

Industrial IT Safety and Security for Control and Communications Systems Industry 4.0



In Industry 4.0 the standard IEC 62443 (Industrial Communication Networks – Networks and System Security) has established itself as internationally-recognized standard for proof of conformity in the process and automation industry. Due to a lack of standardization specifications, today many other industrial sectors are also turning to this standard. As a consequence, IEC 62443 is becoming the central standard for Industry 4.0.

Areas of application of the standard and contents of the audit

The series of standards currently comprises eleven parts. These address the logical levels of organization/processes, system and components as well as process-related and functional requirements. IEC 62443 therefore represents a standard for the entire industrial spectrum, in keeping with the requirements of operators, integrators and manufacturers. In this, in the auditing of processes and systems account is taken of both classic business structures (TIC testing, inspection, certification) and measures for the product testing or certification of components. The standard is based on a systematic, structured and continuous approach, in order to analyse and assess the asset value of all processes, systems and components in an iterative manner that is true to the documentation.

IEC 62443			
General	Policy and processes	System	Components
1-1 Terminology, concepts and models	2-1 Requirements of an IACS security management system (profile of ISO 27001/27002)	3-1 Security for IACS	4-1 Requirements of product development
1-2 Glossary of terms and abbreviations	2-3 Patch management in the IACS environment	3-2 Security risk assessment and system design	4-2 Technical security requirements of IACS products
1-3 Metrics for compliance of system security	2-4 Requirements of IACS solution providers	3-3 System security requirements and security levels	
Definitions and metrics	Requirements regarding security of the organisation and its processes	Requirements for a secure system	Requirements of secure system components

[Informative standards](#) [Functional requirements](#) [processes](#)

Your path to Industry 4.0 readiness

The linking of different levels within the company itself and with customers and suppliers outside of the organisation requires a combined approach to security. If you augment your certification to IEC 62443 with a further certification according to ISO 27001, you can satisfy the highest security requirements according to the current state of the art. This degree of maturity signifies Industry 4.0 readiness. With our integrated Security4Safety risk management we can identify weak points at the level of components, products and processes prior to a possible certification.



The benefits for you

- Verification of your security and safety standards to customers and business partners via the neutral proof of TÜV NORD CERT
- Minimising of the risk of errors and damages to reputation (risk management)
- Reduction of costs and risks via the identification and elimination of digital security vulnerabilities in advance
- Your customer orientation, performance, quality and security are evident to outsiders
- Transparent feedback via accomplished security experts at TÜV NORD for the further development of your learning organisation

One-stop certification expertise

TÜV NORD has been an internationally-recognised and reliable partner for inspection and certification services for many years. Our S4S project team is actively represented in the standards committee of the IEC 62443 and is directly involved in the creation of the standard. As a result, this key, up-to-date inside knowledge is incorporated into the positive further development of your company. Our auditors support you in all phases from development to marketing of your products, providing objective feedback parallel to this. Regarding the IEC 62443 standard series, accreditation with the Deutsche Akkreditierungsstelle (DAKKS), TAF and IECCE which have been completed. We are therefore able to offer you accredited certification to IEC 62443 as one of the first providers on the market.



Further information can be found at www.tuv-nord.com and www.security4safety.com