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Safety and quality: "SUCCESS" is the goal (1)

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THIRD PARTY INDEPENDENT VERIFICATION & VALIDATION TECHNOLOGY OF FIELD PROGRAMMABLE GATE ARRAY IN AEROSPACE MISSIONS

Abstract

FPGA(Field Programmable Gate Array) is used in spacecraft systems more widely because of it's flexibility and fault tolerant. Meanwhile, it brings the new challenge for Verification Validation Technology technology of system using FPGA. In China aerospace industry, quality assurance of design in FPGA is treated like software. Life cycle of design in FPGA is managed in the method of software engineer. However, As the quantity and complexity of design in FPGA is increasing, more quality issue is brought on by FPGA design fault. So China aerospace industry rules that FPGA design must be tested and verified by third-party independent institute before used in whole system. The article presents third party independent verification validation technology of FPGA, and we face the challenge of new technology and the resolvable method.