



# Optimized Wireless Solutions for Healthcare Facilities



Secure, reliable communications systems  
and services for the most challenging  
healthcare environments

One Company. A World of Solutions.



Today's healthcare facilities contain sensitive medical devices – But patients and their families want to use cell phones and laptops to stay connected – And effective patient care requires timely communication between doctors, nurses, and staff.

### How Do You Make It All Work?

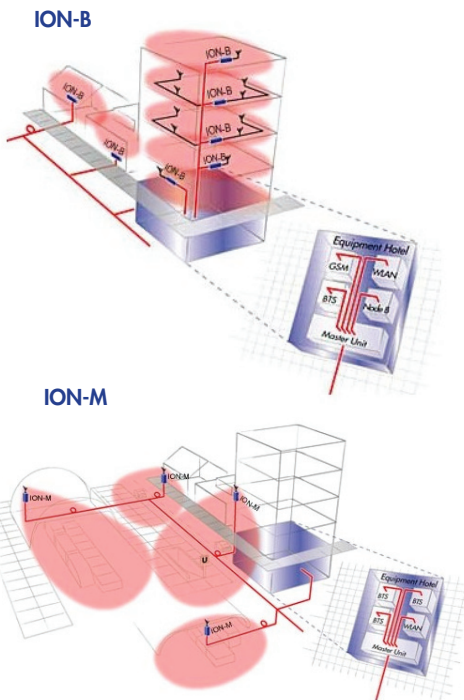
Healthcare facilities are uniquely challenging sites for wireless communications. The healthcare worker of today is mobile. Wireless requirements extend from within one building to across the entire campus, including staff offices, laboratories, multiple medical centers, patient rooms, and garages. Technical issues include mitigating electromagnetic interference (EMI) between mobile devices and sensitive medical equipment and supporting the multitude of patient and staff wireless devices. Administratively, healthcare organizations tend to be under tremendous financial and operational constraints, meaning capital expenditures must be rationalized and produce the expected results.

“Our physicians and resident teams rely on the RF [radio frequency] phones to communicate with each other, more than their pagers,” said Gretchen Tegethoff, information system director, George Washington University.<sup>1</sup> “But there was interference and problems with dropped calls. It also impacted our wireless laptops, which are heavily relied upon by the clinical staff.”

### Reliable Indoor Wireless Networks Are the Answer

The harder mobile phones work to send signal to the closest antenna, the greater the signal power and possibility for interference with other equipment. The way to decrease signal power is bringing the antenna closer by installing an indoor, distributed antenna system. Andrew's ION™ (Intelligent Optical Network) in-building system is an industry-leading, fiber optic DAS, which sends signals loss-free down corridors, into patient rooms and staff offices, and throughout interior nooks and crannies. Andrew's ION is future-proofed, providing the bandwidth necessary to meet future broadband data rates in support of mobile phone calls and wireless LAN applications. A.I.M.O.S., the Andrew Integrated Management and Operating System tool, continuously monitors the ION system, allowing for re-configurations to improve performance and upgrades to new software or frequencies. Adaptable, versatile, and reliable—exactly what Andrew is known for.

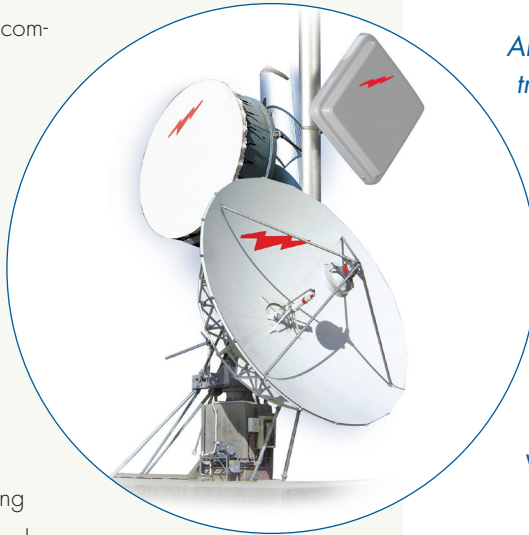
<sup>1</sup>Geering, Deborah. “Plugged In.” *Health Executive*, July 2007: 35-6.



The Andrew ION (Intelligent Optical Network) provides an optimized, easy-to-scale, fiber-based distributed solution for indoor and outdoor applications. Indoor confined horizontal spaces may be covered with an ION-B. ION-M is ideal for more difficult environments, being deployable almost anywhere and easily hidden in street furniture, lamp poles, or building walls.

## Who is Andrew?

Andrew Corporation is a leading global supplier of communications products and systems for the wireless infrastructure marketplace, serving global OEMs and wireless operators from facilities in 35 countries across Asia-Pacific, Europe, and the Americas. Founded in 1937, Andrew has the proven experience to be a long-term solutions provider for radio frequency (RF) transmission in almost any environment. From ensuring mobile phone communications for thousands of football fans in giant sports arenas, to furnishing point-to-point microwave antenna systems in Alaska, to designing and supplying wireless networks across whole countries or within single office buildings, Andrew's expertise is wireless communications.



*Andrew Corporation's "flash" trademark is the benchmark of quality communications equipment and expert RF engineering wherever it appears—on cell tower and earth station satellite antennas, base station subsystem products, and in-building communications systems throughout the world.*

Andrew is poised on the cutting edge of communications technology advancements, developing new products and services to stay at the forefront of the wireless industry. That means a continual supply of solutions as healthcare communication needs evolve. Andrew can provide today's healthcare enterprise with a wide range of scalable coverage and capacity solutions from its extensive product portfolios. Andrew solutions are vast in scope yet tailored to individual need, designed to meet the wireless needs of today and tomorrow. Andrew solutions can meet most budgetary scenarios and logistical footprints, from small offices and clinics to multi-story clinical towers and campuses.

Because of its vast RF design and implementation experience, Andrew can deliver a technologically rigorous solution that provides a fast return on investment. Andrew personnel are highly experienced project managers and design engineers with extensive knowledge of wireless communications. They can effectively lead a team with representatives from OEMs, complimentary solutions providers, or other selected experts as required.

Whatever the wireless need, Andrew has an answer. Whether it is to make more efficient use of existing wireless capacity, enable new coverage capabilities across any amount of space, or upgrade the network to the next generation of wireless applications, Andrew has a solution.

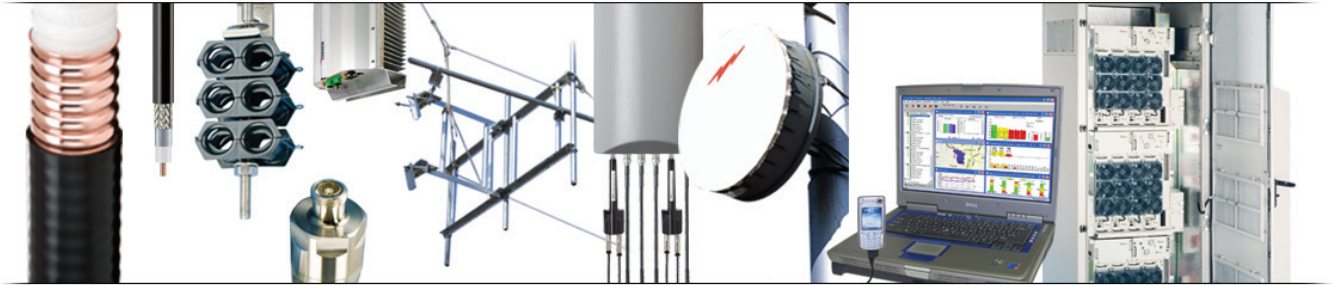


**COMSEARCH**

*An Andrew Company*

*Comsearch, an Andrew company founded in 1977, is an industry leader in spectrum management, including frequency analysis, coordination, and licensing. Comsearch engineers perform site audits of healthcare facilities' complete indoor and outdoor RF environments, deciphering sources of interference and designing optimum network layout. They determine from where RF signals are coming, on what frequency bands they operate, how they impact the overall wireless environment, and if adjustments should be made. In addition, Comsearch is a technical partner with The American Society for Healthcare Engineering of the American Hospital Association (ASHE), developing and hosting the official frequency coordination database for Wireless Medical Telemetry Service (WMTS). Visit [comsearch.com](http://comsearch.com) for more information.*

# Andrew Offers a Clear Advantage in Communications Solutions



Andrew Corporation is the foremost global supplier of one-stop, end-to-end RF subsystem solutions. Andrew designs, manufactures, and delivers complete solutions for wireless infrastructure—from top-of-the-tower base station antennas to cable systems, RF site solutions, signal distribution, and network optimization. The company's long, successful history in the telecommunications marketplace has translated into expanded solutions for sports stadiums, metropolitan railways, international airports, healthcare facilities, and other enterprises.

Andrew serves traditional wireless networks, third generation technologies, voice, data, video, and Internet services as well as specialized applications. The company's full RF subsystem product capability, globally diversified customer base, economies of scale, and financial strength position Andrew as the clear choice supplier.

- Wireless infrastructure
- Coverage and capacity
- Wireless network planning and management
- Mobile location services
- Network test, measurement, and optimization
- Satellite communications
- Terrestrial microwave
- WiMax/broadband
- Radar and HF
- Program management and site services



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