

EXHIBIT 4-1

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

PARKERVISION, INC.,
Plaintiff

-v-

INTEL CORPORATION,
Defendant

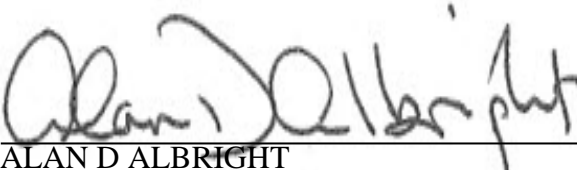
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W-20-CV-00108-ADA

CLAIM CONSTRUCTION ORDER

The Court held a *Markman* hearing on January 26, 2021. During that hearing, the Court provided its final constructions. The Court now enters those claim constructions.

SIGNED this 26th day of January, 2021.



ALAN D ALBRIGHT
UNITED STATES DISTRICT JUDGE

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction	Court's
"universal frequency down-converter (UFD)" ('518 patent, claim 50)	"circuitry that generates a down converted output signal from an input signal"	"A down-converter that down-converts a carrier signal at an aliasing rate (i.e., by sampling at less than or equal to twice the frequency of the carrier signal)"	"circuitry down converted from an input wide range of frequencies"
"energy transfer module" ('902 patent, claim 1)	Plain and ordinary meaning	"A module that down-converts an electromagnetic signal by transferring energy at an aliasing rate (i.e., by sampling at less than or equal to twice the frequency of the electromagnetic signal)"	Plain-and-
"frequency down-conversion module" ('444 patent, claims 2, 3; '474 patent, claim 1)	Plain and ordinary meaning	"A module that down-converts an input signal at an aliasing rate (i.e., by sampling at less than or equal to twice the frequency of the input signal)"	Plain-and-
"aliasing module" ('725 patent, claim 1)	Plain and ordinary meaning	"A module that down-converts an RF information signal at an aliasing rate (i.e., by sampling at less than or equal to twice the frequency of the RF information signal)"	Plain-and-

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction	Court's
<p>“system for frequency down-converting” ('513 patent, claim 19; '528 patent, claim 1; '736 patent, claim 1)</p>	<p>Plain and ordinary meaning</p>	<p>“A system that down-converts a modulated carrier signal at an aliasing rate (i.e., by sampling at less than or equal to twice the frequency of the modulated carrier signal)”</p>	<p>Preamble and-ordina</p>
<p>“frequency down-conversion module” ('673 patent, claim 1)</p>	<p>Plain and ordinary meaning</p>	<p>“A module that down-converts an input modulated carrier signal at an aliasing rate (i.e., by sampling at less than or equal to twice the frequency of the input modulated carrier signal)”</p>	<p>Plain-and-</p>
<p>“apparatus for down-converting” ('673 patent, claim 13)</p>	<p>Plain and ordinary meaning</p>	<p>“An apparatus that down-converts a modulated carrier signal at an aliasing rate (i.e., by sampling at less than or equal to twice the frequency of the modulated carrier signal)”</p>	<p>Preamble and-ordina</p>
<p>“under-samples” ('444 patent, claim 2; '474 patent, claim 6)</p>	<p>“sampling at an aliasing rate” or “sampling at less than or equal to twice the frequency of the input signal”</p>	<p>“samples at less than or equal to twice the frequency of the input signal using negligible apertures (i.e., pulse widths) that tend towards zero time in duration”</p>	<p>“sampling to twice th input signa</p>

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction	Court's
<p>“the [] switch is coupled to the [] storage element at a [] node and coupled to a [] reference potential” (’474 patent, claim 1)</p>	<p>Plain and ordinary meaning</p>	<p>“the switch receives current from a storage element via a node, and shunts (i.e., diverts) current to a point held at a constant reference voltage”</p>	<p>Plain-and-wherein “connected through a closed swi</p>
<p>[wherein said storage elements comprises] “a capacitor that reduces a DC offset voltage in said first-down converted signal and said second down-converted signal” (’444 patent, claim 4)</p>	<p>Plain and ordinary meaning</p>	<p>[wherein said storage elements comprises] “a capacitor that reduces a DC offset voltage in both said first down-converted signal and said second down-converted signal”</p>	<p>Plain-and-wherein th each of the reduces a the corres converted</p>
<p>“DC offset voltage” (’444 patent, claim 4)</p>	<p>“a deviation of DC voltage from a reference voltage”</p>	<p>“a DC voltage level that is added to a signal of interest by related circuitry”</p>	<p>Plain-and-wherein th meaning is between th signal and e.g., grou</p>
<p>“energy storage element” (’513 patent, claim 19; ’528 patent, claim 1; ’736 patent, claims 1, 11, 21)</p>	<p>“an element of an energy transfer system that stores non-negligible amounts of energy from an input electromagnetic signal for driving a low impedance load”</p>	<p>“an element that stores non-negligible amounts of energy from an input electromagnetic (EM) signal”</p>	<p>“an element transfer sy negligible from an in signal”</p>

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