



## Wireless Broadband Network Designer and Integrator Adds Remote Network Power Management Capabilities

Wireless Connections utilizes Innovative Circuit Technology’s power products, offering remote DC power monitoring and power control capabilities, and providing comprehensive network power management to their customers.

Using Remote DC Power Management Over Ethernet To Reduce Costly Site Visits

### Company

Wireless Connections,  
Norwalk, OH

### Business Need

Finding a cost effective way to monitor and manage remote DC equipment, including power cycling locked up devices, without having to visit the site.

### Solution

ICT power supplies and DC power distribution panels with Ethernet capability provided remote power monitoring and the ability to shut down or power cycle any DC powered device at the site.

### Business Benefits

- ▶ Maintenance visits and operating costs were reduced
  - ▶ Selective power cycling avoided shutting down power to entire site
- Increased network uptime and quality of service

### Business Need

Even the most robust, well designed wireless communications network can experience problems with network devices, such as microwave radios, routers and network switches. Unforeseen external events such as power surges or lightning strikes can cause these network devices to lock up. For Wireless Connections and their customers, such an instance would often require a visit to the communication site to resolve the problem, a problem where the solution is sometimes as simple as cycling power to the troublesome device.

These events, while infrequent, do require network operators to invest in sending a technician to visit a – often remote – network tower site. During these events, portions of the network may cease to operate, resulting in loss of wireless communications to customers. Not only are maintenance costs increased, but quality of service can be impacted by network downtime.

Most network designs incorporate DC power infrastructure which is used to power various network devices. Historically, any issue with one device would involve shutting down all DC power at the site, resulting in loss of power to all network devices. This is not desirable from a network-uptime perspective. Finding a way to power down only the affected devices, while keeping non-affected devices operational, would allow for the network to remain online while the necessary steps are taken to resolve any issue at the site.

**"The ICT DC Distribution Panels with remote monitoring and power cycling have enabled Wireless Connections to offer a solution to our customers that provides valuable information about the status of a remote site at their finger tips. The ability to remotely power cycle individual outputs reduces the need for costly and time consuming site visits to resolve issues with locked up devices and increases uptime as a result."**

John Staley, Sales Manager

### Business Solution

Many of ICT’s DC power products incorporate Ethernet-based communications, allowing network operators to remotely monitor and control DC power at a site. Parameters – DC bus voltage, battery voltage, total system current and individual load currents – can be easily monitored, and power can be cycled to individual network devices, often removing the need to physically visit a site to resolve an issue. This can be done manually or it can be automated, based on predefined, user-set conditions. No additional software is required; just a PC, tablet or smart-phone using a standard web browser.

Wireless Connections saw many advantages to these features. Using ICT's DC power supply and DC distribution panel to distribute power to individually connected devices, allows for each device to be power cycled without affecting other connected devices. In many cases, this will avoid the issue of a full site shutdown. It also reduces the amount of site visits required to correct issues. For Wireless Connections, being able to offer this functionality to customers was an appealing prospect.

One such Wireless Connections customer is an internet service provider based in Maryland, which offers both residential and commercial high-speed internet services. Wireless Connections was involved in designing the network; conducting RF propagation studies; purchasing all the required network components, including power products from ICT; and performing network installation and testing. Wireless Connections proposed ICT DC power solutions as part of the network design, explained the benefits, and incorporated ICT's Ethernet-enabled products into the network.

### Business Outcome / Benefits

For Wireless Connections' customer, the benefits to this approach are:

- Minimized service calls to communication sites, thereby reducing maintenance costs
- Power cycling to specific network devices to avoid shutting down power to the whole site
- Increase network uptime and quality of service

In addition, Wireless Connections now offers this solution to other customers, providing added functionality and value to their network designs and technical proposals.

**"The team at ICT have been great to work with. They are responsive and provide timely and accurate technical information when needed."**

### About Wireless Connections

Wireless Connections is the leader in providing expertise needed for proper design, equipment purchases, implementation and maintenance of wireless networks in both licensed and unlicensed frequencies. Our typical clients include ISPs, Utilities, Telcos, Emergency Management Agencies, Municipalities and resellers across the country in need of a wireless solution.

We provide solid solutions for your entire network needs and have the resources and flexibility to customize services and training to make every wireless project a perfect fit.

[www.wirelessconnections.net](http://www.wirelessconnections.net)

### About ICT

ICT is a leading manufacturer of power conversion products for land mobile radio, fixed wireless broadband and industrial power markets. Our power solutions help improve uptime, reliability and quality of service, reduce operating costs, and provide remote power monitoring and management of connected loads over Ethernet, often reducing unnecessary visits to remote sites.

