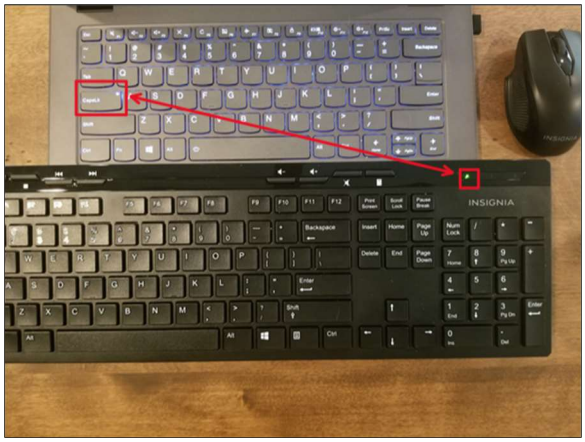
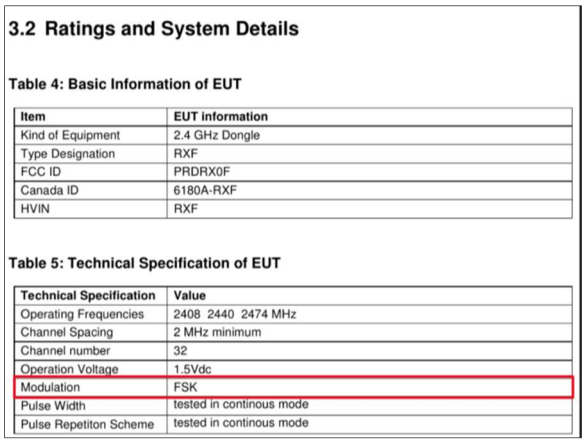
The host device (e.g. computer) communicates data through the circuit (e.g. USB

dongle) to a USB device (e.g. keyboard) via wireless radio signal.

As an example of this communication, after a user presses the "Caps Lock" key on a computer which hosts the circuit, then, when the user presses a key on the wireless keyboard the "Caps Lock" indicator on the wirelessly connected keyboard lights up.



The circuit operates on a frequency hopping sequence (e.g. frequency-shift keying).



3.2 Ratings and System Details

Table 4: Basic Information of EUT

Item	EUT information
Kind of Equipment	2.4 GHz Dongle
Type Designation	RXF
FCC ID	PRDRX0F
Canada ID	6180A-RXF
HVIN	RXF

Table 5: Technical Specification of EUT

Technical Specification	Value
Operating Frequencies	2408 2440 2474 MHz
Channel Spacing	2 MHz minimum
Channel number	32
Operation Voltage	1.5Vdc
Modulation	FSK
Pulse Width	tested in continous mode
Pulse Repetiton Scheme	tested in continous mode

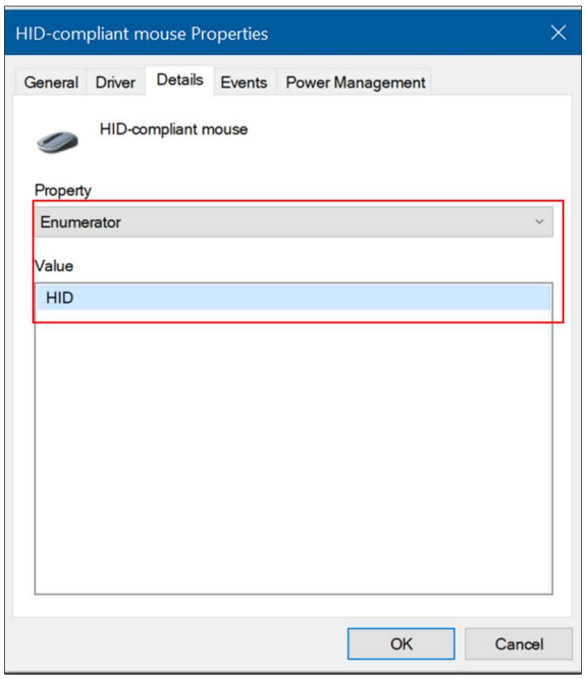
https://fccid.io/PRDRX0F/Test-Report/Test-Report-3013862

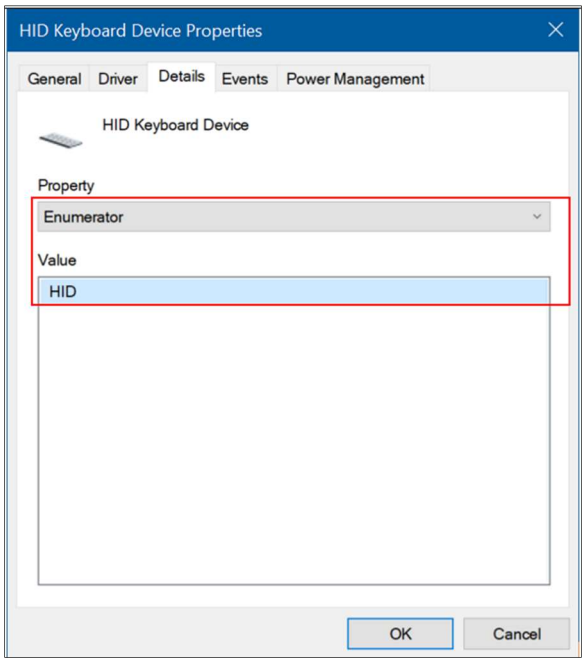
The circuit operates between 2408, 2440, and 2474 MHz.

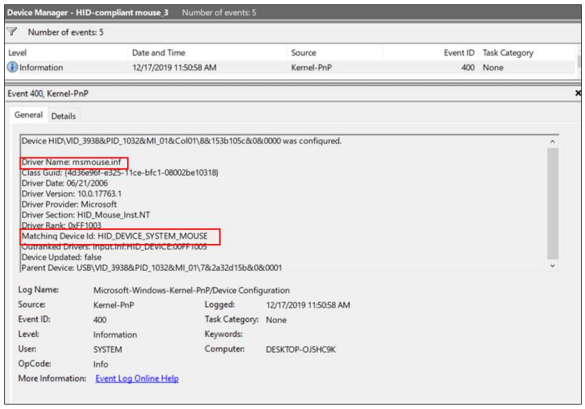
The frequency hopping sequence supports one or more USB devices (e.g. mouse and keyboard).

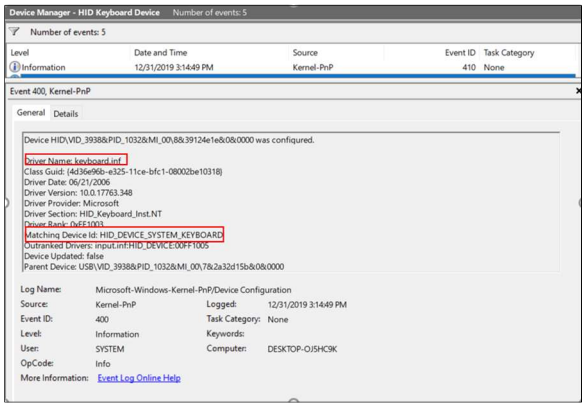
(ii) enumerate said one or more USB devices.

The Accused Products are operable to enumerate the USB devices.









"A hardware ID is a vendor-defined string that Windows uses to match a device to an INF file."

https://docs.microsoft.com/en-us/windows-hardware/drivers/install/hardware-ids

26. Terrestrial is entitled to recover from Defendant the damages sustained by Terrestrial as a result of Defendant's infringement of the '133 Patent in an amount subject to proof at trial, 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. 6,519,290

27. Terrestrial repeats and realleges the allegations of paragraphs 1 through 15 as if fully set forth herein.

28. Claim 1 of the '290 Patent recites:

> 1. An apparatus comprising:
>
> a circuit configured to generate a wireless radio signal in response to one or more first Universal Serial Bus (USB) data signals,
>
> wherein said wireless radio signal comprises a single frequency hopping sequence configured to support one or more USB peripheral wireless network devices, and
>
> said circuit is configured to (i) generate said one or more first USB data signals in response to said wireless radio signal and
>
> (ii) enumerate said one or more USB devices.

29. Without license or authorization and in violation of 35 U.S.C. § 271(a), Defendant has infringed and continues to infringe the '290 Patent by making, using, importing, offering for sale, and/or selling the Accused Products.

30. As exemplified below, the Accused Products are a circuit configured to communicate USB data signals over a wireless frequency.

An apparatus comprising:

The Accused Products are an apparatus comprising a circuit configured to communicate USB data signals over a wireless frequency to one or more USB devices (e.g. keyboard and mouse) and to enumerate the USB devices.

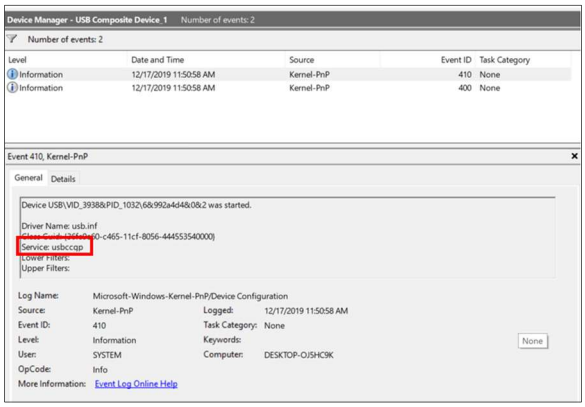
https://www.insigniaproducts.com/pdp/NS-PNC7011/5502800

a circuit configured to generate a wireless radio signal in response to one or more first Universal Serial Bus (USB) data signals,

The Accused Products include a circuit configured to generate a wireless radio signal in response to one or more first Universal Serial Bus (USB) data signals.

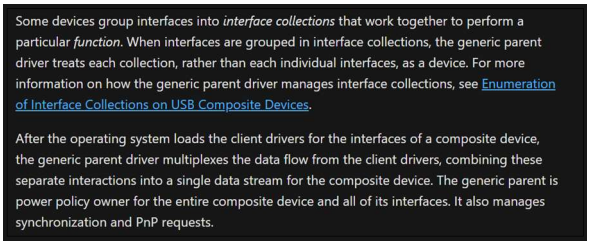
The first data signal below is communicated between the host device and the USB interface.

To set up the USB interface, the client drivers (provided by the host) communicate with the receiver to establish the protocol as described below:

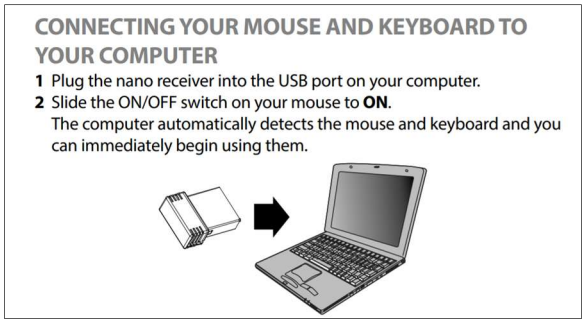


The service shown above is the USB generic parent driver

https://docs.microsoft.com/en-us/windows-hardware/drivers/usbcon/usb-common-class-generic-parent-driver



In response to said first data transaction the device is then registered to the computer and begins transmitting a wireless frequency device to connect to peripheral devices (a mouse and keyboard)



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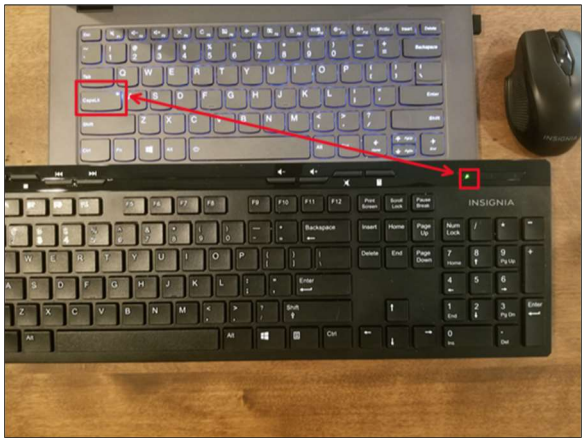
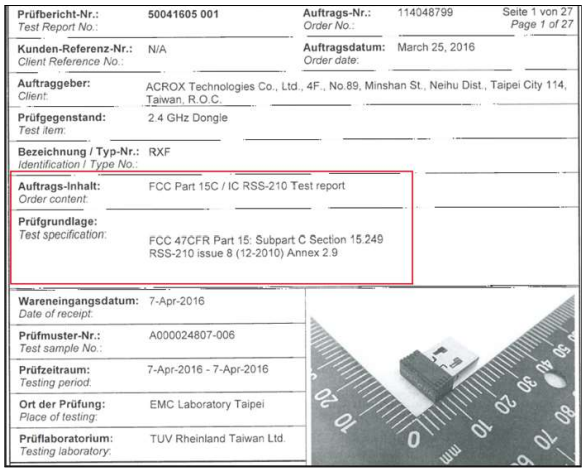
Then once the peripheral device is turned on, the USB Transceiver registers and communicates with said device.



wherein said wireless radio signal comprises a single frequency hopping sequence configured to support one or more USB peripheral wireless network devices, and

The radio signal generated comprises a frequency hopping sequence to support one or more peripheral devices



Prüfbericht-Nr.: *Test Report No.:*	**50041605 001**	**Auftrags-Nr.:** *Order No.:*	114048799 Seite 1 von 27 *Page 1 of 27*
Kunden-Referenz-Nr.: *Client Reference No.:*	N/A	**Auftragsdatum:** *Order date:*	March 25, 2016
Auftraggeber: *Client:*	ACROX Technologies Co., Ltd., 4F., No.89, Minshan St., Neihu Dist., Taipei City 114, Taiwan, R.O.C.		
Prüfgegenstand: *Test item:*	2.4 GHz Dongle		
Bezeichnung / Typ-Nr.: *Identification / Type No.:*	RXF		
Auftrags-Inhalt: *Order content:*	FCC Part 15C / IC RSS-210 Test report		
Prüfgrundlage: *Test specification:*	FCC 47CFR Part 15: Subpart C Section 15.249 RSS-210 issue 8 (12-2010) Annex 2.9		
Wareneingangsdatum: *Date of receipt:*	7-Apr-2016		
Prüfmuster-Nr.: *Test sample No.:*	A000024807-006		
Prüfzeitraum: *Testing period:*	7-Apr-2016 - 7-Apr-2016		
Ort der Prüfung: *Place of testing:*	EMC Laboratory Taipei		
Prüflaboratorium: *Testing laboratory:*	TUV Rheinland Taiwan Ltd.		

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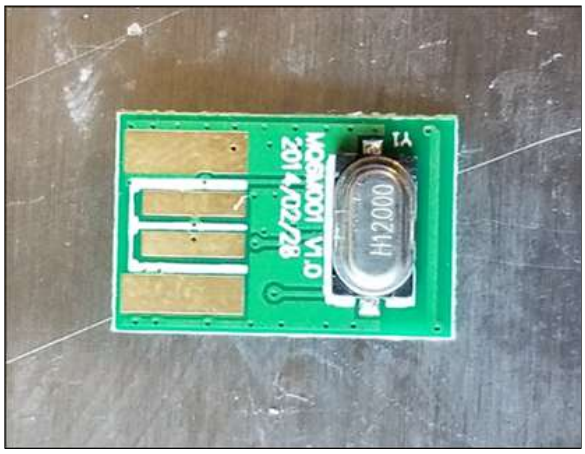
The circuit is a device configured to communicate via wireless radio frequency.



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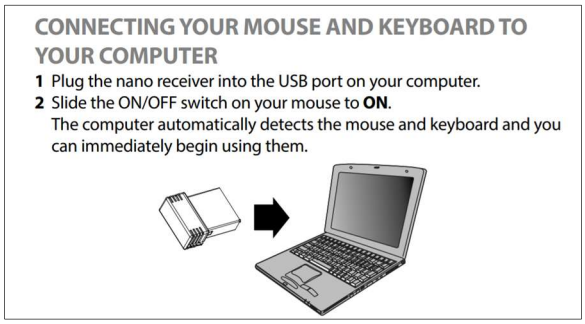
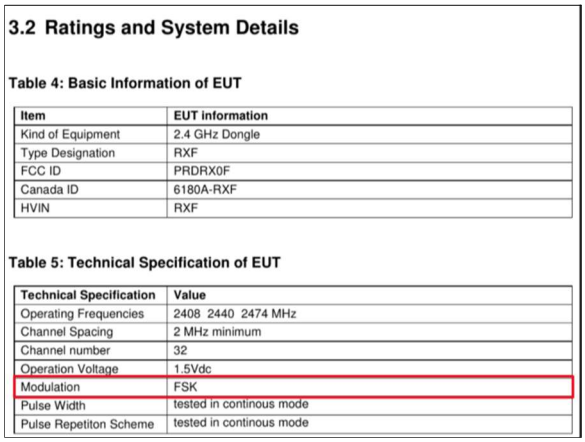
The circuit is operable to communicate with one or more USB devices.



https://files.bbystatic.com/LV619s%2FNMB19S8bD9Nb%2BvA%3D%3D/NS-PNC7011_16-0816_QSG_V2_EN_Final_lr.pdf

The circuit operates on a frequency hopping sequence (e.g. frequency-shift keying).



3.2 Ratings and System Details

Table 4: Basic Information of EUT

Item	EUT information
Kind of Equipment	2.4 GHz Dongle
Type Designation	RXF
FCC ID	PRDRX0F
Canada ID	6180A-RXF
HVIN	RXF

Table 5: Technical Specification of EUT

Technical Specification	Value
Operating Frequencies	2408 2440 2474 MHz
Channel Spacing	2 MHz minimum
Channel number	32
Operation Voltage	1.5Vdc
Modulation	FSK
Pulse Width	tested in continous mode
Pulse Repetiton Scheme	tested in continous mode

https://fccid.io/PRDRX0F/Test-Report/Test-Report-3013862

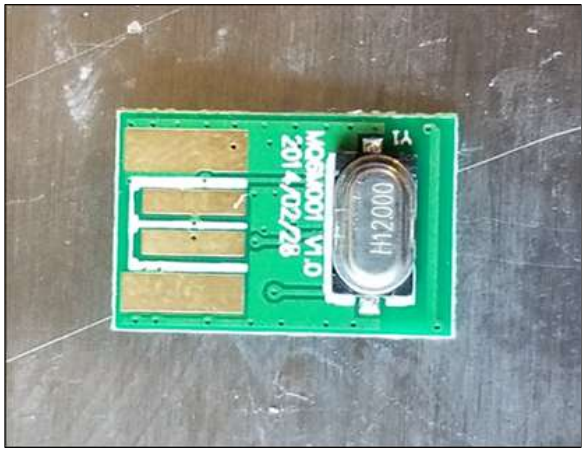
The circuit operates between 2405 and 2474 MHz.

The frequency hopping sequence supports one or more USB peripheral devices (e.g. mouse and keyboard).

said circuit is configured to (i) generate said one or more first USB data signals in response to said wireless radio signal and

The device generates a USB data signal in response to said wireless radio signal.

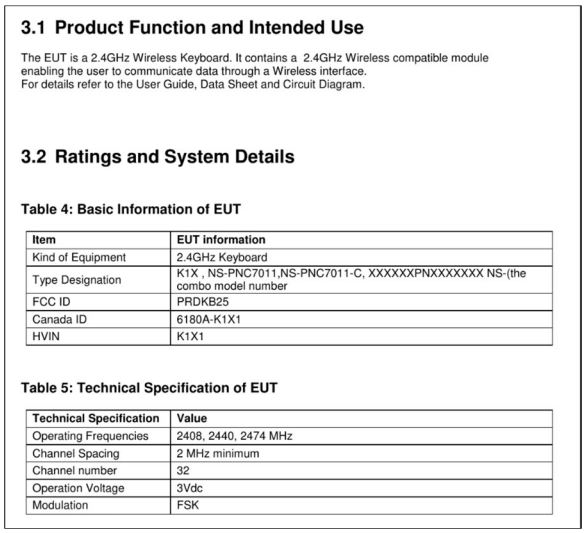
The circuit is a device configured to communicate via wireless radio frequency (e.g. 2.4 GHz wireless radio).



The circuit is operable to communicate with one or more USB devices (e.g. Mouse and Keyboard).

https://fccid.io/PRDKB25/Label/Label-3218124

The transmitter in the wireless keyboard sends a data signal via a radio frequency to the USB device which receives the radio signals and converts that data into a USB data signal which is then communicated to the host device



3.1 Product Function and Intended Use

The EUT is a 2.4GHz Wireless Keyboard. It contains a 2.4GHz Wireless compatible module enabling the user to communicate data through a Wireless interface.
For details refer to the User Guide, Data Sheet and Circuit Diagram.

3.2 Ratings and System Details

Table 4: Basic Information of EUT

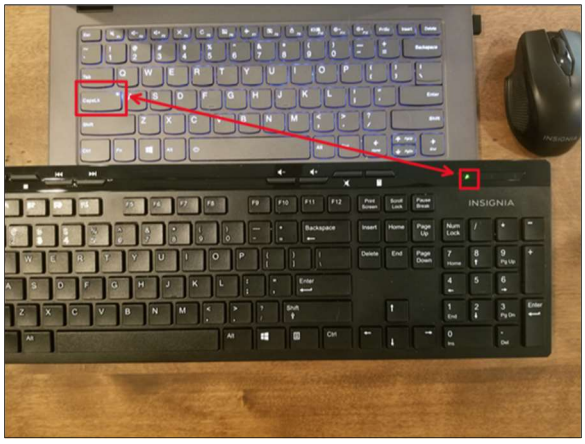
Item	EUT information
Kind of Equipment	2.4GHz Keyboard
Type Designation	K1X , NS-PNC7011,NS-PNC7011-C, XXXXXXPNXXXXXXX NS-(the combo model number
FCC ID	PRDKB25
Canada ID	6180A-K1X1
HVIN	K1X1

Table 5: Technical Specification of EUT

Technical Specification	Value
Operating Frequencies	2408, 2440, 2474 MHz
Channel Spacing	2 MHz minimum
Channel number	32
Operation Voltage	3Vdc
Modulation	FSK

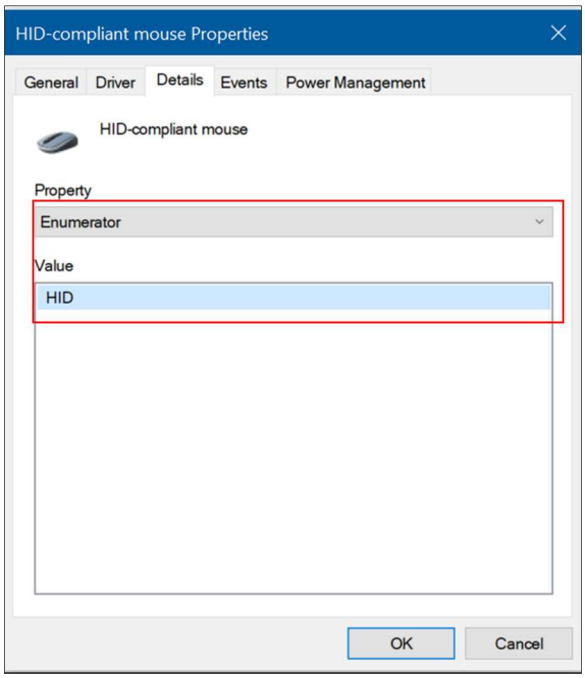
https://fccid.io/PRDKB25/Test-Report/Test-Report-3218127

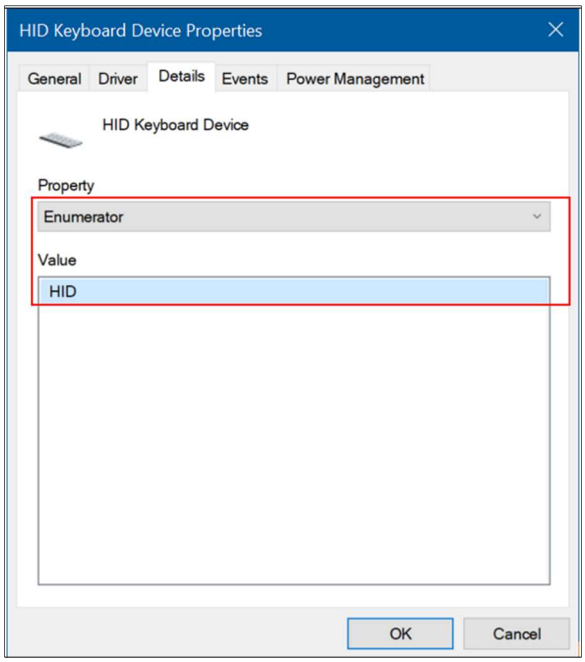
When the caps lock light when pressed on the wireless keyboard turns on the caps lock light on the host computers keyboard

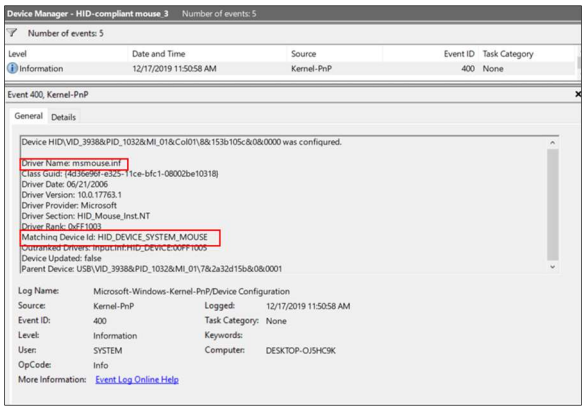


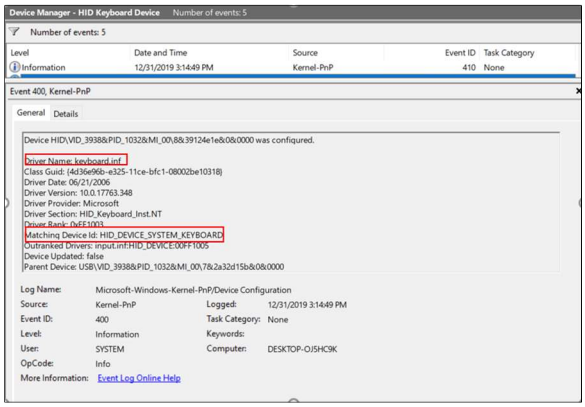
(ii) enumerate said one or more USB devices.

The Accused Products are operable to enumerate the USB devices.


HID-compliant mouse Properties
General
Driver
Details
Events
Power Management
HID-compliant mouse
Property
Enumerator
Value
HID
OK
Cancel


HID Keyboard Device Properties
General
Driver
Details
Events
Power Management
HID Keyboard Device
Property
Enumerator
Value
HID
OK
Cancel





"A hardware ID is a vendor-defined string that Windows uses to match a device to an INF file."

https://docs.microsoft.com/en-us/windows-hardware/drivers/install/hardware-ids

31. Terrestrial is entitled to recover from Defendant the damages sustained by Terrestrial as a result of Defendant's infringement of the '290 Patent in an amount subject to proof at trial, 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.

PRAYER FOR RELIEF

WHEREFORE, Terrestrial requests that this Court enter judgment against Defendant as follows:

A. An adjudication that Defendant has infringed the '552 Patent, the '133

Patent, and the '290 Patent;

B. An award of damages to be paid by Defendant adequate to compensate Terrestrial for Defendant's past infringement of the '552 Patent, the '133 Patent, and the '290 Patent, and any continuing or future infringement through the date such judgment is entered, including interest, costs, expenses and an accounting of all infringing acts including, but not limited to, those acts not presented at trial;

C. A declaration that this case is exceptional under 35 U.S.C. § 285, and an award of Terrestrial's reasonable attorneys' fees; and

D. An award to Terrestrial of such further relief at law or in equity as the Court deems just and proper.

JURY DEMAND

Plaintiff demands trial by jury, Under Fed. R. Civ. P. 38.

Dated: February 11, 2020

Respectfully Submitted

/s/ Raymond W. Mort, III

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