

# ADAPTIVE FRONT LIGHTING SYSTEM

## Overview

AFLS ECU to control the swiveling, leveling, and beam pattern of vehicle headlamps

### Automotive Supplier

Consists of lamps, actuators & sensors for static bending and dynamic bending

- Steering wheel sensor angle and vehicle level sensor signals are used as inputs

**Functionalities:** Swiveling & Leveling (Static & Dynamic), Shielding, Fail-safe & Diagnostics

## Scope - Full System Implementation

### Requirements Capture

### Electronic Hardware Design

- Schematic preparation/ Layout using OrCAD tools
- Hardware Simulation using PSPICE

### Software Design

- Model based Algorithm Design and Implementation using Matlab/ Simulink/ Stateflow
- Structured design/ Implementation of Drivers.

### System Testing

- In-house Functionality Testing
- Integration in Vehicle and on-road testing
- Environmental Tests

