

The manufacturer may use the mark:



Valid until Oct. 1, 2023 Revision 3.3 Sep. 15,2020



# Certificate / Certificat Zertifikat / 合格証

SEC 1110047 C001

exida hereby confirms that the:

# **RTMSafety Robotic Middleware Platform**

Systems Engineering Consultants Co., Ltd. Tokyo, Japan

Has been assessed per the relevant requirements of:

IEC 61508: 2010 Part 3

and meets requirements providing a level of integrity to:

Systematic Integrity: SC 3 (SIL 3 Capable)

# Safety Function:

RTMSafety is a platform for networked robotic systems. Its primary safety function is to communicate data reliably between network enabled robotic elements called RT-Components.

# Application Restrictions:

The unit must be properly designed into a Safety Instrumented Function per the Safety Manual requirements.



Evaluating Assessor

Certifying Assessor

# Certificate / Certificat / Zertifikat /合格書 SEC 1110047 C001

**Systematic Integrity: SIL 3 Capable** 

# **RTMSafety**

Systems Engineering **Consultants Co., LTD** Tokyo, Japan

## SIL Capability:

The product has met the software design process requirements of Safety Integrity Level (SIL) 3. These are intended to achieve sufficient integrity against systematic errors of design in the software.

A Safety Instrumented Function (SIF) designed with this product must not be used at a SIL level higher than stated without "prior use" justification by end user or diverse technology redundancy in the design.

### SIL Verification:

The Safety Integrity Level (SIL) of an entire Safety Instrumented Function (SIF) utilizing this software must be verified via a calculation of PFD<sub>AVG</sub> considering redundant architectures, proof test interval, proof test effectiveness, any automatic diagnostics, average repair time and the specific failure rates of all products included in the SIF. Each subsystem must be checked to assure compliance with minimum hardware fault tolerance (HFT) requirements.

The following documents are a mandatory part of certification:

Assessment Report: SEC 11/10-047 R001 V3 R3

Safety Manual: RTMSafety User Manual, RTMSafety-SP-019 Revision 2.4, Section 3



T-002, V3R3-3