

KALYCITO INFOTECH AND OSADL



IN CLOSE COLLABORATION WITH THE FRAUNHOFER INSTITUTE OF OPTRONICS, SYSTEM TECHNOLOGIES AND IMAGE EXPLOITATION IOSB



## PRESS RELEASE

Open Source OPC UA server based on the *open62541* SDK successfully certified

***open62541* is the only Open Source all-C implementation of OPC UA technology, the world-wide interoperability standard for machine-to-machine communication. The software developed in substantial parts at the Fraunhofer Institute of Optronics, System Technologies and Image Exploitation IOSB is extremely friendly for resource-constrained environments and runs on nearly every kind of hardware, from the small embedded system to the large production plant. Now, *open62541* has received the decisive seal of approval: The OPC Foundation has just announced the official certification of an example server that was built with version 1.0 of the open OPC UA stack.**

OPC UA - the Open Platform Communications Unified Architecture, is the open standard that allows any type of equipment to communicate with each other seamlessly. For example, individual sensors up to complete production lines, power plants or oil platforms, etc. can be mapped in an OPC UA server-side information model and can be accessed by multiple clients. This enables data exchange, intelligent data evaluation and process control. As a manufacturer-independent standard, OPC UA is considered a basic technology for realizing new business models in the Industry 4.0 world. OPC UA is published, developed and managed by the OPC Foundation based in the United States of America.

*open62541* is an open source implementation of the OPC UA technology which is being driven forward by the Indian software system integrator Kalycito and the Open Source Automation Development Lab (OSADL), Germany along with Fraunhofer IOSB, Germany. The software library is written in the C programming language, more precisely in the common subset of C99 and C++ 98. "This means that the software can be used with all common compilers and is resource saving in such a way that it runs on nearly every imaginable hardware. It also makes it possible to set up dedicated OPC UA servers as well as to integrate OPC UA based communication into existing applications", explains Dr. Julius Pfrommer from Fraunhofer IOSB, the lead software architect behind *open62541*. Bhagath Singh Karunakaran, founder and CEO of Kalycito Infotech Private Ltd. adds: "After being the first to implement Pub/Sub and demonstrate TSN readiness in early 2018, *open62541* is now the first open source C stack to be certified against the server CTT. We dedicate this success to each and every contributor".

Open source provides a way for industry leaders to collaborate, stop re-inventing the wheel, reduce total cost of ownership and focus on their core differentiators. The now certified server was built according to the 'Micro Embedded Device Server' profile that also supports subscriptions, method calls, and encryption. In addition, *open62541* version 1.0 also supports communication based on the OPC UA Publisher/Subscriber model that, for the time being, cannot yet be certified. The *open62541* software is licensed under the Mozilla Public License v2.0 (MPL-2.0) and, thus, ensures that the library can be linked and distributed along with proprietary software. Only further developments of the *open62541* library itself must be licensed under the MPL-2.0.

The latest developments are made possible by an OSADL community project involving the following companies:

Balluff GmbH  
Heidelberger Druckmaschinen AG  
Intel Corporation  
iss innovative software services GmbH  
Linutronix GmbH  
Nestfield Co., Ltd  
Pepperl+Fuchs AG  
Pilz GmbH & Co. KG  
Sick AG  
Siemens AG  
TQ-Systems GmbH  
WIKI Mobile Control GmbH & Co. KG

Dr. Carsten Emde, General Manager of the Open Source Automation Development Lab (OSADL) eG, thanks the participating companies for the financial support without which the project would not have been possible. At the same time, he points out that with this certification the project is by no means complete, but the development continues – to finally achieve a consistent and freely available solution for real-time Ethernet via a connection to TSN. He says: "The more companies participate in the project, the more powerful and versatile components can be developed and contributed. The project is designed to allow companies to join in at any time after the project has started, so we would like to take this opportunity to motivate other interested companies to participate."

Further information:

<https://opcfoundation.org/products/view/open62541-server-sdk>

<https://open62541.org/certified-sdk>

<https://www.iosb.fraunhofer.de/>

<https://kalycito.com/opc-ua-sdk/>

<https://osadl.org/OPCUA>

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