

**UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

FORAS TECHNOLOGIES LTD.,

Plaintiff,

v.

TOYOTA MOTOR NORTH AMERICA, INC.  
and DENSO CORPORATION,

Defendants.

Case No. 2:23-cv-150

**JURY TRIAL DEMANDED**

**COMPLAINT FOR PATENT INFRINGEMENT AGAINST  
TOYOTA MOTOR NORTH AMERICA, INC. AND DENSO CORPORATION**

This is an action for patent infringement arising under the Patent Laws of the United States of America, 35 U.S.C. § 1 *et seq.*, in which Plaintiff Foras Technologies Limited (“Plaintiff” or “Foras”) makes the following allegations against Defendants Toyota Motor North America, Inc. (“Toyota”) and Denso Corporation (“Denso”) (collectively, “Defendants”):

**INTRODUCTION**

1. This complaint arises from Defendants’ unlawful infringement of the following United States patents owned by Plaintiff, which relate to lockstep processing technology: United States Patent No. 7,502,958 (“the ’958 Patent”), 7,627,781 (“the ’781 Patent”), and 7,624,302 (“the ’302 Patent”) (collectively, the “Asserted Patents”).

**PARTIES**

2. Plaintiff Foras Technologies Limited is a private company limited by shares organized and existing under the law of Ireland, with its principal place of business at The Hyde Building, Suite 23, The Park, Carrickmines, Dublin 18, Ireland. Foras is the sole owner by

assignment of all right, title, and interest in the Asserted Patents, including the right to recover for past, present, and future infringement.

3. Defendant Toyota Motor North America, Inc. is a corporation organized and existing under the laws of California with its principal place of business in this District at 6565 Headquarters Dr., Plano, TX 75024. Toyota may be served through its registered agent CT Corporation System, 1999 Bryan Street, Suite 900, Dallas, Texas 75201. Toyota is currently registered to do business in the State of Texas. On information and belief, Toyota is responsible for importing, making, marketing, distributing, offering for sale, and/or selling Toyota-branded and Lexus-branded automobiles throughout the United States, including this District.

4. Defendant Denso Corporation is a corporation organized and existing under the laws of Japan with a principal place of business at 1-1, Showacho, Kariya, Aichi Prefecture, 448-0029, Japan. On information and belief, Denso does business itself, or through its subsidiaries, affiliates, and agents, in the State of Texas and the Eastern District of Texas. On information and belief, Denso is responsible for importing, making, marketing, distributing, offering for sale, and/or selling Denso components (such as electronic control units (“ECU”), cameras, and radar sensors) included in Toyota-branded and Lexus-branded automobiles throughout the United States, including this District.

5. Denso induces its subsidiaries, affiliates, retail partners, and customers in the making, using, selling, offering for sale, and/or importing throughout the United States, including within this District, infringing products (such as ECUs, cameras, and radar sensors) and placing such devices into the stream of commerce via established distribution channels knowing or understanding that such products would be sold and used in the United States, including in

the Eastern District of Texas. Denso purposefully directs the Accused Products into established distribution channels within this District and the U.S. nationally.

6. On information and belief, Denso maintains a corporate presence in the United States via at least its wholly-owned U.S.-based subsidiary Denso International America, Inc. (“Denso IA”). Denso IA is a Delaware corporation with a principal place of business at 24777 Denso Drive, P.O. Box 5047 Southfield Michigan 48086. On information and belief, Denso IA also operates in this judicial district. *See* Ex. 1 (<https://www.denso.com/us-ca/en/news/newsroom/2019/20190917-01/>). Denso IA is registered to do business in the state of Texas and may be served through CSC Lawyers Incorporating Company, 211 E. 7th Street, Suite 620, Austin, TX 78701. Denso IA is the parent company for Denso’s North American operations, including design and production engineering, technical support, sales, and finance at the direction and control of and for Denso. *See* Ex. 2 (<https://www.denso.com/us-ca/en/about-us/company-information/us/diam/>). Denso IA is an agent of Denso. At the direction and control of Denso, U.S.-based subsidiaries, including Denso IA, make, use, import, offer to sell, and/or sell Denso components included in Toyota-branded and Lexus-branded automobiles that infringe the Asserted Patents.

7. On information and belief, Denso and its U.S.-based subsidiaries (which act as part of a global network of sales and manufacturing subsidiaries) operate as agents of one another and vicariously as parts of the same business group to work in concert together. For example, Denso, alone and through at least the activities of their U.S.-based sales subsidiaries (including Denso IA), conduct business in the United States, including importing, distributing, and selling infringing products, in Texas and this District. On information and belief, Denso, alone and through its U.S.-based subsidiaries, place such infringing products into the stream of commerce via established

distribution channels knowing or understanding that such products would be sold and used in the United States, including in the Eastern District of Texas.

8. On information and belief, Denso does business itself, or through their subsidiaries, affiliates, and agents, in the State of Texas and the Eastern District of Texas. Denso has placed or contributed to placing infringing products, such as the ECUs, cameras, and radars included in Toyota-branded and Lexus-branded vehicles, into the stream of commerce via established distribution channels knowing or understanding that such products would be sold and used in the United States, including in the Eastern District of Texas. For example, Denso IA identifies Toyota as a “customer” on its website (*see* Ex. 2) and Toyota maintains its principal place of business in this District. On information and belief, Denso has derived substantial revenue from infringing acts in the Eastern District of Texas, including from the sale and use of infringing products.

#### **JURISDICTION AND VENUE**

9. This action arises under the patent laws of the United States, Title 35 of the United States Code. This Court has original subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

10. This Court has personal jurisdiction over Defendants in this action because Defendants have committed acts within this District giving rise to this action and have established minimum contacts with this forum such that the exercise of jurisdiction over Defendants would not offend traditional notions of fair play and substantial justice. Defendants, directly and through subsidiaries or intermediaries, have committed and continue to commit acts of infringement in this District by, among other things, making, using, importing, offering to sell, and selling Toyota-branded and Lexus-branded automobiles containing Denso components that infringe the Asserted Patents. Defendants have not contested personal jurisdiction in this Court in prior actions. *See*

*Fundamental Innovation Sys. Int'l LLC v. Toyota Motor Corp., et al.*, No. 2:21-cv-281-JRG, Dkt. No. 50 at ¶¶ 16-17, Dkt. No. 51 at ¶¶ 10-11, 14 (E.D. Tex. Nov. 15, 2021).

11. Venue is proper in this District under 28 U.S.C. §§ 1391 and 1400(b). Upon information and belief, Defendants have transacted business in this District and have committed acts of direct and indirect infringement in this District by, among other things, making, using, importing, offering to sell, and selling products that infringe the Asserted Patents. Venue is proper as to Toyota, which is registered to do business in Texas. Toyota has a regular and established place of business in this District, including at 6565 Headquarters Dr., Plano, TX 75024. Toyota also has nearly 50 job postings in Plano, Texas.<sup>1</sup> Toyota has not contested that this Court is a proper venue in prior actions. *See Fundamental Innovation Sys. Int'l LLC v. Toyota Motor Corp., et al.*, No. 2:21-cv-281-JRG, Dkt. No. 51 at ¶ 23 (E.D. Tex. Nov. 15, 2021).

12. Venue is also proper as to Denso because it is a foreign corporation organized under the laws of Japan, with a principal place of business in Japan, and suits against foreign entities are proper in any judicial district. *See* 28 U.S.C. § 1391(c)(3); *In re HTC Corp.*, 889 F.3d 1349 (Fed. Cir. 2018). Denso has not contested that this Court is a proper venue in prior actions. *See Fundamental Innovation Sys. Int'l LLC v. Toyota Motor Corp., et al.*, No. 2:21-cv-281-JRG, Dkt. No. 50 at ¶ 23 (E.D. Tex. Nov. 15, 2021).

13. Toyota and Denso may be joined in this action because (1) any right to relief is asserted against Defendants jointly, severally, or in the alternative with respect to or arising out of the same transaction, occurrence, or series of transactions or occurrences relating to the making, using, importing into the United States, offering for sale, or selling of the same accused products

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<sup>1</sup> <https://toyota.wd5.myworkdayjobs.com/TMNA?q=Plano>.

(i.e., Toyota-branded and Lexus-branded automobiles with Denso components that infringe the Asserted Patents); and (2) questions of fact common to Defendants will arise in this action.

**COUNT I**

**INFRINGEMENT OF U.S. PATENT NO. 7,502,958**

14. Plaintiff realleges and incorporates by reference the foregoing paragraphs as if fully set forth herein.

15. Plaintiff owns by assignment all rights, title, and interest, including the right to recover damages for past, present, and future infringement, in U.S. Patent No. 7,502,958, entitled “System and method for providing firmware recoverable lockstep protection.” The ’958 Patent was duly and legally issued by the United States Patent and Trademark Office on March 10, 2009. A true and correct copy of the ’958 Patent is attached as Exhibit 3.

16. On information and belief, Defendants have and continue to make, use, offer for sale, sell, and/or import certain products and services, including without limitation the Toyota Rav4, which includes a Denso Electronic Control Unit (containing a Renesas R7F701202 RH850/E1L chipset) and/or Denso Monocular Forward ADAS Camera (containing a Renesas R7F701202 RH850/E1L chipset), Toyota Camry, which includes a Denso Electronic Control Unit (containing a Renesas R7F701202 RH850/C1M chipset), Lexus NX350h, which includes a Denso front radar (containing an Infineon SAK TC356TD chipset), and Lexus LS500h, which includes a Lexus Advanced Drive Camera (containing a Renesas R7F701207 RH850/E1L chipset) (“Accused Products”), that directly infringe, literally and/or under the doctrine of equivalents, one or more claims of the ’958 Patent. Identification of the Accused Products will be provided in Plaintiff’s infringement contentions disclosed pursuant to the Court’s scheduling order.

17. The Accused Products satisfy all claim limitations of one or more claims of the '958 Patent. Claim charts comparing exemplary independent claim 19 of the '958 Patent to representative Accused Products are attached as Exhibits 4 and 5.

18. By making, using, offering for sale, selling and/or importing into the United States the Accused Products, Toyota and Denso have injured Plaintiff and are liable for infringement of the '958 Patent pursuant to 35 U.S.C. § 271.

19. On information and belief, Plaintiff (including its predecessors and any licensees) complied with 35 U.S.C. §287 at least prior to June 30, 2022 because Plaintiff, its predecessors, and any licensees did not make, offer for sale, or sell products that practice(d) the '958 Patent during the relevant time period or were not otherwise required to mark during the relevant time period.

20. As a result of Defendants' direct infringement of the '958 Patent, Plaintiff is entitled to monetary damages (past, present, and future) in an amount adequate to compensate for Defendants' infringement, but in no event less than a reasonable royalty for the use made of the invention by Toyota and Denso, together with interest and costs as fixed by the Court.

## **COUNT II**

### **INFRINGEMENT OF U.S. PATENT NO. 7,627,781**

21. Plaintiff realleges and incorporates by reference the foregoing paragraphs as if fully set forth herein.

22. Plaintiff owns by assignment all rights, title, and interest, including the right to recover damages for past, present, and future infringement, in U.S. Patent No. 7,627,781, titled "System and method for establishing a spare processor for recovering from loss of lockstep in a boot processor." The '781 Patent was duly and legally issued by the United States Patent and

Trademark Office on December 1, 2009. A true and correct copy of the '781 Patent is attached as Exhibit 6.

23. On information and belief, Defendants have and continue to make, use, offer for sale, sell, and/or import certain products and services, including without limitation the Lexus NX350h, which includes a Denso front radar (containing an Infineon SAK TC356TD chipset) (“Accused Products”), that directly infringe, literally and/or under the doctrine of equivalents, one or more claims of the '781 Patent. Identification of the Accused Products will be provided in Plaintiff’s infringement contentions disclosed pursuant to the Court’s scheduling order.

24. The Accused Products satisfy all claim limitations of one or more claims of the '781 Patent. A claim chart comparing exemplary independent claim 1 of the '781 Patent to representative Accused Products is attached as Exhibit 7.

25. By making, using, offering for sale, selling and/or importing into the United States the Accused Products, Toyota and Denso have injured Plaintiff and are liable for infringement of the '781 Patent pursuant to 35 U.S.C. § 271.

26. On information and belief, Plaintiff (including its predecessors and any licensees) complied with 35 U.S.C. §287 at least prior to June 30, 2022 because Plaintiff, its predecessors, and any licensees did not make, offer for sale, or sell products that practice(d) the '781 Patent during the relevant time period or were not otherwise required to mark during the relevant time period.

27. As a result of Defendants’ direct infringement of the '781 Patent, Plaintiff is entitled to monetary damages (past, present, and future) in an amount adequate to compensate for Defendants’ infringement, but in no event less than a reasonable royalty for the use made of the invention by Toyota and Denso, together with interest and costs as fixed by the Court.



**COUNT III**

**INFRINGEMENT OF U.S. PATENT NO. 7,624,302**

28. Plaintiff realleges and incorporates by reference the foregoing paragraphs as if fully set forth herein.

29. Plaintiff owns by assignment all rights, title, and interest, including the right to recover damages for past, present, and future infringement, in U.S. Patent No. 7,624,302, titled “System and method for switching the role of boot processor to a spare processor responsive to detection of loss of lockstep in a boot processor.” The ’302 Patent was duly and legally issued by the United States Patent and Trademark Office on November 24, 2009. A true and correct copy of the ’302 Patent is attached as Exhibit 8.

30. On information and belief, Defendants have and continue to make, use, offer for sale, sell, and/or import certain products and services, including without limitation the Lexus NX350h, which includes a Denso front radar (containing an Infineon SAK TC356TD chipset) (“Accused Products”), that directly infringe, literally and/or under the doctrine of equivalents, one or more claims of the ’302 Patent. Identification of the Accused Products will be provided in Plaintiff’s infringement contentions disclosed pursuant to the Court’s scheduling order.

31. The Accused Products satisfy all claim limitations of one or more claims of the ’302 Patent. A claim chart comparing exemplary independent claim 21 of the ’302 Patent to representative Accused Products is attached as Exhibit 9.

32. By making, using, offering for sale, selling and/or importing into the United States the Accused Products, Toyota and Denso have injured Plaintiff and are liable for infringement of the ’302 Patent pursuant to 35 U.S.C. § 271.

33. On information and belief, Plaintiff (including its predecessors and any licensees) complied with 35 U.S.C. §287 at least prior to June 30, 2022 because Plaintiff, its predecessors, and any licensees did not make, offer for sale, or sell products that practice(d) the '302 Patent during the relevant time period or were not otherwise required to mark during the relevant time period.

34. As a result of Defendants' direct infringement of the '302 Patent, Plaintiff is entitled to monetary damages (past, present, and future) in an amount adequate to compensate for Defendants' infringement, but in no event less than a reasonable royalty for the use made of the invention by Toyota and Denso, together with interest and costs as fixed by the Court.

**PRAYER FOR RELIEF**

WHEREFORE, Plaintiff respectfully requests that this Court enter:

- a. A judgment in favor of Plaintiff that Defendants have infringed, either literally and/or under the doctrine of equivalents, the '958, '781, and '302 Patents;
- b. A judgment and order requiring Defendants to pay Plaintiff its damages (past, present, and future), costs, expenses, and pre-judgment and post-judgment interest for their infringement of the '958, '781, and '302 Patents;
- c. A judgment and order requiring Defendants to pay Plaintiff compulsory ongoing licensing fees, as determined by the Court;
- d. A judgment and order requiring Defendants to provide an accounting and to pay supplemental damages to Plaintiff, including without limitation, pre-judgment and post-judgment interest and compensation for infringing products released after the filing of this case that are not colorably different from the Accused Products;
- e. A judgment and order finding that this is an exceptional case within the meaning

of 35 U.S.C. § 285 and awarding to Plaintiff its reasonable attorneys' fees against Defendants; and

f. Any and all other relief as the Court may deem appropriate and just under the circumstances.

**DEMAND FOR JURY TRIAL**

Plaintiff, under Rule 38 of the Federal Rules of Civil Procedure, requests a trial by jury of any issues so triable by right.

Dated: April 5, 2023

Respectfully submitted,

/s/ Brett E. Cooper

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