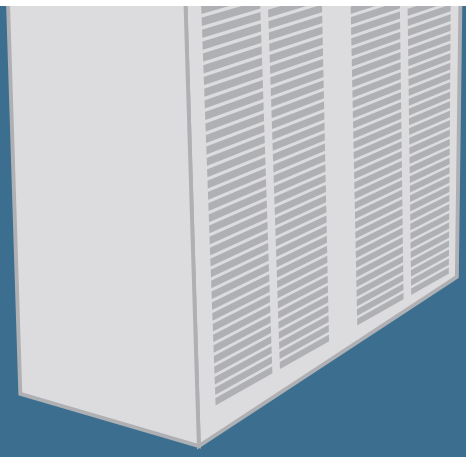
Anixter Complete Technology Solutions

NETWORK INFRASTRUCTURE



RACKS AND ENCLOSURES

Racks and enclosures are the frames, cabinets and housings that support passive components and active electronics across multiple technical spaces and environments. The cabinet is at the heart of the network infrastructure and needs to be designed to consider security, density, connectivity, administration, power and airflow.

COMPONENTS OF YOUR COMPLETE RACKS AND ENCLOSURES SOLUTION

Racks	Standardized 19-in., 2 or 4-post, open frame for mounting telecommunications equipment and network hardware.
Cabinets	Standardized 19-in. closed frame, typically with front and rear vented doors, for mounting network equipment and server hardware.
Wall Mounts	Typically for small installations, where floor mounting is either unavailable or not required.
Zone Enclosures	Includes consolidation point enclosures and telecommunications enclosures that fit under a raised access floor or within a drop ceiling.
NEMA Enclosures	Used in outdoor applications or harsh environments, providing protection against different elements based on the rating.

WE ADD VALUE BY ENABLING:		
Technology Selection	Systems Interoperability	Project Deployment

Equipment is measured in terms of a rack unit (or U) space. One U space is 1.75 in. high. When equipment is installed in a rack, each U space is not to exceed 1.73 in. and the height must grow in increments of 1.75 in.

Source: EIA-310 D.

COMMON CHALLENGES

- Rack **DENSITY**
- **THERMAL** efficiency
- **POWER** delivery and optimization
- Capacity and floor **LOADING**
- **SECURING** assets

TECHNOLOGY SOLUTIONS

Rack density
As rack densities increase, every rack-mount unit becomes more valuable. Optimizing rack space can be addressed in several ways, from angled patch panels, eliminating the need for horizontal cable management, to zero U Rack PDUs moving the power strips to the back of the rack out, freeing crucial RMU space.

Thermal efficiency
More efficient cooling becomes a concern as active stacks at the rack level increase. Both the intake side and exhaust side of the active stack should be free and clear of cable and components. Both passive and active thermal components can be utilized to mitigate increased heat challenges.

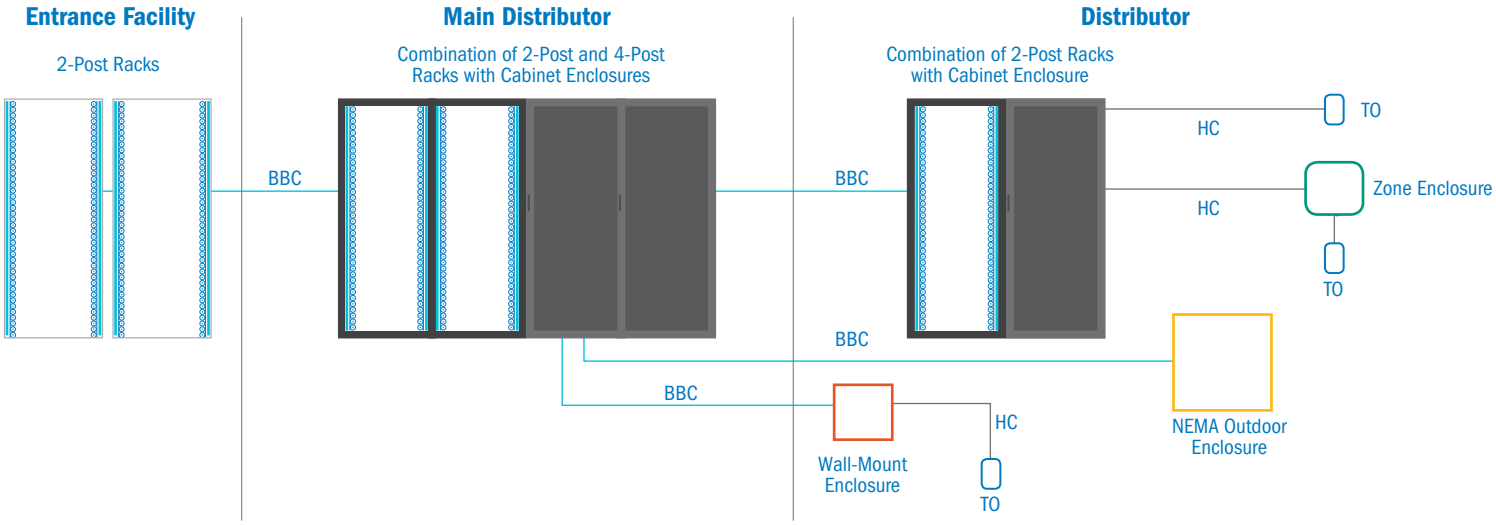
Power delivery and optimization
As rack densities increase, the existing power infrastructure delivered to the rack may not be adequate. Single-phase power may not be sufficient, and 3-phase dual feeds should be considered. If delivering 3-phase to the rack, balancing the load across all 3 phases needs to be addressed for improved power optimization.

Capacity and floor loading
Weight concerns of racks and cabinets should be addressed during the design phase. Verify the manufacturer's static and dynamic load capacities and calculate the weight of the gear that will be loaded in the rack. It is important to know how much weight the floor can withstand where the rack is located.

Securing assets
Security at the cabinet is often not addressed, as multiple departments and service providers require access. This can result in loss of density and improper load balancing, leading to downtime based on inefficiencies and/or human error. To deter this, cabinet-level access control should be considered.

CONCEPTUAL SYSTEM LAYOUT

Racks and enclosures solutions supplied by Anixter
For system installation, we recommend working with a certified contractor.



FOR MORE INFORMATION VISIT **ANIXTER.COM/INFRASTRUCTURE** OR CONTACT YOUR LOCAL ANIXTER REPRESENTATIVE.

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.