



Customer

Deutsche Energie Funk GmbH
www.deutsche-energie-funk.de

Partner

Welotec GmbH
www.welotec.com

Location

Germany

Challenges

- > Facilitate remote monitoring and control
- > Integrate with existing systems
- > Deliver secure, fast data transmission

Products

Industrial Automation
Sixnet Series VersaTRAK® RTUs

Results

- > Provides a reliable, secure platform
- > Seamlessly interfaces with existing devices
- > Ensures fail-safe communication

“Our secure information superhighway easily adapts to meet the varying requirements of the energy industry. By combining Germany-wide radio frequency together with innovative hardware and software from vendors that include Red Lion, we are able to provide network operators, energy companies, energy system manufacturers and operators of virtual power plants or even airports with a reliable communication solution that enables remote monitoring and control.”

- Stefan Lichy, Managing Director of Deutsche Energie Funk GmbH

Project Scope

Germany continues to lead the energy revolution by integrating alternative energy sources into its mainstream electrical grid supply. According to the “German Renewable Energy Act,” legislation was created to drive alternative energy costs down through the mass adoption of solar and wind generation facilities. Not only is consumption being reduced by the implementation of “greener” technologies, production is also being watched and controlled more closely to better meet renewable generation requirements. With alternative energy plants taking up large amounts of land they are typically remotely located where land is either less expensive or wind patterns are more stable.

Deutsche Energie Funk provides electricity demand and monitoring solutions for the power generation market. Tasked with developing a solution to address the demands of collecting real-time data from different power generation sources, the organization was looking to provide secure communication to remote sites while utilizing native M2M protocols like Modbus for easier integration with field devices and meters. The end goal was to deliver a solution that reliably connects generation plants and substations to many downstream systems such as electrical transportation, storage and substations, which rely on real-time accurate and sensitive data for efficient power source and electrical grid management.

Solution

Deutsche Energie Funk combined its own narrowband radio network with industry-leading hardware and software components to offer an optimal solution for the remote monitoring and control of renewable energy generation facilities. Narrowband radios are used in this smart grid application to deliver high quality of service, real-time communication and long reach of low frequencies. By working with Welotec GmbH to select the Sixnet series VersaTRAK RTUs from Red Lion Controls, Deutsche Energie Funk is now able to reliably collect and store I/O data points from substation equipment located in or near wind farms, solar plants and co-generation facilities. The Modbus registers in the VersaTRAK RTUs then push data to UHF radios that securely communicate with the energy supplier control rooms. The control servers monitor available energy supply with current demand selecting the appropriate mix of generation methods (wind, solar and co-generation) based on a number of requirements.

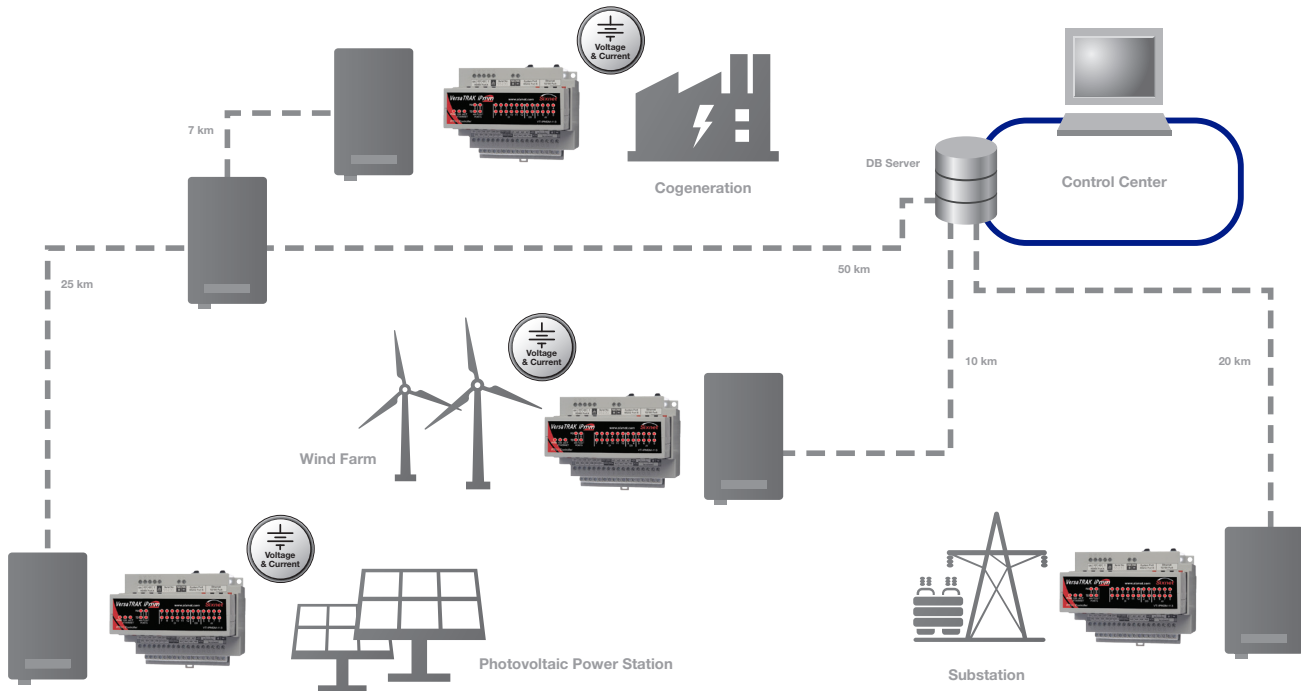
Benefits

Red Lion's rugged VersaTRAK RTUs provide Deutsche Energie Funk with a reliable, secure platform for remotely monitoring and controlling energy generation equipment. The built-in Modbus gateway forms a seamless interface to existing RTU and PLC devices, there by simplifying integration efforts. In addition, Deutsche Energie Funk is able to incorporate different energy meters with a single automation platform. The industrial RTUs, which are configured redundantly in the control center, help to ensure reliable network security and management. The end result is a fail-safe communication network that enables the smart grid provider to better serve customers.

Products

Model	Description
VT-MIPM-245-D	Sixnet Series VersaTRAK Mini IPm RTU
VT-IPM2M-213-D	Sixnet Series VersaTRAK IPm2m Industrial RTU

Network Diagram



www.redlion.net

Connect. Monitor. Control.

Americas
sales@redlion.net

Asia-Pacific
asia@redlion.net

**Europe
Middle East
Africa**
europe@redlion.net

+1 (717) 767-6511

As the global experts in communication, monitoring and control for industrial automation and networking, Red Lion has been delivering innovative solutions for over forty years. Our automation, Ethernet and cellular M2M technology enables companies worldwide to gain real-time data visibility that drives productivity. Product brands include Red Lion, N-Tron and Sixnet. With headquarters in York, Pennsylvania, the company has offices across the Americas, Asia-Pacific and Europe. Red Lion is part of Spectris plc, the productivity-enhancing instrumentation and controls company. For more information, please visit www.redlion.net.