

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION**

GREENTHREAD, LLC

Plaintiff,

vs.

CIRRUS LOGIC, INC.

Defendant.

Civil Action No. 1:23-cv-369

JURY TRIAL DEMANDED

**GREENTHREAD’S SUPPLEMENTAL PRELIMINARY INFRINGEMENT
CONTENTIONS**

Plaintiff Greenthread, LLC (“Greenthread”) provides its supplemental preliminary infringement contentions and claim charts, which are attached as Exhibits A-1 through A-6. Greenthread’s disclosures are based on publicly available materials regarding the accused infringing products of Defendant Cirrus Logic, Inc. (“Cirrus Logic” or “Defendant”). Greenthread does not yet have access to any of Defendant’s discovery materials that may be relevant to its infringement claims and thus relies on publicly available materials. In light of the absence of discovery and reliance on publicly available materials, Greenthread has procured limited physical testing to the extent practicable, of certain products believed to be representative of, and similar to, the accused infringing products in pertinent respects. Greenthread explicitly reserves the right to supplement or alter its disclosures herein, as a matter of right, as permitted by the Court, based on the Court’s claim constructions, based on additional information obtained through formal discovery or other means, and/or based on other circumstances.

I. ASSERTED CLAIMS AND PRIORITY DATE

Based on the information presently available to it, Greenthread identifies the asserted claims of each asserted patent that Greenthread alleges is infringed by Defendant, and the priority date of those claims, as set forth in the table below. Based on the information presently available to it, Greenthread alleges that all asserted claims of each particular asserted patent are entitled to the same priority date, which is the earliest priority date afforded to the asserted patents.

Asserted Patents	Asserted Claims ¹	Priority Date of Asserted Claims
10,510,842 ("the '842 patent")	1, 2, 4-10, 12-18	May 24, 2004
10,734,481 ("the '481 patent")	1-9, 13, 15, 17, 20, 22-27, 31, 32, 34	May 24, 2004
11,121,222 ("the '222 patent")	1-9, 13, 15, 17, 20, 21, 23-28, 32, 33, 35, 39-42, 44	May 24, 2004
8,421,195 ("the '195 patent")	1-3, 5-6	May 24, 2004
9,190,502 ("the '502 patent")	7, 8	May 24, 2004
11,316,014 ("the '014 Patent")	1-9, 13, 15, 17, 20, 21, 23-28	May 24, 2004

Greenthread notes that the claims identified in the table reflect the asserted claims in this case, and the absence of a claim from the list does not imply that the claim is not infringed. Greenthread explicitly reserves the right to supplement or alter its identification of asserted claims and priority dates, as a matter of right, as permitted by the Court, based on any further claim constructions, additional information obtained through formal discovery or other means, and/or based on other circumstances.

¹ To the extent Exhibits A-1 through A-6 describe infringement of additional claims, those claims are likewise asserted.

II. CIRRUS LOGIC ACCUSED PRODUCTS

Based upon information presently available to it, Greenthread asserts infringement by the accused products set forth below in this section. For each accused product identified below, Greenthread's contentions apply to the accused product and any other similar past, present, or future products, as well as systems incorporating the accused products or other products with the same or substantially similar features.

As described further in Exhibits A-1 through A-6, Cirrus Logic's products infringe one or more asserted claims of each of the asserted patents.

Cirrus Logic's Accused Products include products made (in whole or in part), used, sold, offered for sale, or imported into the United States by Cirrus Logic, that comprise or consist of the same or similar structures, features, or functionalities as the Cirrus Logic CLI1793B1 power management integrated circuit shown in Exhibits A-1 through A-6. As shown in Exhibits A-1 through A-6, Cirrus Logic Accused Products each infringe one or more claims of the Asserted Patents. Cirrus Logic Accused Products include products from at least the following product categories/types: amplifiers, decoder and encoder ICs, digital-to-analog converters, analog-to-digital converters, digital clocks, haptic drivers, voice processor ICs, and other ICs. The following listing of Cirrus Logic semiconductor products is derived from publicly available information at Cirrus Logic's website, e.g., as noted in Exhibit 8 to Greenthread's Complaint (Dkt. 1), and also from <https://cirrus.com/>. The exemplary charted product, Cirrus Logic CLI1793B1, was manufactured at least as early as 2021, as explained in Exhibits A-1 through A-6. At a minimum, Cirrus Logic had realized the benefits of the asserted patents in time for inclusion in products released then or later. On information and belief, the Cirrus Logic Accused Products are based on designs similar to, or later than, that used for the Cirrus Logic CLI1793B1.

Greenthread reserves the right to seek discovery regarding earlier designed products to determine when Cirrus Logic began incorporating Greenthread's technology into its products.

Greenthread reserves the right to supplement the list of Cirrus Logic Accused Products as discovery proceeds and as permitted by the Court, the Local Patent Rules, the Federal Rules of Procedure, and any other applicable rules or law.

Product or Part number	Category
CLII793B1	PMIC
CS35L45	Amplifiers
CS35L41	Amplifiers
CS42L42	Decoder and Encoder ICs
CS42L92	Decoder and Encoder ICs
CS4244	Decoder and Encoder ICs
CS5302P	Analog-to-Digital Converters
CS5304P	Analog-to-Digital Converters
CS5308P	Analog-to-Digital Converters
CS5346	Analog-to-Digital Converters
CS43131	Digital-to-Analog Converters
CS43198	Digital-to-Analog Converters
CS40L25	Haptic Drivers
CS40L25B	Haptic Drivers
CS40L26	Haptic Drivers
CS40L26B	Haptic Drivers
CS48LV41F	Voice Processor ICs

III. INFRINGEMENT CONTENTION CLAIM CHARTS

Based upon information presently available to it, Greenthread's supplemental preliminary infringement claim charts are provided as attached Exhibits A-1 through A-6. In each claim chart, the discussion for dependent claims should be read as incorporating by reference the discussion corresponding to the claims from which they depend. In addition, the discussion for each row in the chart should be read within the context of the discussion for the entire claim to which that row pertains. Where the charts incorporate excerpts of particular documents, the reference to those

excerpts is exemplary and not to the exclusion of any other excerpt or version of the document or any versions of related documents.

These infringement claim charts are based upon Greenthread's investigation to date. More complete information about the Cirrus Logic Accused Products is in the possession of Defendant and is expected to be obtained through discovery. Greenthread explicitly reserves the right to supplement or alter its supplemental preliminary infringement claim charts, as a matter of right, as permitted by the Court, based on the Court's claim constructions, based on additional information obtained through formal discovery or other means, and/or based on other circumstances.

IV. P.R. 3-1(d) – LITERAL INFRINGEMENT AND/OR DOCTRINE OF EQUIVALENTS

Unless otherwise noted in the claim charts, Greenthread alleges that Defendant infringes literally all asserted claims. To the extent any differences are alleged to exist between the asserted claims and Defendant's Accused Products, such differences are insubstantial and Defendant's Accused Products perform substantially the same function, in substantially the same way, to yield substantially the same result, and therefore Defendant infringes under the doctrine of equivalents.

Greenthread explicitly reserves the right to supplement or alter its disclosure concerning the doctrine of equivalents, as a matter of right, as permitted by the Court, based on the Court's claim constructions, based on additional information obtained through formal discovery or other means, and/or based on other circumstances. In the event that a claim limitation is deemed to be missing under a literal infringement analysis, Greenthread also reserves the right to demonstrate the presence of a substantial equivalent of such limitation and to pursue infringement under the doctrine of equivalents.

V. PATENT FILE HISTORIES AND CONCEPTION DOCUMENTS

Documents evidencing conception and reduction to practice for each claimed invention have been previously produced with Confidential – Outside Attorneys Eyes Only (“OAEO”) confidentiality designations at Bates numbers: GT-WDTX-CL-0001551–1642.

A copy of the Asserted Patents and the file histories have been previously produced herewith at Bates numbers:

Patent	Production Range
'195 Patent and file history	GT-WDTX-CL_0000001–0014 GT-WDTX-CL_0000092–0483
'502 Patent and file history	GT-WDTX-CL_0000015–0028 GT-WDTX-CL_0000484–0650
'842 Patent and file history	GT-WDTX-CL_0000029–0043 GT-WDTX-CL_0000651–0849
'481 Patent and file history	GT-WDTX-CL_0000044–0058 GT-WDTX-CL_0000850–0989
'222 Patent and file history	GT-WDTX-CL_0000059–0075 GT-WDTX-CL_0000990–1274
'014 Patent and file history	GT-WDTX-CL_0000076–0091 GT-WDTX-CL_0001275–1485
All patent assignments	GT-WDTX-CL_0001486–1550

Dated: October 13, 2023

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing document was served on the following counsel of record on October 13, 2023 via electronic mail using the following contact information.

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