



DESIGN AND REALIZATION OF A UHF RFID INTERROGATOR

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Abstract- RFID is a generic item which uses radio waves to automatically identify objects and people. This paper presents a flexible RFID interrogator system architecture which could support various kinds of RFID standards and realizes a UHF RFID interrogator based on the EPC global C1G2 standard in details. The proposed interrogator system consists of RF analog front end, digital baseband and MAC layer. The system circuit contains a FPGA chip and peripheral circuits. NiosII core as a controller is inserted in FPGA. The proposed FPGA based baseband platform could implement various kinds of RFID standards, and efficiently reduce the design time and development cost.

Index terms: RFID, interrogator, reader, UHF, EPC C1G2 , baseband, transceiver