OLEA® APP INVERTER SOFTWARE APPLICATION FOR ELECTRIC VEHICLE POWERTRAIN CONTROL IS NOW CERTIFIED ISO 26262.

Sophia Antipolis, France October 25th, 2022. Today, Silicon Mobility announced that OLEA® APP- T222 INVERTER, a motor control application for traction inverter, is now **certified ISO 26262 ASIL-C** compliant by SGS-TÜV Saar. This achievement makes Silicon Mobility the first company to offer an ISO 26262 certified full stack automotive solution that includes ASIL-D certified OLEA® T222 FPCU chip, OLEA® COMPOSER development framework and OLEA® LIB Libraries (up to ASIL-D certified) and now, the OLEA® APP – T222 INVERTER application (ASIL-C certified). Comprehensive safety work products are available for designers and functional safety managers, along with the certification report. Today, OLEA® technology is a leader in enabling efficient control of the most critical applications such as the inverter and electric motor, DC-DC, and OBC.

OLEA® APP - T222 INVERTER – next technology control for electrified powertrains

OLEA® APP - T222 INVERTER is a motor control application software for OLEA® T222 FPCU, enabling best-in-class control of electrified powertrains. Built as a software platform to control a wide variety of technologies and topologies, OLEA® APP - T222 INVERTER allows high-performance, real-time, and safe control of advanced power electronics and electric motors. Today, it is certified ISO 26262 ASIL–C Compliant from SGS-TÜV Saar and provides support to ASIL-D certification for powertrain system integration.

OLEA® APP - T222 INVERTER functional safety is built upon three key elements:

- the hardware safety resources embedded with the SILant® technology dedicated to the functional safety mechanisms of the OLEA® T222 FPCU
- the software safety mechanisms at application level implemented into OLEA® APP - T222 INVERTER
- the software architecture built with Freedom From Interference between the functional safety and the functional partition

The safety work products include certification reports, safety manuals, and FMEDA (Failure Modes, Effects, and Diagnostic Analysis) tooling.

OLEA® – A complete full-stack automotive solution

OLEA® APP - T222 INVERTER is the latest product from the OLEA® portfolio to be ISO 26262 certified after Silicon Mobility's OLEA® T222 FPCU semiconductor in March 2020 and OLEA® COMPOSER a software-independent design flow powered with OLEA® LIB, a library of control software components, in March 2022.

OLEA® T222 FPCU, a flexible, real-time, and safe automotive semiconductor is certified ISO 26262 ASIL-D ready from SGS-TÜV Saar. A solution designed to process critical information faster with 100% predictability and accuracy. OLEA® T222 FPCU functional safety includes SILant®, a patented hardware technology embedded into the chip. SILant® integrates a safety architecture that goes beyond ASIL-D SEooC (Safety Element out of Context) objectives. More importantly, OLEA® T222 FPCU enables to cover faults at application level with flexible and safe hardware. In addition, the FPCU enables not only ASIL-D design, saves CPU processing power, enables software code simplification, shortens the fault reaction handling time interval and more. OLEA® T222 FPCU is qualified AECQ-100 Grade 1.

OLEA® COMPOSER and OLEA® LIB are certified ISO 26262 from SGS-TÜV Saar, for the development of safety-related software application - using OLEA® T222 FPCU - up to ASIL-D. OLEA® COMPOSER and OLEA® LIB safety work products come with certification reports, safety manuals, tool criteria evaluation reports, tool qualification plans, anomalous conditions analysis reports, and defects reports.

Safety work product records

As of 2022, Silicon Mobility offers a complete off-the-shelf solution certified ISO 26262 for customers to design. As part of its safety work product, the company records a comprehensive set of functional safety related documentations available for designers and safety managers. These deliverables include, but are not limited to, development process design rules, specifications, verifications reports, functional requirements, safety requirements, and Dependent Failure Analysis Reports (DFAR).

According to the standard ISO 26262, this unique set of certifications confirms that the OLEA® solution is suitable for car manufacturers and automotive tier1s to design safety-related automotive applications such as electrified powertrain control.

Press Contacts

David Fresneau
Silicon Mobility
Tel: +33 4 84 79 10 20
david.fresneau@silicon-mobility.com

About Silicon Mobility:

Silicon Mobility is a technology leader and the first to ever to create the FPCU. Our goal is to accelerate all e-mobility transitions in the cleanest, safest, and smartest way. The company designs, develops, and sells flexible, real-time, safe, and open semiconductor solutions for the automotive industry used to increase energy efficiency and reduce pollutant emissions while keeping passengers safe.

Silicon Mobility's products control electric motors, batteries, and energy management systems of hybrid and electric vehicles. By using Silicon Mobility's technologies, manufacturers improve the efficiency, reduce the size, weight, and cost of electric motors, and increase the battery range and durability. Its technologies and products accelerate the car's powertrain electrification for OEMs. Silicon Mobility headquarter is in Sophia- Antipolis, France, with a global presence in Germany, China, and Japan. For more information, visit: www.silicon-mobility.com