Certificate

The certification body of TÜV Informationstechnik GmbH
hereby awards this certificate to the company

Kepler Vision Technologies
Deymanstraat 18F
1091 SE Amsterdam, The Netherlands

to confirm that its application software

Kepler Vision Engine, version 1.3

fulfils all requirements of the SIG/TÜViT Evaluation Criteria

Trusted Product Maintainability v12.0
Level: ★★★★☆ (4 stars)

of Software Improvement Group and TÜV Informationstechnik GmbH. The requirements are summarized in the appendix to this certificate.
The appendix is part of the certificate and consists of 4 pages.
The certificate is valid only in conjunction with the evaluation report.

Main-tainability TÜViT® 2021 Trusted Product

Certificate ID: 6473.21

Certificate validity:
2021-04-06 – 2023-04-06

Essen, 2021-04-06

Dr. Christoph Sutter
Head of Certification Body

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Software Improvement Group
Software Improvement Group
Amsterdam, The Netherlands
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Certification Scheme

The certification body of TÜV Informationstechnik GmbH performs its certification on the basis of the following certification scheme:

- German document: ”Zertifizierungsprogramm (nicht akkreditierter Bereich) der Zertifizierungsstelle der TÜV Informationstechnik GmbH”, version 1.1 as of 2020-03-01, TÜV Informationstechnik GmbH

Evaluation Report

- “SIG Evaluation Report: Kepler Vision Engine, Trusted Product Maintainability”, version 5 as of 2021-03-19, Software Improvement Group

Evaluation Requirements

- “SIG/TÜViT Evaluation Criteria – Trusted Product Maintainability”, version 12.0 as of 2020-06-15, Software Improvement Group and TÜV Informationstechnik GmbH

Evaluation Target

- Application software ”Kepler Vision Engine“, Version 1.3 as of 2021-01-29, Kepler Vision Technologies
- Product description of the application software “Kepler Vision Engine“, Version 1.3 (“High-Level Description Form” version 1.0 as of 2021-01-31, Kepler Vision Technologies)

Evaluation Result

The overall quality level of characteristic maintainability for the evaluated product is 4 out of 5 possible stars (★★★★☆) according to the evaluation criteria.

This rating was derived from the ratings of the quality sub-characteristics of maintainability that are determined by product properties.

Results and interdependencies between sub-characteristics of maintainability and product properties are summarised in the following table. Details can be found in the evaluation report.

sub-characteristic of maintainability \ product property	volume	duplication	unit size	unit complexity	unit Interfacing	module coupling	component balance	component independence	component entanglement	result
analysability	X	X	X				X			★★★★☆
modifiability		X		X		X				★★★★☆
testability	X			X				X		★★★★★
modularity						X	X	X	X	★★★★★
reusability			X		X					★★★☆☆

Table: Mapping of product properties to sub-characteristics of maintainability

Summary of the SIG/TÜViT Evaluation Criteria

The SIG/TÜViT Evaluation Criteria Trusted Product Maintainability specify five increasing quality levels of software quality characteristic maintainability and its sub-characteristics analysability, modifiability, testability, modularity, and reusability. The different levels are represented by one (★) to five (★★★★★) stars.

The determination of the quality levels is based on the measurement of software product properties by source code analysis. These product properties are volume, duplication, unit size, unit complexity, unit interfacing, module coupling, component balance, component independence and component entanglement. (see table above)

To obtain the rating, the measurements of the product properties are calibrated against a benchmark repository containing a large number of comparable software products. The relative number of products in the repository to which a given number of stars is assigned for a specific property shall follow the distribution:

★★★★★: 5 % of the products

★★★★: 30 % of the products

★★★: 30 % of the products

★★: 30 % of the products

★: 5 % of the products

The best 5 % of the products of the repository in terms of a given property receive five stars; the next 30 % of the products four stars and so on. The last 5 % of the products finally receive one single star.

A certificate can be issued for software products having

successfully passed the evaluation and reaching an overall level of at least three stars for the characteristic maintainability and a minimum of two stars for each sub-characteristic.

Furthermore the software product description must fulfil the following requirements:

- The description identifies the product boundaries and its overall function.
- The description identifies all top-level components of the product.
- The description of the top-level components is such that any software artefact within the evaluation scope belongs to exactly one top-level component.
- The description identifies the role of each top-level component in the product.
- The description contains top-level components of appropriate number and size to facilitate maintenance of the product.

The description shall give a global overview of the software product architecture.