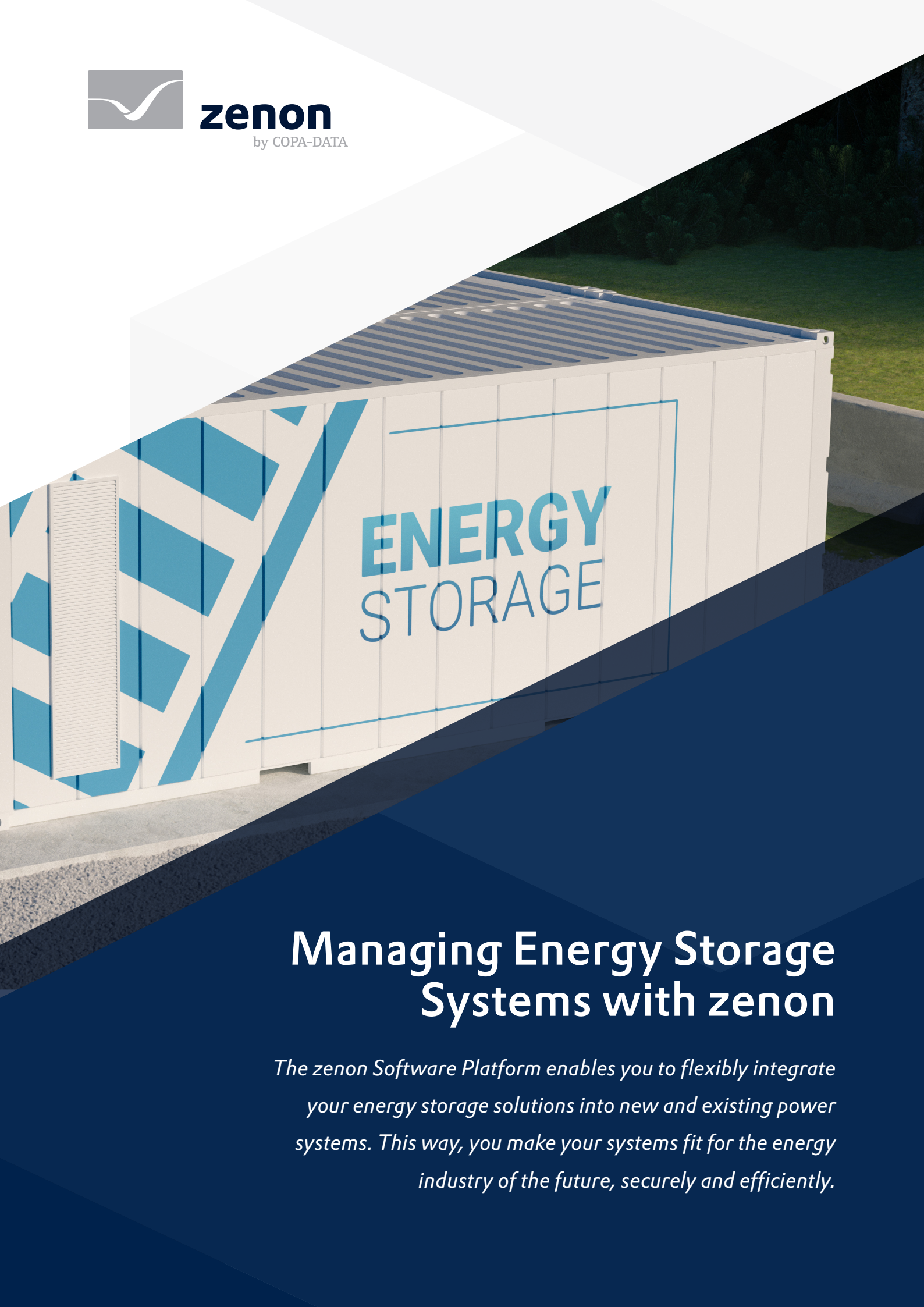




**zenon**  
by COPA-DATA

A large, white, rectangular energy storage container with a blue corrugated metal roof. The container is situated outdoors on a concrete base, with a green lawn and dark foliage in the background. The words 'ENERGY STORAGE' are printed in large, blue, sans-serif capital letters on the side of the container. A blue geometric pattern of overlapping squares and rectangles is visible on the left side of the container. The entire image is overlaid with a dark blue diagonal band that contains the main title and text.

**ENERGY  
STORAGE**

# Managing Energy Storage Systems with zenon

*The zenon Software Platform enables you to flexibly integrate your energy storage solutions into new and existing power systems. This way, you make your systems fit for the energy industry of the future, securely and efficiently.*



© by SAET

## How energy storage with zenon promotes change in the power grid

*An increasingly volatile energy supply has to be aligned with ever-increasing demands for energy. With energy storage solutions, electrical power can be stored temporarily at any point in the power grid and released again as required. This ensures excess power isn't wasted while it relieves systems selectively, and improves delivery quality.*

zenon provides a comprehensive range of options for securely networking, monitoring, and orchestrating energy storage systems in combination with energy systems at all levels of the power grid. The independent platform helps to optimally manage energy storage and ensures other systems, such as solar or wind power systems, are connected efficiently. As a user, this ensures you remain flexible and capable of mastering the most complex tasks. Comprehensive features combined with decades of proven, operational use in energy systems means you can rely on integrated and reliable operation.

### INTEGRATE DEVICES FLEXIBLY AND RECORD DATA SEAMLESSLY

Different devices and systems are used in a battery energy storage system (BESS). With an extensive range of native commu-

nication drivers, zenon supports their integration in a unified solution. Gain comprehensive insights into your power system. Implement smart grid control concepts, such as microgrids or distributed energy resource management systems (DERMS). With its range of gateway protocols, the software platform also meets the requirement for networking with control centers and cloud systems.

### MANAGE PROCESSES EFFICIENTLY AND KEEP AN EYE ON SYSTEMS

Monitoring a complex facility can be very difficult. zenon ensures that you always have a complete overview of the most important data. This can include detailed process overviews (HMI level) for on-site operation or remote access to dashboards for mobile devices. With ready-made functions and integrated programming systems, zenon



**IEC** 60870 61850  
ICCP / TASE 2  
62351 Security

**DNP3**

**KNX**

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**OPC UA**

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**CAN**

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**MQTT**



takes over management of all components of the ESS. You benefit from a quick and complete integration of the system peripherals, such as security technology, air conditioning technology, and any sensors.

## OPTIMAL EFFICIENCY

Equipment and process data only provide strategically valuable insights when they are systematically evaluated and contextualized. For this purpose, zenon provides an integrated Historian for selective data recording, as well as tools for detailed analysis and reporting based on long-term and real-time data. This is how you increase the efficiency of your systems. zenon can be used flexibly and cost-effectively in projects of any size, from local batteries with a few kilowatts to entire battery systems in supply networks with several hundred megawatts of power.

## SHORTEN THE CONFIGURATION TIME WITH EFFICIENT FEATURES

Customized system solutions are critical, but difficult to implement – especially for larger projects. Engineering in ze-

non is supported by standards and tools that enable different components to be easily combined. For example, the BESS Application Library in zenon supports the easy integration of components such as the Battery Management System (BMS), inverters, and various peripheral devices. It does this through predefined application templates based on standard data models such as SunSpec or IEEE 1547-2018.

## STATE-OF-THE-ART SECURITY FOR CRITICAL ENERGY SYSTEMS

As with other critical infrastructure, security and integrity must be ensured in state-of-the-art energy storage applications. zenon fits seamlessly into any environment, taking into account the latest OT and IT security requirements. You can use a variety of security features, such as centralized user authentication and authorization, protocol encryption, centralized logging, and file tampering detection. In addition, zenon is ideal for combining with state-of-the-art security tools.



## OUR SOLUTIONS FOR THE ENERGY INDUSTRY:



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ENERGY STORAGE



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