

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TCL INDUSTRIES HOLDINGS CO., LTD., HISENSE CO., LTD., AND ZYXEL
COMMUNICATIONS CORP.
Petitioners,

v.

PARKERVISION, INC.
Patent Owner

Case No. IPR2021-00985

PETITION FOR *INTER PARTES* REVIEW

OF

U.S. PATENT NO. 7,292,835

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| 1. | Claim 1 | 51 |

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|-----|--|----|
| (a) | Element [1 preamble]: “A cable modem for down-converting an <i>electromagnetic signal having complex modulations</i> , comprising” | 51 |
| (b) | Element [1A]: “an <i>oscillator</i> to generate an in-phase oscillating signal” | 52 |
| (c) | Element [1B]: “a <i>phase shifter</i> to receive said in-phase oscillating signal and to create a quadrature-phase oscillating signal” | 53 |
| (d) | Element [1C]: “a <i>first frequency down-conversion module</i> to receive the electromagnetic signal and said in-phase oscillating signal” | 56 |
| (e) | Element [1D]: “a <i>second frequency down-conversion module</i> to receive the electromagnetic signal and said quadrature-phase oscillating signal” | 57 |
| (f) | Element [1E]: “wherein said first frequency down-conversion module further comprises a <i>first frequency translation module</i> ” | 58 |
| (g) | Element [1F]: “and a <i>first storage module</i> ” | 60 |
| (h) | Element [1G]: “wherein said first frequency down-conversion module samples the electromagnetic signal at a rate that is a function of said in-phase oscillating signal, thereby creating a <i>first sampled signal</i> ” | 61 |
| (i) | Element [1H]: “said second frequency down-conversion module further comprises a <i>second frequency translation module</i> ” | 63 |
| (j) | Element [1I]: “and a <i>second storage module</i> ” | 63 |
| (k) | Element [1J]: “wherein said second frequency down-conversion module samples the electromagnetic signal at a rate that is a function of said quadrature-phase oscillating signal, thereby creating a <i>second sampled signal</i> ” | 64 |

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