**Efx Software Design**

***SteerTurnIllum***



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| Version: |  | 1.0 |

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# Glossary

This section contains a glossary of all the important terms and acronyms used inside the document.

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| **Term / Acronym** | **Description** |
| AUTOSAR | AUTomotive Open System ARchitecture |
| VFB | Virtual Functional Bus |
| SWC | Software Component |
| RTE | Runtime Environment |
| BSW | Basic Software |
| OS | Operating System |
| S/R | Sender / Receiver |
| C/S | Client / Server |
| ECU | Electronic Control Unit |
| uC | Microcontroller |
| ADC | Analog Digital Converter |
| DIO | Digital Input / Output |
| PWM | Pulse Width Modulation |

Table 1 - Glossary.

# Introduction

## Purpose of the Document

The purpose of the document is to define the software design of the ***Efx*** library for the ***SteerTurnIllum*** embedded academy project.

## Overview

While the AUTOSAR ***Efx*** library contains more methods, in this project it implements a single interface for performing moving averages on uint16 inputs and outputs.

# Design Requirements

1. The Efx library shall be implemented according to AUTOSAR 4.3.1 specifications.
2. The Efx library shall implement the following interfaces and all their required data types for performing moving averages on uint16 inputs and outputs (see “8.5.8 Moving Average” on page 68):

* *Efx\_MovingAverage\_u16\_u16();*

1. The Efx library shall consist of the following files:

* *Efx.c*: Implements all the required interfaces in a generic way.
* *Efx*.*h*: Exports all the required interfaces and data types.

# Information about this Document

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## Version Index

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Table 2 - Version Index.