

How Does The TIA-1179 Cabling Standard Affect My Healthcare Facility?

Questions & Answers

Q.	What is TIA-1179?
A.	The Healthcare Facilities Telecommunications Infrastructure Standard, or TIA-1179 (hereinafter referred to as the "Standard"), addresses cabling in a healthcare facility. The Standard specifies cabling, cabling topologies, cabling distances, pathways, work areas and other ancillary requirements.
Q.	Why is there a specific cabling Standard for healthcare facilities?
A.	Cabling requirements in healthcare facilities can be much more complex than a standard commercial building or office space, which are covered by the TIA-568 series of standards. To address the unique requirements of healthcare facilities, TIA-1179 was created.
Q.	How will TIA-1179 help me?
A.	Following the guidelines and recommendations in the Standard allows a network architect to be confident that the cabling infrastructure being designed is ready to support today's applications and tomorrow's as well. While it does not describe all aspects of a cabling infrastructure, the Standard is a useful blueprint for how an effective system can be designed and deployed.
Q.	What systems do the cabling described in TIA-1179 support?
A.	According to TIA: "In addition to telecommunication systems, the telecommunications cabling specified is intended to support a wide range of clinical and non-clinical systems (RFID, BAS, nurse call, security, access control, pharmaceutical inventory, etc.), particularly those which utilize or can utilize IP-based infrastructure." This includes standard IP-based systems as well as low-voltage systems such as lighting control, HVAC, nurse call and security control that can be run over structured cabling.
Q.	How is TIA-1179 different from the TIA-568 series of standards?
A.	Although the cabling structure specified in TIA-1179 is based on the TIA-568 standards, TIA-1179 goes further by describing unique healthcare facility requirements for entrance facilities, equipment rooms, telecommunication rooms and enclosures, backbone and horizontal cabling and work areas.
Q.	What unique requirements does TIA-1179 describe?
A.	Just as there are several differences between standard commercial buildings and a healthcare facility, there are also several differences between the TIA-568 series of standards and TIA-1179, including: <ul style="list-style-type: none"> • The recommendation for a minimum of two diverse pathways between the entrance facilities and equipment rooms • A growth factor assumption of 100% for equipment rooms and telecommunication rooms • The recommendation to implement enclosed pathways in air-handling spaces in order to meet infection control requirements (ICRs) • Segregating cables for different networks and applications to support life and safety protocols. This segregation can be physical (separating the cable runs) and visual (different colored cables for different networks). • Work area outlet density (see next page)



Q.	How is a work area defined?
A.	<p>Arguably the most important aspect of the TIA-1179 standard is the definition of work areas. The authors of the Standard understood the unique needs of different work areas in a healthcare facility. The cabling requirements for a waiting room are very different than the patient room or the nurses' station, for example.</p> <p>To reflect these unique needs, the Standard defines 11 classifications of work areas including:</p> <ul style="list-style-type: none"> • Patient Services • Surgery/Procedure/Operating Rooms • Emergency • Ambulatory Care • Women's Health • Diagnostic and Treatment • Caregiver • Service/Support • Facilities • Operations • Critical Care <p>Each of these categories contains specific subgroup work areas, bringing the total number of work areas defined to 75.</p> <p>Each work area is given a recommended density of Low, Medium or High, which provides a guideline as to how many information outlets are appropriate for the space.</p> <ul style="list-style-type: none"> • Low density is defined to be between 2 – 6 outlets • Medium density is 6 – 14 outlets • High density work areas should have > 14 outlets <p>Following these guidelines provide ample room for additional connections in the future and the ability to make temporary connections in work areas where they are important.</p>
Q.	What kind of cabling (or media) does TIA-1179 recognize?
A.	<p>For twisted-pair cabling, Category 6 or higher is recommended in general, but Category 6A is recommended for new installations. For fiber, the Standard recommends 850 nm laser-optimized 50/125 μm multimode cabling. Single-mode cabling is also recognized.</p>
Q.	Is compliance to TIA-1179 required?
A.	<p>Although compliance to TIA-1179 is not required, adherence to the Standard can provide the designer peace of mind that the cabling infrastructure will not only support today's applications, but tomorrow's as well. It should be considered an industry best practice.</p>
Q.	Why CommScope for your healthcare facility network?
A.	<p>We have a long history of designing and engineering innovative infrastructure solutions that help our customers overcome even the most complex network challenge. Our expertise spans virtually all of the world's communication networks – broadband, enterprise and wireless – and we channel this unique perspective to deliver solutions that prepare your network for every technology that the future may bring.</p> <p>CommScope is a trusted resource and partner around the world because we're invested in you: your people, your networks and your success. You inspire us to build the relationships and infrastructure that connect people and technologies across protocols, oceans, and time zones – and to share what we learn along the way. We'll never stop connecting and evolving the business of life at home, at work, and on the go.</p>

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