# design X tronics

**smart.simple.swift.**

# Project Reference

## CONTACT

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## CUSTOMER

GLOBE Fuel Cell Systems GmbH

Schelmenwasenstraße 1

D-70567 Stuttgart

## PROJECT NAME & PERIOD

Robust Safety Software Solutions for Fuel Cell Control

Jul-2024 – Feb-2025

## PROJECT CONTENTS

- Requirements Engineering for Safety Function Modules
  - Analysis and formalization of requirements using a defined pattern to ensure 100% verifiability
  - Validation of formalized requirements for consistency and completeness using MATLAB® *Requirements Verifier*
  - Automated Stateflow® unit generation based on formalized requirements with MATLAB® *Requirements Verifier*

- Design and Implementation
  - Development of application software architecture
  - Integration of generated units in Simulink® overall model

- Unit testing of Safety Function Modules
  - Specification of unit tests with MATLAB® *Model Tester*
  - Execution of reproducible regression tests (Model-in-the-Loop)
  - Automated generation of detailed and summary reports using MATLAB® *Model Tester*

- Toolchain optimization for configuring calibratable parameters for production code generation within the HYDAC software environment MATCH® for safety electronic control unit TTC 2380

- Process Documentation aligned with DIN EN ISO 13849

## NET PROMOTER SCORE

How likely is it that you would recommend the services of designXtronics to a friend or colleague?

Not at all likely         Extremely likely

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

*(9 marked)*

Notes:

*Excellent, as allways*

Customer name:    Max Eschenbach

Date, signature:    10.3.25