Intelligent thermometer with speech function implemented in FPGA

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Abstaract - This paper presents the design of an embedded system for the assistance of persons with handicaps, implemented into the Spartan 3E Starter Board. The unit is defined in VHDL, and it targets a Xilinx Spartan-3E FPGA. Some of the modules are generic and can be easily reused without changes in other designs. The circuit was designed on a Windows XP PC using Xilinx ISE12.3 CAD tool.

The main goal of this project is to implement a embedded system, which is able to control wireless ZigBee networks, read temperature from remote sensors and say this value using digital speech synthesizer implemented in FPGA.

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