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

CHRIMAR SYSTEMS, INC., d/b/a CMS TECHNOLOGIES and CHRIMAR HOLDING COMPANY, LLC, Plaintiffs, v. POLYCOM, INC., Defendant.	Civil Action No. 6:19-cv-00015 **JURY TRIAL DEMANDED**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiffs Chrimar Systems, Inc. d/b/a CMS Technologies ("Chrimar Systems") and Chrimar Holding Company, LLC ("Chrimar Holding") (collectively, "Chrimar" or "Plaintiffs") file this Complaint against Defendant Polycom, Inc. ("Defendant") for infringement of U.S. Patents Nos. 8,942,107 and 9,812,825, and hereby allege as follows:

NATURE OF THE ACTION

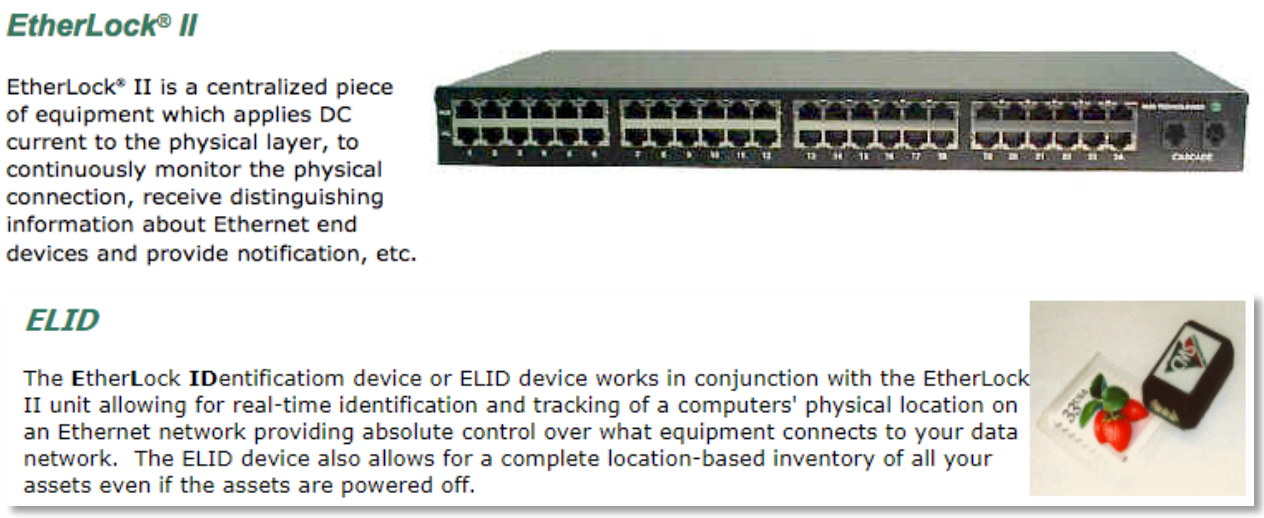
1. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. §§ 1, *et seq*.

PARTIES

2. Plaintiff Chrimar Systems, Inc. d/b/a CMS Technologies is a Michigan corporation with a place of business located at 36528 Grand River Avenue, Suite A-1, Farmington Hills, Michigan 48335.

3. Plaintiff Chrimar Holding Company, LLC is a Texas limited liability company with a place of business located at 911 NW Loop 281, Suite 211-30, Longview, Texas 75604.

4. Chrimar was the first company to employ DC current within a BaseT network in the early 1990s and has received a number of US patents for this very important technology. Chrimar continues to market its EtherLock® family of products for asset control, management and security, including the including the EtherLock® II and EtherLock IDentification (ELID) products:



http://cmstech.com/security_solutions/products/products.html

5. Chrimar's installed ELID/NIC-Stick circuitry practice certain claims of the `107 and `825 Patents. *See also* http://www.cmspatents.com/.

6. Chrimar has entered into numerous non-exclusive licenses for certain equipment under certain Chrimar patents including certain Power over Ethernet (PoE) equipment designed for deployment within a BaseT Ethernet network. *See, e.g.*, https://realtimepressrelease.com/press-releases-tagged-with/chrimar/.

7. Upon information and belief, Defendant Polycom, Inc. is a Delaware corporation having a place of business at 6001 America Center Dr., San Jose, CA 95002-2562, and can be served through its registered agent, CT Corporation System, 1999 Bryan St., Ste. 900, Dallas, TX 75201.

JURISDICTION AND VENUE

8. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

9. Defendant is subject to this Court's specific and general personal jurisdiction due to its substantial business in this forum. For example, upon information and belief, Defendant is subject to the specific personal jurisdiction of this Court because Chrimar's claims for patent infringement arise from Defendant's acts of infringement in the State of Texas. These acts of infringement include selling infringing products in the State of Texas and placing infringing products into the stream of commerce through an established distribution channel with full awareness that substantial quantities of the products have been shipped into the State of Texas. Therefore, this Court has personal jurisdiction over Defendant under the Texas long-arm statute, TEX. CIV. PRAC. & REM. CODE § 17.042.

10. Venue is proper in this judicial district under 28 U.S.C. § 1400(b). Defendant has a regular and established place of business in this District at 7700 W Parmer Lane, Building C, Suite 100, Austin, TX 78729, and has committed and continues to commit acts of infringement in this District. For example, Defendant's regular and established place of business in Austin in this District is a physical building, depicted below, and according to the Williamson County Central Appraisal District is 100% owned by Polycom. *See In re Cray Inc.*, 871 F.3d 1355, 1360 (Fed. Cir. 2017).

Property	Owner	Property Address	2018 Assessed Value
P473803	POLYCOM INC	7700 W PARMER LN #BLD C-100, AUSTIN, TX 78729	$8,247,240

2018 GENERAL INFORMATION

Property Status	Active
Property Type	P1-Personal
Legal Description	BUSINESS PERSONAL PROPERTY @ 7700 W PARMER LN BLD C #100
Neighborhood	-
Account	P-16-P194-7040-3972-59
Related Properties	R379614
Map Number	-

2018 VALUE INFORMATION

Total Assessed Value	$8,247,240

2018 OWNER INFORMATION

Owner Name	POLYCOM INC
Owner ID	O0337108
Exemptions	
Percent Ownership	100%
Mailing Address	Attn: TAX DEPT 6001 AMERICA CENTER DR SAN JOSE, CA 95002

http://search.wcad.org/Property-Detail?PropertyQuickRefID=P473803&PartyQuickRefID=O0337108.

PATENTS-IN-SUIT

11. Chrimar Systems is the owner and the assignee of U.S. Patent No. 8,942,107 (the "`107 Patent"), entitled "Piece of Ethernet Terminal Equipment" and Chrimar Holding holds the exclusive right to license the `107 Patent. Chrimar has ownership of all substantial rights in the `107 Patent, including the right to exclude others and to enforce, sue and recover damages for past and future infringement. A true and correct copy of the `107 Patent is attached as Exhibit A.

12. The `107 Patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code.

13. Chrimar Systems is the owner and assignee of U.S. Patent No. 9,812,825 (the "`825 Patent"), entitled "Ethernet Device" and Chrimar Holding holds the exclusive right to license the `825 Patent. Chrimar has ownership of all substantial rights in the `825 Patent, including the right to exclude others and to enforce, sue and recover damages for past and future infringement. A true and correct copy of the `825 Patent is attached as Exhibit B.

14. The `825 Patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code.

15. The `107 and `825, and Patents are collectively the "Patents-in-Suit."

16. The Patents-in-Suit generally cover plug and play automation and/or asset control capabilities employed by certain BaseT Ethernet equipment including powered devices ("PDs"), that comply with or are compatible with certain portions of the IEEE Standards commonly referred to as IEEE PoE (Power over Ethernet) Standards (e.g., the IEEE 802.3af or IEEE 802.3at standards).

ACCUSED PRODUCTS

17. Upon information and belief, Defendant makes, uses, offers to sell, sells, and/or imports Power over Ethernet powered devices and/or power sourcing equipment that comply with or are compatible with certain portions of the IEEE Standards.

18. The Accused Products comprise Accused Powered Devices ("Accused PD Products"). The Accused PDs are equipment (e.g., IP Phones) that receive an interrogation signal as well as phantom power to operate via their Ethernet port. Exemplary explanations of how the Accused PDs infringe are provided in the patent specific infringement counts below. Defendant sells Accused PDs in the United States including in this district. The Accused PDs include, but are not limited to: Polycom Trio 8500 Skype for Business, Polycom Trio 8500 SIP, Polycom Trio 8800 SIP, Polycom Trio 8800 Skype for Business, Polycom Trio Visual+, Polycom SoundStation Duo, Polycom SoundStation IP 5000, Polycom SoundStation IP 6000, Polycom SoundStation IP 7000, Polycom Trio Visual+ Accessory, Polycom VVX 101, Polycom VVX 150, Polycom VVX 201, Polycom VVX 250, Polycom VVX 300, Polycom VVX 301, Polycom VVX 310, Polycom VVX 311, Polycom VVX 350, Polycom VVX 400, Polycom VVX 401, Polycom VVX 410, Polycom VVX 411, Polycom VVX 450, Polycom VVX 500, Polycom VVX 501, Polycom VVX 600, and Polycom VVX 601.

19. The Accused PD Products comprise the "Accused Products." Upon information and belief, the Accused Products are offered for sale and sold throughout the United States, including within this District.

20. Upon information and belief, Defendant has purposefully and voluntarily placed the Accused Products into the stream of commerce with the expectation that these products will be purchased and used by end users in the United States, including end users in this District.

21. Upon information and belief, Defendant provides direct and indirect support concerning the Accused Products to end users, including end users within this District.

COUNT I
INFRINGEMENT OF U.S. PATENT NO. 8,942,107

22. Chrimar alleges and hereby incorporates by reference every allegation made in the foregoing paragraphs of this Complaint as if each were separately set forth herein.

23. In violation of 35 U.S.C. § 271, Defendant has directly infringed and continue to directly infringe, both literally and/or under the doctrine of equivalents, the `107 Patent by making, using, offering for sale, selling, and/or importing the Accused PD Products in the United States, including within this District, that infringe at least claim 103 across claims 6, 16, 56, 71, and 87; and claim 125 across claims 113 and 122 of the `107 Patent without the authority of Chrimar.

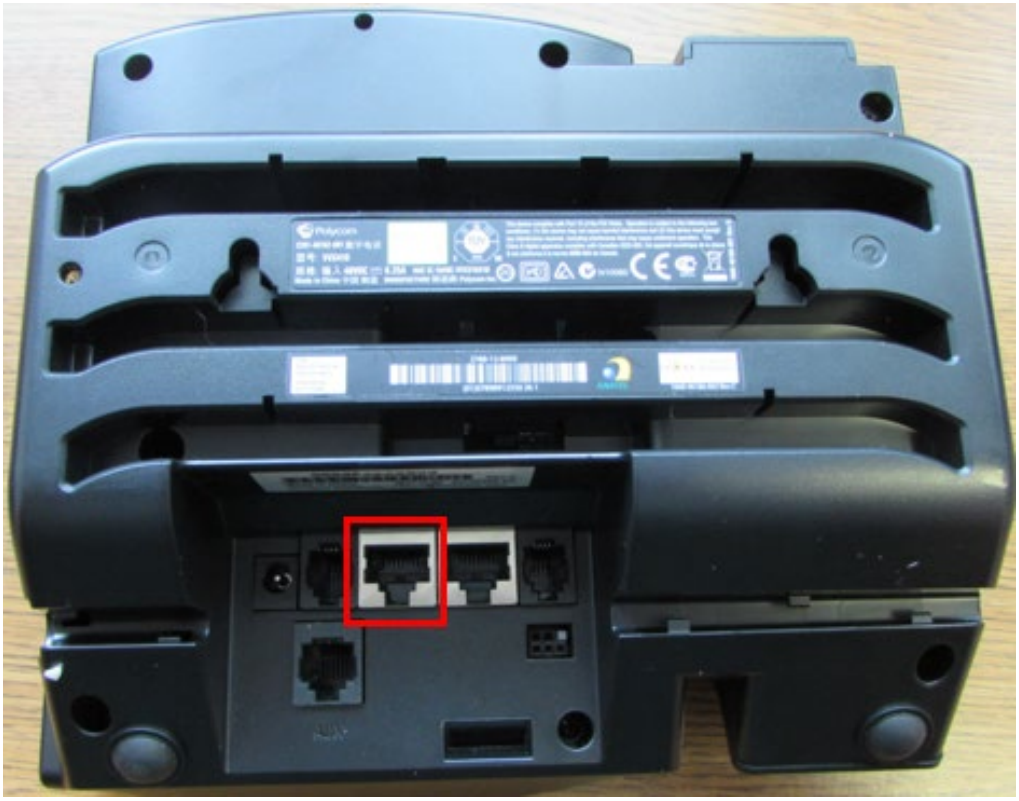
24. The identified claims of the `107 Patent are presumed valid.

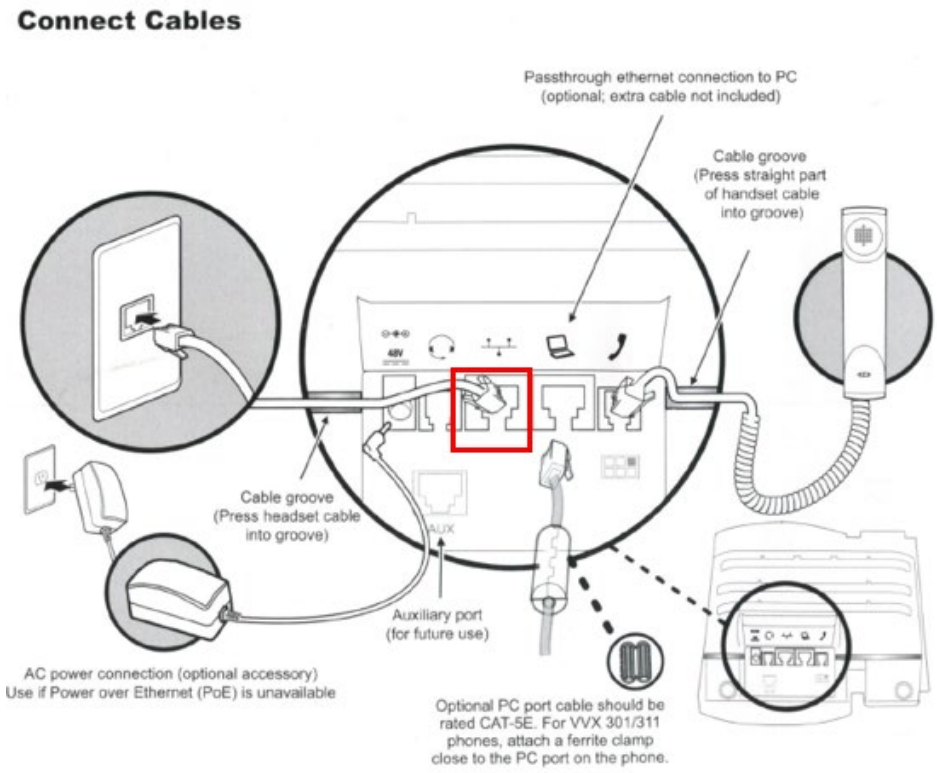
25. Each of the Accused PD Products is a piece of BaseT Ethernet data terminal equipment. For example, the representative Polycom VVX 410 phone is a device that can originate and terminate Ethernet data and Ethernet data transmissions, and is configured to communicate with other devices over a BaseT Ethernet network via Ethernet signals.

- Two-port gigabit Ethernet switch
  - 10/100/1000Base-TX across LAN and 2nd port

http://www.polycom.com/content/dam/polycom/common/documents/data-sheets/polycom-trio-8800-sip-data-sheet-enus.pdf, p. 2.

26. Each of the Accused PD Products has an Ethernet connector comprising first and second pairs of contacts. For example, the representative Polycom VVX 410 phone has an RJ-45 Ethernet connector, which has four pairs of contacts:





Polycom VVX410 Quick Start Guide, p. 2.

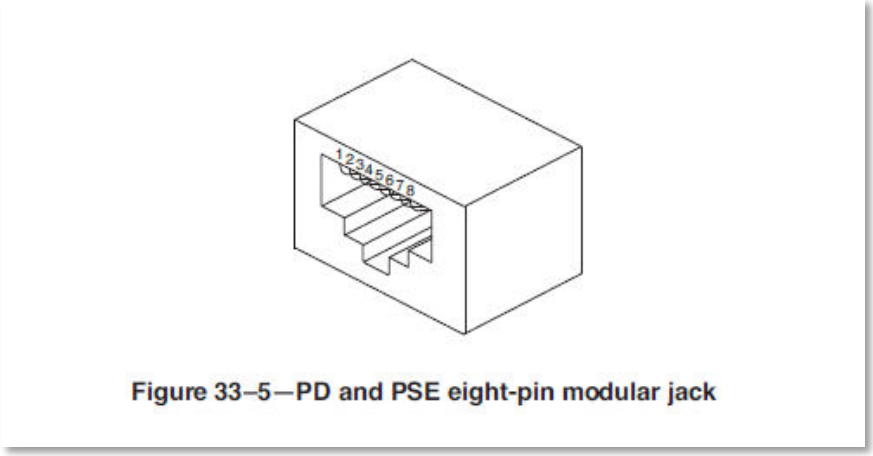
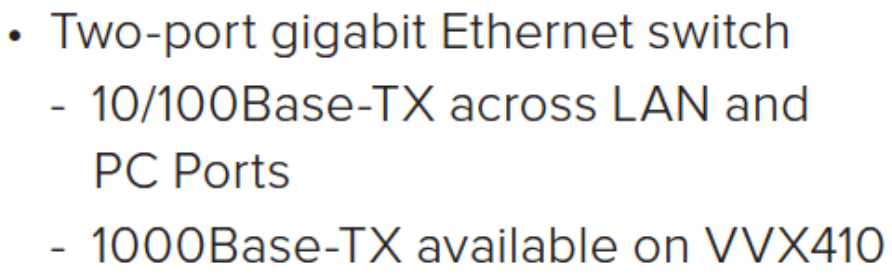


Figure 33–5—PD and PSE eight-pin modular jack

IEEE 802.3af standard, Figure 33-5

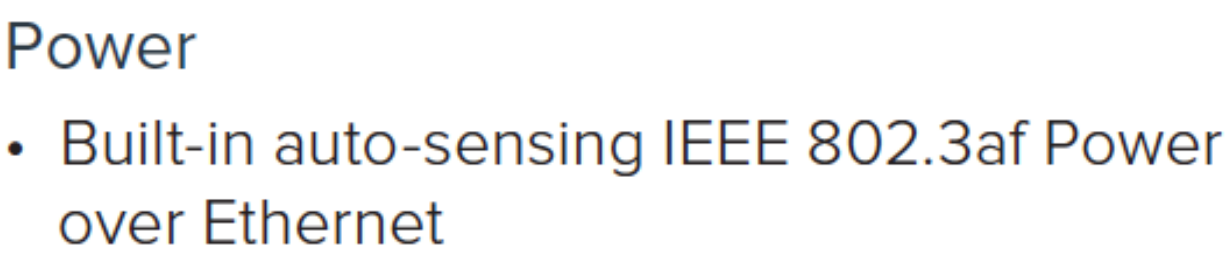
27. Each of the Accused PD Products uses an Ethernet connector's first and second pairs of contacts to carry Ethernet communication signals. For example, the pairs of contacts of the Ethernet connector of the representative Polycom VVX 410 phone can carry 10BaseT and 100BaseTX Ethernet communication data signals:



http://www.polycom.com/content/dam/polycom/common/documents/data-sheets/vvx-400-series-data-sheet-enus.pdf, p. 2.

28. Each of the Accused PD Products is a powered-off end device prior to receiving any of its operationing power. For example, the representative Polycom VVX 410 phone is a powered-off end device when requesting its operating power or when it is not physically connected to the network.

29. Each of the Accused PD Products has at least one path for the purpose of drawing DC current, the at least one path coupled across at least one of the contacts of the first pair of contacts and at least one of the contacts of the second pair of contacts of its Ethernet connector. For example, the representative Polycom VVX 410 phone claims compliance with the IEEE 802.3af standard:



http://www.polycom.com/content/dam/polycom/common/documents/data-sheets/vvx-400-series-data-sheet-enus.pdf, p. 2. Other Polycom phones claim compliance with the IEEE 802.3at standard which is, in relevant part, backward compatible with IEEE 802.3af standard.

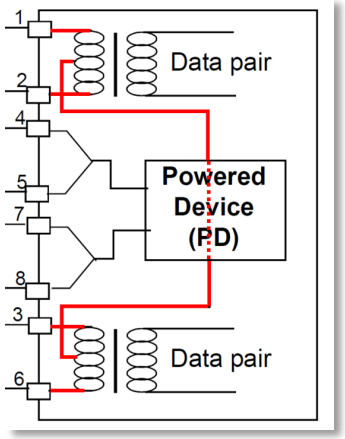
30. The IEEE 802.3af standard explains:

33.3.1 PD PI

The PD shall be capable of accepting power on either of two sets of PI conductors. The two conductor sets are named Mode A and Mode B. In each four-wire connection, the two wires associated with a pair are at the same nominal average voltage. Figure 33–5 in conjunction with Table 33–7 illustrates the two power modes.

Table 33–7—PD pinout

Conductor	Mode A	Mode B
1	Positive V_{Port}, Negative V_{Port}	
2	Positive V_{Port}, Negative V_{Port}	
3	Negative V_{Port}, Positive V_{Port}	
4		Positive V_{Port}, Negative V_{Port}
5		Positive V_{Port}, Negative V_{Port}
6	Negative V_{Port}, Positive V_{Port}	
7		Negative V_{Port}, Positive V_{Port}
8		Negative V_{Port}, Positive V_{Port}



IEEE 802.3af standard, 33.3.1, Table 33-7, and Figure 33-4 (annotated, emphasis added).

Each Accused PD Product draws different magnitudes of DC current flow via the at least one path, the different magnitudes of DC current flow to result from at least one (e.g., voltage or current) condition applied to at least one of the contacts of the first and second pairs of contacts of its Ethernet connector. For example, the representative Polycom Trio 8800 SIP conference phone claims compliance with the IEEE 802.3af standard. *See* http://www.polycom.com/content/dam/polycom/common/documents/data-sheets/vvx-400-series-data-sheet-enus.pdf, p. 2. IEEE 802.3af explains:

33.3.3 PD valid and non-valid detection signatures

A PD shall present a valid detection signature at the PI between Positive V_{Port} and Negative V_{Port} of PD Mode A and between Positive V_{Port} and Negative V_{Port} of PD Mode B as defined in 33.3.1 while it is in a state where it will accept power via the PI, but is not powered via the PI.

A PD shall present a non-valid detection signature at the PI between Positive V_{Port} and Negative V_{Port} of PD Mode A and between Positive V_{Port} and Negative V_{Port} of PD Mode B as defined in 33.3.1 while it is in a state where it will not accept power via the PI.

When a PD becomes powered via the PI, it shall present a non-valid detection signature on the set of pairs from which is it not drawing power.

The valid and non-valid detection signature regions are separated by guardbands. The guardbands for the V-I slope are the ranges 12KΩ to 23.75KΩ and 26.25KΩ to 45KΩ. A PD that presents a signature in a guard-band is non-compliant.

V-I slope is the effective resistance calculated from the two voltage/current measurements made during the detection process.

$$\text{V-I slope} = (V_2 - V_1)/(I_2 - I_1) \qquad (33\text{–}1)$$

where (V_1, I_1) and (V_2, I_2) are measurements made at the PD PI.

The valid PD detection signature shall have the characteristics of Table 33–8.

IEEE 802.3af standard, 33.3.3

31. Each of the Accused PD Products can convey information about itself (e.g., while powered-off) via magnitudes of the DC current flow. For example, the representative Polycom VVX 410 phone claims compliance with the IEEE 802.3af standard. *See* http://www.polycom.com/content/dam/polycom/common/documents/data-sheets/vvx-400-series-data-sheet-enus.pdf, p. 2. Other Accused PDs claim compliance with the IEEE 802.3at standard. The IEEE 802.3at standard operates here in relevant detail the same as the IEEE 802.3af standard. IEEE 802.3af explains:

> The Power Sourcing Equipment (PSE) is located at an endpoint or midspan, separate from and between the MDIs, and provides power to the Powered Device (PD) over the Link Section. The PSE detection protocol distinguishes a compatible PD from non-compatible devices and precludes the application of power and possible damage to non-compatible devices."

Table 33–8—Valid PD detection signature characteristics, measured at PD input connector

Parameter	Conditions	Minimum	Maximum	Unit
V-I Slope (at any 1V or greater chord within the voltage range conditions)	2.7V to 10.1V	23.75	26.25	KΩ
V offset			1.9	V
I offset			10	μA
Input capacitance	2.7V to 10.1 V	0.05	0.12	μF
Input inductance	2.7V to 10.1 V		100	μH

A non-valid detection signature shall have one or both of the characteristics in Table 33–9

Table 33–9—Non-valid PD detection signature characteristics, measured at PD input connector

Parameter	Conditions	Range of values	Unit
V-I Slope	V < 10.1V	Either greater than 45 or less than 12	KΩ
Input Capacitance	V < 10.1V	Greater than 10	μF

IEEE 802.3af standard, Abstract, Table 33-8, and Table 33-9

32. Upon information and belief, discovery will show that the at least one path is integrated into each of the Accused PD Products.

33. Each of the Accused PD Products (e.g., while powered-off, i.e., without any of its operating power) can draw different magnitudes of DC current flow via at least one of the contacts of the first and second pairs of contacts of its Ethernet connector. For example, the representative Polycom VVX 410 phone claims compliance with the IEEE 802.3af standard. *See* http://www.polycom.com/content/dam/polycom/common/documents/data-sheets/vvx-400-series-data-sheet-enus.pdf, p. 2. Other Accused PDs claim compliance with the IEEE 802.3at standard. The IEEE 802.3at standard operates here in relevant detail the same as the

IEEE 802.3af standard. The IEEE 802.3af standard prescribes the presentation of valid detection signatures by drawing different magnitudes of DC current flow in response to at least one electrical condition (e.g. a voltage or current) applied to a contact:

33.3.3 PD valid and non-valid detection signatures

A PD shall present a valid detection signature at the PI between Positive V_{Port} and Negative V_{Port} of PD Mode A and between Positive V_{Port} and Negative V_{Port} of PD Mode B as defined in 33.3.1 while it is in a state where it will accept power via the PI, but is not powered via the PI.

A PD shall present a non-valid detection signature at the PI between Positive V_{Port} and Negative V_{Port} of PD Mode A and between Positive V_{Port} and Negative V_{Port} of PD Mode B as defined in 33.3.1 while it is in a state where it will not accept power via the PI.

When a PD becomes powered via the PI, it shall present a non-valid detection signature on the set of pairs from which is it not drawing power.

The valid and non-valid detection signature regions are separated by guardbands. The guardbands for the V-I slope are the ranges 12KΩ to 23.75KΩ and 26.25KΩ to 45KΩ. A PD that presents a signature in a guard-band is non-compliant.

V-I slope is the effective resistance calculated from the two voltage/current measurements made during the detection process.

$$\text{V-I slope} = (V_2 - V_1)/(I_2 - I_1) \quad (33\text{–}1)$$

where (V_1, I_1) and (V_2, I_2) are measurements made at the PD PI.

The valid PD detection signature shall have the characteristics of Table 33–8.

Table 33–8—Valid PD detection signature characteristics, measured at PD input connector

Parameter	Conditions	Minimum	Maximum	Unit
V-I Slope (at any 1V or greater chord within the voltage range conditions)	2.7V to 10.1V	23.75	26.25	KΩ
V offset			1.9	V
I offset			10	μA
Input capacitance	2.7V to 10.1 V	0.05	0.12	μF
Input inductance	2.7V to 10.1 V		100	μH

A non-valid detection signature shall have one or both of the characteristics in Table 33–9

Table 33–9—Non-valid PD detection signature characteristics, measured at PD input connector

Parameter	Conditions	Range of values	Unit
V-I Slope	V < 10.1V	Either greater than 45 or less than 12	KΩ
Input Capacitance	V < 10.1V	Greater than 10	μF

IEEE 802.3af standard, 33.3.3, Table 33-8, and Table 33-9

34. Upon information and belief, discovery will show that each Accused PD Product has at least one path and the at least one path comprises at least two different impedances.

35. The DC current can comprise a first magnitude of DC current for a first interval followed by a second magnitude of DC current for a second interval, wherein the second magnitude is greater than the first magnitude. For example:

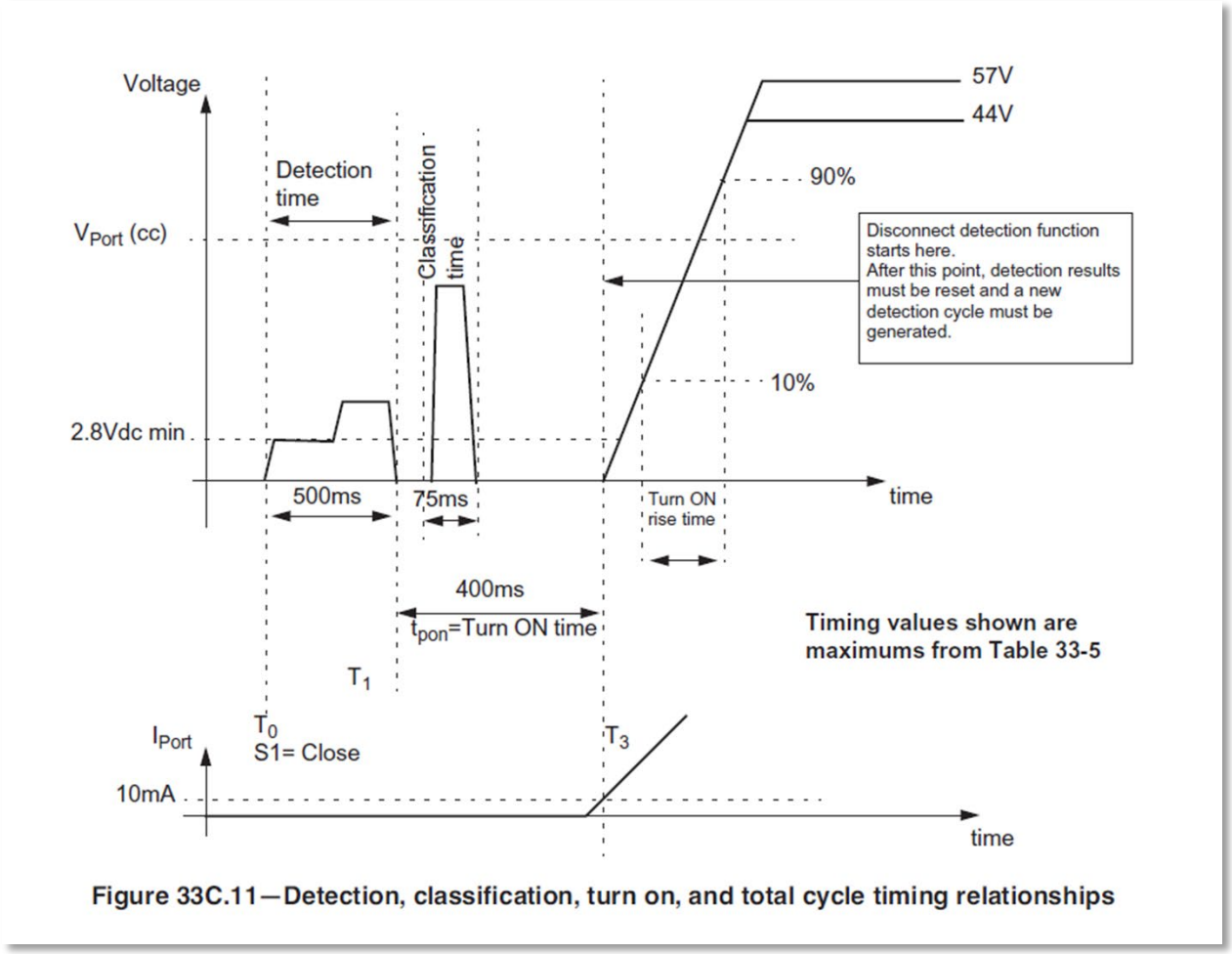


Figure 33C.11—Detection, classification, turn on, and total cycle timing relationships

IEEE 802.3af standard, Figure 33C.11

36. The first and second magnitudes of DC current can generally be used, for example, to distinguish a PD like the Accused PD Products from a non-PD or legacy device, and to identify each Accused PD Product's power requirements.

37. Accordingly, Defendant has and continues to directly infringe the `107 Patent, both literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271(a) by making, using, offering for sale, selling, and/or importing into the United States the Accused Products without the authority of Chrimar.

38. Defendant has been on notice of the `107 Patent since at least the filing of this Complaint. *See Affinity Labs of Tex., LLC v. Toyota Motor N. Am., Inc.*, No. W:13-CV-365, 2014

U.S. Dist. LEXIS 90379, at *12 (W.D. Tex. May 12, 2014)(explaining that a defendant's knowledge of a patent can be established through the filing of the complaint).

39. In violation of 35 U.S.C. § 271(b), Defendant has indirectly infringed the `107 Patent by inducing its customers to directly infringe the `107 Patent, both literally and/or under the doctrine of equivalents, at least by providing its customers with instructions on using the Accused Products and by making, using, offering for sale, selling, and/or importing devices in the United States the Accused Products without the authority of Chrimar. For example, the representative Polycom Trio 8800 SIP conference phone's Guide instructs:

Powering the RealPresence Trio 8800 Solution

You can power the RealPresence Trio 8800 with Power over Ethernet (PoE) or PoE+ (IEEE 802.3at Type 2). When RealPresence Trio 8800 is booting up, an on-screen message indicates the available power supply type. Note that PoE+ provides RealPresence Trio 8800 with full functionality.

Power the RealPresence Trio 8800 System with the Optional Power Injector

If your building is not equipped with PoE+ you can use the optional power injector to provide PoE+ and full functionality to RealPresence Trio 8800.

When using the power injector to power the RealPresence Trio 8800, you must connect cables in the following sequence:

1. Plug the AC power cord of the power injector into the wall and use a network cable to connect the power injector to the RealPresence Trio 8800.
2. Connect the power injector to the network with a CAT-5E or CAT-6 Ethernet cable.

The power adapter LED is green when the RealPresence Trio 8800 is correctly powered. If the LED is yellow, the power injector is bypassed and the RealPresence Trio system is drawing PoE power from the outlet.

http://www.polycom.com/content/dam/polycom/common/documents/technical-guides/ucs-v544-for-trio-admin-guide-enus.pdf, p. 93.

40. Upon information and belief, and in violation of 35 U.S.C. § 271(b), Defendant has indirectly infringed the `107 Patent by contribution knowing that the Accused Products would be combined with other components to infringe the `107 Patent and that the Accused Products have no substantial non-infringing use.

41. Unless enjoined by this Court, Defendant will continue to infringe the `107 Patent.

42. Because of Defendant's infringing activities, Chrimar has suffered damages and will continue to suffer damages in the future.

COUNT II
INFRINGEMENT OF U.S. PATENT NO. 9,812,825

43. Chrimar alleges and hereby incorporates by reference every allegation made in the foregoing paragraphs of this Complaint as if each were separately set forth herein.

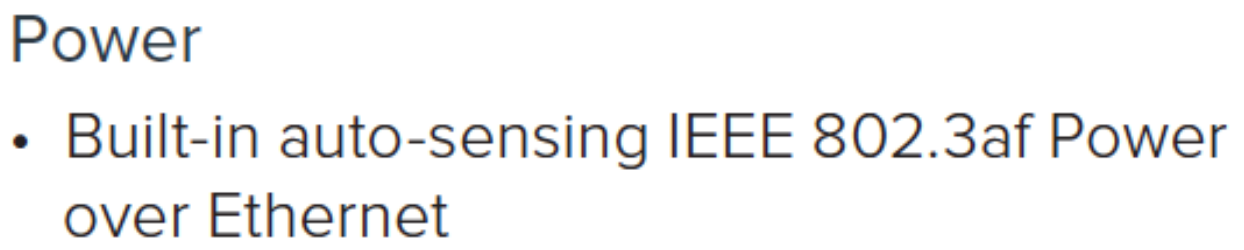
44. The `825 Patent is presumed valid.

45. In violation of 35 U.S.C. § 271, Defendant has directly infringed and continue to directly infringe, both literally and/or under the doctrine of equivalents, the `825 Patent by making, using, offering for sale, selling, and/or importing the Accused PSE Products in the United States, including within this District, that infringe at least claims 5, 11, 13, 15, 16, 17, 40, 45, 49, 50, 64, and 68 of the `825 Patent without the authority of Chrimar. In further violation of 35 U.S.C. § 271, Defendant has directly infringed and continue to directly infringe, both literally and/or under the doctrine of equivalents, the `825 Patent by making, using, offering for sale, selling, and/or importing the Accused PD Products in the United States, including within this District, that infringe at least claims 40, 45, 49, 50, and 64 of the `825 Patent without the authority of Chrimar.

46. The Accused PD Products are powered-off BaseT Ethernet devices that are configured to be interrogated for a predetermined response via at least one direct current (DC) signal prior to receiving any of their operating power.

47. For example, each Accused PD Product has pairs of contacts of its Ethernet connector that are used to carry 10BaseT and/or 100BaseTX Ethernet communication signals.

Additionally, each Accused PD Product implements Section 33.3.5.1 of the 802.3af standard, or a similar provision of another IEEE PoE standard, which defines that a PD is powered off and shall "turn on" when certain conditions are met. For example, the representative Polycom VVX 410 phone datasheet states:



http://www.polycom.com/content/dam/polycom/common/documents/data-sheets/vvx-400-series-data-sheet-enus.pdf, p. 2.

48. Each Accused PD Product complies or is compatible with the portions of the IEEE 802.3af standard that prescribe the presentation of valid detection signatures by drawing different magnitudes of DC current flow in response to at least one electrical condition (e.g., a voltage or current) applied to contacts of an Ethernet connector described in the below excerpts:

33.3.3 PD valid and non-valid detection signatures

A PD shall present a valid detection signature at the PI between Positive V_{Port} and Negative V_{Port} of PD Mode A and between Positive V_{Port} and Negative V_{Port} of PD Mode B as defined in 33.3.1 while it is in a state where it will accept power via the PI, but is not powered via the PI.

A PD shall present a non-valid detection signature at the PI between Positive V_{Port} and Negative V_{Port} of PD Mode A and between Positive V_{Port} and Negative V_{Port} of PD Mode B as defined in 33.3.1 while it is in a state where it will not accept power via the PI.

When a PD becomes powered via the PI, it shall present a non-valid detection signature on the set of pairs from which is it not drawing power.

The valid and non-valid detection signature regions are separated by guardbands. The guardbands for the V-I slope are the ranges 12KΩ to 23.75KΩ and 26.25KΩ to 45KΩ. A PD that presents a signature in a guard-band is non-compliant.

V-I slope is the effective resistance calculated from the two voltage/current measurements made during the detection process.

$$\text{V-I slope} = (V_2 - V_1)/(I_2 - I_1) \quad (33\text{–}1)$$

where (V_1, I_1) and (V_2, I_2) are measurements made at the PD PI.

The valid PD detection signature shall have the characteristics of Table 33–8.

Table 33–8—Valid PD detection signature characteristics, measured at PD input connector

Parameter	Conditions	Minimum	Maximum	Unit
V-I Slope (at any 1V or greater chord within the voltage range conditions)	2.7V to 10.1V	23.75	26.25	KΩ
V offset			1.9	V
I offset			10	μA
Input capacitance	2.7V to 10.1 V	0.05	0.12	μF
Input inductance	2.7V to 10.1 V		100	μH

A non-valid detection signature shall have one or both of the characteristics in Table 33–9

Table 33–9—Non-valid PD detection signature characteristics, measured at PD input connector

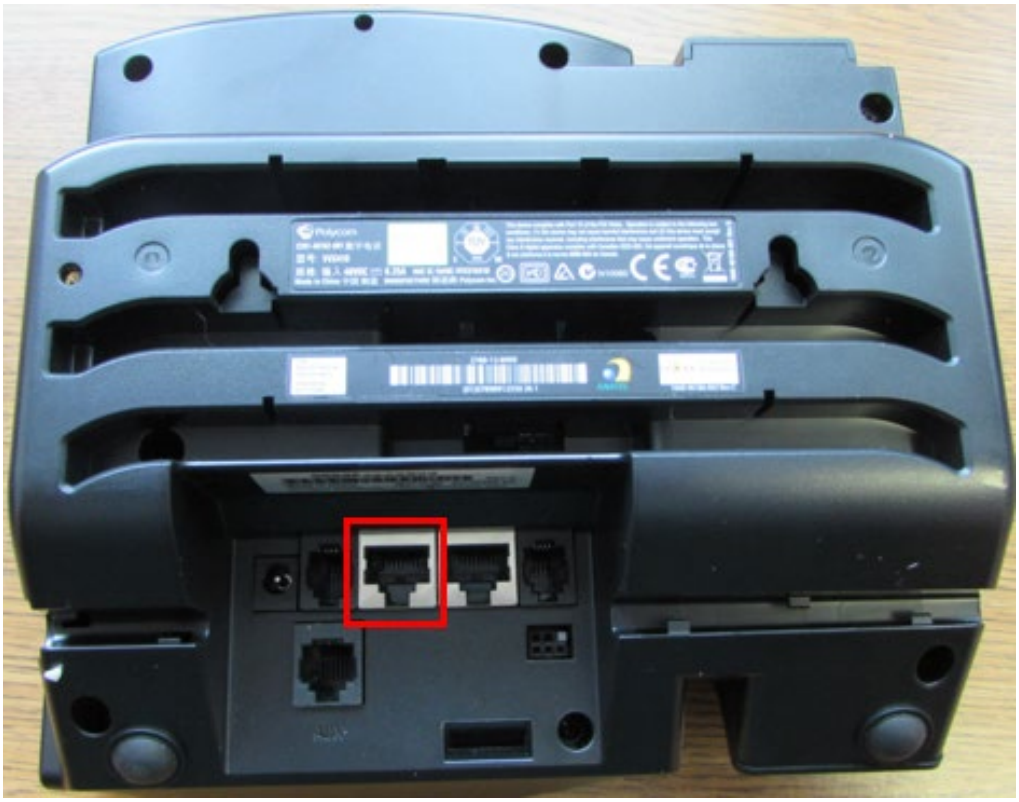
Parameter	Conditions	Range of values	Unit
V-I Slope	V < 10.1V	Either greater than 45 or less than 12	KΩ
Input Capacitance	V < 10.1V	Greater than 10	μF

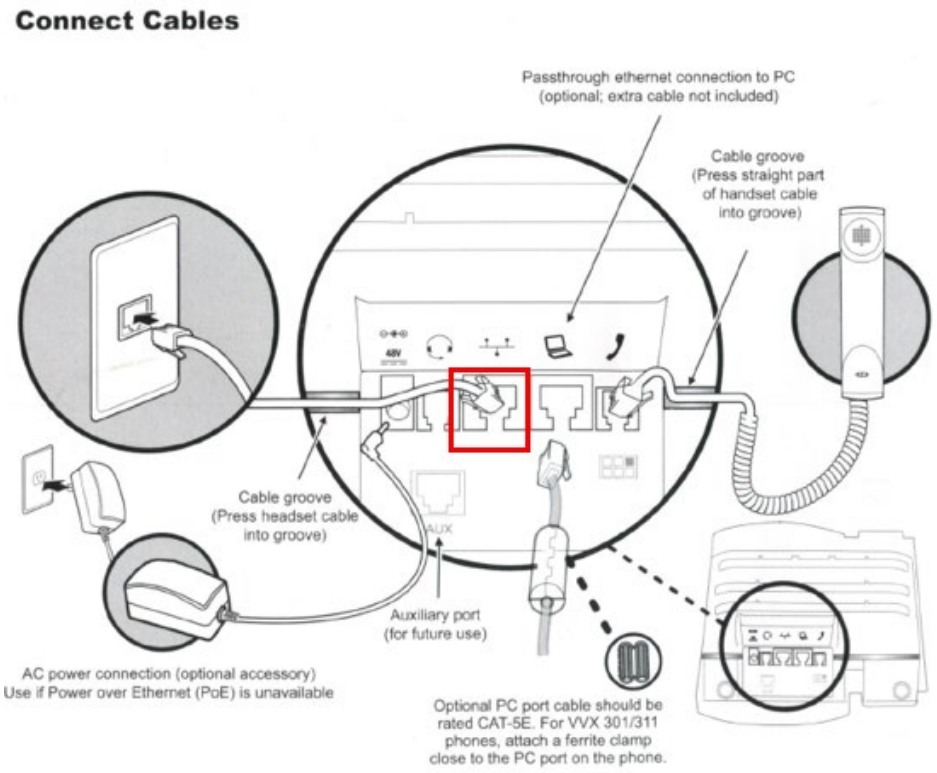
IEEE 802.3af standard, Abstract, Table 33-8, and Table 33-9

49. Each Accused PD Product is a BaseT Ethernet device that comprises an Ethernet jack connector. The Ethernet jack connector comprises first and second pairs of contacts (1,2 &

3,6). Each of the first and second pairs are configured to carry BaseT Ethernet communication signals wherein the first pair of contacts consists of a transmit pair of the Ethernet jack connector and wherein the second pair of contacts consists of the receive pair of the Ethernet jack connector.

50. For example, the representative Polycom VVX 410 phone has an RJ-45 Ethernet connector with four pairs of contacts:





Polycom VVX410 Quick Start Guide, p. 2.

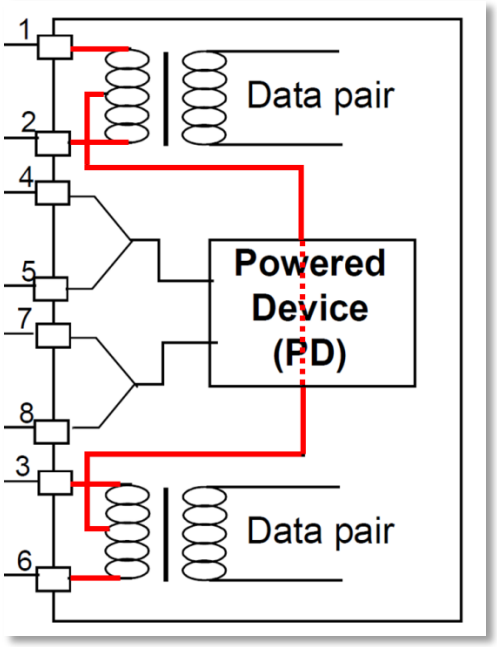
51. Each Accused PD Product is a BaseT Ethernet device that comprises at least one path. The at least one path is for the purpose of drawing at least one direct current (DC) signal. The at least one path is coupled across at least one of the contacts of the first pair (1,2) and at least one of the contacts of the second pair (3,6) of the Ethernet jack connector.

52. For example, because each of the Accused PD Products comply with the IEEE PoE Standards, each "shall be capable of accepting power on either of two sets of PI conductors (1,2 & 3,6 or 4,5 & 7,8). The two conductor sets are named Mode A and Mode B. In each four-wire connection, the two wires associated with a pair are at the same nominal average voltage. Figure 33–5 in conjunction with Table 33–7 illustrates the two power modes." IEEE 802.3af standard, p. 49.

Table 33–7—PD pinout

Conductor	Mode A	Mode B
1	Positive V_{Port}, Negative V_{Port}	
2	Positive V_{Port}, Negative V_{Port}	
3	Negative V_{Port}, Positive V_{Port}	
4		Positive V_{Port}, Negative V_{Port}
5		Positive V_{Port}, Negative V_{Port}
6	Negative V_{Port}, Positive V_{Port}	
7		Negative V_{Port}, Positive V_{Port}
8		Negative V_{Port}, Positive V_{Port}

IEEE 802.3af standard, Table 33-7. *See also, e.g.*, 802.3af Standard, p. 30, Figure 33-4 showing examples of PDs (referred to as Powered End Stations with respect to Figure 33-4) having paths coupled across the contacts of the Ethernet connector to be used for detection and classification. Because each Accused PD Product claims IEEE 802.3af/at compliance or compatibility, each has at least one path coupled across the contacts of the Ethernet connector as shown in the simplified example below.



IEEE 802.3af standard, Figure 33-4 (annotated, emphasis added)

53. Each Accused PD Product implements detection and classification protocols requiring at least one path for the purpose of drawing DC current, the at least one path coupled across at least one of the contacts of the first pair of contacts of the Ethernet connector and at least one of the contacts of the second pair of contacts of the Ethernet connector as explained in the 802.3af standard:

33.3.3 PD valid and non-valid detection signatures

A PD shall present a valid detection signature at the PI between Positive V_{Port} and Negative V_{Port} of PD Mode A and between Positive V_{Port} and Negative V_{Port} of PD Mode B as defined in 33.3.1 while it is in a state where it will accept power via the PI, but is not powered via the PI.

A PD shall present a non-valid detection signature at the PI between Positive V_{Port} and Negative V_{Port} of PD Mode A and between Positive V_{Port} and Negative V_{Port} of PD Mode B as defined in 33.3.1 while it is in a state where it will not accept power via the PI.

When a PD becomes powered via the PI, it shall present a non-valid detection signature on the set of pairs from which is it not drawing power.

The valid and non-valid detection signature regions are separated by guardbands. The guardbands for the V-I slope are the ranges 12KΩ to 23.75KΩ and 26.25KΩ to 45KΩ. A PD that presents a signature in a guard-band is non-compliant.

V-I slope is the effective resistance calculated from the two voltage/current measurements made during the detection process.

$$\text{V-I slope} = (V_2 - V_1)/(I_2 - I_1) \qquad (33\text{–}1)$$

where (V_1, I_1) and (V_2, I_2) are measurements made at the PD PI.

The valid PD detection signature shall have the characteristics of Table 33–8.

IEEE 802.3af standard, 33.3.3

54. The Accused PD Products are powered-off BaseT Ethernet devices that are configured to receive or return at least one direct current (DC) signal via at least one of the contacts of the first pair and configured to return or receive the at least one direct current (DC) signal via at least one of the contacts of the second pair of the Ethernet connector prior to receiving any of their operating power. The predetermined response is carried by at least two different magnitudes in the flow of the at least one direct current (DC) signal.

55. For example, the below excerpts of the IEEE PoE Standards demonstrate that a compliant product, such as the Accused PD Products, will draw different magnitudes of DC current flow in response to at least one electrical condition (e.g., voltage or current) applied to a contact, as required to comply with the detection and classification protocols.

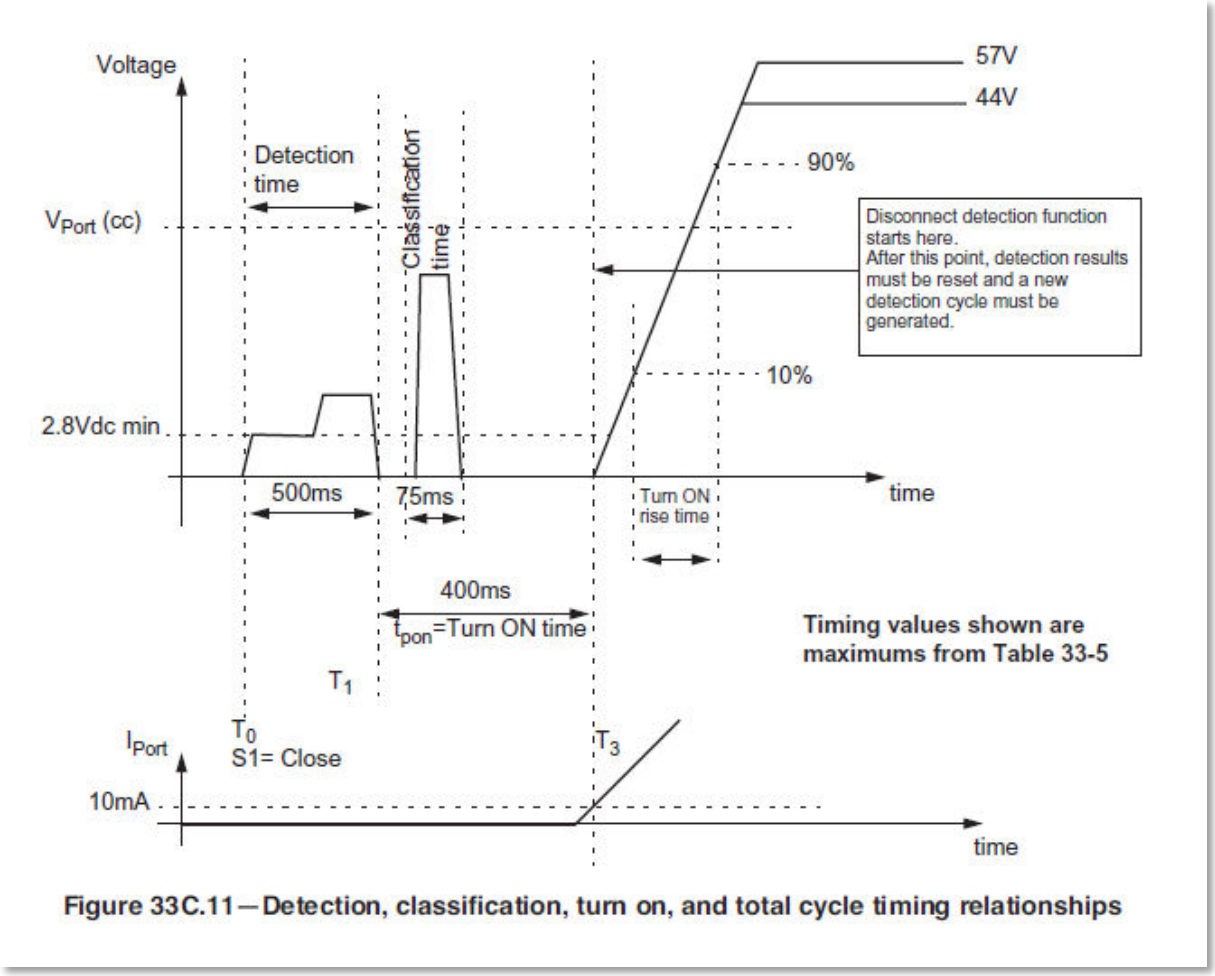
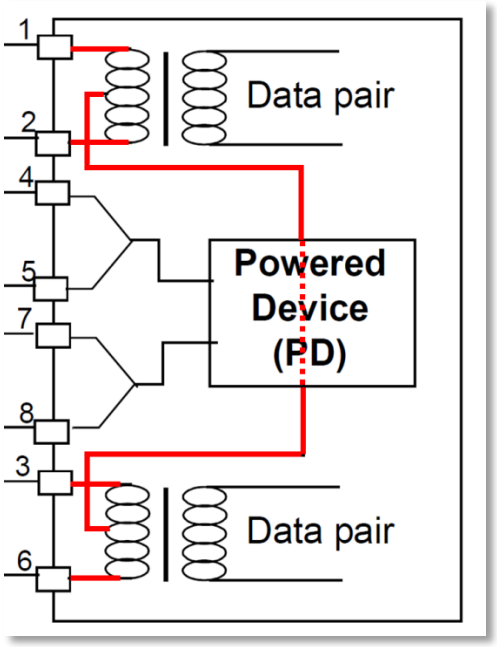


Figure 33C.11—Detection, classification, turn on, and total cycle timing relationships

IEEE 802.3af standard, Figure 33C.11 This signature impedance is within the at least one path and distinguishes an Accused PD Product from non-PoE Ethernet devices.

56. Each of the Accused PD Products is a powered-off BaseT Ethernet device (prior to being operationally powered) wherein the at least one path is physically coupled across at least one of the contacts of the first pair of contacts and at least one of the contacts of the second pair of contacts of the Ethernet jack connector.

57. For example, because each Accused PD Product is IEEE 802.3af/at compliant or compatible, each has at least one path coupled across the contacts of the Ethernet connector as shown in the simplified example below.



IEEE 802.3af standard, Figure 33-4 (annotated, emphasis added)

58. Each of the Accused PD Products comprises a controller coupled across at least one of the contacts of the first pair of contacts and at least one of the contacts of the second pair of contacts of the Ethernet jack connector.

59. For example, each of the Accused PD Products employs a controller coupled across the recited contacts as described above.

60. Upon information and belief, discovery will show that each of the Accused PD Products has firmware for the controller described above.

61. Accordingly, Defendant has and continues to directly infringe the `825 Patent, both literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271(a) by making, using, offering for sale, selling, and/or importing into the United States the Accused Products without the authority of Chrimar.

62. Defendant has been on notice of the `825 Patent since at least the filing of this Complaint. *See Affinity Labs of Tex., LLC v. Toyota Motor N. Am., Inc.*, No. W:13-CV-365, 2014

U.S. Dist. LEXIS 90379, at *12 (W.D. Tex. May 12, 2014)(explaining that a defendant's knowledge of a patent can be established through the filing of the complaint).

63. In violation of 35 U.S.C. § 271(b), Defendant has indirectly infringed the `825 Patent by inducing its customers to directly infringe the `825 Patent, both literally and/or under the doctrine of equivalents, at least by providing its customers with instructions on using the Accused Products and by making, using, offering for sale, selling, and/or importing devices in the United States the Accused Products without the authority of Chrimar.

64. Upon information and belief, and in violation of 35 U.S.C. § 271(b), Defendant has indirectly infringed the `825 Patent by contribution knowing that the Accused Products would be combined with other components to infringe the `825 Patent and that the Accused Products have no substantial non-infringing use.

65. Unless enjoined by this Court, Defendant will continue to infringe the `825 Patent.

66. Because of Defendant's infringing activities, Chrimar has suffered damages and will continue to suffer damages in the future.

APPLICATION FOR PRELIMINARY AND PERMANENT INJUNCTION

67. Chrimar alleges and hereby incorporates by reference each and every of the allegations made in the foregoing paragraphs of this Complaint as if each were separately set forth herein.

68. As discussed above, Chrimar was the first company to employ DC current within a BaseT network in the early 1990s and has received a number of US patents for this very important technology, and continues to market its products including the EtherLock® II and ELID products. *See* http://cmstech.com/security_solutions/products/products.html. Chrimar's

installed ELID/NIC-Stick circuitry practice certain claims of the `107 and `825 Patents. *See also* http://www.cmspatents.com/.

69. Upon information and belief, Defendant, unless enjoined, will continue to infringe Chrimar's intellectual property rights in the `107 and `825 Patents as described in this Complaint.

70. These actions entitle Chrimar to a preliminary injunction and, upon hearing, permanent injunction enjoining Defendant and its officers, agents, servants, employees, users, and attorneys, and all those persons in active concert or in participation with them from:

(i) Making, using, offering to sell, or selling any product that infringes the `107 and `825 Patents, including the Accused Products and all other similar infringing products; and

(ii) Otherwise infringing any rights of Chrimar.

71. For these actions, there is no adequate remedy at law. The Patents-in-Suit cover the core technology of Chrimar's and Defendant's businesses. Defendant's efficient infringement gives them an unfair advantage in the marketplace by allowing Defendant to make infringing alternatives available to the marketplace. In view of this, the injury to Chrimar greatly outweighs any injury to Defendant that the requested injunction may cause, and the balance of hardships tips strongly in favor of Chrimar.

72. Further, Chrimar is substantially likely to prevail on the merits of these claims. For example, in *Chrimar Systems, Inc., et al., v. Alcatel-Lucent Enterprise, USA, Inc.*, Alcatel-Lucent stipulated to infringement of certain claims of the `107 Patent and the jury rejected Alcatel-Lucent's validity challenge to the `107 Patent's claims asserted in that case. Civil Action No. 6:15-cv-163-JDL, Dkt No. 349 (Verdict Form, Oct. 10, 2016), Dkt No. 423 (Final Judgment, February 2, 2017) (E.D. Tex.).

73. Finally, the injunction will not disserve the public interest. Here, the public interest favors entry of a permanent injunction because the detrimental effect of inhibiting innovation, coupled with the public's general interest in the judicial protection of property rights in inventive technology, outweighs any interest the public has in purchasing cheaper infringing products.

74. Therefore, Chrimar is entitled to preliminary and permanent injunctive relief against Defendant.

ADDITIONAL ALLEGATIONS

75. Chrimar has complied with 35 U.S.C. § 287.

NOTICE OF REQUIREMENT OF LITIGATION HOLD

76. Defendant is hereby notified they are legally obligated to locate, preserve, and maintain all records, notes, drawings, documents, data, communications, materials, electronic recordings, audio/video/photographic recordings, and digital files, including edited and unedited or "raw" source material, and other information and tangible things that Defendant knows, or reasonably should know, may be relevant to actual or potential claims, counterclaims, defenses, and/or damages by any party or potential party in this lawsuit, whether created or residing in hard copy form or in the form of electronically stored information (hereafter collectively referred to as "Potential Evidence").

77. As used above, the phrase "electronically stored information" includes without limitation: computer files (and file fragments), e-mail (both sent and received, whether internally or externally), information concerning e-mail (including but not limited to logs of e-mail history and usage, header information, and deleted but recoverable emails), text files (including drafts, revisions, and active or deleted word processing documents), instant messages, audio recordings

and files, video footage and files, audio files, photographic footage and files, spreadsheets, databases, calendars, telephone logs, contact manager information, internet usage files, and all other information created, received, or maintained on any and all electronic and/or digital forms, sources and media, including, without limitation, any and all hard disks, removable media, peripheral computer or electronic storage devices, laptop computers, mobile phones, personal data assistant devices, Blackberry devices, iPhones, video cameras and still cameras, and any and all other locations where electronic data is stored. These sources may also include any personal electronic, digital, and storage devices of any and all of Defendant's agents, resellers, or employees if Defendant's electronically stored information resides there.

78. Defendant is hereby further notified and forewarned that any alteration, destruction, negligent loss, or unavailability, by act or omission, of any Potential Evidence may result in damages or a legal presumption by the Court and/or jury that the Potential Evidence is not favorable to Defendant's claims and/or defenses. To avoid such a result, Defendant's preservation duties include, but are not limited to, the requirement that Defendant immediately notify its agents and employees to halt and/or supervise the autodelete functions of Defendant's electronic systems and refrain from deleting Potential Evidence, either manually or through a policy of periodic deletion.

JURY DEMAND

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Chrimar demands a trial by jury on all issues triable as such.

PRAYER FOR RELIEF

Chrimar requests that this Court find in its favor and against Defendant, and that this Court grant Chrimar the following relief:

A. An adjudication that Defendant has infringed the `107 and `825 Patents;

B. An award of damages to be paid by Defendant adequate to compensate Chrimar for Defendant's past infringement of the Patents-in-Suit and any continuing or future infringement through the date such judgment is entered (but in no event less than a reasonable royalty in accordance with 35 U.S.C. § 284), including interest, costs, expenses and an accounting of all infringing acts including, but not limited to, those acts not presented at trial;

C. A preliminary and permanent injunction enjoining Defendant and its officers, agents, servants, employees, users, attorneys, and all those persons in active concert or participation with Defendant from the acts described in this Complaint;

D. Alternatively, an order requiring Defendant to pay an ongoing royalty in an amount to be determined for any continued infringement after the date judgment is entered;

E. An award of pre-judgment and post-judgment interest to the full extent allowed under the law, as well as their costs;

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

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

Dated: January 15, 2019

Respectfully submitted,

/s/ *Gary R. Sorden*

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