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United States Senate

COMMITTEE ON ARMED SERVICES

WASHINGTON, DC 20510-6050

RICHARD D. DEBOELS, STAFF DIRECTOR
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October 20, 2011

Mr. Moshe N. Gavrielov
 President and CEO
 Xilinx, Inc.
 2100 Logic Drive
 San Jose, CA 95134

Dear Mr. Gavrielov:

Counterfeit electronic parts in the Department of Defense's (DOD) supply chain pose a risk to our national security, the reliability of our weapons systems, and the safety of our military men and women. Government and industry share a common interest in ensuring that the DOD supply chain is free from these parts. As part of an inquiry by the Senate Armed Services Committee into suspect counterfeit electronic parts in the DOD supply chain, the Committee is seeking information from defense contractors and subcontractors, independent testing companies, and electronic component manufacturers about suspect counterfeit parts.

The Committee has identified suspect counterfeit electronic parts that entered the U.S. military supply chain. Among those are parts that were sold by an independent distributor in China as new, authentic Xilinx XC3042A-7PG84M programmable gate arrays. The purchaser of the suspect parts reported that they exhibited the following anomalies:

- "Different ceramic body size"
- "Different size of metal tabs"
- "Repainted metal tab (traces of masking, dull gold color, traces of sprayed paint on sides of ceramic body)"
- "Same date code, same lot parts come with different ceramic body shape"
- "Signs of resurfacing"
- "Bent leads"
- "Peeling coating (suspecting that pins were repaired)"
- "Different length of pins (not meeting manufacturer's datasheet min specification)"
- "Nicks and dents on surface of pins, evidence of reshaping/straightening pins"
- "Minor chips on sides of ceramic body"
- "Noticeable major scuffs on a couple of parts on the marking area"
- "Some parts have different color and font written of 'Philippines' on the backside of the part"
- "Noticeable major scuffs on a couple of parts on the marking area"
- "One part is completely missing a lead"
- "Philippines text on back of several parts were off centered from the rest of the date code"

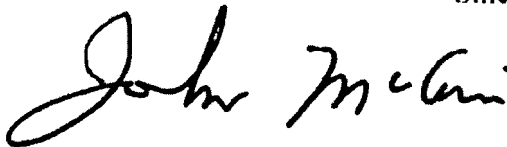
To assist the Committee with its inquiry, please answer the following questions:

- 1) Does Xilinx sell refurbished XC3042A-7PG84M programmable gate arrays or have an agreement with any third party that would permit them to refurbish and sell XC3042A-7PG84M programmable gate arrays?
- 2) Did Xilinx use remarking or black-topping in its manufacturing of XC3042A-7PG84M programmable gate arrays?
- 3) Would Xilinx warranty XC3042A-7PG84M programmable gate arrays that exhibited the anomalies described above?
- 4) Please describe the short-term and long-term reliability and performance risks, if any exist, of using XC3042A-7PG84M programmable gate arrays with the anomalies described above.

Please provide responsive information by October 27, 2011. Please send your response as an attachment to an email to Ozge_Guzelsu@armed-services.senate.gov and Bryan_Parker@armed-services.senate.gov. If you have any questions or wish to discuss this request, please contact Senate Armed Services Committee majority staff Ozge Guzelsu (202-224-8922) and Bryan Parker (202-224-8265) of the minority staff.

Thank you for your cooperation.

Sincerely,



John McCain
Ranking Member



Carl Levin
Chairman



October 26, 2011

Honorable Carl Levin and Honorable John McCain
United States Senate
Committee on Armed Services
Washington, DC 20510-6050

Dear Senators Levin and McCain:

This letter is in response to your letter dated October 20, 2011 asking us to assist you with your inquiry into the risk that counterfeit electronic parts pose to the military supply chain. Provided below are our answers to your questions.

Question: Does Xilinx sell refurbished XC3042A-7PG84M programmable gate arrays or have an agreement with any third party that would permit them to refurbish and sell XC3042A-7PG84M programmable gate arrays?

Answer: Xilinx does not sell refurbished materials nor do we authorize any third party to refurbish or sell devices that have been refurbished.

Question: Did Xilinx use remarking or black-topping in its manufacturing of XC3042A-7PG84M programmable gate arrays?

Answer: Xilinx did not perform black-topping in its manufacturing of XC3042A-7PG84M but Xilinx did occasionally remark this part type with a manufacturing qualified demark process followed by a remark using qualified black ink. A given part can be remarked as another part as long as it is the same device type and it meets required specifications for speed, power, and temperature grades. The remark process, which enables more effective inventory management, can only be performed by Xilinx or an authorized supply chain partner.

Question: Would Xilinx warranty XC3042A-7PG84M programmable gate arrays that exhibited the anomalies described above?

Answer: Xilinx would not extend warranties to any device that was not purchased directly from Xilinx or an authorized distributor as stated in our standard Terms of Sale. This information is detailed on our public website as follows:

Authorized distributor list: <http://www.xilinx.com/company/contact/auth-dist-table.htm>

Warranty: <http://www.xilinx.com/warranty.htm>

Terms of Sale: <http://www.xilinx.com/legal.htm#tos>

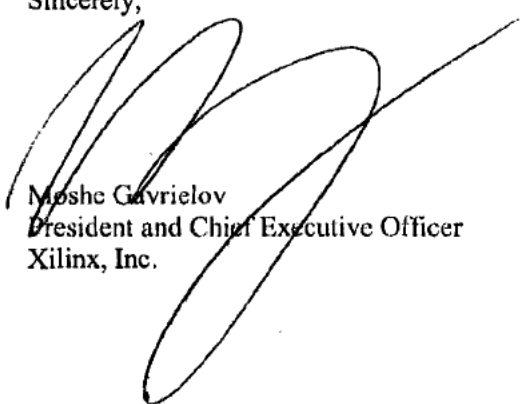


Question: Please describe the short-term and long-term reliability and performance risks, if any exist, of using XC3042A-7PG84M programmable gate arrays with the anomalies described above.

Answer: Based on the description provided on the subject device, we would consider the devices to be of dubious origin. The devices may have been reclaimed and potentially exposed to excessive heat in order to dismount them from a circuit board. These cases pose a significant reliability risk owing to the potential exposure to excessive solder heat and electro-static discharge (ESD) damage. With respect to ESD, there are many potential damage mechanisms that could have affected the devices. Some of these could be catastrophic; others may create a damage mechanism that is latent for an undetermined amount of time. With the descriptions provided in this letter, we believe that excessive solder heat was likely used in conjunction with mechanical removal techniques. The combination of these events calls into question the integrity of the devices and would have exposed them to potential ESD damage as well. Though the devices may initially function, it would be next to impossible to predict what amount of life is remaining, or what damage may have been caused to the circuitry.

We hope that this information will help you in your inquiry. Should you need any further assistance, please contact me directly; alternatively, your staff can contact Craig Taylor (email: [REDACTED]@xilinx.com and telephone: [REDACTED]) from our corporate quality organization.

Sincerely,



Moshe Gavrielov
President and Chief Executive Officer
Xilinx, Inc.