## Accepted Manuscript

An FPGA-based low-cost VLIW floating-point processor for CNC applications

Jingchuan Dong , Taiyong Wang , Bo Li , Zhe Liu , Zhiqiang Yu

 PII:
 S0141-9331(17)30085-6

 DOI:
 10.1016/j.micpro.2017.02.001

 Reference:
 MICPRO 2508

To appear in:

Microprocessors and Microsystems

Received date:5 May 2016Revised date:21 September 2016Accepted date:6 February 2017

Please cite this article as: Jingchuan Dong, Taiyong Wang, Bo Li, Zhe Liu, Zhiqiang Yu, An FPGA-based low-cost VLIW floating-point processor for CNC applications, *Microprocessors and Microsystems* (2017), doi: 10.1016/j.micpro.2017.02.001

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



## ACCEPTED MANUSCRIPT

## Highlights

- Propose a compact floating-point processor design for low-cost FPGAs.
- The floating-point part features a compact 32-bit dual-issue VLIW design.
- Develop a new asynchronous execution mechanism.
- Provide FPGA implementation for the proposed design in a low-cost CNC controller.
- Develop motion planning and interpolation firmware for the processor using parallel computing.

Download English Version:

## https://daneshyari.com/en/article/4956750

Download Persian Version:

https://daneshyari.com/article/4956750

Daneshyari.com