**Overview of Real-time Operating Systems for embedded devices**

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**Abstract:** Real-time OS are very useful for embedded devices, home automation, aviation. This paper describes well known real-time os are such as zephyr os, FreeRTOS and GNU/Linux. Their features will be compared. The paper performs the Overview task of PhD thesis.

**Keywords: risc-v assembly, avr assembly, operating system**

1. **Introduction**

Real-time operating systems can be used for embeddded devices management,smart home automation, for civil or military aviation – for optical devices and weapon controls management. Real-time operating system manages devices with that has:

→ limited resources

→ limited time to complete task

→ sensors for communication

Target of the paper is to explore and describe features of well-known RTOS such as: FreeRTOS, Zephyr and Armbian GNU/Linux.

**2. Material and Methods**

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| **Operating System** | **Type** | **Written in** |
| Zephyr | real-time | C |
| FreeRTOS | real-time | C |

References:

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1. PhD Theme: Methods and Tools to develop a assembly-based operating system for embedded devices [↑](#footnote-ref-2)