

Control over CAN and Flexray  
**Embedded Control Systems**

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# Contents

<b>Introduction</b>	<b>2</b>
<b>1 Part 1</b>	<b>3</b>
1.1 Introduction . . . . .	3
1.2 Response Time analysis . . . . .	3
1.2.1 Response time analysis per processing unit . . . . .	3
1.2.2 Response time analysis for the CAN bus messages . . . . .	3
1.3 System model . . . . .	3
1.4 Design decision . . . . .	3
1.5 Results . . . . .	3
<b>2 Part 2</b>	<b>4</b>
2.1 Introduction . . . . .	4
2.2 Response Time analysis . . . . .	4
2.2.1 Response time analysis per processing unit . . . . .	4
2.2.2 Response time analysis for the CAN bus messages . . . . .	4
2.3 Optimisation for sensor-to-actuator delay . . . . .	4
2.4 System model . . . . .	4
2.5 Design decision . . . . .	4
2.6 Results . . . . .	4
2.7 Conclusions . . . . .	4
<b>3 Part 3</b>	<b>5</b>
3.1 Introduction . . . . .	5
3.2 Answer all the questions . . . . .	5
3.2.1 Theoretical analysis versus actual implementation . . . . .	5
3.3 Design decision . . . . .	5
3.4 Results . . . . .	5
3.5 Conclusions . . . . .	5
3.6 Results . . . . .	5
3.7 Conclusion . . . . .	5

# Introduction

# Chapter 1

## Part 1

### 1.1 Introduction

### 1.2 Response Time analysis

#### 1.2.1 Response time analysis per processing unit

Table 1.1: By running the matlab script `ResponsetimeAnylsis_FPP.m` with the parameters given for PU1 and PU2 these response times are obtained

PU1	$T_1$	$T_2$	$T_3$	$T_4 (T_s)$
ms	0.1	2.1	4.1	7.2

  

PU2	$T_5$	$T_6$	$T_7$	$T_8$
ms	9	3	8	5

#### 1.2.2 Response time analysis for the CAN bus messages

### 1.3 System model

### 1.4 Design decision

### 1.5 Results

Firstly: Response time analysis

Secondly: Control system input and output

# Chapter 2

## Part 2

### 2.1 Introduction

### 2.2 Response Time analysis

#### 2.2.1 Response time analysis per processing unit

#### 2.2.2 Response time analysis for the CAN bus messages

### 2.3 Optimisation for sensor-to-actuator delay

### 2.4 System model

### 2.5 Design decision

### 2.6 Results

Firstly: Response time analysis

Secondly: Plots from chronVIEW (before and after optimization)

Last: Control system input and output

### 2.7 Conclusions

# Chapter 3

## Part 3

### 3.1 Introduction

### 3.2 Answer all the questions

#### 3.2.1 Theoretical analysis versus actual implementation

### 3.3 Design decision

### 3.4 Results

Firstly: Solution to the design problem. (Include the parameters you have chosen)  
Secondly: from chronVIEW for your design

### 3.5 Conclusions

### 3.6 Results

### 3.7 Conclusion