

## Business Challenge

Whether running a small business or a large enterprise, having a fast, reliable, and secure network is essential to operational success. And, in today's business climate, it's all about the speed of the network.

Traditional networks or cable cannot offer the speeds needed to remain competitive in the digital economy. Updating legacy networks is complex, expensive, and, at times, a difficult solution to implement. Organizations faced with mounting customer expectations and demand for faster bandwidth is driving fresh thinking about available network options.

Legacy networks transmit data as frequency "vibrations" over copper wires, fiber networks transmit data faster using light over glass fibers.

## The Solution

The RCN Business fiber network provides extremely reliable data transmission speeds (**up to 100Gbps**) which minimizes latency, jitter, and other bottlenecks, bringing you the information you need faster and more reliably.

It is immune to many environmental factors, and resistant to electrical interference like storms that affect traditional networks. In addition, it offers extensive redundancy to protect your business from downtime, delivers equal upload and download speeds, and enables users to accommodate heavy demands with their data connection. With Service Level Agreements (SLAs) to ensure high performance and availability for mission-critical operations, the RCN fiber network is a reliable network option.

## Key Benefits & Results

- 
**UNLIMITED BANDWIDTH**  
 Ensures necessary bandwidth for your needs and provides optimal connectivity.
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**SCALABILITY & FLEXIBILITY**  
 You can rapidly scale bandwidth to your needs as your business grows or reduce as necessary.
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**COMPLETE NETWORK CONTROL**  
 A fiber network allows you to create a network strategy specific to your needs to build your own physical network.
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**RELIABILITY**  
 Full redundancy ensures improved reliability and disaster recovery ability compared to traditional premise-based systems.
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**BUSINESS CONTINUITY**  
 We build redundancy in our secure data centers that protects your business communications system from weather conditions or other business disruptions.



For the second consecutive year, customers chose RCN Business for the "Readers' Choice Awards for Best Internet Provider"

- Ranked #1 for Best ISP
- Highest score in overall value
- Highest likelihood to be recommended to colleagues
- High scores in overall quality and reliability
- High scores in tech support

# Why RCN Fiber Network?

Fiber networks support modern network speeds easily, it can be run over long distances, it enhances security and prevents signal interference, it's easier to install and it doesn't cost that much more than copper, or coax.

The biggest advantage of a fiber optic network is that it can transmit much more data with the lowest loss at higher speed for longer distance.

	FIBER	CABLE	COPPER
TRANSMISSION	Data travels using light over specialized cables packed with glass fibers	Data travels through coaxial cable over copper wires as electricity	(Legacy Networks) Data travels as frequency "vibrations"
SPEED	Speeds up to <b>100 Gbps</b> , symmetrical upload and download bandwidth	Speeds range from <b>10 Mbps</b> to <b>1 Gbps</b> download speeds and upload speeds from <b>3 Mbps</b> up to <b>50 Mbps</b> .	Constrained by the T1 line capacity
	Signal transmission over copper is theoretically limited to the speed that electrons can travel, while signals traveling over fiber optic cables will theoretically be able to reach speeds close to the speed of light.		
AVAILABILITY	Limited mostly to major metro areas and certain cities	<ul style="list-style-type: none"> <li>Typically offered wherever cable exists</li> <li>Most non-rural areas have access to it</li> </ul>	Ubiquitous
RELIABILITY	<ul style="list-style-type: none"> <li>Less likely to go out during a power outage as there is no electricity involved</li> <li>Less susceptible to interference from power lines, electrical equipment, or lightning</li> </ul>	Susceptible to crosstalk and both radio frequency and electromagnetic interference, since it is transferring electrical signals	Prone to the effects of temperature fluctuations, moisture, and interference from radio and electrical signals
DISTANCE	Can run without significant signal loss for long distances		Experience signal loss over long distances; effective limit of a copper run is 300 feet
SECURITY	Fiber optics is a cost-effective way of adding an additional layer of security to any business. You can easily access copper cables by connecting taps to any line to acquire the electronic signals; however, it is more difficult to tap fiber optics cables.		
PERFORMANCE	<ul style="list-style-type: none"> <li>A dedicated line protects against latency</li> <li>Full SLA 99.99%</li> </ul>	<ul style="list-style-type: none"> <li>Share a connection with other businesses; speeds can slow during high-volume times</li> <li>No SLA</li> </ul>	SLA on DSL and T1 lines
ENERGY EFFICIENCY	Light waves transmitted through glass fibers use much less energy than data signals sent through metal conductors of copper cables.		

For more information visit [www.rcn.com/business](http://www.rcn.com/business) or call **1.877.726.7000** or tweet **@RCNBusiness**

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