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12-31-2001

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Form PTO-1595 U.S. Department of Commerce (Rev. 03/01) Patent and Trademark Office OMB No. 0651-0027 (exp. 5/31/2002) 101928297 To the Honorable Commissioner of Patents and anademarks. riease record the attached original documents or copy thereof. 1. Name of conveying party(ies): 2. Name and address of receiving party(ics): (1) Todd L. Brooks; Name: Broadcom Corporation (2) David S. Ho; (3) Kevin L. Miller; and Internal Address: (4) Eric Fogleman Street Address: 16215 Alton Parkway Additional name(s) of conveying party(ies) attached? □ yes ⋈ no City: Irvine State: California Zip Code: 92618-3616 3. Nature of Conveyance: Country: U.S.A. ■ Assignment
 ■ Assignment □ Merger Additional name(s) & address(es) attached? □ yes ⋈ no □ Security Agreement □ Change of Name □ Other (1) 12/7/01; (2) 12/19/01; (3) 12/11/01; and (4) 12/4/01 4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is A. Patent Application No(s). 09/949,815 B. Patent No(s). Additional numbers attached? □ yes 5. Name and address of party to whom correspondence 6. Total number of applications and patents involved: 1_ concerning document should be mailed: Name: Sterne, Kessler, Goldstein & Fox P.L.L.C. 7. Total fee (37 C.F.R. § 3.41)......\$_40.00 Internal Address: c/o ☑ Enclosed ☐ Authorized to be charged to Deposit Account 1100 New York Ave., N.W. Street Address: 8. Deposit Account Number: Suite 600 19-0036 City: Washington State: D.C. Zip Code: 20005-3934 (Attach duplicate copy of this page if paying by deposit account) DO NOT USE THIS SPACE 9. Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. John A. Harroun Name of Person Signing Registration No. 46,339 Total number of pages including cover sheet, attachments and document 12 12/28/2001 LMU**IL**LER 00000172 09949815 documents to be recorded with required cover sheet information to: Commissioner of Patents and Trademarks, Box Assignments 40.00 OP Washington, D.C. 20231

> **PATENT** REEL: 012393 FRAME: 0818

In consideration of the sum of One Dollar (\$1.00) or equivalent and other good and valuable consideration paid to each of the undersigned inventors: (1) Todd L. Brooks; (2) David S. Ho; (3) Kevin L. Miller; and (4) Eric Fogleman, the undersigned inventors hereby sell and assign to Broadcom Corporation (the Assignee) his/her entire right, title and interest, including the right to sue for past infringement and to collect for all past, present and future damages:

check applicable box(es)

✓ for the United States of America (as defined in 35 U.S.C. § 100),

✓ and throughout the world,

- (a) in the invention(s) known as <u>Method and Apparatus for Mismatched Shaping of an Oversampled Converter</u> for which application(s) for patent in the United States of America has (have) been executed by the undersigned on (1) \(\frac{1}{2}\)\(\frac{\phi}{\ell}\)\(\frac{1}{2}\
- (b) in any and all applications that claim the benefit of the patent application listed above in part (a), including continuing applications, reissues, extensions, renewals and reexaminations of the patent application or Letters Patent therefor listed above in part (a), to the full extent of the term or terms for which Letters Patents issue, and
- (c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals and reexaminations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable;

all such rights, title and interest to be held and enjoyed by the above-named Assignee, its successors, legal representatives and assigns to the same extent as all such rights, title and interest would have been held and enjoyed by the Assignor had this assignment and sale not been made.

The undersigned inventor(s) agree(s) to execute all papers necessary in connection with the application(s) and any continuing (continuation, divisional, or continuation-in-part), reissue, reexamination or corresponding application(s) thereof and also to execute separate assignments in connection with such application(s) as the Assignee may deem necessary or expedient.

The undersigned inventor(s) agree(s) to execute all papers necessary in connection with any interference or patent enforcement action (judicial or otherwise) related to the application(s) or any continuing (continuation, divisional, or continuation-in-part), reissue or reexamination application(s) thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference or patent enforcement action.

The undersigned inventor(s) hereby represent(s) that he/she has full right to convey the entire interest herein assigned, and that he/she has not executed, and will not execute, any agreement in conflict therewith.

The undersigned inventor(s) hereby grant(s) Robert Greene Sterne, Esquire, Registration No. 28,912; Edward J. Kessler, Esquire, Registration No. 25,688; Jorge A. Goldstein, Esquire, Registration No. 29,021; David K.S. Cornwell, Esquire, Registration No. 31,944; Robert W. Esmond, Esquire, Registration No. 32,893; Tracy-Gene G. Durkin, Esquire, Registration No. 32,831; Michael B.

Ray, Esquire, Registration No. 33,997; Robert E. Sokohl, Esquire, Registration No. 36,013; Eric K. Steffe, Esquire, Registration No. 36,688; Michael Q. Lee, Esquire, Registration No. 35,239; Steven R. Ludwig, Esquire, Registration No. 36,203; John M. Covert, Esquire, Registration No. 38,759; and Linda E. Alcorn, Esquire, Registration No. 39,588; all of STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C., 1100 New York Avenue, N.W., Suite 600, Washington, D.C. 20005-3934, power to insert in this assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

IN WITNESS WHEREOF, executed by the undersigned inventor(s) on the date opposite his/her name.

Date: 12/07/01	Signature of Inventor:	Todd L. Brooks
Date:	Signature of Inventor:	David S. Ho
Date:	Signature of Inventor:	Kevin L. Miller
Date:	Signature of Inventor:	Eric Fogleman

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- (b) in any and all applications that claim the benefit of the patent application listed above in part (a), including continuing applications, reissues, extensions, renewals and reexaminations of the patent application or Letters Patent therefor listed above in part (a), to the full extent of the term or terms for which Letters Patents issue, and
- (c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals and reexaminations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable;

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Date:		Signature of Inventor:	
Date;	19 Dec 2001	Signature of Inventor:	Todd L. Brook
Date:		Signature of Inventor:	David S. Flo David S.P. Ho
Date:		Signature of Inventor:	
			Eric Fogleman

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PATENT REEL: 012393 FRAME: 0822

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12/21/01

- (b) in any and all applications that claim the benefit of the patent application listed above in part (a), including continuing applications, reissues, extensions, renewals and reexaminations of the patent application or Letters Patent therefor listed above in part (a), to the full extent of the term or terms for which Letters Patents issue, and
- (c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals and reexaminations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable;

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Date:		Signature of Inventor:	David S. Ho
Date:	12-11-01	Signature of Inventor:	Kevin L. Miller
Date:		Signature of Inventor:	Eric Fogleman

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Date:	12/4/01	Signature of Inventor: _	Eric Fogleman

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PATENT RECORDED: 12/21/2001 REEL: 012393 FRAME: 0826

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