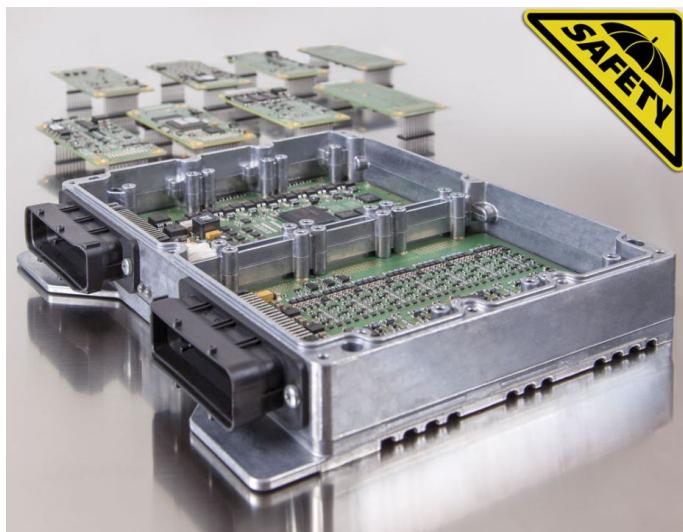




## STW Brings Safety, Convenience and Diagnostic Functions to C Programming of Mobile Control Units



*Safety, Convenience and Diagnostic Functions are now Available for “C” Programming of Mobile Control Units through STW’s Kefex Toolchain, dramatically reducing design and implementation times of safety control solutions for off highway machines*

**NORCROSS, Ga. - July 15, 2015 - [PRLog](#)** -- Safety, convenience and diagnostic functions are now available for “C” programming of mobile control units, dramatically reducing design, implementation, integration and testing time when designing safety control solutions for mobile machines. **STW Technic’s integrated toolchain KEFEX** for Windows for its safety-certified control units comes in a package with the development environment for the programming language “C”. In addition to the implementation of safety functionality, KEFEX also permits the use of Matlab.

In mobile machines, control units are programmed both with CODESYS and “C”: The programming in “C” is subject to restrictions with regard to safety, convenience and diagnostic functions. These limitations are removed through KEFEX, which seamlessly extends the “C” development environment. During development, the parameters are differentiated and defined according to safety relevance. This takes place in accordance with the standards EN ISO 13849 and EN 62061. Once the application is finished, it has to be transferred onto the ECU. Because KEFEX knows the parameters, these can now be modified directly in the non-volatile memory of the ECU via a KEFEX Client and the GUI (Graphical User Interface) on a Windows PC. The main advantage of this is that safety-relevant software components do not have to be changed. The operator, too, profits from the development. They are shown the relevant parameters divided into critical and non-critical parameters. If required, the operator can adjust the values themselves and monitor them during operation. In addition, software libraries permit the development of GUIs for customer-specific services and diagnoses, and also for other operating systems such as Linux or Android, so that KEFEX can also be used in non-Windows environments in the field.

The messages on the CANbus are also frequently safety-relevant. In this way, the traffic on the CAN bus

can be observed via KEFEX. In addition, decentralized control units are deployed in many applications, the synchronization of which is gaining in importance. KEFEX can be used to align the communications between the control units.

The main benefit of the KEFEX toolchain is its high degree of integration into a complete solution, consisting of the STW control units, the "C" development environment with all pre-existing libraries, the provision of a Matlab interface and KEFEX itself. With the parameterization approach, it is possible to certify safety-relevant software components independent of the version, and thus also to minimize the maintenance complexity. The clean division of safety-relevant and non-safety-relevant software also facilitates troubleshooting and adaptation. This all leads to the quicker market launch of a product and then increases the availability of mobile machines in the field. STW provides its customers with application-tailored training courses for the fast utilization of KEFEX. More information on STW's software and hardware tools can be found at:

<http://www.stw-technic.com/products/canbus-modules/hardwa...>

**About STW Technic:** STW ([www.stw-technic.com](http://www.stw-technic.com)) an award-winning provider of a full spectrum of freely programmable controllers, I/O modules, pressure sensors and telematics to a wide range of industries such as mining, construction, agriculture and oil and gas. STW controllers, sensors, I/O modules and Telematics units have attained a leading role in these industries due to their rigorous testing, high quality German engineering and unmatched flexibility. All of STW's products are mobile off-highway rated. STW ([www.stw-technic.com](http://www.stw-technic.com)) is also in the forefront of developing and prototyping hybrid drive technologies – generators and motors – for mobile applications

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