



## The perfect RFID reader

The secret to success lies in service and software

There are many RFID readers on the market. The companies that gain competitive advantages are those that offer more than just technology. Because a perfect solution consists not only of the hardware, but also flexible and powerful software as well as manufacturer support to quickly and easily answer questions from the security manager.

What does the so-called elevator affair have to do with RFID? German Federal Health Minister Jens Spahn squeezed into the elevator with other politicians and doctors during a COVID-19 information visit at a university hospital. The internet scoffed: "Actually, the coronavirus wanted to ride along, too. But unfortunately, the elevator was already full." Spahn apologized that such things happen in everyday life. Some security managers might react to such situations less carelessly. Companies have a duty of care towards employees and must cur-

rently ensure that distancing requirements are met. Many companies regulate this by having some employees work from home and others work in the office on an alternating basis. Theoretically, this could be controlled by an RFID access control system. This identification technology can be used to determine, for example, which employees may enter a room.

### New challenges all the time

But apart from the pandemic, there are many requirements for access systems, which must constantly change and be updated, even in quieter times: The task is no longer just to unlock a door for authorized emplo-

yees, for example, but to link them to other more complex functions such as time recording. End users also sometimes use a new card technology. Or, increasing security needs require different encryption or new security features for identification management purposes. These digital challenges of access control and authentication present companies with large and complex challenges. However, most decision-makers or building managers lack the time and often the expertise to come up with appropriate solutions. Aden Abazovic, who works as Head of Support Team at ELATEC GmbH, the RFID hardware developer from Puchheim near Munich, knows this situation: "Companies invest in an RFID solution and then want everything to work smoothly and innovations to be implemented without any problems. And rightly so: companies should be able to concentrate on their core competencies and their business. That is why we are the partner at their side on whom they can rely. Our RFID readers are more than just technology. What makes us special is our overall service package. It's a triad consisting of hardware, software and exceptional customer service."

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»» The RFID solution must be tailored to the respective requirements and integrated into the existing software and hardware environment.



### Modular readers + software + service = success

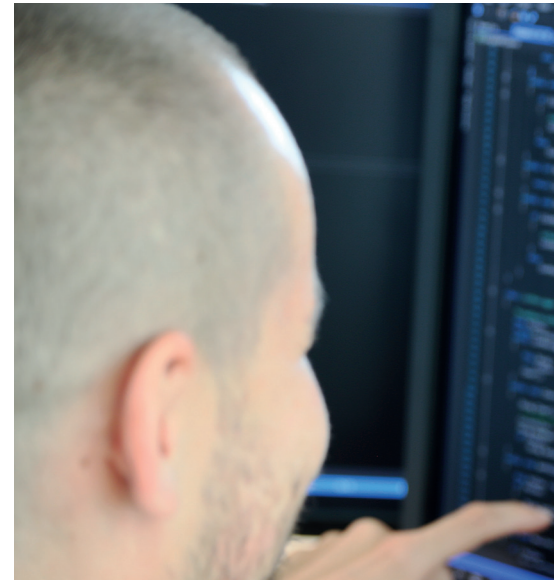
The basis of the ELATEC portfolio is the hardware. The company's portfolio includes a wide range of RFID readers, from desktop readers for single sign-on applications to card readers for secure printing solutions. One of the special features of these devices is that they are compatible with over 60 transponder technologies. At the same time, ELATEC provides modules with or without an antenna in order to offer customers the greatest possible freedom of choice. But the key to success in an RFID implementation is the software and especially the support. What constitutes good support? This is made up of several factors. You could say that good service is the sum of availability, competence, quick response, reliability and friendliness. A study by the University of Warwick shows that response time has the greatest impact on customer satisfaction and is therefore one of the most important criteria for good service quality. This applies especially to the use of RFID solutions. It is important for companies, especially when dealing with such highly sensitive and security-relevant matters such as access and

identification systems, to get fast and competent support at any time, no matter whether it is for a technical problem or a more complicated reconfiguration. This makes it all the more annoying when security managers have to spend hours on hold on the phone, are redirected umpteen times, or their email is only answered after a long time or just disappears into cyberspace.

### Exceptionally fast response times

At ELATEC, things are different. Aden Abazovic reports that the RFID provider receives positive feedback time and again about how exceptional the in-house support is. "Our customers are often perplexed by how quickly we react," he smiles. The support team can often provide qualified answers to even technically complex questions. This is due to the fact that the service team is not made up of semi-skilled employees, but of electronics and communications engineers, IT experts and integration specialists. They have practical experience, work intensively with the ELATEC product portfolio (both hardware and software), and carry out individual adjustments for companies.

Thanks to this technical know-how, the service team can proactively accompany companies throughout the entire product life cycle in cooperation with their ELATEC colleagues from sales and development. This already begins with presales consulting. The ELATEC team analyzes and documents customer requirements with the aim of finding the best solution. At the beginning, there is also an individual consultation for the configuration decision. In addition, the experts conduct a feasibility study, the proof-of-concept, in order to provide the customer with decision confidence. Then the professionals from ELATEC develop an implementation and rollout plan together with the project managers. The subsequent focus is on the optimal implementation: the RFID solution must be tailored to the respective requirements and integrated into the existing software and hardware environment. ELATEC takes care of this, as well as the development of applications, the configuration and all modifications. The service also includes hardware testing and adaptation as well as testing the communication protocols.



### Support even after implementation

In order to enable companies to also build up in-house competence among their own employees, they are trained by ELATEC experts and are given access to a self-service knowledge center. But the work is not over yet. “Our customers can count on our continued support and we will advise them on how to get the best out of the installation in the future,” adds Aden Abazovic. After successful integration of the RFID solution, the support team therefore remains available for optimizations, reconfigurations and upgrades—by telephone, e-mail and also via remote access.

In addition to support, the software is an important key to ensuring that an RFID solution is future-proof and can constantly adapt to new requirements. It must be flexible and powerful and in order to secure a significant competitive advantage for companies. ELATEC therefore delivers each reader with the Software Development Kit (SDK). This is the basis for every efficient RFID solution, with which the readers delivered in the standard configuration can be adapted as desired—i.e., configured for the target application. Christian Rötzer, Head of Development at ELATEC GmbH, explains: “The devices should be able to be used relatively individually by the customer, and therefore the behavior of the reader can be changed with our software pack at all possible points. For

example, the list of supported transponders can be adapted to the application. It is also possible to determine how the device handles the data read by transponders or how the data is transferred to the host.” These tasks are performed by the so-called AppBlaster Tool, the core element of the developer kit. The configuration module is also responsible for reading and writing cards, adapting formats, defining output formats and generating output protocols. It can be used to manage the memory of the cards and set the user feedback.

### Software pack for individual configurations

The AppBlaster Tool offers three configuration options. The simplest option is a standard configuration. “Here, the customer receives a ready-to-use firmware file from us, which he or she then uploads to the device – this is the most basic option,” explains Christian Rötzer. The second option is a configurable firmware. “Here, you set up the reader by selecting the appropriate options for the respective mode of operation. You select the transponder types you would like to read and can also determine the output format,” explains the ELATEC chief developer. The third variant is suitable for special requirements in complex environments. “This is the freestyle option, so to speak. Here you have advanced configuration options for the device. Nothing

is specified, nothing can be selected, instead you write your own programs in the C programming language”.

In addition to the AppBlaster Tool, the Software Development Pack contains additional tools which ELATEC provides for the customer according to individual requirements. These include the Director Tool test and diagnostic tool, which can be used to remotely test functionalities and the scope of functions directly on the reader and to check the interaction with other components and interfaces. The Developer Kit also includes a tool for antenna development, the Tech Tracer Tool, with which transponder technologies can be analyzed and determined, a Flash Tool, which supports configuration and programming, and the Transponder Memory Dump, which reliably reads data contents.

### No on-site update required thanks to remote access

Customers also enjoy maximum freedom when updates, upgrades or individual changes are pending. If a company uses several different card technologies, this can be complicated and expensive. Technicians sometimes have to disconnect the RFID readers from the system or buy and implement new devices that meet the extended requirements. They have to make sure that no reader is forgotten, check each one individually and



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*Aden Abazovic, Head of Support Team at ELATEC GmbH*



carry out different updates. “Imagine you have an office building with 1,000 printers, each with a transponder reader attached. Now you want to perform an update or upgrade. If you have to go to every reader and reconfigure it manually, it's a lot of work with long distances to cover—which is why this on-site update is also known as a ‘sneaker’ update,” explains Christian Rötzer. It is much easier if a remote update can be carried out. This allows all readers to be updated simultaneously via the network. Each reader is updated at the same time without having to disconnect each one from the system and without expensive technician time.

“However, the remote update requires an individually designed infrastructure, because the path of the data to the transponder reader is complex. But we support the customer in creating an individual solution for an update via the network,” promises ELATEC's chief developer.

### **Configurations and upgrades on the fly**

Another option would be the configuration and upgrade cards. “Our readers can be set up in such a way that you simply go to the device with the Config Card and use it to upload the configuration. With the Upgrade Card, further technologies can be added quickly and

without additional tools or special know-how,” is how Christian Rötzer describes the principle. “This will give you a functional enhancement on the fly. For example, you can specify that additional transponders are supported, so that you have additional functions in the Bluetooth range”. ELATEC products are compatible with over 60 transponder technologies. This includes both the low- and high-frequency range (LF and HF), as well as Near Field Communication (NFC) and Bluetooth Low Energy (BLE), which are mainly used in mobile devices. And no matter what demands the future will make on RFID readers and software, the employees at ELATEC will keep their finger on the pulse of the times and continue to develop the portfolio.

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#### **Information about the support team:**

[www.elatec-rfid.com/de-de/rfid-made-eas](http://www.elatec-rfid.com/de-de/rfid-made-eas)

#### **Information about the software:**

[www.elatec-rfid.com/de-de/elatec-software](http://www.elatec-rfid.com/de-de/elatec-software)

#### **Information on ELATEC products in the whitepapers “Physical Access Control” and “Security in RFID”:**

[www.elatec-rfid.com/whitepaper](http://www.elatec-rfid.com/whitepaper)