

DIGITAL ENGINEERING MAGAZIN

Smart Factory

Cybersecurity for the smart factory with modern authentication solutions from Elatec

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In the Industrial Internet of Things (IIOT), networked devices, systems and sensors optimize processes, improve quality and throughput, and reduce costs. However, the high degree of networking also leads to a higher risk of falling victim to a cyberattack.



This makes an effective security concept with modern user authentication all the more important. It prevents costly production downtime and ensures that security requirements are implemented in a legally-compliant manner. This is particularly important in relation to the NIS2 directive, which from October 2024 will require not only organizations managing

critical infrastructure but also manufacturers in many other industries such as chemicals, food and industrial engineering to introduce appropriate security measures.

Greater risk management required

The NIS2 directive prescribes a wide range of cybersecurity measures and disciplines. These include the zero-trust concept with the principle of “never trust, always verify.” This means that every user, every device and every application should be checked every time access to a file, system or service is requested. At the heart of this is modern identity and access management. This makes it possible to assign each user within the system a unique identity with specific user rights and restrictions that determine exactly which files and programs the user is allowed to access and which physical locations and resources they have access to at which times.

All-in-one authentication solution from Elatec: win-win for security and efficiency

The requirements of the NIS2 directive can be implemented most effectively in the smart factory with an all-in-one authentication solution based on Radio Frequency Identification (RFID) and the mobile technologies Near-Field Communication (NFC) and Bluetooth® Low Energy (BLE). It can cover a wide variety of applications with a single system, putting an end to the often-heterogeneous security architecture at production sites.

The basis for a modern all-in-one solution is already in place in most companies: the classic employee ID card, which is equipped with an RFID chip to authorize access to the factory premises. While the use of robust cards is recommended in production, users in administration can also use digital credentials on their smartphone.

Elatec's readers are capable of mapping different transponders, allowing the best solution to be found for every area. However, Elatec's all-in-one authentication solution not only offers optimum protection with maximum flexibility, but can also be scaled to almost any size. For example, it is possible to start with “only” machine authentication and access to industrial trucks in addition to building access. Other applications, such as fleet management or kiosks, can be added successively at a later date.

Elatec: Secure and cost-efficient protection against cybercrime

A standardized access system from Elatec does more than ensure maximum cybersecurity. Smart factories can also reduce the cost of expensive cyber insurance if they implement appropriate measures such as an authentication solution from Elatec. This is because Elatec readers support advanced encryption that meets the requirements

of NIS2-compliant companies and can be used as part of a multi-factor security concept. Regular remote updates and upgrades ensure that the solution is always at the cutting edge of technology.

The software development kit, which can be used to customize the readers, ensures the highest security standards: It offers the option of using the TWN4 readers with an advanced cryptography method (ECC elliptic-curve cryptography).