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Press Release

Chemnitz (Germany), October 14th 2019

BASELABS series-grade data fusion software now supports Infineon's AURIX™ TC3xx microcontrollers

Data fusion as part of the environmental model is one of the key components for automated driving. The performance, reliability, and flexibility of this software component will have a decisive influence on the success of vehicle automation.

With BASELABS Create Embedded, a series-grade software library is available which enables customers to efficiently develop data fusion systems for automated driving functions in embedded systems. The software makes it possible for the first time to take over the developed data fusion C-code directly for series production ECUs.

Infineon's AURIX™ TC3xx microcontroller platforms are perfectly suited for the execution of the embedded software algorithms because of the combination of performance and a powerful safety architecture with support for safety requirements up to ASIL D.

BASELABS Create Embedded contains fusion algorithms that combine data from radar, camera and lidar sensors. The resulting object fusion provides a uniform object list of the vehicle environment and serves as an input for path planning and decision algorithms. Typical use cases include Automated Emergency Braking (AEB), Adaptive Cruise Control (ACC), Forward Collision Warning (FCW), piloted driving, and object fusion as part of a diverse redundant safety
architecture, e.g. ASIL D decomposition. The software enables the safety-compliant
development of data fusions, including documentation and testing of safety-related
use cases. This drastically reduces the development
effort, significantly shortens the development time and improves time-to-market.

“Many of our customers are faced with the challenge that the overall data fusion
system has the right performance to address the anticipated use case. Additionally,
for the use in series vehicles, the developed software must meet the process and
safety requirements. To stay competitive, they need a cost-efficient
solution. BASELABS Create Embedded massively supports the developer in
mastering the challenges of data fusion. The special thing about the software is that
the developed data fusion C-code runs directly in the series
hardware. For our algorithms, the AURIX TC3xx microcontroller family is an ideal
platform because of its combination of performance and a powerful safety
architecture with support for safety requirements up to ASIL D,” explains Dr.
Norman Mattern, Head of Product Development at BASELABS.

“AURIX microcontrollers are already being used in series production sensor
fusion ECUs. Now the combination of the second generation of the AURIX family
(TC3xx) with BASELABS’ advanced software algorithms is creating new
opportunities for system developers to enable new and more optimized system
architectures for sensor fusion,” said Ritesh Tyagi, Head of the Infineon Automotive
Silicon Valley Innovation Center (SVIC). “Infineon looks forward to continue our
collaboration with BASELABS to advance the development and deployment of next
generation fusion systems required for highly automated vehicles.”
BASELABS will showcase its data fusion software for series production running in AURIX family (TC3xx) at Infineon's invite-only OktoberTech 2019 technology collaboration forum on October 17, 2019 in Mountain View, CA.

458 words, 3223 characters

More information: https://www.baselabs.de/Create-Embedded

The series-grade data fusion software library BASELABS Create Embedded perfectly runs on AURIX TC3xx microcontrollers from Infineon.

Download chart (CYMK)
Download chart (RGB)

About BASELABS

BASELABS provides data fusion results for advanced driver assistance systems (ADAS) and highly automated driving (HAD) to OEMs, Tier1s, Tier2s and service providers. The company supports its customers with development tools and engineering support. BASELABS has a team size of 50+ people. The company is in shared ownership of the four founders and Vector Informatik GmbH. This makes BASELABS strategically independent from any OEM or Tier 1 in the market.
Press contact

BASELABS GmbH
Maren Siegert, Head of Marketing
Tel.: +49 (0) 371 3371 51 16
Email: maren.siegert@baselabs.de
www.baselabs.de