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Software Tool Assessment Review Report
for the
Software Tool Suitability as Applied to Railway Electronics and Software Control Applications

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1 Introduction

Siemens Electrical Board Systems (EBS) creates software tools for the use in the development of PCB and related products for the rail industry. The rail-compliant software tools will be assessed according to IEC 62279, EN 50128, and EN 50129, hereby known as “Rail Standards.”

2 Assessment Tasks

Siemens DI SW GS&CS ECS-TS is employed to assess Siemen’s EBS division Software Tool Suitability Report for Railway Electronics and Software Control Applications, for Xpedition Enterprise, Advanced IC Packaging, HyperLynx, and Valor NPI using reference document S1, “EBS_Rail_Software_Tool_Qualification_Assessment_Report.xlsm”.

Assessment tasks shall be carried out by the utmost level of independence where each assessor is independent, regarding management, resources and release authority, from the department responsible for the creation of the considered work product(s).

3 Standards Referenced

Tested according to the following standards:

Table 1: Standards Referenced

Ref. No	Standard	Description
R1	IEC 62279:2015	Railway applications – Communication, signaling and processing systems Software for railway control and protection systems
R2	EN 50128:2011	Railway applications - Communication, signaling and processing systems Software for railway control and protection systems
R3	EN 50129:2018	Railway applications - Communication, signaling and processing systems Safety-related electronic systems for signaling

Documentation Referenced

3.1 EBS Documentation

Table 2: EBS Documentation

Ref. No	Documents Title	Version	Date
D1	Railway Tool Suitability Worksheet EBS 2409	1.1	11/07/2024
D2	Software Tool Suitability Report for Railway Electronics and Software Control Applications	1.1	11/07/2024

3.2 Siemens Documentation

Table 3: Siemens Documentation

Ref. No	Documents Title	Version	Date
S1	EBS_Rail_Software_Tool_Qualification_Assessment_Report.xlsx	4.0	11/18/2024

3.3 Terms and Abbreviations

Table 4: Terms and Abbreviations

Standard	Description
SIL	Safety Integrity Level
EBS	Electronic Board Systems
TC	Tool Classification

4 Assessment Requirements

The Suitability Report will assume general customer use cases that will support the planning of the EBS tools in the user's tool flow. The user shall confirm all assumptions when applying the Software Tool Suitability to their project. The Software Tool Assessment addressed the compliance to IEC 62279:2015 clause 6.7 Support tools and languages, EN 50128:2011 clause 6.7 Support tools and languages, and EN 50129:2018 clause 6.3 Safety-related tools for electronic systems. The assessment focused on EBS's software tool compliance to these standards per the applied assumptions and the tool validation results.

5 Assessment

Siemens Industry Software provided assessment and conformity services to EBS Group's Xpedition Enterprise, Advanced IC Packaging, HyperLynx, and Valor NPI tools for Rail Standards applicable to both hardware and software development of Railway applications applicable to communication, signaling, and processing systems - safety-related electronic systems for signaling and software for railway control and protection systems. The Software Tool Suitability Report aims to provide evidence and best practices that EBS's software tools are suitable for project tasks and activities for Rail Applications.

Assessment Results	R
The review of the "Railway Tool Suitability Worksheet EBS 2409" [D1] and the "Railway Tool Suitability Report EBS 2409" [D2] for EBS tools are found to be compliant with the requirements of IEC 62279:2015 [R1], EN 50128:2011 [R2], and EN 50129:2018 [R3]. **Finding:** The normative requirements are fulfilled. **Restrictions:** The customer must confirm assumed use cases.	☒ Full Compliant ☐ Mostly Compliant ☐ Partially Compliant ☐ Not Compliant ☐ Not Applicable

Any changes may require repeating some parts of the confirmation to retain the assessment results.

7 Conclusion

The "Railway Software Tool Suitability Report EBS 2409" [D2] provided a description of best practices for the features and uses of Electronic Board System (EBS) software tools. The EBS tools alone may demonstrate different classifications of TC1, TC2 or TC3 for a development project. The assessment shows increased confidence in the justification and evidence provided and that the software tools are suitable for IEC 62279, EN 50128, and EN 50129 activities or tasks.

While all indemnification clauses apply, this software tool is pre-qualified for use within a project covered by IEC 62279, EN 50128, or EN 50129 for all SILs.

8 Approvals

Joseph Dailey 11/18/2024

Global Director of Functional Safety & Cybersecurity

Siemens PLM Software Inc.