



APPLICATION BRIEF



HEALTHCARE SOLUTIONS

Optical Wireless for Medical Services: High-speed Inter-building Connectivity

THE PROBLEM:

Hospitals and medical facilities serve as the information hub for many health-care campus environments. Dedicated T1 or E1 leased lines often connect physically dispersed medical groups, emergency rooms, intensive care units, operating rooms and radiology facilities. As medical groups embrace technology that enables instant access to digital X-ray images, medical records and other care-related patient files, new bandwidth challenges emerge. For example, if high-resolution CT and MRI images are transmitted over slow 1.54-megabit per second connections, the promise of faster patient diagnosis and treatment will not materialize. As hospitals move to fully digitized patient records to comply with HIPAA standards, inter-facility communication networks will become even more congested.

The Problem: Medical and digital records are overburdening slow T1 and E1 networks that link medical groups and hospitals.

Traditionally, the only viable option for building-to-building communication between health care facilities has been dedicated T1/E1 or leased fiber connections. While some hospitals have made the expensive investment in fiber, many are deterred by the cost-prohibitive

pains of bringing new buildings into the network. With the financial and HIPAA certification pressures faced by the health-care industry, hospital IT groups are demanding economical and secure network alternatives. To eliminate the enormous costs of fiber, existing throughput constraints of T1/E1 lines and installations that can take months, hospitals and medical groups are turning to Optical Wireless solutions.

THE SOLUTION:

Hospitals and medical groups with buildings visible by line-of-sight are turning to high-speed Optical Wireless bridging solutions for real-time medical imaging and patient record transmission. Leveraging proven free-space optics technology that is secure enough for military applications, Optical Wireless solutions combine the speed of fiber with the flexibility of wireless. Using beams of light, hospitals and medical groups can instantly transmit data at ultra high speed without the complications of leased or dedicated lines. With its inherently secure narrow beam, Optical Wireless is virtually impossible to intercept, assuring HIPAA medical record security.



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The solution eliminates:

- Throughput bottlenecks
- Permits and licensing requirements
- Trenching
- Reliance on fixed-line service providers
- In-ground fiber requirements
- Leases and long-term contracts
- Time-consuming installations
- High costs

The Solution: High-throughput beams of light connect medical buildings, eliminating bottlenecks and the high costs of fiber.

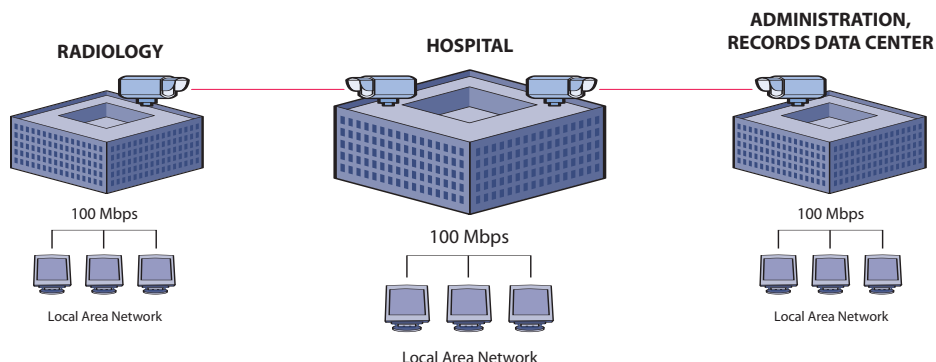
LIGHTPOINTE LEADERSHIP:

LightPointe is a pioneer in Optical Wireless solutions. The company's outdoor wireless products have enabled building-to-building wireless fiber-optic performance for many of the world's largest medical facilities. Designed to meet the budget, HIPAA and availability requirements of hospitals and medical groups, LightPointe securely connects buildings that have line-of-sight visibility within approximately 4,000 meters or 2.5 miles.

Benefits include:

- Ultra-high bandwidth and throughput
- Full line speed, bi-directional communication
- Simple line-of-sight, point-to-point technology
- Multi-beam redundancy (certain models)
- Installed and operational in a day
- Economical alternative to fiber-optic cable
- Not reliant on service provider fiber line availability
- No ongoing charges – simply purchase and install

LightPointe Optical Wireless solutions are deployed in medical facilities throughout the world.



LightPointe extends high-speed network connectivity between multiple healthcare buildings.