SIERRA WIRELESS™

# Healthcare Solutions

## Solutions for a Connected Healthcare Industry

Wireless data communications is enabling cost-effective new models for healthcare as governments, medical facilities, and insurance companies look for ways to control the cost of delivering healthcare. Mobile and remote applications connect patients to healthcare professionals, enhance preventative care, ensure compliance with prescribed treatments, and ultimately improve the quality of care.

Secure, reliable wireless communications are critical to healthcare solutions that handle confidential patient data and are relied upon for real-time access to this data. From patient monitoring devices to remote healthcare infrastructures and servicing large populations of wireless devices, Sierra Wireless understands that a successful end-to-end wireless healthcare solution can improve patient care efficiencies and enable medical practitioners to transform the way they share critical patient information.

### Healthcare Applications

**PATIENT WELL-BEING**

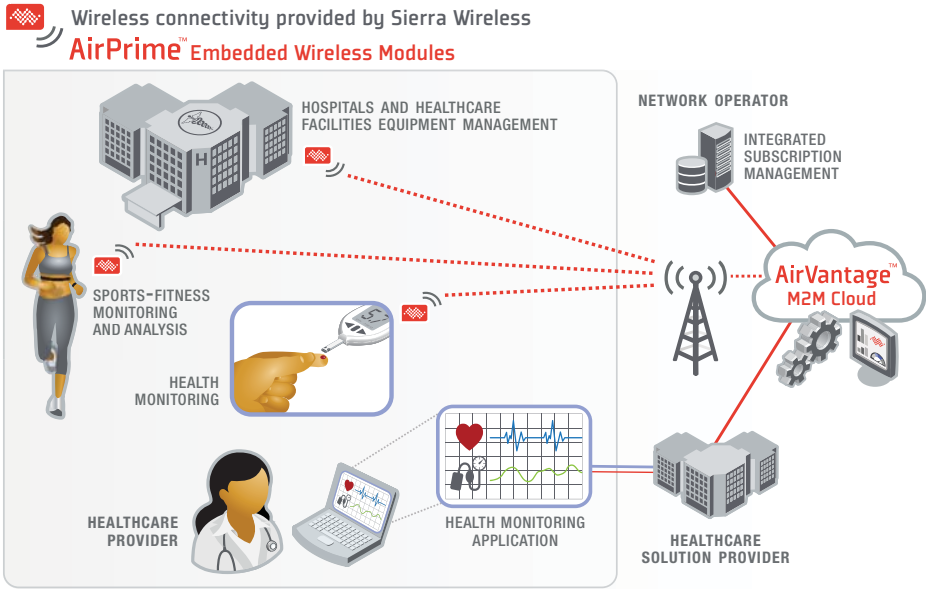
- Monitoring patient conditions while away from the medical facility

**MEDICAL FACILITIES**

- Monitoring and managing equipment in a professional medical environment

**SPORTS AND FITNESS**

- Monitoring athletes and their equipment to enhance performance




Our experience in industries that require secure and reliable communications combined with a portfolio of wireless modules, software, and management services help you meet the challenges of complex communications-enabled healthcare applications. Robust embedded intelligence and comprehensive device management features simplify installation and operation of large deployments and devices installed in disparate areas. The complete solution from Sierra Wireless gives you the ability to:

- Build lightweight, compact solutions using wireless modules that deliver mission-critical data performance, low power consumption and the lowest total cost-of-ownership in the industry
- Reduce cost and expand market opportunities by using modules with footprint compatible form factors and multiple air interface support
- Get to market faster with wireless modules pre-certified for use on major networks worldwide

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# Connecting the Healthcare Industry

| Trends | Challenges | Meeting the Challenges with Sierra Wireless |
|---|---|---|
| **Mobile Health or M-Health Adoption** | • Cost and ease of integrating wireless devices into medical instruments<br>• Network operator certification<br>• Staying current with new wireless standards<br>• Expanding to new markets | • Select from a range of programmable modules that integrate easily with existing equipment and applications<br>• Minimize cost and increase reliability with lean, programmable modules that deliver only the most essential functions<br>• Keep production costs down with form factors designed for fully automated surface-mount, high-volume, quality production<br>• Accelerate time-to-market with pre-certified modules<br>• Future-proof with Sierra Wireless market leadership and standards compliance<br>• Minimize engineering and lifecycle costs when you need to expand to new markets or upgrade product designs with modules that support multiple air interfaces with a single form factor |
| **Home-based management of chronic illnesses and patient compliance** | • Ease of use and installation by the patient<br>• Secure, reliable transmission of sensitive patient data<br>• Patient mobility<br>• Reliable device components that last the lifetime of the product<br>• Cost to service large deployments | • Mobile cellular network connectivity is friendly, fast, and easier than Wi-Fi; no fixed line connection requirement, no need for patients to set up other wireless equipment at home<br>• Secure, reliable, mission-critical wireless connectivity that supports broadband IP connectivity and secure layer protocol<br>• Design products that deliver flexible mobility with:<br>  • lightweight, compact wireless devices hardened to withstand extreme vibration, temperatures, humidity<br>  • low power mode for long battery life<br>  • ability to stay connected anywhere a mobile phone works<br>• Increase reliability while reducing installation and logistics costs with Embedded SIM (subscriber identity module) technology<br>• Reduce quality-related issues with products that have earned a reputation for high volume quality manufacturing<br>• Minimize costs of managing large device populations in disparate areas with AirVantage™ Management Service for remote diagnosis and over-the-air software updates |
| **Real-time mobile diagnosis and treatment** | • Secure, reliable transmission of sensitive patient data including images<br>• Global coverage<br>• Future proof product design for multiple air interfaces and changing wireless technologies | • Secure, reliable, mission-critical wireless connectivity that supports high speed IP connectivity, secure layer protocol, and images/video transmission<br>• Increase reliability while reducing installation and logistics costs with Embedded SIM (subscriber identity module) technology<br>• Cellular networks allow wireless data connectivity anywhere a mobile phone works |

## Mission Critical Reliability

When reliable, consistent data transmission matters, healthcare solution providers can count on Sierra Wireless for secure, always-on, real-time wireless connectivity. Select from a range of wireless modules with low power consumption and advanced battery optimization features. It's no accident that Sierra Wireless solutions are used by emergency services and first responders.

## End-to-End Solutions

Future-proof your solutions with products designed for compatibility with multiple air interfaces. Sierra Wireless is the only company that can offer all the wireless technology you need to bring competitive healthcare solutions to market. There is no need to compromise on performance, ease of integration, or reliability.

- Fully certified and network operator approved wireless modules
- Low power consumption for long battery life
- Compact, lightweight modules with proven performance and reliability
- Cost effective platform lifecycle management capabilities

## Simplify Integration and Deployment

Sierra Wireless software and applications leverage the intelligence built into all modules to simplify integration, deployment, and maintenance. The Open AT® Operating System for Sierra Wireless AirPrime modules provide an execution environment for applications that integrates with existing protocols, allows easy management of wireless communications, and adds advanced security features (such as encryption, SSL and jamming detection) into the wireless module with no extra cost.

## Network Operator Credibility

Sierra Wireless credibility and long-standing relationships with leading wireless network operators help facilitate network certification and connections for your solution. After nearly two decades in the wireless business and ongoing partnerships with some of the world's largest network operators, we can help smooth the certification process for you.

Use pre-certified modules for fast time to market. Or leverage our professional services team to guide you through network certification. Take advantage of our verification and validation experience and strong operator relationships.

## Partner for Success with Sierra Wireless

When you need to deliver healthcare solutions that are reliable, cost-effective and easy to maintain, contact Sierra Wireless. Reduce risk and development cost with proven wireless technologies designed for easy integration, fast deployment and scalability.

## Sierra Wireless is certified with network operators worldwide including:

- AT&T (USA)
- Bell Mobility (Canada)
- O2 (UK and Ireland)
- Soft Bank (Japan)
- Sprint (USA)
- Telecom New Zealand
- Telefonica (Spain)
- Telstra (Australia)
- Telus (Canada)
- Verizon Wireless (USA)
- Vodafone

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## Sierra Wireless Product Advantages

| Healthcare solution requirement | Sierra Wireless AirPrime™ Embedded Wireless Modules |
|---|---|
| • Wireless components that integrate easily into existing medical devices | • Open AT® Operating System and plug-Ins allow easy integration with existing protocols while providing native wireless services |
| • Secure, reliable transmission of patient data | • Modules provide mission-critical reliability with persistent network connections that reconnect automatically. Sierra Wireless modules are already used for:<br>  • Emergency and first response systems<br>  • Financial transactions/applications<br>  • Energy and utilities monitoring<br>• Open AT ensures privacy and security for sensitive patient data with encryption, jamming detection and redundant communication capabilities<br>• Embedded SIM (subscription identity module) reduces SIM theft security threats |
| • Compact, lightweight components for portability and mobility | • All modules support low power mode to reduce battery size<br>• Embedded SIM offers even more miniaturization potential |
| • Low power consumption | • All modules support low power mode to increase battery life and mobility |
| • Scalable, compatible product line | • Modules are scalable, extensible, and form-factor compatible<br>• Allows a single product design that can communicate on any cellular protocol, anywhere in the world |
| • Guaranteed network operator certification | • Use modules pre-certified with major network operators worldwide<br>• Or, use Sierra Wireless professional services and network operator relationships to help with product design, deployment plans, and certification |
| • Low total cost of ownership at every stage of the product cycle | • Minimize development and production costs:<br>  • Integrate applications and modules easily into existing medical devices<br>  • Programmable modules support low-cost, high-volume production needs<br>  • Single form factor footprint supports multiple air interfaces for scalability and compatibility with different network operators<br>  • Embedded software capabilities allow development of efficient embedded applications<br>  • Form factor enables fully automated surface-mount high-volume, quality production<br>• Minimize certification costs with pre-certified modules<br>• Reduce logistics costs with embedded SIM solutions that deploy more conveniently than SIM cards, and simplify inventory management, secure storage, and activation<br>• Reduce deployment risks and ensure quality service cost-effectively with AirVantage™, a comprehensive, scalable, secure service platform with:<br>  • Web portal and powerful tools<br>  • Real-time over-the-air software updates<br>  • Cost-effective remote deployment, configuration, and maintenance of solutions and services<br>• Reduce network certification cost and accelerate time-to-market with pre-certified modules, or use Sierra Wireless professional services to help you through network verification. |

For further company and product information, please visit www.sierrawireless.com

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