

МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ РОССИЙСКОЙ
ФЕДЕРАЦИИ

ФЕДЕРАЛЬНОЕ ГОСУДАРСТВЕННОЕ АВТОНОМНОЕ
ОБРАЗОВАТЕЛЬНОЕ УЧРЕЖДЕНИЕ ВЫСШЕГО ОБРАЗОВАНИЯ
«Санкт-Петербургский национальный исследовательский университет
информационных технологий, механики и оптики»

ФАКУЛЬТЕТ ПРОГРАММНОЙ ИНЖЕНЕРИИ И КОМПЬЮТЕРНЫХ
ТЕХНОЛОГИЙ

Лабораторная работа №4

по дисциплине

«Системы ввода-вывода»

Вариант 2

Выполнили:

Векшин А. И. Р3316/CBB 1.2

Дашкевич Е.В. Р3308/CBB 1.2

Степутенко И.С. Р3312/CBB 1.2

Преподаватель:

Сергей Михайлович Табунщик

Введение

Тема: «Изучение работы контроллеров ввода вывода»

Цель: познакомиться с принципами работы с контроллерами ввода вывода на примере контроллера UART.

Код программы

Код микроконтроллера

<https://github.com/ArsenyVekshin/ITMO/tree/master/IOSystems/lab3/mcu.ino>

Код ответной программы

<https://github.com/ArsenyVekshin/ITMO/tree/master/IOSystems/lab3/pc.py>

Скриншоты работы

```
Connected to /dev/tty.usbserial-110 at 38400 baud

--- Serial Communication Menu ---
1. Write a message
2. Read a single packet
3. Read continuously
4. Exit
Select option (1-4): 1
Enter message to send: asdasds
Sent 10 bytes
```

```
--- Serial Communication Menu ---
1. Write a message
2. Read a single packet
3. Read continuously
4. Exit
Select option (1-4): 2
Reading a single packet...
Received data (string): Temperature =
```

```
Received data (string): Temperature =  
Received data (string): 25.65  
Received data (string): *C
```

```
Received data (string): Pressure =  
Received data (string): 101750.27  
Received data (string): Pa
```

```
Received data (string): Temperature =  
Received data (string): 25.64  
Received data (string): *C
```

```
Received data (string): Pressure =  
Received data (string): 101750.05  
Received data (string): Pa
```

```
Received data (string): Temperature =  
Received data (string): 25.64  
Received data (string): *C
```

```
Received data (string): Pressure =  
Received data (string): 101750.17  
Received data (string): Pa
```

```
Received data (string): Temperature =  
Received data (string): 25.64  
Received data (string): *C
```

```
Received data (string): Pressure =  
Received data (string): 101749.80  
Received data (string): Pa
```

```
Received data (string): Temperature =  
Received data (string): 25.63  
Received data (string): *C
```

```
Received data (string): Pressure =  
Received data (string): 101749.77  
Received data (string): Pa
```

```
Received data (string): Temperature =  
Received data (string): 25.63  
Received data (string): *C
```

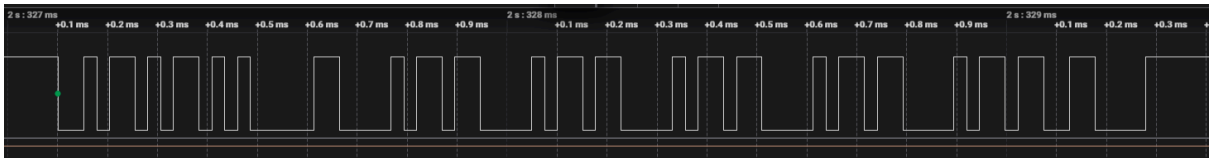
```
Received data (string): Pressure =  
Received data (string): 101749.57  
Received data (string): Pa
```

```
Received data (string): Temperature =  
Received data (string): 25.63  
Received data (string): *C
```

```
Received data (string): Pressure =
```

Временные диаграммы

PC -> MC



MC -> PC

