M2M Communication Applications for Medical Devices

MultiTech®
Systems
M2M Simplified™

Multi-Tech products are used in over one million healthcare applications for good reason. Manufactured by a 40-year industry leader with more than 22 million devices deployed worldwide, all of Multi-Tech's products are designed, manufactured and tested in our ISO13485 certified U.S. manufacturing facility. Every device passes a rigid ISO 9001:2008 quality control system and undergoes 100% functional testing.

The healthcare industry is always looking to improve patient care and reduce overall costs. Machine-to-machine (M2M) communications can address both care and costs by enabling access to real-time data from home and mobile devices. However, the complexity of adding a communications element can often delay the time to market and significantly add to the cost of the solution. Multi-Tech can help healthcare companies overcome these challenges.

Challenge #1: Extend Patient Care Into Homes

Healthcare organizations need to consistently and effectively treat patients from their homes, regardless of the existing communication elements available. Remote patient monitoring systems need to take into account the various communication options in residential deployments, including analog phone lines or Ethernet, as well as the quality and availability of these elements. To extend the lives of existing home patient monitoring products, medical OEMs are infusing cellular technology into existing home patient monitoring products.

Solution: MultiConnect® AW Analog-to-Wireless Converter or the MultiConnect® rCell 100 Series Cellular Router
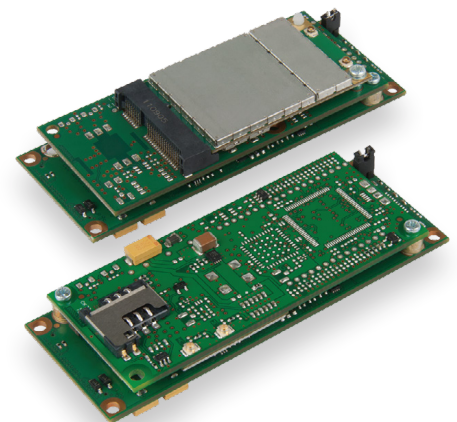
Challenge #2: Reduce Time-to-treatment

A mobile medical device enabled with cellular technology facilitates simultaneous communications between field and hospital care teams. The ability to send patient data to hospital care teams' computers, PDAs or smartphones enables medical professionals to start planning for the appropriate treatment before the patient arrives, which reduces time to treatment. In many cases, as in cardiac events, chances of survival can be greatly improved.

Solution: MultiConnect® rCell 100 Series Cellular Router or the MultiConnect OCG-D, a programmable gateway for the Internet of Things.

Challenge #3: Streamlining the Process

It can take five, six or even more organizations to roll out one application that is enabled with cellular connectivity. For companies to achieve successful cellular deployments and ensure a positive experience for the patient and healthcare professional, it is critical that medical OEMs can look to one point of contact.

Solution: Multi-Tech and Aeris significantly simplify the deployment process, whether it is kitting, activation or deployment of a cellular solution. Through our subsidiary, Connected Development, Multi-Tech can design complete products from wearable devices to stand-alone wireless solutions.

Real World Example

The award winning Health Buddy System from Robert Bosch Healthcare has been utilizing the combined solution from Multi-Tech and Aeris Communications. The Health Buddy, a personal, easy to use, in-home communication and telemedical device, provides a cellular connectivity option to patients without a phone line or home Ethernet connection, or who have home phone connection problems. Easy-to-install, the Multi-Tech cellular router is preconfigured for the Health Buddy appliance. Patients simply attach the supplied Ethernet cable and power cord. It provides a high quality connection and fast data speeds over the Aeris Communications network.

Aeris COMMUNICATIONS

M2M Communications Solutions

MultiConnect® rCell100 Series Cellular Routers

- 2G and 3G, GSM, CDMA and LTE
- RS-232, USB, and Ethernet
- Bluetooth®, WiFi®, GPS
- Maintains device certification – FDA 510(k)
- Extends life of patient monitoring device
- Hosted device management for remote configuration/control

MultiConnect® AW Analog-to-Wireless Converters

- 2G and 3G, GSM and CDMA
- Provides phone line emulation
- ETSI ES 201 970 compliant
- Extends life of patient monitoring device
- Maintains device certification – FDA 510(k)
- Minimal to no application change needed

MultiConnect® OCG-D – The Gateway for the Internet of Things

- Harvest business critical Edge information from your valued assets including sensors, industrial machinery or medical devices
- Rapidly develop targeted IoT applications using our deployment ready hardware and software development framework

Development Hardware
- Includes GPS and cellular modem
- Multiple interfaces available (serial, USB, Ethernet, Bluetooth®, WiFi®)
- 36-pin GPIO interface
- Application-ready hardware platform

CoreCDP™ Software
- Custom Linux distribution branch
- Provides Linux build environment
- Cross-compile thousands of open source software packages
- Create custom applications in a short period of time

Support
- Advanced developer support available
- Established developer community available at www.multitech.net

Deployment Models
- Cellular-only and cellular/GPS models
- Standard and customized deployment models available

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bsi. ISO 9001 Quality Management
FM31060

bsi. ISO 13485 Medical Devices Quality Management
FM 586973

CW100 2014

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