United States District Court,
E.D. Texas, Texarkana Division.

MOBILITY ELECTRONICS, INC,
Plaintiff.
v.
FORMOSA ELECTRONIC INDUSTRIES, INC,
Defendant.

No. 504-CV-103-DF

Feb. 24, 2006.

CLAIM CONSTRUCTION ORDER CONSTRUING U.S. PATENT NOS. 5,347,211 6,064,177 6,650,560 6,700,808 6,920,056 6,937,490 6,643,158 6,775,163

DAVID FOLSOM**, District Judge.**

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I. Background

Plaintiff Mobility Electronics, Inc., ("Mobility") brings this cause of action against Defendant Formosa Electronic Industries, Inc., ("Formosa") alleging infringement of U.S. Patent No. 5,347,211 ("'211 patent"), U.S. Patent No. 6,064,177 ("'177 patent"), U.S. Patent No. 6,650,560 ("'560 patent"), U.S. Patent No. 6,700,808 ("'808 patent"), U.S. Patent No. 6,920,056 ("'056 patent"), U.S. Patent No. 6,937,490 ("'490 patent"), U.S. Patent No. 6,643,158 ("'158 patent"), and U.S. Patent No. 6,775,163 ("'163 patent") (collectively, the "patents-in-suit"). Dkt. No. 138 Fourth Amended Complaint.

Now before the Court is the claim construction of the respective patents. The parties filed initial claim construction briefs. Dkt. Nos. 136 and 137. Formosa then filed a supplemental brief on claim construction and a brief in response to Plaintiff's Initial Claim Construction. Dkt. Nos. 176 and 179, respectively. Mobility filed a combined response to Defendant's initial and supplemental claim construction briefs. Dkt. No. 178. The parties then filed a joint claims construction chart (Dkt. No. 180) ("JCCC"). On November 17,

2005 the Court conducted a claim construction hearing. With the Court's permission, Mobility filed a Supplemental Brief in Support of its Proposed Claim Construction after the hearing. Dkt. No. 183. FN1

FN1. Because Formosa's claim construction positions were unclear until the submission of the JCCC, see footnote *infra,* Mobility was allowed to file a supplemental brief in response to terms Formosa failed to clearly identified as in dispute prior to the filing of the JCCC. Dkt. No. 183; 11/17/06 Hr. Tr. at 1-2.

After considering the patents, the parties' submissions, arguments of counsel, and all other relevant pleadings and papers, the Court finds that the claims of the patents-in-suit should be construed as set forth herein.

II. The Legal Principles of Claim Construction

A determination of patent infringement involves two steps. First, the patent claims are construed, and, second, the claims are compared to the allegedly infringing device. Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1455 (Fed.Cir.1998) (*en banc*).

The legal principles of claim construction were recently reexamined by the Federal Circuit in Phillips v. AWH Corp., 415 F.3d 1303 (Fed.Cir.2005) (*en banc*). FN2 Reversing a summary judgment of non-infringement, an *en banc* panel specifically identified the question before it as: "the extent to which [the court] should resort to and rely on a patent's specification in seeking to ascertain the proper scope of its claims." Id. at 1312. Addressing this question, the Federal Circuit specifically focused on the confusion that had amassed from its recent decisions on the weight afforded dictionaries and related extrinsic evidence as compared to intrinsic evidence. Ultimately, the court found that the specification, "informed, as needed, by the prosecution history," is the "best source for understanding a technical term." Id. at 1315 (quoting Multiform Dessicants, Inc. v. Medzam, Ltd., 133 F.3d 1473, 1478 (Fed.Cir.1998)). However, the court was mindful of its decision and quick to point out that *Phillips* is not the swan song of extrinsic evidence, stating:

FN2. The Court notes that Formosa, when setting forth "The Law of Claim construction" in its initial claim construction brief, excerpted substantially all of the section entitled "General Principles Governing Claim Construction" from *Maxma v. Conoco Philips,* Inc., 384 F.Supp.2d 1016 (E.D.Tex.2005) (Ward, J.). Dkt. No. 134 at pp. 12-18. Though stating it "generally follows" Judge Ward's statement of the law in the *Maxma* opinion, Formosa fails to state that it was citing the opinion almost verbatim-save two statements regarding the role of the specification in limiting the scope of the claims (pp. 13-14, 16).

> [W]e recognized that there is no magic formula or catechism for conducting claim construction. Nor is the court barred from considering any particular sources or required to analyze sources in any specific sequence, as long as those sources are not used to contradict claim meaning that is unambiguous in light of the intrinsic evidence.
>
> Phillips, 415 F.3d at 1324 (citations omitted). Consequently, this Court's reading of *Phillips* is that the Federal Circuit has returned to the state of the law prior to its decision in Texas Digital Sys. v. Telegenix, Inc., 308 F.3d 1193 (Fed.Cir.2002), allotting far greater deference to the intrinsic record than to extrinsic evidence.
>
> Additionally, the Federal Circuit in *Phillips* expressly reaffirmed the principles of claim construction as set

forth in Markman v. Westview Instruments, Inc., 52 F.3d 967 (Fed.Cir.1995) (*en banc*), *aff'd,* 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996), Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576 (Fed.Cir.1996), and Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111 (Fed.Cir.2004). Thus, the law of claim construction remains intact. Claim construction is a legal question for the courts. Markman, 52 F.3d at 979. The claims of a patent define that which "the patentee is entitled the right to exclude." Innova, 381 F.3d at 1115. And the claims are "generally given their ordinary and customary meaning" as understood by "a person of ordinary skill in the art in question at the time of the invention, *i.e.,* as of the effective filing date of the patent application." Vitronics, 90 F.3d at 1582. However, the Federal Circuit stressed the importance of recognizing that the person of ordinary skill in the art "is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." Phillips, 415 F.3d at 1313.

Advancing the emphasis on the intrinsic evidence, the *Phillips* decision explains how each source, the claims, the specification as a whole, and the prosecution history, should be used by courts in determining how a skilled artesian would understand the disputed claim term. *See, generally, id.* at 1314-17. The court noted that the claims themselves can provide substantial guidance, particularly through claim differentiation. Using an example taken from the claim language at issue in *Phillips,* the Federal Circuit observed that "the claim in this case refers to 'steel baffles,' which strongly implies that the term 'baffles' does not inherently mean objects made of steel." *Id.* at 1314. Thus, the "context in which a term is used in the asserted claim can often illuminate the meaning of the same term in other claims." *Id.* Likewise, other claims of the asserted patent can be enlightening, for example, "the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." *Id.* at 1315 (citing Liebel-Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 910 (Fed.Cir.2004).

Still, the claims "must be read in view of the specification, of which they are part." Markman, 52 F.3d at 978. In *Phillips,* the Federal Circuit reiterated the importance of the specification, noting that "the specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.' " Phillips, 415 F.3d at 1315 (quoting Vitronics, 90 F.3d at 1582). To emphasize this position, the court cited extensive case law, as well as "the statutory directive that the inventor provide a 'full' and 'exact' description of the claimed invention." *Id.* at 1316 (citing Merck & Co., v. Teva Pharms. USA, Inc., 347 F.3d 1367, 1371 (Fed.Cir.2003)), *see also* 35 U.S.C. s. 112, para. 1. Consistent with these principles, the court reaffirmed that an inventor's own lexicography and any express disavowal of claim scope is dispositive. *Id.* at 1316. Concluding this point, the court noted the consistency with this approach and the issuance of a patent from the Patent and Trademark Office and found that "[i]t is therefore entirely appropriate for a court, when conducting claim construction, to rely heavily on the written description for guidance as to the meaning of the claims." *Id.* at 1317.

Additionally, the *Phillips* decision provides a terse explanation of the prosecution history's utility in construing claim terms. The court simply reaffirmed that "the prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." *Id.* (citing Vitronics, 90 F.3d at 1582-83). It is a significant source for evidencing how the patent office and the inventor understood the invention. *Id.*

Finally, the Federal Circuit curtailed the role of extrinsic evidence in construing claims. In pointing out the less reliable nature of extrinsic evidence, the court reasoned that such evidence (1) is by definition not part of the patent, (2) does not necessarily reflect the views or understanding of a person of ordinary skill in the

relevant art, (3) is often produced specifically for litigation, (4) is far reaching to the extent that it may encompass several views, and (5) may distort the true meaning intended by the inventor. *See id*. at 1318. Consequently, the Federal Circuit expressly disclaimed the approach taken in *Texas Digital*. While noting the *Texas Digital* court's concern with regard to importing limitations from the written description, "one of the cardinal sins of patent law," the Federal Circuit found that "the methodology it adopted placed too much reliance on extrinsic sources such as dictionaries, treatises, and encyclopedias and too little on intrinsic sources, in particular the specification and prosecution history." *Id*. at 1320. Thus, the court renewed its emphasis on the specification's role in claims construction.

Many other principles of claims construction, though not addressed in *Phillips,* remain significant in guiding this Court's charge in claim construction. The Court is mindful that there is a "heavy presumption" in favor of construing claim language as it would be plainly understood by one of ordinary skill in the art. Johnson Worldwide Assocs., Inc. v. Zebco Corp., 175 F.3d 985, 989 (Fed.Cir.1999); *Cf. Altiris, Inc., v. Symantec Corp.,* 318 F.3d 1364, 1372 (Fed.Cir.2003) ("[S] imply because a phrase as a whole lacks a common meaning does not compel a court to abandon its quest for a common meaning and disregard the established meaning of the individual words."). The same terms in related patents are presumed to carry the same meaning. *See* Omega Eng'g, Inc. v. Raytek Corp., 334 F.3d 1314, 1334 (Fed.Cir.2003) ("We presume, unless otherwise compelled, that the same claim term in the same patent or related patents carries the same construed meaning.").

Claim construction is not meant to change the scope of the claims but only to clarify their meaning. Embrex, Inc. v. Service Eng'g Corp., 216 F.3d 1343, 1347 (Fed.Cir.2000) ("In claim construction the words of the claims are construed independent of the accused product, in light of the specification, the prosecution history, and the prior art.... The construction of claims is simply a way of elaborating the normally terse claim language[ ] in order to understand and explain, but not to change, the scope of the claims.") (citations and internal quotations omitted). Regarding claim scope, the transitional term "comprising," when used in claims, is an inclusive or open-ended and "does not exclude additional, unrecited elements or method steps." CollegeNet, Inc. v. ApplyYourself, Inc., 418 F.3d 1225, 1235 (Fed.Cir.2005) (citations omitted). Claim constructions that would read out the preferred embodiment are rarely if ever is a correct. Vitronics Corp. v. Conceptronics, Inc., 90 F.3d 1576, 1583-84 (Fed.Cir.1996).

Lastly, the Court notes that a patent examiner's "Reasons for Allowance," where merely summarizing a claimed invention and not specifically noting that patentability is based on a particular feature, do not limit the scope of the claim. *See* Apex Inc. v. Raritan Computer, Inc., 325 F.3d 1364, 1375 (Fed.Cir.2003). Similarly, an examiner's unilateral statements in a "Notice of Allowance" do not result in the alteration of claim scope. *See Id.;* Salazar v. Procter & Gamble Co., 414 F.3d 1342, 1346-47 (Fed.Cir.2005).

III. The Patents-in-Suit Generally

Each of the patents-in-suit generally relate to power adapters for portable electronic devices. The eight asserted patents are detailed below.

'211 Patent**:**

The '211 patent, entitled Selectable Output Power Converter, issued on September 13, 1994 from application number 30,670 which was filed on March 11, 1993.

'*211 Abstract:*

A power converter for providing a selectable desired voltage has a converter circuit having an input port for receiving an input of a first voltage and an output port for providing an output of a second voltage. The converter circuit also has a keyway for receiving a key. The key, which is configured to be received by the keyway, contains an electrical component and has a body within which the electrical component is disposed. The output voltage of the converter is determined by the value of the component disposed within the body of the key such that the output voltage can be varied by replacing the key with another key having an electrical component of a different value.

'177 Patent**:**

The '177 patent, entitled Two-Part Battery Charger/Power Cable Article with Multiple Device Capability, issued on May 16, 2000 from application number 09/225,984 which was filed on January 5, 1999.

'*177 Abstract:*

An article is disclosed which provides for powering or charging the battery of a variety of different electronic devices, with the article being in two parts. The first part has components such that it is "universal" for use with all of the variety of different devices, and the second part has components which are specific to the operation of only a single model, type or brand of such device or of closely related devices which operate with the same voltage and plug-compatibility requirements of the specific device. In particular, the article with both parts (modules) present will operate a specific model, type or brand of device. However one can disconnect the two parts from each other and connect a different second part for a different device to the same first part, thereby being able to operate two different devices with substitution of only one part (the second) rather than requiring substitution of the entire article when a difference (sic) device must be powered or its battery charged. The article is particularly useful for powering or charging the batteries of devices such as cellular telephones, computers and the like from house, office or other building electrical systems or from vehicle electrical systems.

'560 Patent:

The '560 patent, entitled Dual Input AC and DC Power Supply Having A Programmable DC Output Utilizing Single-Loop Optical Feedback, issued on November 18, 2003 from application number 10/225,933 which was filed on August 22, 2002.

'*560 Abstract:*

A dual input AC/DC power converter having dual inputs adapted to receive both an AC and DC input and provide a selectable DC voltage output and a second DC output. The dual input AC/DC power converter comprises a power converter circuit having an AC-to-DC converter, a DC-to-DC booster converter, a feedback circuit, a filter circuit and a DC-to-DC buck converter. Advantageously, the power converter resolves many of the system management problems associated with carrying all of the different interface components necessary to power a wide variety of mobile products from either an AC or DC power supply. In addition, the feedback circuit comprises single feedback loop having stacked photocouplers, one controlling the AC-to-DC converter and the other controlling the DC-to-DC booster converter, to select the overall DC output voltage.

(references to figures omitted).

'808 Patent**:**

The '808 patent, entitled Dual Input AC and DC Power Supply Having A Programmable DC Output Utilizing a Secondary Buck Converter, issued on March 2, 2004 from application number 10/072,074 which was filed on February 8, 2002.

'*808 Abstract:*

A dual input AC/DC power converter having dual inputs adapted to receive both an AC and DC input and provide a selectable DC voltage output and a second DC output. The dual input AC/DC power converter comprises a power converter circuit having an AC-to-DC converter, a DC-to-DC booster converter, a feedback circuit, a filter circuit and a DC-to-DC buck converter. Advantageously, the power converter resolves many of system management problems associated with carrying all of the different interface components necessary to power a wide variety of mobile products from either an AC or DC power supply. In addition, the power converter also advantageously includes dual output voltage terminals to allow for multiple mobile devices of varying power requirements to be powered, simultaneously, by a single converter.

(references to figures omitted).

'056 Patent**:**

The '056 patent, entitled Dual Input AC and DC Power Supply Having a Programmable DC Output Utilizing Single-Loop Optical Feedback, issued on July 19, 2005 from application number 10/715,259 which was filed on November 17, 2003. It is a continuation in part of the application that ultimately resulted in the issuance of the '560 patent, which was a continuation in part of the application that resulted in the issuance of the '109 patent, which was a continuation-in-part of the patent application that resulted in the '158 patent.

'*056 Abstract:*

A dual input AC/DC power converter having dual inputs adapted to receive both an AC and DC input and provide a selectable DC voltage output and a second DC output. The dual input AC/DC power converter comprises a power converter circuit having an AC-to-DC converter, a DC-to-DC booster converter, a feedback circuit, a filter circuit and a DC-to-DC buck converter. Advantageously, the power converter resolves many of the system management problems associated with carrying all of the different interface components necessary to power a wide variety of mobile products from either an AC or DC power supply. In addition, the feedback circuit comprises single feedback loop having stacked photocouplers, one controlling the AC-to-DC converter and the other controlling the DC-to-DC booster converter, to select the overall DC output voltage.

(references to figures omitted).

'490 Patent**:**

The '490 patent, entitled Dual Input AC and DC Power Supply Having Programmable DC Output Utilizing A Modular Programmable Feedback Loop, issued on August 30, 2005 from application number 10/790,654

which was filed on March 1, 2004. It is a continuation-in-part of the application that ultimately resulted in the issuance of the '808 patent.

2C490 Abstract:

A dual input AC/DC power converter having dual inputs adapted to receive both an AC and DC input and provide a selectable DC voltage output and a second DC output. The dual input AC/DC power converter comprises a power converter circuit having an AC-to-DC converter, a DC-to-DC booster converter, a feedback circuit, a filter circuit and a DC-to-DC buck converter. Advantageously, the power converter resolves many of system management problems associated with carrying all of the different interface components necessary to power a wide variety of mobile products from either an AC or DC power supply. In addition, the power converter also advantageously includes dual output voltage terminals to allow for multiple mobile devices of varying power requirements to be powered, simultaneously, by a single converter.

(references to figures omitted).

The Court notes that the previous four patents, '560, '808, '158, and '490, are related as each issued from a continuation-in-part of Application No. 10/005,961. Without tracing the full patent family here, it is suffice to say that the '560 and '158 patents share a specification, and the '808 and '490 share a specification. The specifications of each of these four patents is substantially similar. As the '560 was the first patent to issue, all references to the specification will be to the '560 specification unless otherwise noted. FN3

FN3. Though Mobility did not comment on the relationship between the patents in suit, Formosa did: "The '808 patent is based on Serial No. 10/072,074 ... and the specification of the '560 and '808 patens are substantially the same. For this reason, they will be considered together herein." Dkt. No. 136 at 38-39. "The '056 patent issued ... [from] Application No. 10/715,259 [which was] a continuation of the application leading to the '560 patent. Accordingly, the specification of the ' 056 patent is identical to the '560 patent and similar to the specification of the '808 patent. Therefore Formosa relies upon its description of the subject matter of the '560 patent in its principal brief at pages 38-42." Dkt. No. 176 at 2. "The '490 patent issued [from] application No. 10/790,654. This application was a continuation application from the application leading to the '808 patent and, as such, the specification of the '490 patent is identical to the '808 patent and similar to the '560 patent. Therefore the subject matter of the '490 patent is as set forth fro the '560 and '808 patents...." Dkt. No. 176 at 17. *See also* 11/17/05 Hr. Tr. at 70.

'158 Patent**:**

The '158 patent, entitled Dual Input AC/DC to Programmable DC Output Converter, issued on November 4, 2003 from application number 10/005,961 which was filed on December 3, 2001.

'*158 Abstract:*

A power converter capable of receiving either an AC input voltage or a DC input voltage and generating a programmable DC output voltage. The converter comprises a first circuit that converts an AC input voltage to a predetermined DC first output voltage, and a second circuit that converts a DC input voltage to a predetermined second DC output voltage. The converter also comprise a third circuit which is adapted to

receive the first and second DC voltages from first and second circuits to generate a selectable output DC voltage. In selected embodiments, the first and second DC output voltages provided by the first and second circuits, respectively, are generally the same value and are coupled to a common node that feeds the input terminal of the third circuit. Moreover, the third circuit is adapted to provide a selectable output DC voltage which may be set higher or lower than its DC input voltage. The third circuit may also be adapted to couple a set of removable programming keys that provide for a different associated DC output voltage. The programming key comprises a resistor, which may provide for a variety of functions, such as current-limiting, over-voltage protection, output voltage programming, and wrong-tip circuit protection.

'163 Patent**:**

The '163 patent, entitled Dual Input AC/DC to Programmable DC Output Converter, issued on August 10, 2004 from application number 10/661,216 which was filed on September 12, 2003. It is a continuation-in-part of the application that ultimately resulted in the issuance of the '158 patent.

'*163 Abstract:*

A power converter capable of receiving either an AC input voltage or a DC input voltage and generating a programmable DC output voltage. The converter comprises a first circuit that converts an AC input voltage to a predetermined DC first output voltage, and a second circuit that converts a DC input voltage to a predetermined second DC output voltage. The converter also comprise a third circuit which is adapted to receive the first and second DC voltages from first and second circuits to generate a selectable output DC voltage. In selected embodiments, the first and second DC output voltages provided by the first and second circuits, respectively, are generally the same value and are coupled to a common node that feeds the input terminal of the third circuit. Moreover, the third circuit is adapted to provide a selectable output DC voltage which may be set higher or lower than its DC input voltage. The third circuit may also be adapted to couple a set of removable programming keys that provide for a different associated DC output voltage. The programming key comprises a resistor, which may provide for a variety of functions, such as current-limiting, over-voltage protection, output voltage programming, and wrong-tip circuit protection.

The Court notes that the previous two patents, '158 and '163, are related. The '158 issued from Application No. 10/005,961 and the '163 issued from a continuation in part of the same application. The specifications of the two patents substantially similar. FN4 As the ' 158 patent was the first to issue, all references to the specification will be to the '158 specification unless otherwise noted. Note also that Application No. 10/005,961 was the application from which the '560, '808, '056, and '490 originated as well, so that these six patents are related.

FN4. Though Mobility did not comment on the relationship between the patents in suit, Formosa acknowledged this relationship: "The '158 and ' 163 patents include the same specification and, accordingly, will also be considered together." Dkt. No. 136 at 4. *See also* 11/17/05 Hr. Tr. at 70.

IV. Claim Construction

The parties request the Court to construe a number of terms appearing in the patents-in-suit. FN5 In their respective briefing and during the claims construction hearing, the parties focused their arguments on the following claims in the following patents: ' 211 patent, claims 1, 12, and 17; ' 177 patent, claim 7; ' 560 patent, claims 1, 10, 23, 24, and 31; ' 808 patent, claims 1, 5, 6, 9, and 18; ' 056 patent, claims 1-3, 5 and 13;

' 490 patent, claim 1; ' 158 patent, claims 1 and 6; and ' 163 patent, claims 1 and 7. The asserted claims are repeated below, patent by patent, followed by a table setting forth each disputed term, each party's proposed construction and support (as compiled in Dkt. No. 180 and supplemented by Dkt. No. 183), a discussion, and the Court's construction.

FN5. Formosa filed an initial claim construction brief and supplemental brief, together totaling more than 100 pages of briefing and more than 3,000 pages of exhibits, but failed to clearly set forth either proposed constructions for claim terms or to identify claim terms to be construed. Dkt. Nos. 136 and 176. Noting the confusing manner in which Formosa sets forth its initial claim construction positions, Mobility submitted a response brief that, while maintaining its positions from its initial brief, addressed the positions it contemplated Formosa to have tried to take in it is briefing. Dkt. No. 178 at 1.

Formosa's arguments in opposition to Mobility's proposed constructions were clearly set forth Formosa's response brief. Dkt. No. 179. However, only in the JCCC does Formosa clearly set forth the claim terms and proposed definitions therefor. Dkt. No. 180.

A. '211 Patent

1. A power converter for providing a selectable output voltage, the power converter comprising:

(a) a converter circuit having an input port for receiving an input voltage and an output port for providing an output voltage, said converter circuit having a keyway;

(b) a key configured to be received by said keyway, said key comprising a body within which an electrical component is disposed, said electrical component having a predetermined value; and

(c) wherein the value of the output voltage is determined by the value of said electrical component such that the output voltage is varied by replacing the key with another key having an electronic component of a different value.

12. The power converter as recited in claim 1 further comprising a body within which said converter circuitry is disposed, said body being electronically and mechanically configured to be attached to a battery pack and to receive power therefrom.

17. The power converter as recited in claim 1 further comprising an input voltage monitoring circuit, said input voltage monitoring circuit providing an indication of low input voltage.

Mobility argues, in its initial claims construction brief, that only three terms in the '211 patent required construction: key; keyway; and electronic component. Dkt. No. 137 at 6. Further, Mobility argues that the intrinsic evidence, as set forth in the charts below, supports its proposed constructions. Dkt. No. 137 at 6.

Formosa's initial claim construction addressed the '211 patent pages 8-29. Dkt. No. 136. Formosa "assign[s] error" to each of Mobility's proposed constructions and suggests that a number of additional terms require construction. Dkt. Nos. 179 and 180.

1. ***Key***

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction

Key	A module that determines an electrical parameter. (Col. 5, lines 4-7; Col. 6, line 12; Col. 6, lines 53-55; Col. 9, lines 35-40; '211 patent, Claim 2; Resp. Brief [FN6] at 9-12)	Key means a body configured to be received by the keyway in the converter case and within which is disposed an electrical component having a predetermined value. (Figure 1, # 30; Column 5, lines 3-7 and 10-13)

FN6. Citations to "Resp. Brief" herein refer to Dkt. No. 178.

('211 Patent-
Claim 1)

In response to Mobility's proposed claim construction for "key," Formosa argues the proposal is contrary to the term's plain meaning and that it reads elements out of the claim. Dkt No. 179 at 5. Formosa further argues that the term "is not an ordinary term of art in the power converter field and the specification must be consulted to see how the patentee defined the term." Dkt No. 179 at 5. As support for its proposed construction, Formosa then cites passages from the specification as set forth in the chart above as well as a passage from a technical dictionary. Dkt. No. 179 at 6.

Responding to Formosa's briefing, wherein Formosa appeared to propose a construction different than the proposal set forth in the above chart, Mobility disagrees that the art is as narrow as Formosa contends and instead argues the pertinent art is "that of electronic circuit design, not just power converters." Dkt. No. 178 at 9. Mobility also argues that the term "key" is "a common term that is used every day in the electronic circuit design industry." Dkt. No. 178 at 9. Mobility argues that Formosa tries to construe the term in a manner that improperly limits the claim scope by limiting the place where the key may be located and that Formosa's arguments regarding this term violate the doctrine of claim differentiation. Dkt. No. 178 at 10-11. Mobility cites the differences between Claim 1 and Claim 2 in support of its claim differentiation argument. Dkt. No. 178 at 11. Mobility argues in favor of its proposed construction because it is consistent with the plain meaning of the claim language, has substantial intrinsic support, does not improperly read limitations into the claim, and does not violate the doctrine of claim differentiation.

It is of note that while Formosa argues that the term is not an ordinary term of art, Formosa undercuts its own argument by citing both the patent specification and a technical dictionary in support of its proposed construction. In any event, the term can be construed from an examination of the patent itself without resorting to dictionary definitions. The term "key" need not be construed to include the limitation "configured to be received by the keyway in the converter case," as is suggested by Formosa, as this is both redundant with the claim language and unnecessarily reads limitations into the claim. Further, the patent indicates that it is not the "key" that "determines an electrical parameter" but rather the "electrical component" within the key performs this function, though the Court recognizes that the patent specification contemplates that the key and the electrical component may be one and the same. '211 patent at 5:55-58, 8-13.

Thus, having examined the '211 patent as well as the both parties' briefing, **"key"** is construed as **"an electronic component or a module or device containing an electrical component."** This construction is subject to "electronic component" being construed as set forth below.

2. Keyway

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Keyway ('211 Patent-Claim 1)	A device adapted to receive a key. (Col. 5, lines 12-13; Col. 9, lines 35-40)	Keyway means a slot in the power converter case configured to receive a key. (Figures 1 and 4; Column 5, lines 3 and 13)

Formosa argues that Mobility's proposed construction for the term "keyway" is in error as the term "is not an ordinary term of art in the power converter field and the specification must be consulted to see how the patentee defined the term." Dkt No. 179 at 7. Formosa then argues that a "keyway" is not a "device" but a "slot," and that the term "device" would be "overbroad and indefinite." Dkt. No. 179 at 7. In support of its proposed construction, Formosa cites portions of the patent and a technical dictionary. Dkt. No. 7.

In response to Formosa's briefing, Mobility argues that Formosa improperly seeks to limit the term to a structural definition though it is actually an electrical term. Mobility also argues that Formosa attempts to improperly limit the claim by reading in limitations from the written description. Dkt. No. 178 at 13. Mobility notes that Formosa argues against itself, stating that the term is specially defined in the patent yet citing a technical dictionary in support of its definition. Dkt. No. 178 at 12. In support of its argument that the term is not specially defined in the '211 patent, Mobility also cites a technical dictionary. Dkt. No. 178 at 12-13.

The '211 patent claims 1, 12, and 17 do not limit the location of the keyway, and to adopt a construction adding such limitations would be improper. '211 patent at claims 1, 12, and 17. Nor is the structure of the keyway limited. And, although Formosa argues that the term "device" is "overbroad and indefinite," it is not clear why this would be true.

Therefore, having considered the patent as a whole as well as the briefing submitted by both parties, the term **"keyway"** is construed as **"a device or portion of a device adapted to receive a key."**

3. ***Electrical Component***

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Electrical Component	A device operable with an electrical circuit. (Col. 5, lines 45-48; Col. 6, lines 53-55; '211 patent, Claim 3; Resp. Brief at 12-13; Resp. Brief at 13-15)	Electrical component means a resistor, capacitor, inductor or equivalent component having a readily identifiable value. (Column 5, lines 4-7 and 52-58)

Formosa argues that Mobility's proposed construction for the term "electrical component" is in error for two reasons. First, " '[e]lectrical' and 'electronic' have different meanings and Mobility's interpretation is fatally flawed." Dkt. No. 179 at 8. Second, Formosa argues that Mobility's proposed construction contains the word "device," which Formosa argues is indefinite and overly broad "and not taken in the context of the entire claim or the specification." Dkt. No. 179 at 8. Formosa argues that the patentee defined the term "as a resistor or, alternatively, as a capacitor, inductor or like electrical component." Dkt. No. 179 at 8 (Note that, in the JCCC, Formosa substituted "equivalent component" for the prior proposal "like electrical component"

therefore avoiding defining the term as itself). Formosa fails to cite the patent for support. Further, Formosa argues, the term requires a readily identifiable value. Dkt. No. 179 at 8. In support, Formosa cites the portions of specification and a technical dictionary. Dkt No. 179 at 8. On these bases, Formosa argues in favor of its proposed construction.

In response to Formosa's briefing, Mobility argues that Formosa's positions on this term should be rejected as lacking support in the claim language and as contrary to the specification. Dkt. No. 178 at 13. Specifically, Mobility argues that the patent specification does not limit the term to "a resistor, capacitor, inductor or equivalent component ..." Dkt. No. 178 at 14 citing '211 patent at 6:53-55. Mobility also argues that Formosa's positions violate the doctrine of claim differentiation as claim 1 does not limit the type of electrical component that may be used while claim 3 does recite such limitations. Dkt. No. 178 at 14.

A review of the claim language demonstrates that the term "electrical component" is not limited as Formosa suggests. Further, the specification supports that a jumper may be used as an electrical component. '211 at 6:53-55. It would therefore be improper to add such limitations into the construction of the term. The critical aspect of the "electrical component" is that it contains a predetermined value which determines the output voltage of the converter. ' 211 patent at 5:55-58 and claim 1. But, because the requirement of containing a predetermined value is included within the language of independent claim 1 (and thereby in dependant claims 7 and 12), it is unnecessary to add it to the construction.

Therefore, the term **"electrical component"** is construed as **"a device operable within an electrical circuit that determines an electrical parameter."**

4. ***Predetermined Value***

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Predetermined Value ('211 Patent-Claim 1)	The value of the electrical component that determines the output voltage of the converter. (Col. 5, lines 3-7; Col. 6, lines 44-55; Resp. Brief at 22).	Predetermined value means that the electrical component has a specific readily identifiable value such that the electrical circuitry of the power converter can determine from the electrical component the desired output voltage. (Column 5, lines 55-58)

Although Mobility argues that no construction of the term "predetermined value" is necessary, its alternately proposed construction is not far from that proposed by Formosa. Although the term appears to be used in accordance with its plain meaning, it is used in the patent specifically to refer to the value that will determine the output voltage of the converter. '211 patent at 5: 3-7, 55-58; 6:44-55.

In accordance with its use in the patent, the term **"predetermined value"** is construed as **"the value that determines the output voltage of the converter."**

5. Power Converter

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Power	An article converting power from	Power converter means the case which contains the

Converter ('211 Patent-Claim 1)	one point to another point. ('211 patent, Claim 12; Col. 1, lines 16-18 and lines 24-30; Col. 5, lines 35-36; Figure 1, # 10 & # 12; Resp. Brief at 18-20)	converter circuit which converts the AC or DC input voltage to the desired DC output voltage and does not include the input and output cables. (Figure 1; Column 4, line 65; Column 2, lines 22-25; Column 4, lines 54-58)

Having considered the patent and the parties' briefing, the Court finds that no construction is necessary.

The Court notes that this term appears in the preamble of claim 1 of the ' 211 patent, which all other claims depend from, and therefore generally only "limits the invention if it recites essential structure or steps, or if it is 'necessary to give life, meaning, and vitality' to the claim." Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc., 289 F.3d 801, 808 (Fed.Cir.2002). Neither party, however, raised this issue before the Court.

6. Converter Circuit

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Converter Circuit ('211 Patent-Claim 1)	That portion of the power converter that is capable of conducting electricity. ('211 patent, Claims 4 and 5; Col 2, lines 22-24; Col. 4, lines 41-49; Col. 8, line 61-Col. 9, line 2; Resp. Brief at 20-22)	Converter circuit means the part of the power converter which converts the AC or DC input voltage to the DC output voltage. (Column 2, lines 22-29)

Having considered the patent and the parties' briefing, the Court finds that no construction is necessary. As will be discussed *infra,* however, the Court's construction of the term "circuit" is applicable here: **"circuit"** is construed as **"a path or group of interconnected paths capable of carrying electric currents."**

7. Input Port

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Input Port ('211 Patent-Claim 1)	1. This term is familiar to those of ordinary skill in the art and need not be construed. (Resp. Brief at 22-24) 2. Alternatively, a point of passage for receiving electricity. (Resp. Brief at 22-24; Col. 4, lines 57-63 (explaining that "jack," not "port" is a structural term))	Input port means the port in the power converter case for receiving a cable which provides the input voltage. (Figure 1, # 14; Column 2, lines 22-25; Column 4, lines 57-58; Column 8, lines 39-40)

Having considered the patent and the parties' briefing, the Court finds that no construction is necessary.

8. ***Output Port***

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Output Port ('211 Patent-Claim 1)	1. This term is familiar to those of ordinary skill in the art and need not be construed. (Resp. Brief at 22-24) 2. Alternatively, a point of passage for sending electricity. (Resp. Brief at 22-24; Col. 4, lines 57-63 (explaining that "jack," not "port" is a structural term))	Output port means the port of the power converter case for receiving the output cable and providing the selectable converted output voltage to a standard cable to the device to be powered. (Figure 1, # 16; Column 2, lines 22-25; Column 4, lines 57-58; Column 8, lines 35-37)

Having considered the patent and the parties' briefing, the Court finds that no construction is necessary.

9. ***Electronically Configured.***

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Electronically ... configured ('211 Patent-Claim 12)	This term is familiar to those of ordinary skill in the art and need not be construed. (Resp. Brief at 17)	Electronically configured means electrical contacts or their equivalents connecting the converter circuitry in the converter housing to a battery pack. (Column 5, line 67 to Column 6, line 3)

Having considered the patent and the parties' briefing, the Court finds that no construction is necessary.

10. ***Mechanically Configured***

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Mechanically configured ('211 Patent-Claim 12)	This term is familiar to those of ordinary skill in the art and need not be construed. (Resp. Brief at 17)	Mechanically configured means a complementary mechanical track on the power converter housing and on a battery pack for attaching the power converter to a battery pack or known equivalent structure. (Column 7, line 67 to Column 8, line 19; Figures 7 and 8)

Having considered the patent and the parties' briefing, the Court finds that no construction is necessary.

11. ***Input Voltage Monitoring Circuit.***

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Input Voltage	1. This term is familiar to one of	Input voltage monitoring circuit means a circuit in the converter circuitry in the power converter to actively monitor input voltage

Monitoring Circuit	ordinary skill in the art and need not be construed.	and to provide a positive indication of low input voltage, that is, 11 volts DC or lower, and consisting of a blinking LED light.
('211 Patent-Claim 17)	2. Alternatively, a circuit that monitors an input voltage. (Supp. Br.[FN7] at 3, 5-8)	(Column 7, lines 50-57)

FN7. Citations to "Supp. Br." herein refer to Dkt. No. 183.

Having considered the patent and the parties' briefing, the Court finds that no construction is necessary. As will be discussed *infra,* however, the Court's construction of the term "circuit" is applicable here: **"circuit"** is construed as **"a path or group of interconnected paths capable of carrying electric currents."**

B. '177 Patent

6. FN8 A power/battery charger cable article for conveying low voltage power from a source of said low voltage power to an electronic device, which device includes a shaped receiver for electrical connection to said device and which operates at a specific voltage, said article comprising:

FN8. Though no terms in claim 6 are in dispute, the language of the claim is included here as claim 7 depends from claim 6.

a first module comprising:

a first electrical connector for electrical attachment to said source of low voltage power;

electrically connected thereto a first electrical circuit comprising only those universal circuit elements common to power or charging circuits for all devices in a plurality of different ones of said electronic device;

a first part of a second electrical connector connected to said first electrical circuit; and

a second module comprising:

a second part of said second electrical connector, said first and second parts releaseably interconnecting to conduct electrical current therebetween;

a second electrical circuit comprising those supplemental circuit elements which when electrically connected with said universal circuit elements of said first electrical circuit form a complete electrical circuit which provides electrical power to said device at said voltage required by such device;

an electrical conductor electrically connecting said second part of said second electrical connector to said second electrical circuit; and

a third electrical connector for electrically interconnecting said second circuit and said electronic device and shaped to interconnect with said shaped receiver of said device for transmission of said electrical power to internal electrical circuitry of said device;

whereby said article can be made serially operable for any of said plurality of said devices through different second modules serially connected to said first module, said third connector of each of said different second modules being shaped to interconnect with less than all of said plurality of said devices, allowing interchange of said devices and their serial connection to said source by interchange solely of said respective second modules.

7. An article as in claim 6 wherein said first electrical connector and said first electrical circuit are enclosed in a first housing and said third electrical connector and said second electrical circuit are enclosed in a second housing.

Mobility argued, in its initial claims construction brief, that none of the terms in the '177 patent required construction. Dkt. No. 137 at 6. Formosa only clearly identified terms for construction and proposed constructions in the JCCC. Dkt. No. 180. During the claims construction hearing, Formosa appeared to agree with Mobility stating that the terms in the '177 patent were "for the most part ... readily understandable." Hr. Tr. at 69. However, through supplemental briefing, Mobility responded to Formosa's claim construction proposals. Dkt. No. 183. Though responding to Formosa's proposals, Mobility maintains that none of the '177 patent terms require construction. Having reviewed the '177 patent and having considered the proposals and arguments of the parties, the Court agrees that the terms are readily understandable and, with one exception, do not require construction.

1. ***First Electrical Connector***

Claim Term	**Mobility's Proposed Construction**	**Formosa's Proposed Construction**
First Electrical Connector ('177 Patent-Claim 7)	1. This term is familiar to one of ordinary skill in the art and need not be construed. 2. Alternatively, a detachable device for connecting electrical conductors. (Supp. Br. at 3, 8-10)	First electrical connector means a plug which is inserted into a power source. (Column 5, lines 16-21; Column 7, lines 54-56)

As for the claim term "first electrical connector," the Court finds it need look no further than the claim itself to arrive at the plain and ordinary meaning of this claim term and finds that no construction is required.

2. ***First Electrical Circuit***

Claim Term	**Mobility's Proposed Construction**	**Formosa's Proposed Construction**
First Electrical Circuit	1. This term is familiar to one of ordinary skill in the art and need not be construed.	First electrical circuit means a circuit connected to the first electrical connector and includes only those universal circuit elements common to power or charging circuits for a plurality of different electronic devices such as laptop computers, cell phones and the like.

('177 Patent-Claim 7)	2. Alternatively, a path or group of interconnected paths capable of carrying electric current. (Supp. Br. at 4, 10-11)	(Figure 4; Column 5, lines 7-11 and 25-32; Column 6, lines 12-13)

Having considered the patent and the parties' briefing, the Court finds that no construction is necessary. As will be discussed infra, however, the Court's construction of the term "circuit" is applicable here: **"circuit"** is construed as **"a path or group of interconnected paths capable of carrying electric currents."**

3. ***Second Electrical Connector***

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Second Electrical Connector ('177 Patent-Claim 7)	1. This term is familiar to one of ordinary skill in the art and need not be construed. 2. Alternatively, a detachable device for connecting electrical conductors. (Supp. Br. at 3, 8-10)	Second electrical connector means a universal connector designed to be connected to any number of device specific second modules and is not device specific. (Column 5, line 23; Column 7, line 56)

Having considered the patent and the parties' briefing, the Court finds that no construction is necessary.

4. ***Second Electrical Circuit***

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Second Electrical Circuit ('177 Patent-Claim 7)	1. This term is familiar to one of ordinary skill in the art and need not be construed. 2. Alternatively, a path or group of interconnected paths capable of carrying electric current. (Supp. Br. at 4, 10-12)	Second electrical circuit means a device specific electrical circuitry for powering/charging the specific device and includes the device specific electronic components necessary to determine the output voltage including at least resistors and similar components. (Figure 4; Column 6, lines 13-17)

Having considered the patent and the parties' briefing, the Court finds that no construction is necessary. As will be discussed infra, however, the Court's construction of the term "circuit" is applicable here: **"circuit"** is construed as **"a path or group of interconnected paths capable of carrying electric currents."**

5. ***Conductor***

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Conductor	1. This term is familiar to one of ordinary skill in the art and need not be construed.	Conductor means a cable.

('177 Patent-Claim 7)	2. Alternatively, a wire, cable or other body or medium that is suitable for carrying electric current. (Supp. Br. at 4, 12-14)	(Figure 6, # 156; Column 7, lines 60-67)

Having reviewed the patent, it is clear that the patentee used the term in accordance with its plain meaning to one of ordinary skill in the art. The plain meaning of the term, however, is not clear from the patent. The Court finds that this presents a situation where it is appropriate to look to extrinsic evidence, in the form of technical dictionaries, in order to arrive at the appropriate construction of the claim term. *See* Phillips, 415 F.3d at 1324.

One of the technical dictionaries proffered by Mobility for their alternative construction defines a conductor as: "[a] wire, cable or other body or medium that is suitable for carrying electric current." FN9 Dkt. No. 179 at 12, *McGraw-Hill Dictionary of Scientific and Technical Terms* 461 (6th Ed.). This dictionary definition clarifies the meaning of the term as used in the patent. Regarding the proposed definition by Formosa, the Court finds that the definition is less helpful and not as explicit regarding the plain meaning of the term to one of ordinary skill in the art.

FN9. Regarding the *McGraw-Hill Dictionary of Scientific and Technical Terms* (6th Ed.), the Court notes that for other terms in its briefing, Formosa too relies on a *McGraw-Hill* dictionary.

Considering the claims, the patent as a whole, and the dictionary definition above, the Court construes **"conductor"** as **"a wire, cable or other body or medium that is suitable for carrying electric current."**

6. ***Third Electrical Connector***

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Third Electrical Connector ('177 Patent-Claim 7)	1. This term is familiar to one of ordinary skill in the art and need not be construed. 2. Alternatively, a detachable device for connecting electrical conductors. (Supp. Br. at 3, 8-10)	Third electrical connector means a connector for electrically interconnecting the second circuit and the electronic device and having a device specific connector to mate with the shaped receiver of the device. (Column 7, line 64 to Column 8, line 2)

Having considered the patent and the parties' briefing, the Court finds that no construction is necessary.

C. '560 Patent

1. A power converter, comprising: a first circuit converting an AC input voltage to a first predetermined DC output voltage; a second circuit converting a DC input voltage to a second predetermined DC output voltage; and a third circuit having a feedback circuit comprising a single feedback loop, said third circuit receiving said first and second predetermined output voltages and providing a selectable DC output voltage at a first output, wherein said single feedback loop is adapted to regulate both said first and second circuits

to provide said selectable DC output voltage when said AC and DC input voltages are supplied to respective said first and second circuits.

10. The power converter of claim 1 comprising a fourth circuit coupled to said first output and providing a second DC output voltage at a second output, wherein said second DC voltage output is independent of, and substantially lower than said selectable DC output voltage.

23. The power converter of claim 1 wherein the first circuit and the second circuit receive their respective AC input voltage and DC input voltages at a common single connector.

24. A power converter, comprising: a first circuit converting an AC input voltage to a first predetermined DC output voltage; a second circuit converting a DC input voltage to a second predetermined DC output voltage; a third circuit having a single optical feedback loop and receiving said first and second predetermined DC voltages and, in response thereto, providing a selectable DC output voltage at a first output, wherein said selectable DC output voltage is established as a function of a removable program module.

31. The power converter of claim 24 comprising a fourth circuit coupled to said first output and providing a second DC output voltage at a second output, wherein said second DC voltage output is independent of, and substantially lower than said selectable DC output voltage.

Mobility argues, in its initial claims construction brief, that only four terms in the '560 patent required construction: feedback circuit; single feedback loop; program module; and single optical feedback loop. Dkt. No. 137 at 8. "The meaning of these terms can be readily determined through the intrinsic evidence," Mobility argues, and relies on the citations to the patent included in the charts below. Dkt. No. 137 at 8.

Formosa's initial claim construction brief addressed the '560 patent at pages 43-52. Dkt. No. 136. Formosa "assign[s] error" to each of Mobility's proposed constructions and suggests that a number of additional terms require construction. Dkt. Nos. 179 and 180.

At the outset of its response, Mobility takes issue with representations made by Formosa and states that "there was no prior art disclosing a combination converter with feedback that regulates, or was adapted to regulate, both AC/DC and DC/DC converter ..." and that Formosa's "attempt to limit the '560 and ' 808 patents to the product 'illustrated in Figure 1A' is meritless." Dkt. No. 178 at 28. Mobility points out that both the '560 and the '808 patents were allowed as filed and the patentees are not limited to the preferred embodiment. Dkt. No. 178 at 29. Mobility then argues against Formosa's attempt to read limitations into the claims based on the Examiner's Reasons for Allowance as legally improper. Dkt. No. 178 at 29-30, *citing* Salazar v. Procter & Gamble, Co., 414 F.3d 1342, 1347 (Fed.Cir.2005) (explaining that the examiner's remarks do not limit the claim scope because "the applicant has disavowed nothing. This court refuses to create a rule or presumption that the applicant in this case disavowed claim scope by silence.") and distinguishing Elkay Mfg. Co. v. Ebco Mfg. Co., 192 F.3d 973 (Fed.Cir.1999) at Dkt. No. 178 at 30 n. 15.

As noted above, the '560, '808, '056, and '490 patents are related and share substantially the same specification. The discussion below in the section on the '560 patent, as well as the claim constructions, is largely applicable to each of the four patents.

1. ***Feedback Circuit***

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Feedback Circuit ('560 Patent-Claim 1) ('808 Patent-Claim 5)	A circuit that taps a signal from a circuit to a portion of the circuit that previously processed the signal. ('560 patent, Col. 3, lines 58-59 and 63-66, '808 patent, Col. 3, lines 58-59 and 63-66; Resp. Brief at 31-34)	Feedback circuit means a circuit which returns a portion of the output of a circuit to its input. ('560 Patent, Column 4, line 63 to Column 5, line 15; Figure 2B)

Formosa argues that Mobility's proposed construction of the term "feedback circuit" is erroneous because it "is not in accord with the common meaning" of the term. Dkt. No. 179 at 17. Formosa also argues that Mobility's proposed construction is indefinite as to "taps a signal" and is "not in accord with the claim language, the specification or the examiner's reasons for allowance." Dkt. No. 179 at 17. Instead, Formosa argues in favor of its proposed construction as in accord with the use of the term in the specification and cites the portions of the patent recited in the chart above. Further, Formosa argues, "feedback circuit" is a common term of art. Dkt. No. 179 at 19 citing a definition from *McGraw-Hill Electronics Dictionary* (6th Ed.).

Mobility, responding to a very different proposal than Formosa set forth in the JCCC, argues that Formosa's proposed definition of "feedback circuit" should be rejected as it contradicts the plain meaning of the claim language. Dkt. No. 178 at 31. Mobility argues that, "[I]n pertinent part, claim 1 of the '560 patent discloses a power converter including, among other things, 'a third circuit having a feedback circuit comprising a single feedback loop, said third circuit receiving said first and second predetermined output voltages and providing a selectable DC output voltage at a first output.' " Dkt. No. 78 at 31. Formosa, Mobility argues, improperly attempts to rewrite the claims, interprets "comprising" as a closed ended transitional word, and uses the words "feedback circuit" and "third circuit" interchangeably. Dkt. No. 178 at 31-32.

Having reviewed the patent, it is clear that the patentee used the term in accordance with its plain meaning to one of ordinary skill in the art. The plain meaning of the term, however, is not clear from the patent. The Court finds that this presents a situation where it is appropriate to look to extrinsic evidence, in the form of technical dictionaries, in order to arrive at the appropriate construction of the claim term. *See* Phillips, 415 F.3d at 1324. The technical dictionary proffered by Formosa defines feedback as: "[t]he return of a portion of the output of a circuit or device to its input." FN10 Dkt. No. 179 at Ex. 129, *McGraw-Hill Electronics Dictionary* (6th Ed.). This dictionary definition clarifies the meaning of the term as used in the patent. Regarding the proposed definition by Mobility, the Court finds that the phrase "taps a circuit" is unclear and inappropriate to use in the claim construction.

FN10. Regarding the *McGraw-Hill Electronics Dictionary* (6th Ed.), the Court notes that for other terms in its briefing, Mobility too relies on a *McGraw-Hill* dictionary.

Considering the claims, the patent as a whole, and the dictionary definition above, the Court construes **"feedback circuit"** as **"a circuit which returns a portion of the output of a circuit to its input."**

As will be discussed *infra,* however, the Court's construction of the term "circuit" is applicable here: **"circuit"** is construed as **"a path or group of interconnected paths capable of carrying electric currents."**

2. ***Single Feedback Loop***

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Single Feedback Loop ('560 Patent-Claim 1) ('808 Patent-Claim 6)	A single path that is tapped from a circuit and provided to one or more portions of the circuit that previously processed the signal. ('560 patent, Col. 4, lines 63-65; '560 patent, Col. 5, lines 9-12; Resp. Brief at 34-36)	Feedback circuit comprising a single feedback loop means a circuit which returns a portion of the output of a circuit to its input by one closed path. ('560 Patent, Column 4, line 63 to Column 5, line 15; Figure 2B)

Formosa argues that Mobility's proposed claim interpretation for "single feedback loop" is erroneous because it "is not in accord with the common meaning" of the term. Dkt. No. 179 at 18. Formosa also argues that Mobility's proposed construction is indefinite as to "tapped from a circuit" and is "not in accord with the claim language, the specification or the examiner's reasons for allowance." Dkt. No. 179 at 18-19. Instead, Formosa argues in favor of its proposed construction as in accord with the use of the term in the specification and cites the portions of the patent recited immediately above. Further, Formosa argues the term is a common term of art. Dkt. No. 179 at 18 citing a definition from *McGraw-Hill Electronics Dictionary* (6th Ed.).

Mobility, responding to a very different proposal than Formosa set forth in the JCCC, argues against Formosa's proposal because it is erroneous. "The most critical error ... is the requirement that the single feedback loop must regulate the first and second circuits. [Formosa's] construction misstates the claim language, which requires only that the single feedback loop be 'adapted to regulate both said first and second circuits.' " Dkt. No. 178 at 34-35. Mobility argues that Formosa's proposal results in a construction that would not cover the preferred embodiment, which does not teach regulation of both circuits at the same time but rather "teaches a single common connector whereby different power cords are adapted to be received by the common connector to receive input power from different sources ..." Dkt. No. 178 at 35 citing ' 560 at Co. 3:20-32.

Instead, Mobility argues that its proposed construction should be adopted because it "accurately reflects the claim language stating that the 'single feedback loop' is 'adapted to regulate' the AC and DC circuits." Dkt. No. 178 at 35. Mobility reinforces its position citing the specification and arguing, "the specification does not require that the single feedback loop simultaneously regulate both the converters, just that it be capable of regulating both converters." Dkt. No. 178 at 35-36, citing '560 patent, Col. 4:63-65. Its construction, Mobility argues, "accurately conveys that there is a shared path of electricity from a single common tap, that goes to the AC/DC and DC/DC converters and that shares components [while Formosa's definition]

contradicts the claim language, improperly reads limitations into the claim and even excludes the preferred embodiment." Dkt. No. 178 at 36.

Much like the term before it, having reviewed the patent, it is clear that the patentee used the term "single feedback loop" in accordance with its plain meaning to one of ordinary skill in the art. The plain meaning of the term, however, is not clear from the patent. The Court again finds that this presents a situation where it is appropriate to look to extrinsic evidence, in the form of technical dictionaries, in order to arrive at the appropriate construction of the claim term. *See* Phillips, 415 F.3d at 1324. The Court again considers the technical dictionary proffered by Formosa which defines feedback as: "[t]he return of a portion of the output of a circuit ... to its input." Dkt. No. 179 at Ex. 129, *McGraw-Hill Electronics Dictionary* (6th Ed.). Regarding the proposed definition by Mobility, the Court finds that the phrase "tapped from a circuit" is unclear and inappropriate to use in the claim construction.

Considering the claims, the patent as a whole, and the dictionary definition above, the Court construes **"single feedback loop"** as **"a single path that returns portions of the output of a circuit to one or more portions of the circuit that previously processed the signal."**

3. ***Single Optical Feedback Loop***

Claim Term	**Mobility's Proposed Construction**	**Formosa's Proposed Construction**
Single Optical Feedback Loop ('560 Patent-Claim 24)	A single path that is tapped from a circuit and provided to one or more portions of the circuit that previously processed the signal with an optical component. (Col. 5, lines 3-12; '560 patent, Claims 1, 24; Resp. Brief at 39-41)	Third circuit having a single optical feedback loop means a circuit which returns a portion of the output of a circuit to its input by one closed path using an optical component. ('560 Patent, Column 5, lines 3-15; Figure 2B)

Formosa argues that Mobility's proposed claim interpretation for "single optical feedback loop" is erroneous because it "is not in accord with the common meaning" of the term. Dkt. No. 179 at 20. Formosa also argues that Mobility's proposed construction is indefinite as to "tapped from a circuit," is "not in accord with the claim language, the specification or the examiner's reasons for allowance," and is erroneous because the phrase " 'provided to one or more portions' reads out the claim element 'single' as the 'feedback loop' is no longer a 'single path.' " Dkt. No. 179 at 20. Instead, Formosa argues its proposed construction is supported by the specification and in support cites the portions of the patent recited immediately above. Dkt. No. 180. Further, Formosa argues the term is a common term of art. Dkt. No. 179 at 20 citing a definition from *McGraw-Hill Electronics Dictionary* (6th Ed.).

Mobility, responding to a very different proposal than Formosa set forth in the JCCC, argues that independent claims 1 and 24 of the '560 patent must be carefully compared in order to properly construe the claim phrase "single optical feedback loop." Though the claims are similar, claim 1 differs from claim 24 as it "recites that the third circuit has a 'feedback circuit' and also requires that a single feedback loop be 'adapted to regulate' the first and second circuits." Dkt. No. 178 at 40. In contrast, claim 24, in pertinent part, discloses:

a third circuit having a single optical feedback loop and receiving said first and second predetermined DC voltages and, in response thereto, providing a selectable DC output voltage at a first output, wherein said selectable DC output voltage is established as a function of a removable program module.

So as not to violate the doctrine of claim differentiation, the terms "single feedback loop" and "single optical feedback loop" cannot be identically construed. Dkt. No. 178 at 40. Mobility further points out that the term "feedback circuit" is not part of the language in claim 24 and that the limitation "regulates both the first and second circuits" and "must regulate both the first and second circuits" are not found in claim 24. Dkt. No. 178 at 40-41.

Mobility notes that its definition for "single optical feedback loop" is "virtually identical" to its proposed construction of "single feedback loop." Dkt. No. 178 at 39 n. 19. Mobility arrived at its proposed construction by adding the phrase "with an optical component" to its definition for "single feedback loop." Mobility argues that its proposed construction of "single feedback loop" provides additional support for its construction of "single optical feedback loop" and incorporated this support by reference. Dkt. No. 178 at 39 n. 19. Its proposed construction, Mobility argues, is consistent with the plain meaning of the claim language and provides meaning both to claims 1 and 24 of the '560 patent. Dkt. No. 178 at 41.

Consistent with its reasoning and construction of the term "single feedback loop," the term **"single optical feedback loop"** is construed as **"a single path that returns portions of the output of a circuit to one or more portions of the circuit that previously processed the signal with an optical component."**

4. Program Module

Claim Term	**Mobility's Proposed Construction**	**Formosa's Proposed Construction**
Program Module ('560 Patent-Claim 24) ('808 Patent-Claim 1) ('056 Patent-Claim 5) ('490 Patent-Claim 1)	A module that provides a selectable electrical parameter of the circuit. (Resp. Brief at 36-39; '808 patent, Claims 1, 10).	Program module means a housing having an electrical component which determines the DC output voltage. ('560 Patent, Column 3, line 63 to Column 4, line 2; Column 4, lines 65-67; Figure 1A)

Formosa argues that Mobility's proposed construction of "program module" is erroneous because it is "indefinite as to the language 'electrical parameter' and is not supported by the entire claim or the specification." Dkt. No. 179 at 21-22. Formosa also argues that Mobility's proposal is overbroad and that

"the claim provides that the 'program module' provides a 'DC output voltage,' not an 'electrical parameter." Dkt. No. 179 at 22. In support of its proposal, Formosa cites the patent as set forth in the chart above as well as a technical dictionary. Dkt. No. 180. Formosa takes the same positions regarding the construction of the term "program module" as used in the '808, ' 056, and '490 patents. Dkt. No. 179 at 23.

Mobility argues that those skilled in the art readily understand the plain meaning of this claim limitation. For the term "module," Mobility cites three technical dictionaries in support of the plain meaning of the term. Dkt. No. 178 at 37. Mobility then argues that a proper construction for the claim phrase can be derived "just by combining the plain meaning of the terms...." Dkt. No. 178 at 37. Mobility then argues against Formosa's attempt to limit the term "module" to physical structure; instead, it is an electrical term as supported by technical dictionary definitions. Dkt. No. 178 at 37.

Mobility, responding to a very different proposal than Formosa set forth in the JCCC, argues that Formosa improperly attempts to apply structural limitations to the phrase as though the phrase should be construed in accordance with the requirements of s. 112 para. 6 even though the word "means" is not used without rebutting the presumption that s. 112 para. 6 requirements are not invoked. Dkt. No. 178 at 37-38. Additionally, Mobility argues that Formosa's proposed construction improperly reads limitations into the claim from the preferred embodiment, violates the doctrine of claim differentiation, and attempts to convert the open-ended transitional word "comprising" to closed format. Dkt. No. 178 at 38-39.

Having reviewed each patent and the asserted claims in which the term appears, it is apparent that the term is used with the same meaning in each. Further, as each claim contains the limitations of "determining the DC output voltage," it is unnecessary to burden the construction with this limitation. Further, as Mobility notes (and Formosa seems to agree in light of the revised proposal it submitted to the JCCC), the claims have not limited "module" to a physical structure.

Therefore, **"program module"** is construed as **"a module that provides a selectable electrical parameter of the circuit."**

5. Removable Program Module

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Removable Program Module ('560 Patent-Claim 24) ('808 Patent-Claim 1) ('056 Patent-Claim 5) ('490 Patent-	A removable module that provides a selectable electrical parameter of the circuit. (Resp. Brief at 36-39; '808 patent, Claims 1, 10).	Removable program module means a housing having an electrical component which determines the DC output voltage at the first output and is removable from the power converter. ('560 Patent, Column 3, line 63 to Column 4, line 2; Column 4, lines 65-67; Figure 1A)

Claim 1)

The related term "program module" was discussed at length above. Here, the term is used the same way in the patent except that the program module must meet the limitation of being "removable." Mobility argues that Formosa incorrectly asserts that " 'removable program module' is not an ordinary term for art in the field of power adapters." Dkt. No. 178 at 36. Further, as discussed above, Mobility argues and cites support regarding the plain meaning of the term "module" to one of ordinary skill in the art. Mobility argues that "[t]he mere addition of the words 'removable program' before 'module' does not make construction of the entire phrase any more vexing." Dkt. No. 178 at 37.

Having examined the patents and the parties' briefing, the Court finds that no construction of this term is required. The term "program module" was construed above and that construction is sufficient. The placement of the term "removable" in front of "program module" does not warrant additional construction.

6. Third Circuit

Claim Term	**Mobility's Proposed Construction**	**Formosa's Proposed Construction**
Third Circuit ('560 Patent-Claims 1, 24) ('808 Patent-Claim 1) ('056 Patento-Claim 1, 3, 5)	1. This term is familiar to those of ordinary skill in the art and need not be construed. (Resp. Brief at 42-45). 2. Alternatively, a path or group of interconnected paths capable of carrying electric current. (Resp. Brief at 42-45).	Third circuit means a feedback circuit which consists of a single feedback loop and provides a selectable DC output voltage at a first output. ('560 Patent, Figure 1A, # 26; Column 3, lines 13-14 and 58-63)

The positions of each of the parties regarding a proposed construction of the term "third circuit" is set forth in the chart above. The Court finds that the term is readily understood by one of ordinary skill in the art, but finds that a further construction of the term circuit is required. Formosa's proposed construction merely attempts to burden the claim with limitations from the specification.

In its brief, Mobility cites both a Federal Circuit case recognizing that those skilled in the art of electronics readily understand the meaning of the term "circuit" as well as several technical dictionaries with definitions of the term. Dkt. No. 178 at 42 citing Apex Inc. v. Raritan Computer, Inc., 325 F.3d 1364, 1373 (Fed.Cir.2003). The dictionary definitions were: "electrical circuit" is "[a] path or group of interconnected paths capable of carrying electric currents," *McGraw-Hill Dictionary of Scientific and Technical Terms* 689-690 (6th Ed.2003); "circuit" is "one or more conducting paths which serve to interconnect electrical components ...," *Wiley Electrical and Electronics Engineering Dictionary* 112 (1st Ed.2004); "circuit" is a "system of conductors through which an electric current is intended to flow, *IEEE 100: The Authoritative Dictionary of IEEE Standards Terms* 168 (7th Ed.2000). Although the term has a plain meaning to those of

ordinary skill in the art, the Court finds it appropriate to construe the term in accord with its plain meaning.

Thus, having examined each of the patents-in-suit as well as the both parties' briefing and support, **"circuit"** is construed as **"a path or group of interconnected paths capable of carrying electric currents."** This construction is applicable to each of the asserted patents.

7. Fourth Circuit

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Fourth Circuit ('560 Patent-Claims 10, 31) ('808 Patent-Claim 1) ('056 Patent-Claim 2	1. This term is familiar to one of ordinary skill in the art and need not be construed. 2. Alternatively, a path or group of interconnected paths capable of carrying electric current. (Supp. Br. at 4, 10-12)	Fourth circuit means a buck converter circuit which is coupled to the first output and provides for a second DC output voltage at a second output. ('560 Patent, Figure 1A, # 28; Column 3, line 13; Column 4, lines 9-12)

Having considered the patent and the parties' briefing, the Court finds that no construction is necessary. As discussed *supra,* the Court's construction of the term "circuit" is applicable here: **"circuit"** is construed as **"a path or group of interconnected paths capable of carrying electric currents."**

8. Selectable DC Output Voltage

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Selectable DC Output Voltage ('560 Patent-Claims 1, 24) ('808 Patent-Claim 1) ('490 Patent-Claim 1)	1. This term is familiar to those of ordinary skill in the art and need not be construed. (Resp. Brief at 45-46) 2. Alternatively, voltage is determined by a removable program module. (Resp. Brief at 45-46)	Selectable DC output voltage means a voltage selectable by a removable programming module having an electronic component to provide the selected output voltage. ('560 Patent, Column 3, line 65; Column 4, lines 67 to Column 5, line 3)

Mobility maintains that this term does not require construction and argues against Formosa's proposal as it

inserts a "superfluous limitation" by its addition of the phrase "having an electronic component to provide 'selected' output voltage." Dkt. No. 178 at 45. Mobility charges that this is an attempt by Formosa to read in a limitation from the specification though it is absent from the claim language. Dkt. No. 178 at 45. To read in such a limitation, Formosa has to demonstrate a clear intention to limit the claim scope by use of words of manifest exclusion or restriction, which Mobility argues Formosa has failed to do. Dkt. No. 178 at 45-46, citations omitted.

Having considered the patent and the parties' briefing, the Court finds that no construction is necessary.

9. Common Single Connector

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Common Single Connector ('560 Patent-Claim 23) ('808 Patent-Claim 18) ('056 Patent-Claim 1, 3, 5)	A single housing having one or more electrical contacts. (Supp. Br. at 4, 14-15)	Common single connector means a common connector in the housing of the converter in which the input terminals for the AC input voltage and the DC input voltage are integrated and receives different power cords adapted to receive input power from different sources. ('560 Patent, Column 3, lines 26-29)

Mobility, responding to Formosa's proposal for this term in its supplemental brief, first notes that this term was originally briefed in connection with the '056 patent. Dkt. No. 183 at 14 citing Dkt. No. 178 at 23-25. It is Mobility's position that the term should be construed consistently throughout the patents. Dkt. No. 183 at 14.

Mobility argues against adopting Formosa's proposal, which seeks to define the term differently in the '560 and '808 patents as opposed to the '056 patent. Dkt. No. 183 at 14, comparing JCCC at 9 and at 15. Mobility argues that Formosa's proposed construction of this term in the context of the '560 and '808 patents should be rejected because it improperly seeks to limit the location of the "common single connector" and because it improperly imports limitations from the preferred embodiment into the claims. Dkt. No. 183 Dkt. No. 14-15.

Formosa argues that Mobility's proposed construction of the term "common single connector" is erroneous as "indefinite as to the meaning 'electrical contacts,' " overbroad, and "not in accord with the claim language, the specification or the prosecution history." Dkt. No. 179 at 23-24.

The patent describes the "common single connector" at Col. 3: 26-32 and in Figure 1A. Having considered the patent and the parties' briefing, the Court finds that both proposals have certain shortcomings. Formosa's

proposal unnecessarily imports limitations from the specification into the claims. The words "electrical contacts" in Mobility's proposal unnecessarily depart from the language in the patent, which uses the term "input terminals." Col. 3:20-26 (describing Nos. 12 and 14 in Figure 1A as "input terminals), *see also* Col 4:42-43 and Col. 5:14-15. It is clear in the patent that the "common single connector" houses the "input terminals" for either the AC or DC input voltages.

Therefore, **"common single connector"** is construed as **"a single housing having one or more input terminals for voltage input."**

D. '808 Patent

1. A power converter, comprising: a first circuit converting an AC input voltage to a first predetermined DC output voltage; a second circuit converting a DC input voltage to a second predetermined DC output voltage; a third circuit receiving said first and second predetermined DC voltages and, in response thereto, providing a selectable DC output voltage at a first output, wherein said selectable DC output voltage is established as a function a removable program module; and a fourth circuit coupled to said first output and providing a second DC output voltage at a second output, whereby said second DC voltage output is independent of, and substantially lower than said selectable DC output voltage.

5. The power converter of claim 1 wherein said third circuit includes a feedback circuit coupled to said first circuit and said second circuit, said feedback circuit regulating the first and second predetermined DC voltages generated by said first and second circuits.

6. The power converter of claim 5 wherein said feedback circuit comprises a single loop.

9. The power converter of claim 1 wherein said first and second predetermined DC output voltages of said respective first and second circuit are established via said removable program module, wherein said removable program module comprises a key adapted to be removably coupled to said power converter.

18. The power converter of claim 1 wherein the first circuit and the second circuit receive their respective AC input voltage and DC input voltages at a common single connector.

Mobility argued, in its initial claims construction brief, that only two terms in the '808 patent required construction: feedback circuit and program module. Dkt. No. 137 at 8. Mobility further argued that these terms, which appear in the '560 patent, should be construed the same as in both patents. These terms were discussed above in the section regarding the '560 patent and the Court construes those terms in the same way for both patents.

Formosa's initial claim construction brief addressed the '808 patent at pages 53-61. Dkt. No. 136. Formosa "assign[s] error" to each of Mobility's proposed constructions and suggests that a number of additional terms require construction. Dkt. Nos. 179 and 180.

1. Key

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Key	A module that determines an electrical parameter.	Key means a physical structure

	(Mobility's construction for "key" is consistent with its construction of this term for the '211 patent, above; '808 patent, Col. 3, line 63-Col. 4, line 2; Col. 4, lines 6-9).	insertable into the housing of the power converter and including a resistor which programs the desired DC output voltage. (Column 3, line 66 to Column 4, line 2; Column 4, lines 65-67)
('808 Patent-Claim 9) ('058 Patent-Claim 5)		

This term was considered at length in the discussion of the '211 patent, and is again extensively considered below in the discussion of the ' 056 patent. The parties proffered the same competing definitions for the term in both the '808 patent and the related '056 patent. The Court likewise finds it appropriate to assign the same construction to the term in both the '808 and '056 patents.

Therefore, **"key"** is construed as **"an electronic component or a module or device containing an electrical component wherein the electronic component determines an electrical parameter."**

2. Feedback Circuit

As discussed above in the context of the '560 patent, the parties agree that this term should be construed the same way in the '808 patent as it was construed in the '560 patent. Dkt. No. 137 at 8; Dkt. No. 136 at 4. Finding that nothing in the '808 patent compels a different construction, and the Court construes the term "feedback circuit" the same way in the '808 patent as in the '560 patent: **"feedback circuit"** is construed as **"a circuit which returns a portion of the output of a circuit to its input."**

Also, as was discussed *supra,* the Court's construction of the term "circuit" is applicable here: **"circuit"** is construed as **"a path or group of interconnected paths capable of carrying electric currents."**

3. Program Module

Mobility argues that the term "program module," which was discussed above in the context of the '560 patent, should be defined the same way in the ' 808 patent. Dkt. No. 137 at 10. Formosa agrees. Dkt. No. 176 at 17; Dkt. No. 179 at 23. Finding that nothing in the '808 patent compels a different construction, and the Court construes the term "program module" the same way in the '808 patent as in the '560 patent: **"program module"** is construed as **"a module that provides a selectable electrical parameter of the circuit."**

E. '058 Patent

1. A power converter, comprising:

a housing;

a first circuit having a first voltage input disposed in the housing converting an AC input voltage to a first DC voltage;

a second circuit having a second voltage input electrically isolated from the first voltage input and disposed in the housing converting a DC input voltage to a second DC voltage;

a third circuit disposed in the housing receiving the first and second DC voltages and generating a first DC output voltage at a first output; and

wherein the first circuit and the second circuit receive the respective AC input voltage and DC input voltage at a common single connector being integral to the housing and adapted to separately couple to a DC input cord and an AC input cord.

2. The power converter of claim 1 comprising a fourth circuit coupled to said first output and providing a second DC output voltage at a second output, wherein said second DC voltage output is independent of, and substantially lower than said first DC output voltage.

3. A power converter, comprising:

a housing; a first circuit disposed in the housing converting an AC input voltage to a first DC voltage;

a second circuit disposed in the housing converting a DC input voltage to a second DC voltage;

a third circuit disposed in the housing receiving the first and second DC voltages and generating a first DC output voltage at a first input; and

wherein the first circuit and the second circuit receive the respective AC input voltage and DC input at a common single connector being integral to the housing and adapted to separately couple to a DC input cord and an AC input cord;

wherein said second circuit comprises a DC-to-DC boost converter, wherein said DC-to-DC boost converter is adapted to provide the second DC voltage of between 15VDC and 24VDC.

5. A power converter, comprising:

a housing

a first circuit disposed in the housing converting an AC input voltage to a first DC voltage;

a second circuit disposed in the housing converting a DC input voltage to a second DC voltage;

a third circuit disposed in the housing receiving the first and second DC voltages and generating a first DC output voltage at a first output; and

wherein the first circuit and the second circuit receive the respective AC input voltage and DC input voltage at a common single connector being integral to the housing and adapted to separately couple to a DC input cord and an AC input cord;

wherein said first DC output voltage is established via a removable program module, wherein said

removable program module comprises a key adapted to be removably coupled to said power converter.

13. The power converter of claim 2 further comprising a fifth circuit including a protection circuit providing an over-voltage protection function.

Mobility argued, in its initial claims construction brief, that only three terms in the '056 patent required construction: common single connector; key; and program module. Dkt. No. 137 at 10.

Formosa's supplemental claim construction Brief addressed the '056 patent at pages 6-17. Dkt. No. 176. Formosa "assign[s] error" to each of Mobility's proposed constructions and suggests that a number of additional terms require construction. Dkt. Nos. 179 and 180.

1. Common Single Connector

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Common Single Connector ('560 Patent-Claim 23) ('808 Patent-Claim 18) ('056 Patent-Claims 1, 3, 5)	A single housing having one or more electrical contacts. (Col. 3, lines 26-32; Resp. Brief at 71-72; *see also* Supp. Br. at 4, 14-15)	Common single connector means a single connector in the housing of a power converter such that different power cords adapted to receive input power from an AC input source and a DC input source are received by an AC to DC converter circuit and a DC to DC converter circuit, respectively. (Column 3, lines 20-29; Figure 1A, # 17)

This term was previously considered and construed in the discussion of the '560 patent. Mobility takes the position that the term should be construed the same way in the '560, '808, and '056 patents. Dkt. No. 183 at 14. Formosa proposes a different construction for this term in both the '560 and '056 patents, though does not specifically address why different constructions are necessary.

Mobility, in responding to Formosa's proposal, understood Formosa's proposed construction of "common single connector" to be: "The Single connector includes an AC input terminal to the first circuit and a DC input terminal to the second circuit and which are electronically isolated from each other." Dkt. No. 178 at 70. Formosa's proposed construction, as set forth in the above chart, differs from the proposal to which Mobility responded but is substantially the same.

Mobility faults Formosa for proffering a construction that lacks support in the claim language. Dkt. No. 178 at 71. Mobility notes that claims 1, 3, and 5 require that the "common single connector" be "integral to the housing" ___ the claims do not require that the "common single connector" be inside the housing. Dkt. No.

178 at 71.

Having considered the patent and the parties' briefing, the Court finds that nothing in the '056 patent compels a different construction than arrived at for the '560 patent. Therefore, the Court construes the term **"common single connector"** as **"a single housing having one or more input terminals for voltage input."**

2. Program Module

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Program Module ('560 Patent-Claim 24) ('808 Patent-Claim 1) ('056 Patent-Claim 5) ('490 Patent-Claim 1)	A module that provides a selectable electrical parameter of the circuit. (Mobility's construction for "program module is consistent with its construction of this term for the '560 and '808 patents, above; '056 patent, Claims 5-6; Col. 3, lines 63-66; Resp. Brief at 73-76)	Program module means a housing having an electrical component which determines the DC output voltage. (Column 3, line 61 to Column 4, line 3; Column 4, lines 59-67; Figure 1A, # 15)

Mobility argues that the term "program module," which appears in the '560, ' 808, and '056 patents, should be defined the same way in each patent. Dkt. No. 137 at 10. Formosa agrees. Dkt. No. 176 at 17; Dkt. No. 179 at 23. This term was discussed above in the section regarding the '560 patent, and the parties submitted the same proposed constructions for the term for both patents.

Finding that nothing in the '056 patent compels a different construction, the Court construes the term "program module" the same way in the '056 patent as in the '560 and '808 patents: **"program module"** is construed as **"a module that provides a selectable electrical parameter of the circuit."**

3. Removable Program Module

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Removable Program	A removable module that provides a selectable electrical parameter of the circuit. (Mobility's	Removable program module means a housing having an electrical

Module ('560 Patent-Claim 24) ('808 Patent-Claim 1) ('056 Patent-Claim 5) ('490 Patent-Claim 1)	construction for "removable program module is consistent with its construction of this term for the '560 and '808 patents, above; '056 patent, Claims 5-6; Col. 3, lines 63-66; Resp. Brief at 73-76)	component which determines the DC output voltage and which is removable from the power converter housing. (Column 3, line 61 to Column 4, line 3; Column 4, lines 59-67; Figure 1A, # 15)

Mobility argues that the term "removable program module," which appears in the '560, '808, and '056 patents, should be defined the same way in each patent. Dkt. No. 137 at 10. Formosa agrees, though it submitted a slightly different proposed construction of the term for the '560 and '808 patents as for the '056 patent. Dkt. No. 176 at 17 and Dkt. No. 179 at 23; Dkt. No. 180. This term was discussed at length above in the section regarding the '560 patent.

As was discussed in the context of the '560 patent, the Court finds that this term requires no construction beyond the construction of program module set forth above.

4. Key

Claim Term	**Mobility's Proposed Construction**	**Formosa's Proposed Construction**
Key ('808 Patent-Claim 9) ('056 Patent-Claim 5)	A module that determines an electrical parameter. (Mobility's construction for "key" is consistent with its construction of this term for the '211 patent, above; '056 patent, Claims 5-6; Col. 3, lines 63-66; Resp. Brief at 72-73)	Key means a physical structure insertable into the housing of the power converter and including a resistor which programs the desired DC output voltage. (Column 3, lines 60-66; Column 4, lines 59-64; Figures 1A, # 15)

The Court notes that this term was discussed at length above and construed within the context of the '211 patent. Mobility takes the position that the term should be construed consistently in the '211, '808, and '056

patents. Dkt. Nos. 137 at 10 and 178 at 72.

Formosa argues that Mobility's proposed claim construction for "key" is contrary to the plain meaning and that it reads elements out of the claim. Dkt No. 179 at 5. Formosa further argues that "[t]he interpretation 'electrical parameter' is contrary to the claim language and specification which require that the key determine the 'DC output voltage,' not an electrical parameter." Dkt. No. 179 at 25. In support of its proposed construction, Formosa cites passages from the specification as set forth immediately above as well as a technical dictionary definition. Dkt. No. 179 at 26.

Formosa's proposed construction, as set forth in the above chart, differs from the proposal to which Mobility responded. Mobility, in responding to Formosa's proposal, understood Formosa's proposed construction of "key" in the '056 patent to be: "a physical structure insertable into the housing of the power converter and including a resistor." Dkt. No. 178 at 70-71. Mobility's objections to Formosa's proposal are set forth above in the discussion of the ' 211 patent. Mobility argues, contrary to Formosa, that the term has an ordinary meaning in the field of the electronic circuit design industry. Dkt. No. 178 at 72. Mobility further argues that the doctrine of claim differentiation, which creates a presumption that an independent claim does not contain a particular limitation where a dependant claim contains that limitation, cuts against Formosa's proposal. Dkt. No. 178 at 72 citing Liebel-Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 910 (Fed.Cir.2004). This is because dependant Claim 6 contains the limitation "comprises a key having a resistor" whereas claim 5 does not. Dkt. No. 178 at 72. Thus Formosa's proposal, Mobility argues, runs afoul of the doctrine of claim differentiation by eviscerating the difference between claims 5 and 6. Dkt. No. 178 at 72. Mobility further argues that Formosa has failed to rebut the presumption created by the doctrine. Dkt. No. 178 at 72.

The '056 patent has very little description of the "key": '560 patent at Col. 3:66-4:8; Col. 4:65-5:3; Figure 1A. Formosa's proposed definition, however, improperly reads in several limitations from the specification and violates the doctrine of claim differentiation. This term is used differently in the '056 and '808 patents than in the '211 patent because the additional claim limitation of an "electronic component" is absent. The import of that limitation is to require an electronic component that determines an electrical parameter, which is a necessary limitation in the context of the '056 and '808 claims. To account for this, the construction of this term in the context of the '808 and '056 patents requires additional language that was unnecessary in the context of the '211 patent.

Therefore, **"key"** is construed as **"an electronic component or a module or device containing an electrical component wherein the electronic component determines an electrical parameter."**

5. Third Circuit

Claim Term	**Mobility's Proposed Construction**	**Formosa's Proposed Construction**
Third Circuit	1. This term is familiar to those of ordinary skill in the art and need not be construed. (Resp. Brief at 78-79)	Third circuit means a single feedback circuit which receives both the first and second DC voltages, generates a first DC output voltage at a first output, regulates the voltage level of the DC output voltage generated from the first and second circuits and is disposed in the housing.
('560 Patent-	2. Alternatively, a path or group of interconnected	(Column 2, lines 28-30; Column 3, lines 13-15 and 55-59; Figure 1A, # 26)

Claim 1 and 24) ('808 Patent-Claim 1) ('056 Patent-Claims 1, 3, 5) ('490 Patent-Claim 1)	paths capable of carrying electric current. (Resp. Brief at 78-79)

As discussed above in the context of the '560 patent, and having considered the patent and the parties' briefing, the term "third circuit" requires no construction. The Court notes, however, that Formosa proffered a different construction for this term in the '560 patent than for the '056 patent.

As discussed *supra,* the Court's construction of the term "circuit" is applicable here: **"circuit"** is construed as **"a path or group of interconnected paths capable of carrying electric currents."**

6. Fourth Circuit

Claim Term	**Mobility's Proposed Construction**	**Formosa's Proposed Construction**
Fourth Circuit ('056 Patent-Claim 2)	1. This term is familiar to one of ordinary skill in the art and need not be construed. 2. Alternatively, a path or group of interconnected paths capable of carrying electric current. (Supp. Br. at 5, 10-12)	Fourth circuit means a buck converter circuit which is coupled to the first output and provides for a second DC output voltage at a second output and is disposed in the housing. (Column 2, lines 39-43; Column 4, lines 6-9; Figure 1B)

As discussed above in the context of the '560 patent, and having considered the patent and the parties' briefing, the term "fourth circuit" requires no construction. The Court notes, however, that Formosa proffered a different construction for this term in the '560 patent than for the '056 patent.

As discussed *supra,* the Court's construction of the term "circuit" is applicable here: **"circuit"** is construed as **"a path or group of interconnected paths capable of carrying electric currents."**

7. Fifth Circuit

Claim Term	**Mobility's Proposed Construction**	**Formosa's Proposed Construction**

1. Fifth Circuit	1. This term is familiar to one of ordinary skill in the art and need not be construed.	Fifth circuit means a protection circuit providing an over-voltage protection function which consists of a number of electrical components to provide an overvoltage protection point of 25 VDC.
2. A Protection Circuit providing an Over-Voltage Protection Function ('056 Patent-Claim 13)	2. Alternatively, a path or group of interconnected paths capable of carrying electric current. (Supp. Br. at 5, 10-12)	(Column 5, lines 12 and 41-58)

Having considered the '056 patent and the parties' briefing, the Court finds that the term "fifth circuit" requires no construction.

As discussed *supra,* the Court's construction of the term "circuit" is applicable here: **"circuit"** is construed as **"a path or group of interconnected paths capable of carrying electric currents."**

F. '490 Patent

1. A power converter, comprising:

a first circuit converting an AC input voltage to a first DC voltage;

a second circuit converting a DC input voltage to a second DC voltage; and

an (sic) third circuit having a feedback loop and receiving said first and second DC voltages and, in response thereto, providing a selectable DC output voltage at a first output, wherein said selectable DC output voltage is established as a function of a removable program module, the removable program module selectively establishing a resistor as a part of the feedback loop of the third circuit.

Mobility argued, in its initial claims construction brief, that only two terms in the '490 patent required construction: feedback loop and program module. Dkt. No. 137 at 11.

Formosa's supplemental claim construction brief addressed the '490 patent at pages 20-23. Dkt. No. 176. Formosa "assign[s] error" to each of Mobility's proposed constructions and suggests that a number of additional terms require construction. Dkt. Nos. 179 and 180.

1. Feedback Loop

Claim Term	**Mobility's Proposed Construction**	**Formosa's Proposed Construction**
Feedback Loop ('490 Patent-	A path that is tapped from a circuit and provided to one or more portions of the circuit that previously processed the signal.	Feedback loop means a circuit which returns a portion of the output of a circuit to its input by one closed path. (Column 3, lines 62-64; Column 4, lines 65-67)

Claim 1)

A very similar term, "single feedback loop," was discussed above in the section regarding the '560 patent. Mobility proffered nearly the same construction for both terms. Dkt. No. 137 at 11.

Mobility, in its response, understood Formosa to proffer the following proposed construction for this term: "The claim further calls for a third circuit having a feedback loop receiving both the first and second DC voltages from the first and second circuits and, in response thereto, providing a selectable DC output voltage at a first output." Dkt. No. 178 at 83. Formosa's proposed construction in the JCCC differs significantly from the construction addressed by Mobility in its response and, as a result, Mobility's arguments in opposition to Formosa's proposal are not on point.

Having reviewed the '490 patent and the parties' briefing, the Court finds that the term should be construed consistently with the construction of the term "single feedback loop" in the '560 patent. Therefore, the term **"feedback loop"** is construed as **"a path that returns portions of the output of a circuit to one or more portions of the circuit that previously processed the signal."**

2. Program Module

Claim Term	**Mobility's Proposed Construction**	**Formosa's Proposed Construction**
Program Module ('490 Patent-Claim 1)	A module that provides a selectable electrical parameter of the circuit. (Mobility's construction is supported by its discussion of this term in connection with the '560, '808 and '056 patents, above; Col. 5, lines 5-13; Resp. Brief at 85-87)	Program module means a housing having an electrical component which determines the DC output voltage. (Column 2, lines 20-29; Column 3, line 65 to Column 4, line 10; Column 4, line 67 to Column 5, line 5)

This term was discussed above in the section regarding the '560 patent. Mobility further argues that the term "program module," which appears in the ' 560, '808,'056, and '490 patents, should be defined the same way in each patent. Dkt. No. 137 at 11. Formosa agrees, having relied on its briefing regarding the '560 and '808 patents for the construction of this term in the '490 patent and having proffered the same proposed construction for the term in all three patents. Dkt. No. 176 at 17, Dkt. No. 179 at 23.

Finding that nothing in the '490 patent compels a different construction, and the Court construes the term "program module" the same way in the '490 patent as in the '560 and '808 patents: **"program module"** is construed as **"a module that provides a selectable electrical parameter of the circuit."**

3. Removable Program Module

Claim Term	**Mobility's Proposed Construction**	**Formosa's Proposed Construction**
Removable Program Module	A removable module that provides a selectable electrical parameter of the circuit. (Mobility's construction is supported by its discussion of this term in connection with the '560, '808 and '056	Removable program module means a housing having an electrical component which determines the DC output voltage which is removable

	patents, above; Col. 5, lines 5-13; Resp. Brief at 85-87)	from the power converter.
('490 Patent-Claim 1)		(Column 2, lines 20-29; Column 3, line 65 to Column 4, line 10; Column 4, line 67 to Column 5, line 5)

This term was discussed above in the section regarding the '560 patent. Having reviewed the '490 patent and the parties' briefing, and noting that the proposed construction proffered by Formosa for this term is slightly different than that proposed for the same term in the '560 patent, as discussed above, the Court finds no need to construe the term here. The term "program module" was construed above and that construction is sufficient. The placement of the term "removable" in front of "program module" does not warrant additional construction.

4. Third Circuit

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Third Circuit ('560 Patent-Claim 1 and 24) ('808 Patent-Claim 1) ('056 Patent-Claims 1, 3, 5) ('490 Patent-Claim 1)	1. This term is familiar to those of ordinary skill in the art and need not be construed. 2. Alternatively, a path or group of interconnected paths capable of carrying electric current.	Third circuit means a single circuit and comprises a single feedback circuit. (Column 2, lines 20-25; Column 3, lines 13-15 and 60-64; Column 4, lines 65-67)

As discussed above in the context of the '560 patent, and having considered the patent and the parties' briefing, the term "third circuit" requires no construction.

As discussed *supra,* the Court's construction of the term "circuit" is applicable here: **"circuit"** is construed as **"a path or group of interconnected paths capable of carrying electric currents."**

5. Selectable DC Output Voltage

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Selectable DC Output Voltage ('560 Patent-Claims 1, 24) ('808 Patent-Claim 1) ('490 Patent	1. This term is familiar to those of ordinary skill in the art and need not be construed. 2. Alternatively, a DC voltage that can be chosen.	Selectable DC Output Voltage means a DC output voltage which is established as a function of a removable program module. (Column 2, lines 20-29; Column 3, line 65 to Column 4, line 10; Column 4, line 67 to Column 5, line 5)

('490 Patent-
Claim 1)

This term was discussed above in the section regarding the '560 patent. As Mobility argued with regard to this term in the '560 patent, Mobility here argues that this term does not require construction as it has a plain and ordinary meaning.

Having reviewed the '490 patent and the parties' briefing, the Court notes that the proposed construction proffered by Formosa for this term and the "alternative construction" proffered by Mobility for this term is different from the parties' proposals for the same term in the '560 patent. As in the '560 patent, however, the Court finds no need to construe the term in the '490 patent.

6. Selectively Establishes a Resistor as a Part of the Feedback Loop

Claim Term	**Mobility's Proposed Construction**	**Formosa's Proposed Construction**
Selectively Establishes a Resistor as a Part of the Feedback Loop ('490 Patent-Claim 1)	This claim language is familiar to those of ordinary skill in the art and need not be construed. (Resp. Brief at 90-91)	Selectively establishes a resistor as a part of the feedback loop means that the removable program module is a key comprising a resistor and is coupled to the feedback loop of the feedback circuit. (Column 2, lines 20-29; Column 3, line 65 to Column 4, line 10; Column 4, line 67 to Column 5, line 5; August 27, 2004 Amendment-cited on pp. 19-20 of Formosa's Supplemental Brief on Claim Construction)

Mobility maintains the position that the plain meaning of this term is clear and no construction is necessary. Dkt. No. 178 at 90. Mobility argues that Formosa's proposal should be rejected as it misstates the plain meaning and is unsupported by the claim language-particularly as the terms "key" and "feedback circuit" do not appear in the claim, yet appear in Formosa's proposal. Dkt. No. 178 at 90-91, citing '490 patent claim 1.

Having considered the patent and the parties' briefing, the Court finds that no construction is necessary.

G. '158 Patent

1. A power converter, comprising:

a first input circuit adapted to receive an AC input voltage and generate a DC voltage;

a second input circuit adapted to receive an [sic] DC input voltage and generate a DC output voltage;

and an output circuit receiving said DC output voltage from both first and second input circuit and producing a programmable DC output voltage, said programmable DC output voltage being established by a single selectively removable key regardless of whether the converter input voltage is an AC or DC voltage, wherein different said programming keys establish different associated said DC output voltages, wherein said key includes a passive electrical component.

6. The converter of claim 1 further comprising a tip adapted to be coupled to an external [sic] device to be

powered by said converter, wherein said key is integral to said tip.

Mobility argues, in its initial claims construction brief, that only four terms in the '158 patent required construction: key; programming key; electronic component; and tip. Dkt. No. 137 at 6. Mobility further argues that the terms "key" and "electronic component," which appear in the '211 patent and were discussed above, should be defined the same in the '158 patent.FN11 Dkt. No. 137 at 6.

FN11. In its response brief, Mobility also responded to certain invalidity contentions raised by Formosa. Dkt. No. 178 at 56-57. Mobility noted, however, that it "believes that any issue concerning whether or not an asserted claim is indefinite is an invalidity question that should be reserved for a summary judgment motion." Dkt. No. 178 at 56 n. 25. The Court is in agreement with Mobility and will address any summary judgment motions for invalidity if and when filed. Patents are presumed valid. 35 U.S.C. s. 282. During claim construction, courts will construe claims unless, because of an ambiguity, one of ordinary skill in the art could not reasonably understand the scope of the claim. *See* Exxon Research and Eng.'g Co. v. United States, 265 F.3d 1371, 1375 (Fed.Cir.2001); *see also* Phillips, 415 F.3d 1303, 2005 WL 1620331 at *19 (noting that a validity analysis is not a regular component of claim construction). Presently, this Court finds none that of Formosa's invalidity contentions render any of the asserted claims so ambiguous that a construction cannot be reached.

Formosa's initial claim construction brief addressed the '158 patent at pages 69-74. Dkt. No. 136. Formosa "assign[s] error" to each of Mobility's proposed constructions and suggests that a number of additional terms require construction. Dkt. Nos. 179 and 180.

1. Key

Claim Term	**Mobility's Proposed Construction**	**Formosa's Proposed Construction**
Key ('158 Patent-Claim 1)	A module that determines an electrical parameter. (Mobility's construction for "key" is consistent with its construction of this term for the '211 patent, above; '158 patent, Claims 1, 7; Col. 5, lines 10-13; Col. 5, lines 21-23; Resp. Brief at 50-51)	Key means a body configured to be received by a slot in the converter case and within which is disposed a passive electrical component which consists of one or more resistors. (Column 2, lines 24-25; Column 3, lines 4-8; Column 5, lines 9-13)

The term "key" appears in the '211, '808, and '056 patents and was considered and separately discussed at length for both the '211 and '056 patents. Mobility argues that the term should be construed with the same construction in each of the patents in which it appears. Dkt. No. 137 at 6. Formosa, however, disagrees because "the term is not an ordinary term of art and the term is defined slightly differently in the two patents ['211 and ' 158]." Dkt. No. 179 at 10 n. 4.

Formosa argues that Mobility's proposed construction is both contrary to the plain meaning of the claim language and specification and that it reads elements out of the claim. Formosa argues that Mobility's use of the phrase "electrical parameter" is "contrary to the claim language and specification because the key

"determine[s] the 'DC output voltage,' not an 'electrical parameter.' " Dkt. No. 179 at 10. Based on the claim language and passages of the specification, as cited in the chart above, Formosa argues that the patentee acted as his own lexicographer in defining "key" and that its proposed claim construction is in accord with the patentee's definition. Dkt. No. 179 at 10-11.

In its response brief Mobility notes that Formosa, in its initial claim construction brief, "does not explicitly request construction" of the term "key" and did not clearly set forth a proposal. Dkt. No. 178 at 50. According to Mobility, however, Formosa's discussion of the term contains several erroneous statements. Dkt. No. 178 at 50. Mobility refers to its discussion of the term as set forth in connection with the '211 patent. Dkt. No. 50.

Having reviewed the '158 patent and the parties' briefing, the Court finds that the construction reached for this term in the '211 patent is applicable in the '158 patent. The citations to the patent provided by each party support this construction. The construction arrived at for the '056 and '808 patents is inapplicable because the asserted claims in the '158 patent contain the limitation of the "electrical component," as did the asserted claims of the '211 patent.

Therefore, in the '158 patent, **"key"** is construed as **"an electronic component or a module or device containing an electrical component."** This construction is subject to "electronic component" being construed as set forth below.

2. Programming Keys

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Programming Keys ('158 Patent-Claim 1)	A module that provides a selectable electrical parameter of the circuit. ('158 patent, Claims 1, 7; Col. 5, lines 10-13; Resp. Brief at 51-52)	Programming keys mean a plurality of bodies configured to be received by the slot in the converter case and within which are disposed different passive electronic components which consist of one or more resistors. (Column 2, lines 22-27; Column 3, lines 4-8; Column 5, lines 9-13)

Formosa argues the term "programming keys" in claim one has no antecedent basis. Dkt. No. 179 at 12. Formosa also argues that the term "is not an ordinary term of art in the power converter field and the specification must be consulted to see how the patentee defined the term." Dkt No. 179 at 12. Formosa then argues that the portions of the specification set forth above support its argument that the term has a specialized meaning. Further, Formosa argues that Mobility's proposed construction "is overbroad and not taken in context with the rest of the claim language or the specification" and "covers more than the inventor's invention and violates the basic rules of claim interpretation." Dkt. No. 179 at 13.

Mobility argues that this term is "substantially similar to the term 'program module' found in the '560 and '808 patents" and therefore the above discussion regarding "program module" is applicable here. Dkt. No. 178 at 51. Mobility requests that the same construction be adopted for both terms. Dkt. No. 178 at 51.

Regarding Formosa's proposal, which Mobility understood to be "a set of one or more resistors," Mobility argues that the doctrine of claim differentiation militates against this construction noting that claim 1 does not limit the passive electrical component to resistors, but dependant claim 16 contains this limitation. Dkt.

No. 178 at 50 and 52. Additionally, Mobility argues against Formosa's contention that the "programming keys are inserted in a slot in the housing of the converter" because the claim language does not require such insertion. Dkt. No. 178 at 52.

As construed above, a "key" is "an electronic component or a module or device containing an electrical component." This same construction is applicable to the "keys" in "programming keys." Having reviewed the patent and claim language, in particular the description of the "programming keys" at Col. 2:22-24 and Col. 5: 9-20, as well as the parties briefs, the term **"programming keys"** is construed as **"an electronic component or a module or device that provides a selectable electrical parameter of the circuit."**

3. Electrical Component

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Electrical Component ('158 Patent-Claim 1)	A device operable with an electrical circuit. ('158 patent, Claims 1, 16; Col. 5, lines 10-13; Col. 5, lines 17-21; Resp. Brief at 50-51)	Electrical component means one or more resistors. (Column 3, lines 4-6)

The term "electrical component" appears in the '211 patent and was discussed above. Mobility argues that the term should be construed with the same construction in both the '211 and '158 patents. Dkt. No. 137 at 6. Formosa, however, appears to disagree as it has proposed a construction different from Mobility's and different from the construction proposed for this term in the '211 patent. Formosa's objections to Mobility's proposed construction, however, are the same as discussed above. See Dkt. No. 179 at 8 and 14. Formosa argues that the patentee, in the '158 patent, defined the term as "one or more resistors" and cites the passage in the chart above as well as definitions from a technical dictionary. Dkt. No. 179 at 14.

In its response brief Mobility notes that Formosa "does not explicitly request construction" of the term "electrical component" and did not clearly set forth a proposal. Dkt. No. 178 at 50. According to Mobility, however, Formosa's discussion of the term contains several erroneous statements. Dkt. No. 178 at 50. For example, Mobility agrees with Formosa that "key" includes "passive electrical components having different values, i.e., different resistors" but argues that Formosa "incorrectly claims that '[t]he passive electrical component is one or more resistors.' " Dkt. No. 178 at 50. Mobility argues that Formosa's extraneous "resistor" limitation is not supported by the open-ended claim language, is an improper attempt to read limitations into the claim from the specification, and is further improper because Formosa has not shown unambiguous disavowal of the possibility of using electrical components other than resistors. Dkt. No. 178 at 50-51. Lastly, Mobility argues that Formosa's attempt to limit the claim to resistors should be rejected as improper under the doctrine of claim differentiation as dependant claim 7 explicitly recites the resistor limitation. Dkt. No. 178 at 51. Mobility refers to its discussion of the term set forth in connection with the '211 patent. Dkt. No. 50

Having reviewed the '158 patent and the parties briefing, the Court finds that the same construction for this term reached for the '211 patent is applicable here.

Therefore, in the '158 patent, the term **"electrical component"** is construed as **"a device operable within**

an electrical circuit that determines an electrical parameter."

4. Tip

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Tip ('158 Patent-Claim 6)	A module adapted to be coupled to an external device. (Claim 6; Col. 5, lines 56-67; Fig. 2; Resp. Brief at 52, 56-57)	Indefinite 35 U.S.C. s. 112, second paragraph.

Formosa argues that Mobility's proposed construction of the term "tip" is erroneous because it "is not an ordinary term of art in the field of power converters" but was instead defined by the patentee. Dkt. No. 179 at 15. Formosa argues that the "tip" cannot be a "module" because the patent specification uses the term "module" to cover the physical structure which is inserted into the power converter. Dkt. No. 179 at 15, citing '158 patent at 5:9-13, 55-56. Further, Formosa argues, the patent specification provides no information regarding the meaning of this term and, as a result, invalidates the claim as indefinite. Dkt. No. 179 at 15-17.

In its response brief Mobility notes that Formosa "does not appear to request construction of this term." Dkt. No. 178 at 52. In support of its own proposal, Mobility argues that its construction of the term is supported by the plain meaning of the language in claim 6 of the '158 patent, "which recites 'the converter of Claim 1 further comprising a tip adapted to be coupled to an external devices....' " Dkt. No. 178 at 52.

The term "tip" is addressed only briefly in the patent, as set forth by the parties in the above chart. The discussion of the "tip" is not so brief as to render it so ambiguous that one of ordinary skill in the art could not reasonably understand the term. Further, the term is limited by the claim language, which states that the "key is integral to said tip."

Therefore, consistent with the usage of the term in the patent, **"tip"** is construed as **"a module adapted to be coupled to an external device."**

5. ***First Input Circuit***

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
First Input Circuit ('158 Patent-Claim 1)	1. This term is familiar to those of ordinary skill in the art and need not be construed. (Resp. Brief at 53-55) 2. Alternatively, a path or group of interconnected paths capable of carrying electric current. (Resp. Brief at 53-55)	First input circuit means an AC/DC converter circuit which is not a programmable supply circuit and does not contain any smart circuitry other than to provide a fixed regulated DC output. (Column 3, lines 65-67)

The Court notes that a substantially similar term, "first circuit," was discussed at length above in the context of the '560 patent. Having considered the patent and the parties' briefing, the Court finds that the term "first

input circuit" requires no construction.

As discussed *supra*, the Court's construction of the term "circuit" is applicable here: **"circuit"** is construed as **"a path or group of interconnected paths capable of carrying electric currents."**

6. Second Input Circuit

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Second Input Circuit ('158 Patent-Claim 1)	1. This term is familiar to those of ordinary skill in the art and need not be construed. (Resp. Brief at 53-55) 2. Alternatively, a path or group of interconnected paths capable of carrying electric current. (Resp. Brief at 53-55)	Second input circuit means a DC to DC converter circuit which is not programmable and does not have any additional circuitry other than to convert from 11-16 V input to the DC output, approximately 28 VDC. (Column 4, lines 37-41)

The Court notes that a substantially similar term, "second circuit," was discussed at length above in the context of the '560 patent. Having considered the patent and the parties' briefing, the Court finds that the term "second input circuit" requires no construction.

As discussed *supra*, the Court's construction of the term "circuit" is applicable here: **"circuit"** is construed as **"a path or group of interconnected paths capable of carrying electric currents."**

7. DC Voltage

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
DC Voltage ('158 Patent-Claim 1)	1. This term is familiar to those of ordinary skill in the art and need not be construed. (Resp. Brief at 55-56) 2. Alternatively, a direct current voltage. (Resp. Brief at 55-56)	DC voltage means approximately 28 VDC. (Column 3, lines 60-63)

Mobility maintains that no construction of this term is necessary as there is a well-settled plain meaning for the term to one of ordinary skill in the art. Dkt. No. 178 at 55, citing technical dictionaries. Should the Court determine that a construction is necessary, Mobility argues that its proposal be adopted. Mobility faults Formosa's proposal for "improperly seek[ing] to narrow the plain and ordinary meaning ... by limiting them to a particular voltage" which Mobility argues is not supported by the claim language and requires the improper importation of limitations from the specification and preferred embodiment. Dkt. No. 178 at 56.

This term is further considered in the discussion of the '163 patent, claim term "fixed DC output voltage." As the Court concludes infra, the term **"DC"** is construed **"direct current."**

8. Programmable DC Output Voltage

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction

Programmable DC Output Voltage ('158 Patent-Claim 1)	1. This term is familiar to those of ordinary skill in the art and need not be construed. (Resp. Brief at 55-56) 2. Alternatively, a direct current voltage. (Resp. Brief at 55-56)	Programmable DC output voltage means a predetermined output voltage established by a single selectively removable key which includes a passive electrical component. (Column 3, lines 1-6; Column 5, lines 10-13)

Mobility maintains that no construction of this term is necessary as there is a well-settled plain meaning for the term to one of ordinary skill in the art. Dkt. No. 178 at 55, citing technical dictionaries. Should the Court determine that a construction is necessary, Mobility argues that its proposal be adopted. In its response briefing, understanding Formosa's proposal for this term to be "approximately 28 VDC," Mobility faults Formosa's proposal for "improperly seek[ing] to narrow the plain and ordinary meaning ... by limiting them to a particular voltage." Dkt. No. 178 at 53 and 56.

Having considered the patent and the parties' briefing, the Court finds that the term "programmable DC Output Voltage" requires no construction.

As discussed *infra,* the Court's construction of the term **"DC"** is applicable here: **"DC"** means **"direct current."**

9. Output Circuit

Claim Term	**Mobility's Proposed Construction**	**Formosa's Proposed Construction**
Output Circuit ('158 Patent-Claim 1)	1. This term is familiar to one of ordinary skill in the art and need not be construed. 2. Alternatively, a path or group of interconnected paths capable of carrying electric current. (Supp. Br. at 5, 10-12)	Output circuit means a down converter circuit which produces a programmable DC output voltage. (Column 4, lines 48-54)

Having considered the patent and the parties' briefing, the Court finds that the term "output circuit" requires no construction.

As discussed *supra,* the Court's construction of the term "circuit" is applicable here: **"circuit"** is construed as **"a path or group of interconnected paths capable of carrying electric currents."**

H. '163 Patent

1. A power conversion device capable of receiving either an AC input voltage or a DC input voltage and generating a programmable DC output voltage, said device comprising:
a first circuit converting an AC input voltage to a DC output voltage;

a second circuit converting a DC input voltage to a fixed DC output voltage even when said DC input voltage varies, wherein said second circuit includes a DC-to-DC up converter;

and a third circuit receiving said DC output voltages and said fixed DC output voltage from said first and

second circuits, respectively, and generating a selectable output DC voltage.

7. The device as recited in claim 1 wherein said third circuit is adapted to couple to a plurality of removable programming keys, said keys providing different associated DC output voltages.

Mobility argues, in its initial claims construction brief, that only one term in the '163 patent, "programming key," requires construction. Dkt. No. 137 at 9. Further, Mobility argues that the term, which appears in the '158 patent, should be construed the same way for both patents. Dkt. No. 137 at 9.

Formosa's initial claim construction brief addressed the '163 patent at pages 79-83. Dkt. No. 136. Formosa "assign[s] error" to each of Mobility's proposed constructions and suggests that a number of additional terms require construction. Dkt. Nos. 179 and 180.

1. Programming Keys

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Programming Keys ('158 Patent-Claim 1) ('163 Patent-Claim 7)	A module that provides a selectable electrical parameter of the circuit. (Mobility's construction for "programming keys" in the '163 patent is consistent with its construction of this term for the '158 patent, above; Col. 5, lines 14-17; '163 patent, Claims 7-8)	Programming keys mean a plurality of bodies configured to be received by the slot in the converter case and within which are disposed different passive electronic components which consist of one or more resistors. (Column 2, lines 24-27; Column 3, lines 7-11; Column 5, lines 13-17)

Mobility discussed its position regarding this term above in the section on the '158 patent as well as its position on the substantially similar term "programming module" in connection with the '560 and '808 patents. Dkt. No. 178 at 60. Mobility agrees with Formosa that the term "the Court should utilize the same construction of 'programming key' for both the ' 158 and '163 patents." Dkt. No. 178 at 60 citing Dkt. No. 136 at 83; Dkt. No. 137 at 9.

Having considered the patent and the parties' briefing, the Court finds no reason to construe the term differently in the '163 patent than in the ' 158 patent.

Therefore, **"programming keys"** is construed as **"an electronic component or a module or device that provides a selectable electrical parameter of the circuit."**

2. First Circuit

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
First Circuit	1. This term is familiar to those of ordinary skill in the art and need not be construed. (Resp. Brief at 64)	First circuit means an AC/DC converter circuit which is not a programmable supply circuit and does not contain any smart circuitry other than to provide a fixed regulated DC output.

('163 Patent-Claim 1)	2. Alternatively, a path or group of interconnected paths capable of carrying electric current. (Resp. Brief at 64)	(Column 4, lines 1-3)

The Court notes that the term "first circuit" was discussed at length above in the section on the '560 patent. Having considered the patent and the parties' briefing, the Court finds that the term "first circuit" requires no construction.

As discussed *supra*, the Court's construction of the term "circuit" is applicable here: **"circuit"** is construed as **"a path or group of interconnected paths capable of carrying electric currents."**

3. Second Circuit

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Second Circuit	1. This term is familiar to those of ordinary skill in the art and need not be construed. (Resp. Brief at 64)	Second circuit means an up converter circuit which does not have any additional circuitry other than to convert from an 11-16 V input to approximately a fixed 28 VDC and is not programmable.
('163 Patent-Claim 1)	2. Alternatively, a path or group of interconnected paths capable of carrying electric current. (Resp. Brief at 64)	(Column 4, lines 41-44)

The Court notes that the term "second circuit" was discussed at length above in the section on the '560 patent. Having considered the patent and the parties' briefing, the Court finds that the term "second circuit" requires no construction.

As discussed *supra*, the Court's construction of the term "circuit" is applicable here: **"circuit"** is construed as **"a path or group of interconnected paths capable of carrying electric currents."**

4. Programmable DC Output Voltage

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Programmable DC Output Voltage	1. This term is familiar to those of ordinary skill in the art and need not be construed. (Resp. Brief at 63)	Programmable DC output voltage means an output voltage programmed by use of a function key comprising one or more resistors.
('163 Patent-Claim 1)	2. Alternatively, a selectable DC output voltage. (Col. 5, lines 13-17; Resp. Brief at 63)	(Column 3, lines 4-9; Column 5, lines 13-17 and 20-22)

This term was previously discussed in the section regarding the '158 patent above. Mobility maintains that no construction of the term is necessary because it is readily understood by persons of ordinary skill in the art. Dkt. No. 178 at 63. Alternatively, Mobility argues the Court should adopt its construction because it is supported by the specification and by statements in Formosa's brief. Dkt. No. 178 at 63 citing Dkt. No. 136 at 16 ("[p]rogrammable means that the DC output voltages can be made selectively different").

The Court notes that this term appears in the preamble of claim 1 of the ' 163 patent and therefore generally only "limits the invention if it recites essential structure or steps, or if it is 'necessary to give life, meaning, and vitality' to the claim." Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc., 289 F.3d 801, 808 (Fed.Cir.2002). Neither party, however, raised this issue before the Court.

Having considered the '163 patent and the parties' briefing, and as found above in the context of the '158 patent, the Court finds that the term "programmable DC Output Voltage" requires no construction.

As discussed infra, the Court's construction of the term **"DC"** is applicable here: **"DC"** means **"direct current."**

5. Fixed DC Output Voltage

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Fixed DC Output Voltage ('163 Patent-Claim 1)	1. This term is familiar to those of ordinary skill in the art and need not be construed. (Resp. Brief at 64-66) 2. Alternatively, a DC voltage that does not vary when the input voltage varies. (Col. 4, lines 41-44; Col. 2, lines 56-63; Col. 6, lines 25-30; Resp. Brief at 64-66)	Fixed DC output voltage means 28 VDC. (Column 3, lines 63-65)

Mobility maintains that no construction of the term "Fixed DC Output Voltage" is necessary because it is readily understood by persons of ordinary skill in the art. In support of its position, Mobility cites as evidence definitions of the "DC" in three technical dictionaries. Mobility also argues that the plain meaning of term "fixed" is readily understandable. Dkt. No. 178 at 64-65. Alternatively, Mobility argues the Court should adopt its construction because it is consistent with the claim language and supported by the patent specification. Dkt. No. 178 at 65.

The Court notes that two the technical dictionaries cited by Plaintiff define "DC" as "direct current." *Wiley Electrical and Electronics Engineering Dictionary* 170, (1st Ed.2004); *IEEE 100: The Authoritative Dictionary of IEEE Standards Terms* 275 (7th Ed.2000). While this claim term appears to have a plan meaning readily apparent to persons of ordinary skill in the art, the Court finds that a further definition of "DC" is necessary and therefore construes **"DC"** as **"direct current."**

6. Selectable Output DC Voltage

Claim Term	Mobility's Proposed Construction	Formosa's Proposed Construction
Selectable Output DC Voltage ('163 Patent-Claim 1)	1. This term is familiar to those of ordinary skill in the art and need not be construed. (Resp. Brief at 64-66) 2. Alternatively, a DC voltage that can be chosen. (Col. 5, lines 13-17; Col. 2, lines 56-63; Col. 6, lines 25-30; Resp. Brief at 64-66)	Selectable output DC voltage means a DC output voltage which is selectable by use of multiple programming function keys. (Column 2, lines 22-27; Column 5, lines 13-17)

Mobility maintains that no construction of the term "Selectable Output DC Voltage" is necessary because it is readily understood by persons of ordinary skill in the art. In support of its position, Mobility cites as evidence definitions of the "DC" in three technical dictionaries. Mobility also argues that the plain meaning of term "selectable" is readily understandable. Dkt. No. 178 at 64-65. Alternatively, Mobility argues the Court should adopt its construction because it is consistent with the claim language and supported by the patent specification. Dkt. No. 178 at 65.

Having considered the '163 patent and the parties' briefing, the Court finds that the term "selectable Output DC Voltage" requires no construction.

As discussed infra, the Court's construction of the term **"DC"** is applicable here: **"DC"** means **"direct current."**

7. Couple

Claim Term	**Mobility's Proposed Construction**	**Formosa's Proposed Construction**
Couple ('163 Patent-Claim 7)	1. This term is familiar to those of ordinary skill in the art and need not be construed. (Resp. Brief at 66-68) 2. Alternatively, "couple" means electronically linked together. (Col. 2, lines 24-26; Col. 2, lines 56-63; Col. 6, lines 25-31; Resp. Brief at 66-68)	Couple means that the programming keys are insertable into a slot in the housing of the converter. (Column 3, lines 7-11; Figure 1, # 15)

Mobility maintains that no construction of the term "couple" is necessary. Mobility argues that the term, as used in claim 7 of the patent, is readily comprehensible to those of ordinary skill in the art: "[t]he device as recited in claim 1 wherein said third circuit is adapted to couple to a plurality of removable programming keys ..." Dkt. No. 178 at 66, citing '163 patent claim 7. That the term has an ordinary and customary meaning to those skilled in the art, Mobility argues, is further evidenced by the term being defined in a number of technical dictionaries. Dkt. No. 178 at 66-67, citing *Wiley Electrical and Electronics Engineering Dictionary* 115 (1st Ed.2004) ("to join, link, or allow the transfer of energy. For instance, to join circuits.") and *McGraw-Hill Dictionary of Scientific and Technical Terms* 501 (6th Ed.2003) ("To connect two circuits so signals are transferred from one to the other.").

Mobility argues that Formosa's proposal should be rejected as it "fails to give meaning to the claim language because it gives the term 'couple' a structural or mechanical meaning as opposed to an electrical meaning," thereby ignoring the plain meaning of the claim. Dkt. No. 178 at 67. Mobility further argues that Formosa improperly attempts to limit the location in which the programming keys may be coupled to the housing by improperly importing limitations from the specification and preferred embodiment into the claims. Dkt. No. 178 at 67. Should the Court construe the term, Mobility argues that its proposed construction should be adopted because it complies with the principles of claim construction, is supported by the specification and claim language, and is accurate in that it reflects that the term has an electrical meaning. Dkt. No. 178 at 68.

Having considered the '163 patent and the parties' briefing, the Court finds that the term "couple" is used in

accordance with its plain meaning and requires no construction.

V. Conclusion

Accordingly, the Court hereby **ORDERS** the disputed claim terms construed consistent herewith.