

Annotation

On a bachelor's thesis "Smart Thermal Imaging Camera" written by Skladchikov Ivan, a fourth-year student of group PC-71.

Thesis consists of an explanatory note of 82 pages, includes 30 illustrations, 2 tables, 22 literary sources and 39 formulas.

In this thesis, a smart thermal imaging camera was developed on the basis of the IoT principle for use in the production.

The first part of the thesis presents theoretical information concerning thermal control. Theoretical information on the usage of thermal imaging cameras, their advantages and disadvantages in certain areas is also provided.

The second part of the thesis presents a process of identifying elements for the smart thermal imaging camera and a reason of such choice; the basic parameters of a sensor and all system of the smart thermal imaging camera are calculated.

The third part describes a software algorithm of this system. It considers main functions of the program and the appendices contain a program code of the system.

The fourth part presents a part of the pilot. The operation of the device is described on experimental versions. All advantages and disadvantages of the smart thermal imaging camera are analyzed. Prospects for improvement and development of this device are also considered.

Key words: thermal control, server, smart thermal imager, sensors, microcontrollers.