

## INFRASTRUCTURE

Well designed connectivity is crucial to a high-performing wireless system today and tomorrow. By adhering to industry standards for structured cabling and RF cabling, a wireless system will be ready for increased bandwidth requirements and new technology that requires additional cabling.

### COMPONENTS OF YOUR COMPLETE WIRELESS INFRASTRUCTURE

Category 6A Cable	Twisted-pair cable for 10 Gigabit Ethernet with improved characteristics for alien crosstalk, allowing high performance at 100 meters.
Optical Fiber	Transmits light between two ends of the fiber with low loss and is immune to electromagnetic interference.
Composite Cable	A single cable that includes both optical fiber and copper cables to allow for both fiber transmission and power.
Coaxial Cable	RF cable that uses a metal shield with center conductor of solid copper or aluminum, providing better performance and reduced interference.
Radiating Cable	Similar to coaxial cable with tuned slots cut into the shield. Often used in tunnels or elevator shafts.
Power Systems	UPS, PDUs, surge protection and powerstrips protect devices from power surges and provide backup in case of short-term power loss.

#### WE ADD VALUE BY ENABLING:

Technology Selection	Systems Interoperability	Project Deployment
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### COMMON CHALLENGES



Selecting the right **MEDIA**



Investing in **FUTURE-READY** infrastructure



Providing appropriate **POWER**



Maintaining industry **STANDARDS** for cable



Choosing a qualified **INTEGRATOR** or **CONTRACTOR**

“[The structured infrastructure] gives the building an inherent ability to quickly and cost effectively respond to the changing needs of its occupants, which impacts the cost to occupy the space. Whatever the initial cost at inception, the lifetime cost of managing the building is potentially lower with this concept due to the flexibility of use of building space, more productive occupants and higher rental return.”

Source: Facility Executive, The Workspace of Tomorrow. 2017.

## TECHNOLOGY SOLUTIONS



### Media selection

The age and design of a building will indicate which type of cable is best to pull—copper, optical fiber or hardline coax. The choice of media will help define the best type of wireless solution for the building. Category cable and optical fiber are the easiest to pull and are typically recommended.



### Infrastructure

As technology continues to evolve, bandwidth demands are only going to increase. A building's cable plant must be able to service the needs of its occupants with a life-cycle exceeding multiple technology refreshes. Plan to meet these future needs by investing in a utility-grade infrastructure.



### Power

Given the number of active devices in a wireless system, there is a significant need for power quality and protection to ensure continual operation and maintain system uptime. In addition to providing emergency power to these devices, an energy-efficient UPS can protect against power surges, voltage drops and frequency distortions.



### Industry standards

BICSI, TIA and IEEE continue to generate new standards for structured cabling. It is important not only for integrators but also end users to be familiar with these developments. Maintaining a standards-based approach to structured cabling allows for a longer lifespan and easier upgrades to the wireless system.



### Integrators and contractors

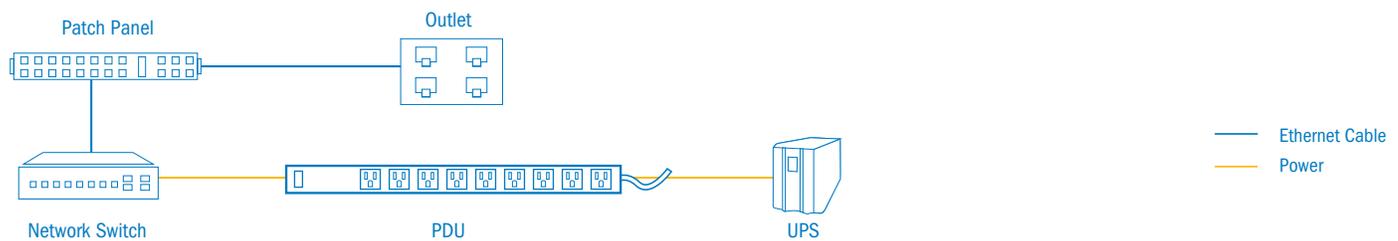
Proper connections are crucial to a working wireless system. A certified wireless integrator or contractor will handle the product appropriately and connectorize and test to make sure the system is deployed properly. A good distributor will be able to connect you with qualified integrator partners.

## CONCEPTUAL SYSTEM LAYOUT

### Infrastructure solutions supplied by Anixter

For system integration and installation, we recommend working with a certified wireless integrator or contractor.

### STRUCTURED CABLING AND POWER PROTECTION



## CONNECTOR STYLES

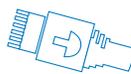
### N-Connector



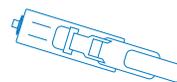
### 4.3-10 Connector



### RG 45 Connector



### APC Fiber Connector



### Wi-Fi Enclosure



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At Anixter, we help build, connect, power, and protect valuable assets and critical infrastructures. From enterprise networks to industrial MRO supply to video surveillance applications to electric power distribution, we offer full-line solutions—and intelligence—that create reliable, resilient systems that can sustain your business and community. Through our unmatched global distribution network, supply chain management expertise and technical know-how, we drive efficiency and effectiveness to benefit your bottom line.