

Abstract

The subject of the research is "The device measuring the distance for the 3D camera".

The aim is to research modern methods of measuring distances and implementation of the project for the FPGA hardware platform of 3D TOF camera.

The paper discusses the basic methods of measuring distances and describes an improved method for measuring the distance, based on the TOF technology. For the hardware platform of 3D TOF camera were developed two modules. The first one realize packetization of data from the ADC and the second one their forwarding to an external microcontroller. The design of the modules was work out in Altera Quartus II Version 8.1 on the VHDL language.

The volume is 61 pages. It includes 37 illustrations and 11 bibliographic names.

Keywords: triangulation method, interferometry, time of flight method, hardware platform, FPGA, packetization, 3D camera.