

AFDX networks simulation-based evaluation system

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ABSTRACT

Aircraft on-board systems, including navigation equipment, sensors and actuator, among others, present an increasingly demanding requirements on the avionics data communication networks. Moreover, the safety-critical needs of avionics make network requirement even more stringent. Also, prototyping and testing different network architectures and configurations pose a challenge due to the cost of the equipment. Furthermore, classical performance assessment relies solely on worst-case assessment, which do not provide detailed feedback. For these reasons, an evaluation system is proposed focusing on the simulation of Avionics Full-Duplex Switched Ethernet (AFDX) in order to help decrease the costs of the development of such networks.