

# Rhebo and Garland Technology Combine for Cyber Security and Continuity

In German Energy Distribution Market

## Rhebo Solution for Industrial Protector Solution

Rhebo Industrial Protector comprehensively and non-intrusively monitors the communication in industrial and network control systems using Garland network TAPs. Any event that can lead to disruptions are detected and reported by the Rhebo automatic anomaly detection in real-time. Such anomalies include both security incidents and technical malfunctions that occur in everyday operation of control systems. Ultimately, Rhebo Industrial Protector ensures plant availability, data integrity and thus long-term security of supply operations.

## Full Network Visibility and Compliance

For every anomaly Rhebo Industrial Protector provides a risk assessment, thus supporting a fast incident prioritisation. Additionally, the automatic recording of all communication data when an anomaly occurs enables detailed forensic analysis of incidents. Furthermore, Rhebo Industrial Protector supports compliance with reporting obligations under §8b (4) of the German IT Security Act.

### Rhebo Advantages with Garland Technology:

- Centrally monitor network with listen-only aggregating TAPs
  - allow Rhebo to passively deploy in "monitor-only" mode but provide full anomaly detection and notification
  - mean less ports consumed on centralized Rhebo Industrial Protector Controller or localized sensor devices
  - provide full copy of traffic without consuming additional ports on the network routing infrastructure
- Cost-effective rack mounting with optional redundant power supply
  - allows Rhebo to install only what is needed plus tap for cold redundancy
  - combines four units in one RU or distributes tap points through plant offering deployment flexibility
- Reliable, high MTBF product
  - supports German power industry standards with 350,000 hours between TAP-point failure
  - ensures quick resolve of any technical or supply issues by Garland support and local distributors

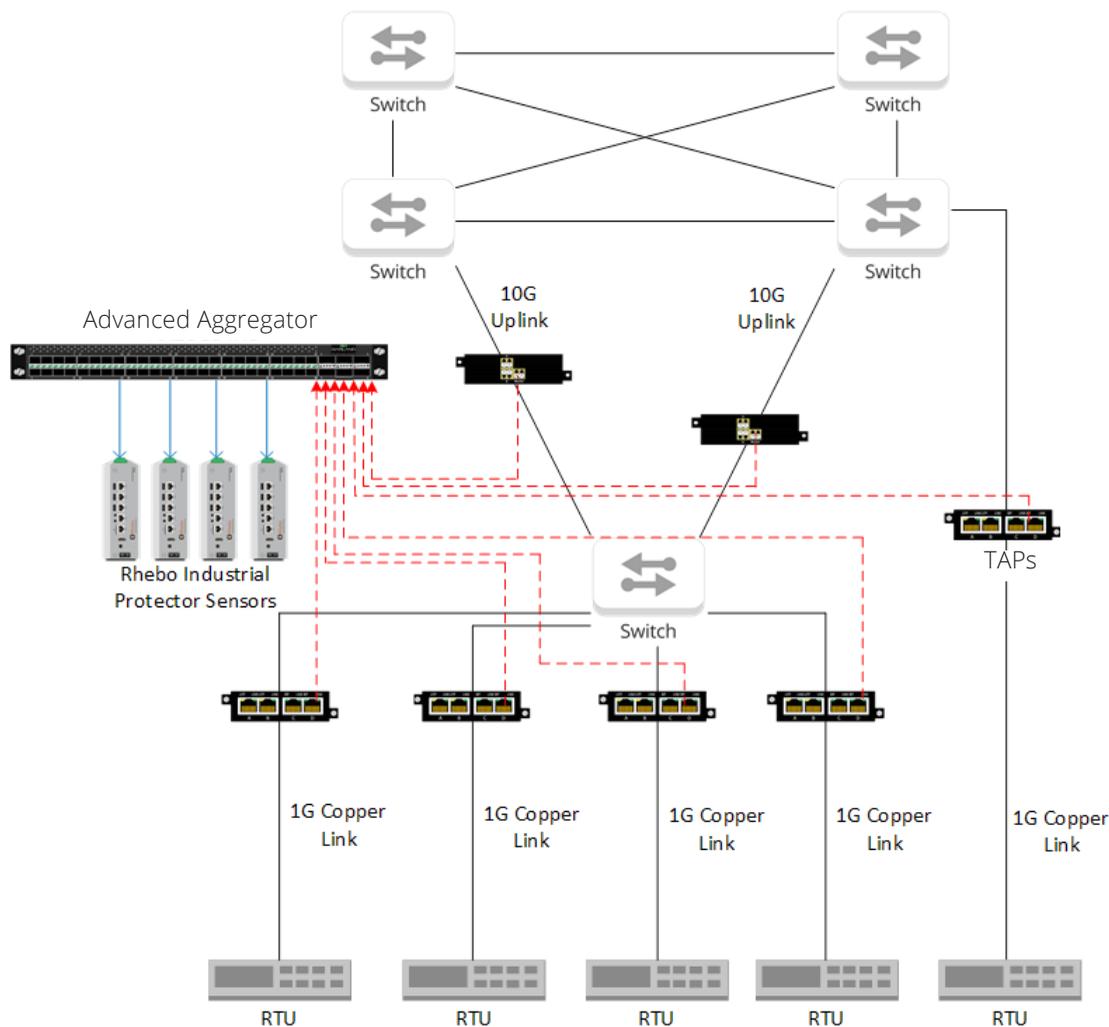
### Goal

Rhebo and Garland combine to increased cyber security and compliance with the IT Security Act as well as DIN ISO 27001, DIN ISO 27002, and ISO/IEC 27019 standards.

### Challenges

The grid operator made three essential demands on the modern security strategy for his network control system: the solution was to monitor all control and supervisory network technology, provide compliance to the German IT Security Act, as well support ISO 27000 initiatives.

Using Garland Technology's Advanced Aggregator, multiple links and speeds can be aggregated together, filtered, and load balanced out to one or many sensors simultaneously. The Advanced Aggregator can be used to reduce the total number of sensors required in the environment and to establish greater control over your monitored network.



## Case Study

Rhebo Industrial Protector was installed at a German distribution grid operator's network control system. The system comprised many hundreds individual devices and services that communicated across different network segments. The segments were monitored at four central access points using four Garland aggregator network TAPs to forward the traffic to a centralised Rhebo Industrial Protector controller. The employment provided a complete picture of all communication processes between the central control system and all telecontrol systems of the substations. The sensors for data collection were installed non-intrusively and passively via network TAPs. The operation of the control system continued without interruption during the installation.

Already during the initial analysis of the Rhebo Industry 4.0 Stability and Security Audit (RISSA), various security- and continuity-related irregularities were identified which could have disrupted plant availability as well as the security of supply. Addressing many of the issues identified in the audit gave the operator a confident baseline pattern for the subsequent real-time anomaly detection by Rhebo Industrial Protector. During on-going operation any new or recurring anomaly was identified in real-time and got immediately reported to the operator.

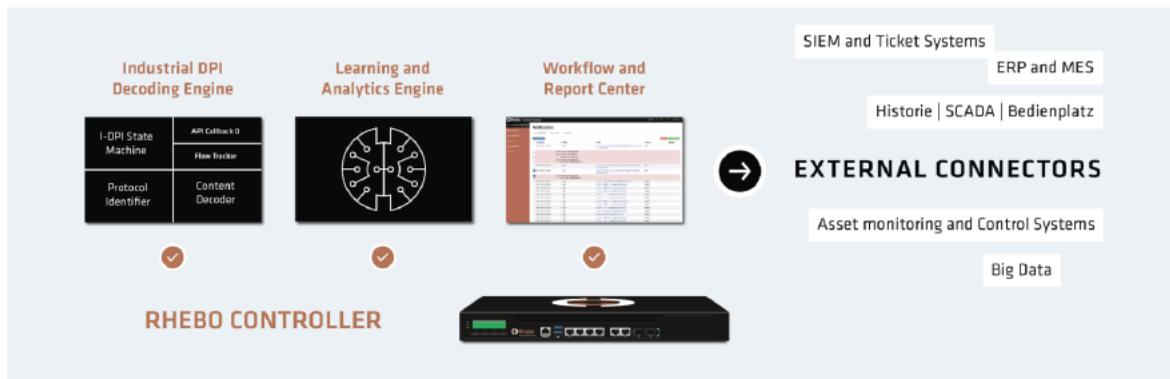
# Benefits

Using Rhebo Industrial Protector, operators of a Critical Infrastructure:

- reduce cybersecurity risk and ensure security of supply through full network transparency and real-time anomaly detection.
- ensure regulatory compliance with BDEW, ISMS, ISO/IEC 27000 and other standards using defense-in-depth and holistic infrastructure monitoring.
- achieve comprehensive incident reporting with detailed audit trail and forensic data.
- implement centralised monitoring of their network control technology via standard interfaces to SCADA, SIEM and other systems.
- keep total control of their data with technology “Made in Germany.”

Using Garland Technology’s passive TAPs and Advanced Aggregators, allows operators to collect every bit, byte and packet necessary with Rhebo Industrial Collector. Garland Technology devices guarantee complete passive listening with no impact on the control network’s processes.

- Garland Technology solutions support 1G, 10G, 40G and 100G network links.
- Garland Technology solutions support DIN Rail, a standardised industrial mounting system designed to reduce cost and time, while improving management.



## About Rhebo

Rhebo is a German technology company that is specialised in ensuring the operational reliability of industrial control systems by monitoring control communications. Rhebo provides hardware, software and services to secure networked industrial control systems and Critical Infrastructure control networks as well as to increase productivity. Rhebo is listed as one of the Top 30 providers for industrial security in Gartner’s “Market Guide for Operational Technology Security 2017.” The company is member of Teletrust – IT Security Association Germany as well as Bitkom e.V. ([www.rhebo.com](http://www.rhebo.com))



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Garland Technology is an industry leader delivering network products and solutions for enterprises, service providers, and government agencies worldwide. Since 2010, Garland Technology has developed the industry’s most reliable test access points (TAPs), enabling data centers to address IT challenges and gain complete network visibility. For more information, or learn more about the inventor of the first bypass TAP, visit [GarlandTechnology.com](http://GarlandTechnology.com) or [@GarlandTech](https://twitter.com/GarlandTech).

