

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

NORTH STAR INNOVATIONS, INC.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Case No.: _____
	)	
XILINX, INC.,	)	<b>JURY TRIAL DEMANDED</b>
	)	
Defendant.	)	

**COMPLAINT FOR PATENT INFRINGEMENT**

North Star Innovations, Inc. (“North Star”), by and through its attorneys, files this Complaint for Patent Infringement against Defendant, Xilinx, Inc. (“Xilinx”), and avers as follows:

**PARTIES**

1. North Star is a corporation organized and existing under the laws of Delaware, with its principal place of business located at 600 Anton Blvd., Suite 1350, Costa Mesa, CA 92626, and further having a registered office at 2711 Centerville Road, Suite 400, Wilmington, Delaware 19808. North Star is the owner, through assignment, of the entire right, title and interest in United States Patent No. 7,617,437, entitled “ERROR CORRECTION AND METHOD THEREOF” (“the ‘437 Patent”).

2. Xilinx is a corporation incorporated under the laws of Delaware, having its principal place of business at 2100 Logic Drive, San Jose, CA 95124. Xilinx’s registered agent for service of process in the State of Delaware is The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801.

3. Upon information and belief, at all times relevant to this action, Xilinx has been engaged in the business of manufacturing, using, offering for sale and selling in the United States, and importing into the United States, system-on-a-chip devices that employ error

correction techniques, including storage of error correction code (“ECC”) data for memory locations in the devices that allows the memory devices to detect and correct memory storage errors.

### **JURISDICTION AND VENUE**

4. This action arises under the patent laws of the United States, 35 U.S.C. §§ 1 et seq. This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and § 1338(a).

5. This Court has personal jurisdiction over Defendant in this district, in that Defendant, directly or through its agents, is a resident of, and/or has regularly conducted business activities in this district; has committed infringing activities in this district by manufacturing, using, marketing, offering for sale, selling and importing products and systems that infringe the ‘437 Patent; and has placed products that infringe the ‘437 Patent in the stream of commerce with the knowledge and intent that they would be used, offered for sale and sold by others in this district.

6. Venue is proper pursuant to 28 U.S.C. §§ 1391(b) and 1400(b).

### **GENERAL ALLEGATIONS**

7. The ‘437 Patent was duly and legally issued by the United States Patent and Trademark Office (“USPTO”) on November 10, 2009, naming William C. Moyer as inventor, and Freescale Semiconductor, Inc., as assignee. A true and correct copy of the ‘437 Patent is attached as Exhibit “A” hereto.

8. The ‘437 Patent relates to a processing device that includes a memory and that employs a method for error correction, including specifically a processing device that includes a memory and a memory control module to disable error processing for particular memory

locations depending on the state of a status indicator associated with the particular memory locations.

9. The '437 Patent as issued by the USPTO is valid and enforceable.

10. The '437 Patent was ultimately assigned to North Star, and North Star is the exclusive and current owner of all rights, title and interest in the '437 Patent, and is entitled to enforce the '437 Patent against infringers, including by commencing the present action.

11. Xilinx has engaged and continues to engage in acts of infringement under 35 U.S.C. § 271, *inter alia*, by manufacturing, using, offering for sale and selling in the United States, and importing into the United States, system-on-a-chip devices that embody each element of at least one (1) claim of the '437 Patent, including, without limitation, Independent Claim 11, either literally or under the doctrine of equivalents.

12. By way of example only, one of the infringing products that Xilinx has specifically manufactured, used, offered for sale and sold in the United States, and imported into the United States for sale, and continues to manufacture, use, offer for sale and sell in the United States, and import into the United States for sale, is the Zynq® UltraScale+™ MPSoC product.

13. Xilinx does not have a license or other authorization to practice the claims set forth in the Patents-in-suit.

#### **CLAIM FOR PATENT INFRINGEMENT**

14. North Star incorporates by reference and in their entirety the averments set forth in paragraphs 1 through 13, inclusive, of this Complaint.

15. Xilinx has manufactured, used, offered for sale, sold and imported into the United States for sale, and continues to manufacture, use, offer for sale, sell and import into the United States for sale, memory devices, including the Zynq® UltraScale+™ MPSoC product, that

infringe at least Claim 11 of the '437 Patent.

16. More specifically, the Zynq® UltraScale+™ MPSoC includes an on-chip memory (“OCM”) module that is primarily composed of a RAM memory block that includes multiple locations, or banks, of RAM, each of which stores data. The OCM module also contains arbitration, framing, ECC, and interrupt logic in addition to the RAM array.

17. The Zynq® UltraScale+™ MPSoC provides ECC decoder operations to correct single-bit errors, and to detect double-bit errors, in the memory data. In the event error correction is not required for portions of the data, the ECC decoder operations can be bypassed by applying a certain core input signal that disables the error correction functionality for those associated portions of the memory. When the ECC decoder operations are bypassed, the data is forwarded directly at the output without error correction being performed.

18. The Zynq® UltraScale+™ MPSoC also includes a memory protection unit (“MPU”) that is coupled to receive ECC core signals at its input and to output ECC core signals to the OCM. In the event error correction is not required for portions of the memory data, the MPU is coupled to receive and output to the OCM a certain ECC core signal that disables the error correction functionality for those associated portions of the memory.

19. Accordingly, the Zynq® UltraScale+™ MPSoC embodies each element of Independent Claim 11 of the '437 Patent, and thereby infringes Independent Claim 11.

### **DAMAGES**

20. North Star incorporates by reference and in their entirety the averments set forth in paragraphs 1 through 19, inclusive, of this Complaint.

21. Xilinx has caused and will continue to cause North Star substantial damage by virtue of its infringing activities.

22. North Star is entitled to recover from Xilinx the damages it has sustained as a result of Xilinx's infringing activities.

**DEMAND FOR JURY TRIAL**

23. North Star hereby demands a trial by jury of all issues triable of right before a jury.

**PRAYER FOR RELIEF**

WHEREFORE, North Star respectfully requests the following relief:

- a) That this Court enter judgment in favor of North Star and against Xilinx that Xilinx has infringed the '437 Patent;
- b) That this Court award North Star all damages adequate to compensate North Star for the harm it has suffered as a result of Xilinx's infringement of the '437 Patent, together with pre- and post-judgment interest and costs as fixed by the Court, all pursuant to 35 U.S.C. § 284;
- c) In the event that evidence is adduced through discovery or at trial that Xilinx's infringement was willful and deliberate, that this Court award North Star enhanced damages pursuant to 35 U.S.C. § 284;
- d) In the event that circumstances warrant a declaration that this case be declared to be exceptional, that this Court award North Star its reasonable attorneys' fees pursuant to 35 U.S.C. § 285; and
- e) That this Court award to North Star such other and further relief as this Court deems to be just and proper.

Dated: December 13, 2016

PHILLIPS GOLDMAN MCLAUGHLIN &  
HALL, P.A.

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