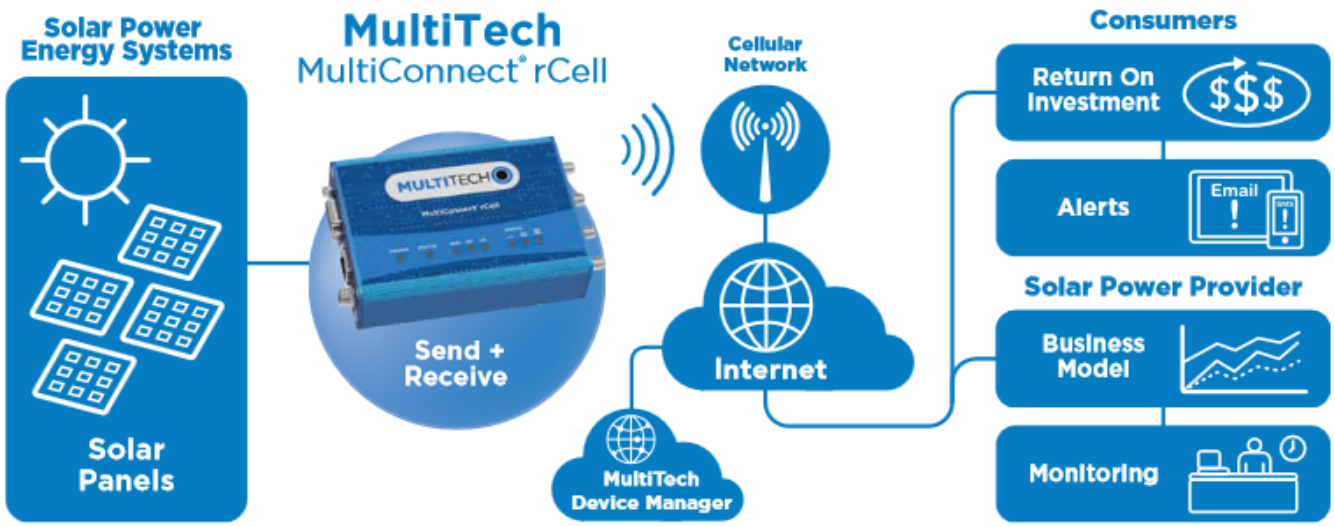
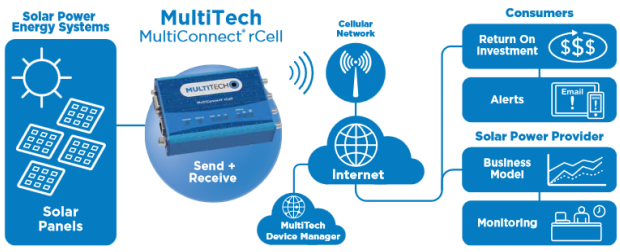
SOLAR ENERGY APPLICATION STORY

MultiTech Cellular Routers Provide Quick and Reliable Connectivity for Solar Power Applications



MultiTech Cellular Routers Provide Quick and Reliable Connectivity for Solar Power Applications

Solar power generation is emerging as a competitive renewable energy resource. As such, service providers are looking to monitor, measure and control remote residential solar energy systems and provide homeowners access to updated system and payback information.



Business Drivers

- Solar energy generation information is needed to reconcile energy sold back to utility companies to ensure ROI. Service providers are presenting analytics to homeowners to support solar energy investment and pay back.
- Service providers require a reliable, low-cost means of accessing remote equipment in order to determine the amount of energy being sold to utility companies and provide homeowners analytics to support their return on investment.

Technical Challenges

- Solar panel control units require remote connectivity
- Homeowner-controlled internet routers are difficult to access, unreliable, or simply not available
- Traditional analog telephone lines cannot be relied upon for data access and in many cases are not available
- Embedded cellular modules are not practical given the time and investment required
- Homeowners security concerns on providing access to their home router

Solution

MultiTech provides internet connectivity via cellular communications and does not use PSTN/POTS lines. MultiTech?s MultiConnect® rCell 100 Series is carrier approved and uses a rugged, SAE tested housing. MultiTech?s solution does not require the homeowner to supply any security passwords or allow access to their home network. It is completely independent of the homeowners network.

MultiTech?s MultiConnect® rCell 100 Series Cellular Routers

The MultiConnect® rCell 100 Series of cellular routers are a part of MultiTech?s comprehensive portfolio of cellular connectivity products optimized for M2M (machine-to-machine) communications. With the Industry?s most cost effective approach to remote device management and shared design approach across multiple cellular technologies, it provides the lowest total cost of ownership to our customers. The MultiConnect rCell 100 Series of cellular routers also offers a long, stable lifecycle, an important consideration for M2M solutions.

Applications The MultiConnect rCell 100 Series of cellular routers are used in a wide variety of applications such as solar monitoring, digital signage, smart vending, smart energy or home medical monitoring. Because the routers are certified and carrier approved, customers are able to quickly deploy with cellular connectivity to realize new revenue streams, Opex reduction or improved service offering. ***Security*** The MultiConnect rCell 100 Series of cellular routers use IPSec industry standard data encryption to provide high performance, secure LAN-to-LAN VPN connections with 3DES or AES encryption using IKE and PSK key management. Support for five concurrent VPN tunnels.			

Wi-Fi/Bluetooth Specifications

The Wi-Fi interface can be set up in 802.11 bgAccess Point (AP) or client mode. In AP mode, the router can support up to 5 client connections. The Bluetooth serial interface allows you to set up a transparent data pipe from a Bluetooth device to a remote server. The router can be configured using TCP or UDP protocols and supports client and server modes giving you the flexibility you need for your particular application. RFCOM and SPP profile support. Contact MultiTech about additional Bluetooth profile support today.

	Wi-Fi • 802.11 bg(1x1) • WEP, WPA, and WPA2 support		*Bluetooth* • Version 2.1+EDR • Power Class 1.5

	• 65 Mbps maximum theoretical throughput		

M2M Focused Software Features

- Remote device management simplifies and scales the management of geographically dispersed devices. Monitor, upgrade and configure devices from a single location resulting in lower total cost of ownership and increased operational efficiency.
- Persistent connectivity options that automatically manage the cellular connection so the connection is available when it?s needed most
- DDNS support for inbound connectivity
- Flexible Serial-to-IP configurations with client and server modes to support any communication architecture
- Flexible GPS configuration allows GPS data to be sent serially or via TCP/UDP protocols in client or server modes
- API (RESTful JSON over HTTPs) for managing all configurations and features of the device enabling integration into external applications

MultiTech Capabilities

MultiConnect® rCell 100Series Cellular Routers

- Internet connectivity using the existing 2G or 3G cellular network
- Pre-certified and carrier approved solution
- Device management from central location

Benefits

- The solar energy service provider maximizes their business model and enjoys a low-cost, reliable wide area network connection
- The solar energy consumer is assured maximum ROI and enjoys near real-time information access

Features

- Remote device management
- 3G and 2G models available
- HSPA+, EV-DO, 1xRTT and GPRS
- Ethernet and Serial interfaces
- Supports IPSec VPN tunnels for secure LAN-to-LAN access
- API
- Models with GPS connectivity
- Models with Wi-Fi®/Bluetooth® connectivity
- Rugged, military and SAE tested
- Carrier approved
- Two-year warranty, upgradable to five year

About MultiTech

Multi-Tech Systems, Inc. has been expanding the connected world by delivering industry-leading communications technology platforms for over 40 years. Offering an extensive line of fully certified and carrier-approved external and embedded modems, routers and gateways, MultiTech works with thousands of customers worldwide to easily enable cellular, analog, Wi-Fi®, Bluetooth® , LoRa?, GPS and other M2M communication capabilities for their IoT applications.