



Press Release

EECC publishes groundbreaking survey on trends and an economic outlook for the RFID industry

The new "RFID Market Survey" is published simultaneously with EECC's leading technical RFID compendium, the 16th edition of the RFID Almanac.

Neuss, Germany, 9/26/2022. EECC publishes two groundbreaking studies for the RFID industry.

The new EECC RFID Market Survey 2022 is a study by RFID executives and experts for RFID executives and experts. Our aim with the study is to shed light on long-term trends as we have long done for disruptive and technical developments in the industry. The study objectively illustrates risks and opportunities for the RFID industry over coming years across all stages of the value chain. It analyzes key strategies that senior executives selected based on their perceptions of the current situation and market outlook. It further contrasts the perspectives of small versus large organizations across all topics that are discussed. In the study outlook, we investigate and analyze technical trends and value drivers.

In our latest edition of the world's leading RFID Almanac, we assess, explain, and analyze technical capabilities as well as future trends for UHF RFID technology. Covering well over 1250 pages, readers interested in the technology are able to make appropriate technology selection decisions based on well over 600 included transponders and more than 40 readers based on a wide variety of parameters and processes. New in this years' RFID Almanac are simplified representations that enable a precise-fit assessment for entire industries.

Motivation:

Since its accreditation in 2006 as the first EPCglobal RFID Test Center, the EECC has expanded its role worldwide as a leading independent UHF RFID test lab and established itself as a thought leader for the adoption of RFID technology and related standards.

The EECC strongly promotes global technical developments through its InnovationLabs in Neuss, Germany including testing in new application fields and publication of the annual RFID Tag Benchmark Report, which is the "RFID Almanac". Since its inception the report has received the highest praise from global industry experts across technology sectors and application fields and is completely vendor-neutral and fully committed to transparency and objectivity.

Today, our lab in Neuss is a key network node for RFID supply chain experts and users, various standardization initiatives by technical working groups and associations as well as lighthouse events for end users (e.g. Consumer Goods Forum, Logistics Days, Retail Initiatives) have found a welcoming home in the EECC InnovationLabs.

The first RFID Market Survey 2022:

Our experts at EECC have always been asked about key market developments and future trends by a wide variety of RFID supply chain participants.

Conrad von Bonin, CEO of the EECC, explains the motivation for the survey: "The EECC has always provided a lot of independent advice and assessments on economic RFID trends. Now we would like to answer these questions in a more structured, transparent and objective way for the whole industry.

The 42-page report is divided into 6 chapters. The first chapter covers long-term market and price developments. Subsequent sections address questions about applications and types of projects down to the tag level. We further study competitive auto-ID technologies and, for example, the importance of chips from China to assess key technical developments.

The study further considers potentially disruptive external events, such as the chip shortage and the U.S.-China conflict, and the overall future outlook takes these findings into consideration.

The remaining chapters examine strategies that different market participants use to respond to market challenges and to grow their respective businesses. Each finding is broken down by a market players role in the supply chain and the size of their company.

Last, the study identifies opportunities and value drivers based on general, technical and external factors.

We would also like to thank all study participants. Their willingness to share information, insights and experiences was truly outstanding. If the feedback remains as positive as it is today, we will continue with this annual publication in addition to the RFID Almanac.

The RFID Almanac is in its 16th year by now and offers deep insights, objective testing and full transparency supported by 621 transponders and 45 readers assessments.

EECC CEO von Bonin states: "The task of conducting all measurements itself is already highly complex. Equally important, we need to consider that RFID-enabled supply chains are growing longer and longer. As a result, the technology components have to cope with increasingly more diverse reading situations." He continues: "For example, it is no longer sufficient for a tag to function only at the textile retailer on the shop floor. The same technology must perform just as well in warehouse, order picking and many other use cases. The same is true for the readers that are used. Each has its own strengths and weaknesses in different situations and applications."

Nam Tran, lead RFID engineer for the study at EECC, is proud "that we found representations that easily show whether a tag or reader meets the necessary requirements for the most important industries." In this way, the RFID Almanac makes it possible to find a suitable tag as well as a reader infrastructure that performs across all supply chain nodes in

an industry, ranging from manufacturers and intermediaries to retailers.

Both of our EECC English-language studies together cover all aspects of the UHF RFID value chain once a year.

The new RFID Market Survey is now available in print for €1495 as a single copy.

The new EECC UHF RFID Almanac 2022 is now available for new customers as a print medium for 1095 € per issue in a 5-year subscription or for 1795 € as a single copy.

Both studies as a bundle are available as print media for € 2495.

About the history of the RFID Almanac:

With its annual benchmark study "UHF Tag Performance Survey (UTPS)", EECC has set the worldwide standard in RFID transponder performance testing since 2007. Today the organization looks back on a long and innovative history of technological, scientific and practical achievements.

In 2008 the EECC introduced material-dependent modelling for tag selection for the first time.

Beginning in 2009, a separate chapter of the UTPS has been dedicated to on-metal transponders and in 2010 EECC was the first laboratory to carry conduct proximity measurements for every transponder.

Since 2011, manufacturers have been able to have the performance of their tags certified for specific applications.

In 2012, EECC introduced material-dependent backlink matrices for the first time worldwide and, in 2013, a separate chapter dedicated to chip sensitivity. Performance parameters for the storage process have been included in the study since 2014.

The sensitivity to interference as characterized by various reader signals has been added in 2015.

In 2016 sensor functionalities were analyzed for the first time and additional features such as memory have been catalogued.

In 2018 IoT capabilities such as Untraceable Command were investigated for the first time.

In its 2019 edition, the study was fundamentally restructured into tag population dependencies, environmental parameters, and system environments.

In 2020 EECC revised the ease of use and, for the first time, tags were labelled according to their application areas while detailed explanations of measurements for practical use cases were added.

This year readers were measured and categorized for the first time in addition to transponders, and the influence on the overall performance with transponders has been included. With this extension, the study is now published under the title "EECC UHF RFID Almanac".

About the European EPC Competence Center (EECC)

GS1 Germany, Deutsche Post DHL and METRO GROUP founded the European market leader for solutions and services around the Electronic Product Code (EPC) and the networked information systems (EPCIS) in 2004.

The European EPC Competence Center shows how to collect and use this data and develops new solutions and business models for industry, logistics and retail in its Innovation Labs.

The EECC in Neuss has been the first European laboratory certified by EPCglobal as an "EPCglobal Performance Test Center".

Since 2006, the EECC RFID Academy, in cooperation with the Auto-ID Lab St. Gallen/ETH Zurich and RWTH International University Aachen, has been imparting knowledge in the fields of EPCIS, Auto-ID, RFID and the standards, software and architecture required for these areas.

With the annual benchmark study "UHF Tag Performance Survey (UTPS)", the EECC has been setting the worldwide standard in RFID transponder measurement and certification since 2007.

Since 2009, the EECC has been imparting knowledge about EPC networks and designing EPCIS solutions that enable the efficient handling of large quantities of serialised data. In the field of "Software and Traceability Solutions", the EECC offers tailor-made software for the traceability and/or tracking of objects in a supply chain, regardless of their acquisition medium (RFID, barcode, virtual).

The in house developed EPC Information System EPCAT was certified in May 2015 according to the latest 1.1 standard (together with GS1 solution as the first software worldwide). The Analytics division with the "+1" product family makes EPCIS data usable for customers in real time. Since 2015, the EECC has also offered all software services as cloud services under customer responsibility, and since 2017 also in operational operation as SaaS (Software as a Service).

In addition, the EECC is active in funded research projects focusing on self-sovereign identities and blockchain/smart contract use in supply chains, as well as in standardisation committees at EPCglobal, GS1 and ISO.

The overarching objective of supply chain tracking is to establish sustainable circular processes. To this end, the EECC founded the initiative "CYCLANCE - Sustainability with EPCIS and IOT" in 2019 and initiated pilot cases in various industries. All initiatives can be experienced as demonstrators in the EECC Innovation Lab, some such as R-Cycle for plastic packaging and Intelli-Pack for fresh products have received awards.

Latest reward received R-Cycle on september 14th in Lisboa. The magazine "Packaging Europe" announced R-Cycle the best out of 360 to win the "Sustainability Award 2022" in the category „Driving the Circular Economy“.

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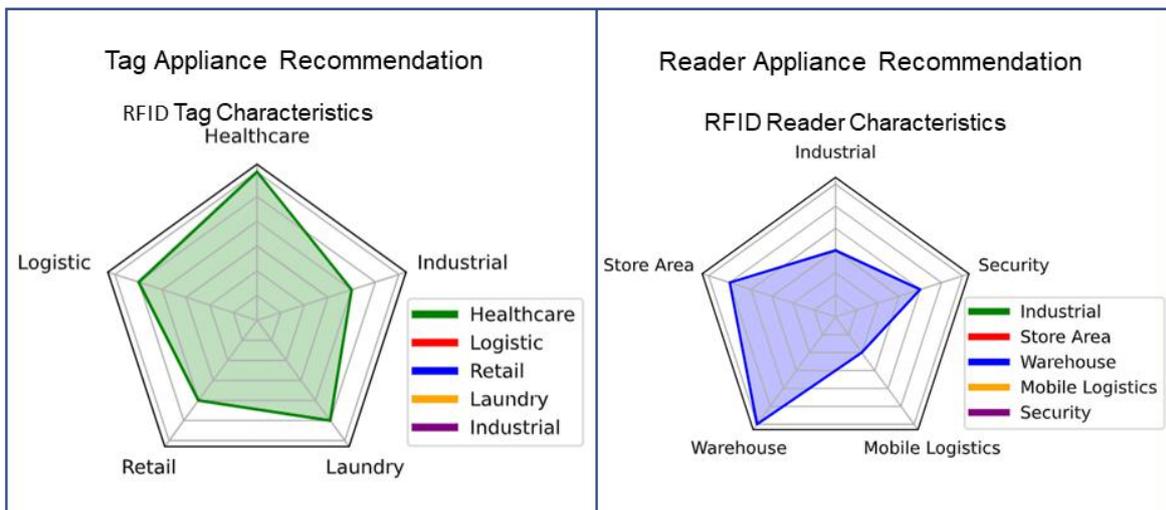
<http://www.eecc.info>

Appendix:

- RFID Market Survey 2022 – Table of contents.pdf
- UHF RFID Almanac 2022 – 1 Evaluated Tag Types Labels.pdf
- UHF RFID Almanac 2022 – 2 Evaluated Tag Types On-Metal.pdf
- UHF RFID Almanac 2022 – 3 Evaluated Reader Types.pdf

Images: (source: EECC)

Figure 1: Diagram: Tag & Reader Recommendation per sector



The applicant is able to recognize the suitability of a RFID tag or reader for typical RFID applications by means of a spider diagram.

Image 2: Cover: The RFID Market Survey 2022

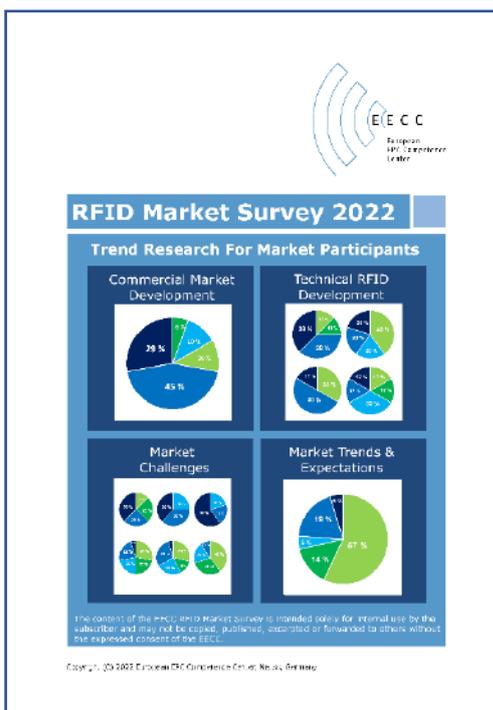
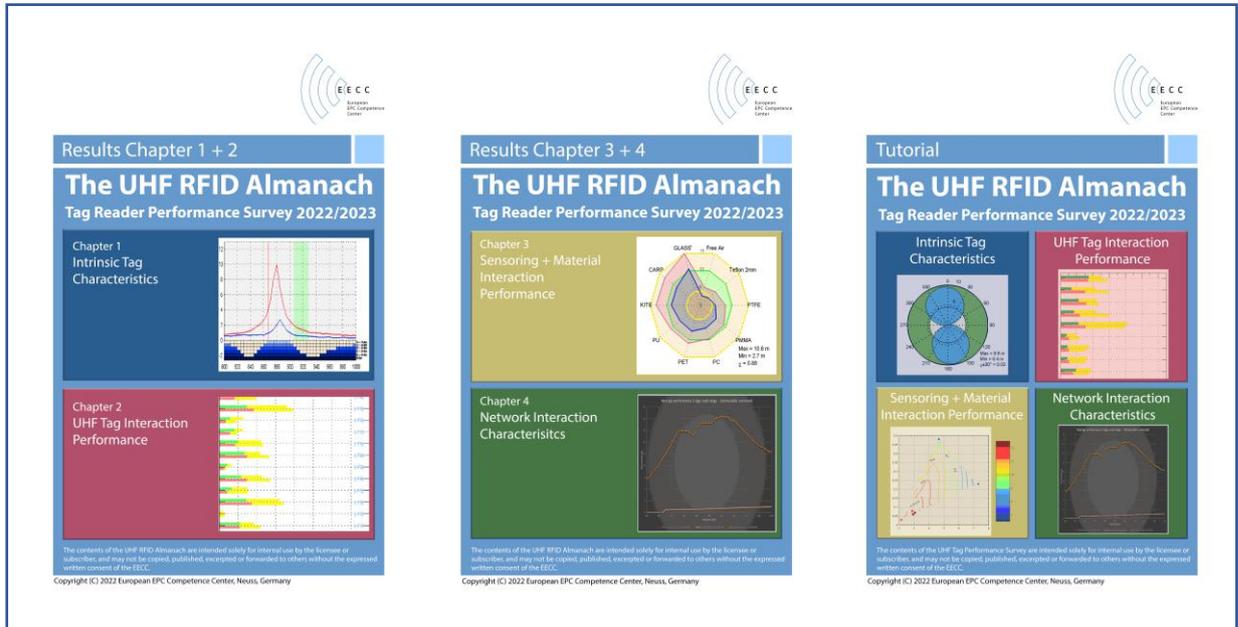


Image 3: Cover: Chapter 1-4 / Tutorial: The EECC UHF RFID Almanac 2022 / 2023



EECC Logo: EECC_Logo_4C.EPS

