

ABB and FreeWave Technologies Collaboration for Smart Grid solutions

ABB's Smart Grid vision is of a self-healing system, based on industry-wide standards, providing a stable, secure, efficient, and environmentally sustainable network. ABB offers a wide range of world class protection & control products for power distribution systems. The incorporation of FreeWave radios into ABB's broad portfolio of distribution automation solutions will provide utilities and their customers with optimal and secure wireless communication.

The ability to maintain reliable, flexible and secure connectivity between data sources and decision-making points is fundamental for the success of smart grid.

Reliable and Secure

The electrical power system is one of the most critical components of the infrastructure on which modern society depends. The collaboration between ABB and FreeWave assures a complete, flexible, and dependable distribution automation solution for tomorrow's electrical grid.

Cost Effective

ABB's distribution automation solutions are a cost-effective way of providing advanced technology in protection, control, and monitoring functions. Efficient substation wireless communication will improve utility operations, as well as offer a more effective and environmentally friendly network. Our distribution automation solutions significantly boost profitability, power network reliability, availability, and efficiency, resulting in better service and greater customer satisfaction.

Who can take advantage of wireless technology?

ABB distribution automation products are built to be part of any utility or industrial facility such as:

- Energy distribution companies
- Power generation companies
- Municipalities
- Investor owned utilities
- Cooperatives
- Mines
- Paper and petrochemical plants

1



2



3



4



1 REF615 feeder protection and control | 2 OVR-3 recloser | 3 COM600 substation automation | 4 GridGuard switch



FGR2-PE

Smart Grid Applications

The introduction of more intelligent monitoring systems and the expansion of substation automation in distribution networks will optimize operations, bringing improvements in security, flexibility, reliability, and energy efficiency.

ABB's distribution automation portfolio offers the best quality Intelligent Electronic Devices (IED) dedicated to protection, control, measurement, and supervision of power systems. ABB's Relion® product family, which includes the COM600 and IEDs, enables comprehensive, interoperable solutions for reliable protection and automation of power systems. For every need, project and challenge, Relion products are able to provide the best possible solution.

Relion IEDs have been designed to implement the core values of the IEC 61850 standard. They also support the industry standard DNP3.0 and Modbus protocols. They cover both vertical and horizontal communication, including GOOSE messaging and parameter setting according to IEC 61850-8-1.

ABB's COM600 gathers data from protection and control devices, such as relays and meters, and combines different communication protocols into one common contact point. It is the best choice for customers who desire localized and remote data acquisition at small, rural, or remote substations.

ABB and FreeWave Technologies

ABB's Power Products Medium Voltage Distribution Automation group and FreeWave have completed a collaboration that offers embedded 900 MHz radios within ABB medium voltage automated switches and capacitor banks for Smart Grid applications. The program delivers a complete portfolio of Smart Grid feeder apparatus with enabled wireless communication solu-

tions that are reliable, easy to apply, and cost effective. This arrangement allows customers to purchase FreeWave radios for applications that are pre-engineered and configured for ABB reclosers, air insulated switches, breakers, and capacitor banks. ABB maintains its position to embed other wireless communication products specified by customers and continues to develop and implement other communication mediums within its automated products.

About FreeWave Technologies

FreeWave has been recognized as a leader in wireless data solutions since its inception in 1993. These radios are manufactured in the USA, and do not require license or connection fees. These products provide:

- Intelligent protection and wireless communication systems
- Superior stability and accuracy
- Access to system status
- Secure, dependable communications
- Timely notification of alerts and alarms

Summary

ABB works hard to maintain its technological lead by contributing to the evolution of power networks. Better communications and modern technology will provide more intelligent automation devices and better optimized systems.

Benefit from ABB's leading-edge technology, global application knowledge, and experienced support network. Customer support is available 24 hours a day, seven days a week – before, during and after the sale. ABB offers pre-engineered smart grid solutions that incorporate FreeWave wireless technology to improve adaptability and dependability of distribution networks.

ABB Inc.

Distribution Automation

4300 Coral Ridge Drive
Coral Springs, Florida 33065
Phone: +1 954 752 6700
Fax: +1 954 345 5329

www.abb.com/substationautomation

All sales are subject to ABB Inc. General Terms and Conditions of Sale.

While every effort has been made to assure accuracy, the information in this document is subject to change without notice.

© Copyright 2010 ABB Inc. All rights reserved.