

Professional Engineering & Installation Services

- In-Building Cellular signal enhancement including cellular, SMR and PCS systems.
- Point-to-Point microwave engineering with all microwave frequencies and types.
- Omni, Multipoint and SCADA Radio Systems
 1. Special Mobile Radio (SMR) for medical and municipal emergencies
 2. Paging
 3. Cellular and Personal Cellular Service (PCS)
 4. Two way communication systems
- Communication Power Systems
- Wi-Fi engineering and provision
- FAA and FCC filings
 1. FAA - filings for new towers or changes in existing towers
 2. FCC - new and modification FCC filings for all types of licensed radio systems
- Project and site documentation using AutoCAD
- Liaison with local government for tower zoning, adjustments, etc.
- Smart Grid - Monitoring and control of the nationwide electric grid to increase efficiency and reliability.
- RF Grounding - Grounding of communications shelters and other ancillary equipment to minimize unwanted transient RF emissions, spurious voltages and voltage surges that could result in damage to equipment and personnel.
- Tower Grounding: Grounding of towers, antennas and feed lines to minimize lightning strikes and damage to radios, communication equipment and personnel.

Delivering Customer Service and Equipment with:

- ✓ Knowledge
- ✓ Integrity
- ✓ Dedication
- ✓ Value

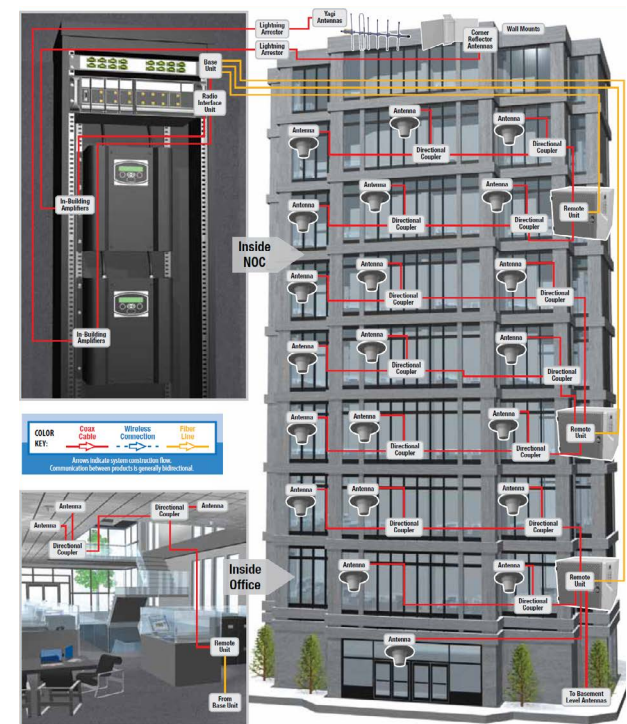
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Microwave Radio Transmission

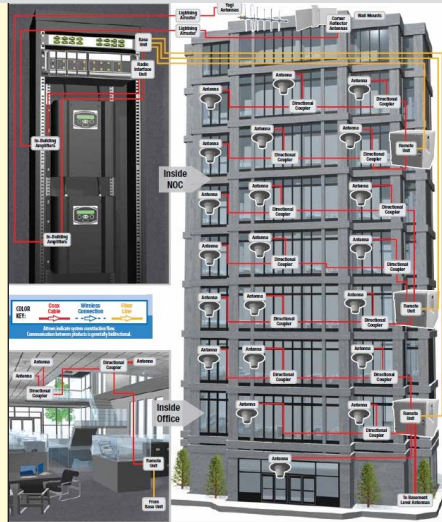


Wireless Solutions

With the need for wireless connectivity growing daily, we recognize that customer requirements vary. We design vendor neutral communication solutions on an individual basis. Our experience helps you determine short and long-term needs that also satisfies budgetary requirements.

Need to Update Legacy Equipment?

As newer technology is continually being developed older technology needs upgrading to meet consumer demands. Microwave Digital Radio (MDR) is gradually being replaced by Microwave Packet Radio (MPR). **Faster speeds, more bandwidth, smarter transmission methods, less maintenance, more advanced and reliable connections, all while supporting legacy systems** are just some benefits of upgrading a system to MPR. Whether upgrading your current system, or designing new systems, we can engineer and provide installations of a reliable system to fit your communication needs.



- Mobile or Two-Way Radio
- Wi-Fi Solutions

We can engineer and install systems in the following environments:

- Office buildings of various sizes
- Warehouses of various sizes
- Under Hydroelectric Dams
- High Rise Buildings
- Parking Garages
- Tunnels
- Underground Generating Facilities (800-1,000 feet underground)
- Illuminate small, defined land areas with cellular signals and Wi-Fi.

Cellular Signal Enhancement

Enhance your signal in areas where cellular signals are weak.

Distributed Antenna Systems (DAS)

Providing affordable, inescapable In-Building wireless applications, including:

- Cellular
- PCS
- Paging



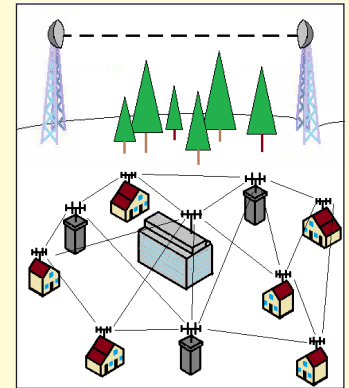
Point-to-Point Microwave

From conception to completion:

- engineering
- site acquisition
- documentation
- filing with the FCC
- and much more!

Applications:

- Cellular backhaul
- Private radio system backhaul
- Public telephone network transport
- Wireless high capacity transport between multiple locations
- Transport of CATV and other video transmissions
- Wireless link for existing fiber optic paths
- Temporary high capacity communications (including voice, data, and video)



Grounding & Power Systems

• **Grounding** - Engineer, design and provide installation of grounding systems for towers and shelters; Provide correction of bonding and grounding discrepancies in existing locations; Meggar Testing; Complete documentation.

• **Lightning & Surge Protection** - Shield sensitive equipment, keep investments safe, protect life against hazards.

• **Power Systems** - The loss of communication could mean an important call or data transfer would be dropped. We provide and install: Backup Battery Systems; Generators; Converters, Fusing designs, -12VDC, -24VDC, -48VDC.



Phillips Communications is a leading distributor of network and power equipment, offering solutions for voice, data and video applications over copper, fiber and wireless infrastructure for over 30 years. Delivering customer service and equipment with KNOWLEDGE, INTEGRITY, DEDICATION and VALUE.