GUIDELINES TO START ISO 26262 COMPLIANT PROJECTS

ISO 26262 | ASIL Compliance | Functional Safety

ISO 26262 Consulting Services

ASIL Compliant Software and Hardware Development Services

Safety Analysis Activities - FMEA, FMEDA, DFA, FTA

A Handbook on ISO 26262 Compliant Development
Several components of a vehicle are safety critical, viz. Electronic Power Steering, Anti-lock Braking System, Air-bags, Electronic stability control, and more.

By safety critical, it is meant that the failure of these components can risk the driver or the passengers’ life.

ISO 26262 is a standard that defines the framework to implement safety practices during the design, development, and testing of all such critical electrical and electronic components of a vehicle.

The standard provides an extensive set of guidelines for automotive product development, right from the concept phase to the product development stage.
ISO 26262 COMPLIANT SERVICE OFFERINGS

Embittel has been one of the frontrunners in the adoption of ISO 26262 within its automotive embedded engineering services.

As a result, we have been able to build a team of ISO 26262 experts providing unmatched service offerings to support your ASIL compliant development endeavors.

1. ISO 26262 Consultancy Services

Consulting services across the safety lifecycle: From the concept phase to the production phase, we offer consulting services to help you comply with ISO 26262 guidelines.

- Creation of Safety Plan and Safety Activity list to ensure the necessary ISO 26262 guidelines are followed
- Process gap analysis at both functional and technical levels to ensure compliance in case of existing work-products
- Confirmation reviews, assessments and audits for work-products
- Templates for several safety activities
- ISO 26262 Functional Safety Training services comprising 1 Day, 2 Day and 5 Day training sessions by the experts
- Consulting on Safety analyses like FMEA, FMEDA, FTA, etc. across all phases of safety lifecycle

2. ASIL Compliant Software and Hardware Development Services

Our ISO 26262 compliant engineering support spans concept phase (Part-4), software development (Part-6) and Hardware Development (Part-5).
A. Concept Phase

- Item Definition
- Impact Analysis
- Hazard Analysis & Risk Assessment (HARA)
- Functional Safety Concept

B. Software Development Phase

- Safety Requirements for software
- Software development and testing in compliance with ISO 26262
- Static and Dynamic analysis
- Coding guidelines support
- SW error detection and handling mechanisms
- Software Tool Qualification

C. Hardware Development Phase

- Safety Requirements for hardware
- Failure Rate calculation as per IEC 62380
- Hardware unit design
- Unit and Integration testing and validation of hardware
- Diagnostic coverage analysis

D. System Level

- Technical Safety Concept
- Technical Safety Requirements
- System Level FMEA
- System Level Fault Tree Analysis

3. Safety Analysis Activities (Software and Hardware)

- Common Cause and Cascading Analysis (DFA)
- Failure Mode and Effects Analysis at Software Level (FMEA)
- Hardware Component level Design FMEA (SOX & Excel)
- Failure Mode Effects and Diagnostic Analysis at Hardware Level (FMEDA)
- HW failure Metrics SPFM, LFM and Failure Rate Class
- Qualitative and Quantitative Fault Tree Analysis (PMHF)
OUR EXPERTISE IN ISO 26262 QUALIFIED TOOLS

1. Requirement Management and Traceability: IBM DOORS and Polarion
2. Software Architecture and Unit Design: IBM Rhapsody, Enterprise Architect, ASCET
3. Safety Analysis: ENCO SOX, APIS
4. Static and Dynamic Analysis: QAC and Polyspace
5. Simulation, Schematics and Hardware Layout Design: Cadence
6. Testing and Validation Tools: Tessy, CANTATA, RTRT, LDRA, MXSuite

CONNECT WITH US

<table>
<thead>
<tr>
<th>INDIA</th>
<th>+91 80 41694200</th>
<th>USA</th>
<th>+1-248-385-2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>GERMANY</td>
<td>+49 711-60 17 47-789</td>
<td>UK</td>
<td>+49 170 1688028</td>
</tr>
</tbody>
</table>

EMAIL: sales@embitel.com

Get in touch with our Team

Aneesh
Head, Automotive Business Unit
aneesh.a@embitel.com

Kuldeep Singh
Business Manager
kuldeep.s@embitel.com