



NexGen Services  
Jack Bush, President  
17W695 Butterfield Road, Suite A  
Oakbrook Terrace, IL 60181  
847-459-1220

## S&G Communications

[jbush@sandgcom.com](mailto:jbush@sandgcom.com)  
[www.sandgcom.com](http://www.sandgcom.com)  
[www.nex-gen-services.com](http://www.nex-gen-services.com)

VOICE & DATA CABLING – VoIP PHONE SYSTEMS – WIFI – NETWORK SERVICES

# STRUCTURED CABLING

## The Backbone of Your Business

For over 25 years, S&G Communications has designed, built, and maintained state of the art data and communication infrastructure to support large and small enterprises to include Northwestern Medicine, Esmark Steel, Echo USA, Personal Creations, GEA Farm Technology, and more. Our services include:



- Cabling for computers, phones, and wireless access point
- Fiber optic backbones within the facility and demark extensions for high-speed internet
- Wireless/Wi-Fi network design and installation services, testing and support; knowledgeable in warehouse wireless design with racking and inventory
- Internet service from all the major carriers
- Network firewalls for intrusion prevention, ransomware protection and data loss prevention
- Hosted and premises IP phone systems
- Internal network infrastructure, switches and routers

**Our IBEW Local 134 union technicians are known for their quality workmanship and excellent customer service.**



## Upgrades to Your Existing Structured Cabling Network

Older cabling can cause problems in your network's speed and Wi-Fi functionality. If you still have some older Cat 5 cables mixed in with your 5e or 6, they can be a source of network slowness.

As the number of devices in your network increases, inadequate cabling can be the cause of performance or reliability issues. If you have 10/100 switches but Gig network ports on your computers, they can be a point of congestion. If you have Gig switches but orange 1 Gig fiber backbones, that 1G fiber uplink can be struggling to support the 24 users on that switch each trying to communicate at 1 Gig.

Newer wireless access points may now transmitting higher speed data than the network was designed for, it may be time to upgrade your network cable to Cat 6A 10 Gig.

This chart illustrates how upgrading your structured cabling increases your network capability. It's important to know that Cat 6 is compatible with Cat 5, so your cabling network can be upgraded only as needed.

We will work on providing a cost-effective add-on solution that fits with your existing network.

Category	Max Transmission Speed at 100 Meters
Cat 5	10/100 Mbps
Cat 5e	1,000 Mbps / 1 <u>Gbps</u> to 2.5 Gig
Cat 6	1,000 Mbps / 1 <u>Gbps</u> to 5 Gig
Cat 6A	1,000 Mbps / 10 <u>Gbps</u>
Optical Fiber Speed	
OM-1	1 Gig Fiber (Orange)
OM-3 or 4	10 Gig Fiber (Aqua)



## Cabling Inspections

Structured cabling is the backbone of your voice and data network so this is important opportunity to have your cabling infrastructure inspected. Our certified technicians will provide an on-site assessment of your cabling network infrastructure, investigate and implement measures to avoid problems and, if necessary, make recommendations for repairs or upgrades.

## A Site Survey

- Can troubleshoot areas with connection instability
- Helps to determine the exact number and placement of APs to provide optimal coverage, throughput and performance
- Can determine the proper bandwidth needed based on the number and types of users, devices, and locations
- Is crucial to building a network that is secure for authorized devices.
- Can cut installation cost and expedite project completion

## Wireless Solutions

Designed for Complete Coverage

The biggest challenge to optimal WiFi performance in a typical manufacturing, warehouse, or distribution facility is not only the vast size of the structure. The effect of racks and cages, pillars, and stored inventory also have an effect on network performance. Added to these challenges is the complexity of the user needs, from inventory scanning to communications to the use of handheld devices, wireless printing, and more.

Identifying a suitable WiFi solution for your facility largely depends on understanding which technologies can meet the needs of your space, your employees, and your business.



## Contact Us

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847 459 1220



jbush@sandgcom.com

www.sandgcom.com

We are a Veteran Owned Small Business

NexGen/S&G Communications | 17W695 Butterfield Road, Suite A, Oakbrook Terrace, IL 60181

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