



## CLOSING REPORT

June 2022

### **embedded world 2022: Embedded community reunites in Nuremberg**

- **More than 720 exhibitors from 39 countries**
- **1,414 attendees and speakers at the embedded world Conference and electronic displays Conference**
- **Industry experts more than happy to be together again**

Once again *embedded world* impressively proved that it is the leading trade fair of the international embedded community. More than 720 exhibitors from 39 countries presented their latest developments in embedded technologies, from components, modules and complete systems to operating systems and software, hardware and software tools, and services for embedded systems. From 21 to 23 June 2022, around 18,000\* international embedded experts from 76 countries attended the 20th *embedded world*. With over 3,900 online and hybrid attendees *embedded world's* digital content was also well received.

Full exhibition halls, enthusiastic visitors and highly satisfied exhibitors - that's how embedded world 2022 can be summed up. With an outstanding range of products and information and the high quality as well as quantity of exhibitors and visitors, the event was convincing right across the board. Current industry topics were presented in an informative manner in the supporting program. "I am overwhelmed by the dynamism, energy and innovative spirit of the embedded industry that was clearly evident during the three days of the show. The security of electronic systems, distributed intelligence, the Internet of Things and solutions for future subjects such as e-mobility and energy efficiency - there are so many trends and exhibitors are addressing pressing issues and already presenting marketable products," says Benedikt Weyerer, Director Exhibition embedded world, NürnbergMesse.

\* The figures for visitors, exhibitors and display area at this exhibition are determined and certified according to the standard definitions of FKM, the Society for Voluntary Control of Fair and Exhibition Statistics.

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**embedded world Conference**

The embedded world Conference also offered three days of knowledge transfer at the highest level. Around 1,000 attendees and speakers from 42 countries took the opportunity to interact with top-class experts and colleagues in 196 presentations, 10 classes, 3 keynotes, and 6 expert panels to exchange technical information and further their knowledge.

"I am pleased that we were finally able to meet in person again and engage in fruitful dialogue. The atmosphere at the embedded world Conference was excellent. The conference not only covered familiar topics but also included new trends and topics, such as embedded Rust or TinyML, which were very well received. It is becoming more and more clear that we not only have technical topics in our conference, but also that "Responsibility" is moving more and more into focus", says Prof. Dr.-Ing. Axel Sikora, Offenburg University of Applied Sciences & Hahn-Schickard and Chairman of the embedded world Conference.

**electronic displays Conference**

"In 2022, the electronic displays Conference once again became the center of knowledge transfer for two days at the highest technical level with the focus on industrial and automotive displays. It is not only the knowledge platform for international experts, but also the most important European B2B platform for professional displays and applications. This year, more than 400 attendees and speakers came together to discuss topics such as touch technologies and innovations, automotive displays and interfaces, display uniformity & testing, display systems, display measurements, micro-LEDs, gesture control, augmented and virtual reality, as well as HMI and GUI concepts with experts in the field.

"Two years is a very long time in a fast moving environment like electronic displays in terms of both new products and technical developments. After this long wait, the electronic displays Conference finally brought participants together again. They exchanged ideas with other experts about the many developments and trends that have emerged in the meantime. Both speakers and visitors greatly appreciated the opportunity to refresh their knowledge and make new contacts", sums up Prof. Dr. Karlheinz Blankenbach, Pforzheim University and Chairman of the edC (electronic displays Conference ) committee.



### **Top speakers and a comprehensive forum program**

Various speakers offered interesting insights into a wide range of topics. The keynotes opened on Tuesday with Dr. Matthias Klauda, Executive Vice President R&D from the recently founded "Cross Domain Computing Solutions" division of Robert Bosch GmbH. He reported on "Brains and Nerves of Future Mobility - E/E Architectures of the Vehicle and Beyond." Steve Douglass, Corporate Vice President, research and development at Lattice Semiconductor, delivered his keynote on "Embracing Change: The Mandate for success in Next Generation Embedded Design." The third keynote was delivered by Patricia Shaw, CEO and founder of Beyond Reach Consulting, on Thursday. She spoke about "Responsible AI: From Principles to Practice."

### **Honored: embedded awards**

On the first day of the show, June 21, in a ceremonial setting, a total of six outstanding solutions were honored with the embedded award 2022. The winners in the categories Embedded Vision, Hardware, Software, Safety & Security, Tools and Startup were:

#### **1. Embedded Vision**

In the Embedded Vision category, this year's award went to GrAI Matter Labs for its Life-Ready AI Chip. GrAI Matter Labs (GML) has developed a novel intelligent dataflow computing architecture in which they have combined principles of biological systems, near-memory computation and massively parallel cores.

#### **2. Hardware**

NXP Semiconductors succeeded in securing the award in the hardware category. NXP Semiconductors' Voice Intelligent Technology (VIT) enables a voice-controlled user interface with always-on wake word detection and local commands. Based on state-of-the-art deep learning and speech recognition technologies, VIT is a comprehensive software library with a far-field audio front-end (AFE) that supports up to three microphones, an always-on wake word engine a voice command engine, as well as online tools to generate custom wake word models and voice command models.



### 3. Software

STMicroelectronics secured the award in the software category with its NanoEdge AI Studio. NanoEdge AI Studio is a machine learning library generator that allows even non-experts to benefit from AI capabilities. With this state-of-the-art all-in-one software tool, users can easily develop an ML-based solution for tiny devices based on an STM32 MCU. The tool provides an integrated workflow, from data acquisition to inference at the edge, including on-device learning.

### 4. Safety & Security

The winner in the Safety & Security category was CodeClinic LL with its Traci Traceability Solution. Traceability is a key concept in embedded software functional safety standards. Each safety element and requirement has to be traceable back to its creation in the design and its verification or validation, a manual process that can lead to errors and omissions. Using a dependency structure matrix (DSM), Traci is an innovative traceability matrix that identifies gaps in the design and verification of requirements as stipulated by most established and emerging standards such as ISO 22839 and 21434.

### 5. Tools

The winner in the category Tools was Accemic Technologies GmbH with CEDARtools®. The key factor for proper testing and efficient debugging is observability - ideally without impacting the system. This is exactly what CEDARtools® delivers; it uses complex electronics and clever software that generate live digital twin representations of monitored processors to perform live coverage measurements or runtime tests defined in a high-level language.

### 6. Startup

Dolphin Design with TinyRAPTOR won in the Startup category. Tiny RAPTOR is an energy-efficient Neural Processing Unit (NPU) IP platform for TinyML applications. Tiny RAPTOR's computing power is based on Processing Elements (PE) with a special instruction set that enables unique near-memory computing.



More information about all the winners can be found at:

**[www.embedded-world.de/nominees2022](http://www.embedded-world.de/nominees2022)**

**Save the date!**

The next embedded world will be held as scheduled at Nuremberg Exhibition Center from March 14-16, 2023.

**embedded world China**

The embedded world China will take place from June 14-16, 2023 in Shanghai.

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