



Telecommunications
Industry
Association



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TIA STANDARD

Healthcare Facility Telecommunications Infrastructure Standard

ANSI/TIA-1179-B
(Revision of TIA-1179-A)

June 2023

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119 **FOREWORD**

120 (This foreword is not considered part of this Standard)

121 This Standard was developed by TIA Subcommittee TR-42.1.

122 **Approval of this Standard**

123 This Standard was approved by TIA Subcommittee TR-42.1, TIA Engineering Committee
124 TR-42, and the American National Standards Institute (ANSI).

125 ANSI/TIA reviews standards every 5 years. At that time, standards are reaffirmed, withdrawn, or
126 revised according to the submitted updates. Updates to be included in the next revision should
127 be sent to the committee chair or to ANSI/TIA.

128 **Contributing organizations**

129 More than 60 organizations within the telecommunications industry (including manufacturers,
130 consultants, end users, and other organizations) contributed their expertise to the development
131 of this Standard.

132 **Documents superseded**

133 This Standard supersedes ANSI/TIA-1179-A dated July 2017.

134 **Significant technical changes from the previous edition**

135 Significant changes from the previous edition include:

- 136 • References were updated.
- 137 • Addition of balanced single twisted-pair cabling as a recognized media
- 138 • Addition of two category 6A or higher performing cabling runs for every wireless access
139 point as a minimum requirement, with additional horizontal links recommended
- 140 • The document was restructured to fit in the same general format as ANSI/TIA-568.1.

141 **Relationship to other TIA standards and documents**

142 The following are related standards regarding various aspects of structured cabling that were
143 developed and are maintained by Engineering Committee TIA TR-42. An illustrative diagram of
144 the ANSI/TIA-568 Series relationship to other relevant TIA standards is given in figure 1.

- 145 • ANSI/TIA-568.0, *Generic Telecommunications Cabling for Customer Premises*
- 146 • ANSI/TIA-568.1, *Commercial Building Telecommunications Infrastructure Standard*
- 147 • ANSI/TIA-568.2, *Balanced Twisted-Pair Telecommunications Cabling and Components*
148 *Standard*
- 149 • ANSI/TIA-568.3, *Optical Fiber Cabling and Components Standard*
- 150 • ANSI/TIA-568.4, *Broadband Coaxial Cabling and Components Standard*
- 151 • ANSI/TIA-568.5, *Balanced Single Twisted-Pair Telecommunications Cabling and Com-*
152 *ponents Standard*
- 153 • ANSI/TIA-569, *Telecommunications Pathways and Spaces*
- 154 • ANSI/TIA-570, *Residential Telecommunications Infrastructure Standard*
- 155 • ANSI/TIA-606, *Administration Standard for Telecommunications Infrastructure*

- 156 • ANSI/TIA-607, *Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises*
- 157
- 158 • ANSI/TIA-758, *Customer-Owned Outside Plant Telecommunications Infrastructure Standard*
- 159
- 160 • ANSI/TIA-862, *Structured Cabling Infrastructure Standard for Intelligent Building Systems*
- 161
- 162 • ANSI/TIA-942, *Telecommunications Infrastructure Standard for Data Centers*
- 163 • ANSI/TIA-1005, *Telecommunications Infrastructure Standard for Industrial Premises*
- 164 • ANSI/TIA-4966, *Telecommunications Infrastructure Standard for Educational Facilities*
- 165 • ANSI/TIA-5017, *Telecommunications Physical Network Security Standard*
- 166 • ANSI/TIA-5048, *Automated Infrastructure Management (AIM) Systems – Requirements, Data Exchange and Applications*
- 167
- 168



- 169 •
- 170

Figure 1 – Relationship between relevant TIA standards

- 171
- 172 The following documents may also be useful to the reader:
- 173 • *National Electrical Safety Code*® (NESC®) (IEEE C2)
 - 174 • *National Electrical Code*® (NEC®) (NFPA 70)
 - 175 • *Hospital Signaling and Nurse Call Equipment* (UL 1069)

176 Due to the life, health and safety aspects of healthcare facilities, there may be a substantial
 177 number of authorities having jurisdiction (AHJs). Designers and installers are encouraged to
 178 thoroughly research the requirements established by these AHJs.

179 Useful supplements to this Standard are the following BICSI documents: *Telecommunications*
 180 *Distribution Methods Manual*, the *Outside Plant Design Reference Manual*, and *Information*
 181 *Technology Systems Installation Methods Manual*. These manuals provide practices and meth-
 182 ods by which many of the requirements of this Standard are implemented.

183 Other references are listed in Annex A.

184 Annexes

185 There is one annex to this Standard. Annex A is informative and not considered a part of this
 186 Standard.

187 Introduction

188 This Standard specifies a telecommunications cabling system for healthcare facilities and build-
 189 ings that will support a multi-product, multi-vendor environment. It also provides information that
 190 may be used for the design of telecommunications products for these enterprises. Examples of
 191 healthcare facilities can include hospitals, clinics, medical offices, nursing homes, treatment
 192 centers and rehabilitation centers.

193 Purpose

194 The purpose of this Standard is to enable the planning and installation of a structured cabling
 195 system for healthcare facilities and buildings. Installation of cabling systems during building
 196 construction or renovation is significantly less expensive and less disruptive than after the build-
 197 ing is occupied. This applies, in particular, to operating facilities that will have additional re-
 198 strictions (e.g. infection control) on access to spaces and areas after occupancy. Selection of
 199 media and network design is of particular importance for larger healthcare facilities, which may
 200 have a useful life far longer than traditional office-oriented commercial buildings.

201 This Standard establishes performance and technical criteria for various cabling system configu-
 202 rations for accessing and connecting their respective elements. In order to determine the re-
 203 quirements of a generic cabling system, performance requirements for various telecommunica-
 204 tions services were considered.

205 The diversity of services currently available, coupled with the continual addition of new services,
 206 means that there may be cases where limitations to desired performance occur. When applying
 207 specific applications to these cabling systems, the user is cautioned to consult application
 208 standards, regulations, equipment vendors, system suppliers, and service suppliers for applica-
 209 bility, limitations, and ancillary requirements.

210 Stewardship

211 Telecommunications infrastructure affects raw material consumption. The infrastructure design
212 and installation methods also influence product life and sustainability of electronic equipment life
213 cycling. These aspects of telecommunications infrastructure impact our environment. Since
214 building life cycles are typically planned for decades, technological electronic equipment up-
215 grades are necessary. The telecommunications infrastructure design and installation process
216 magnifies the need for sustainable infrastructures with respect to building life, electronic equip-
217 ment life cycling and considerations of effects on environmental waste. Telecommunications
218 designers are encouraged to research local building practices for a sustainable environment
219 and conservation of fossil fuels as part of the design process.

220 **Specification of criteria**

221 Two categories of criteria are specified: mandatory and advisory. The mandatory requirements
222 are designated by the word "shall;" advisory requirements are designated by the words "should,"
223 "may," or "desirable," which are used interchangeably in this Standard.

224 Mandatory criteria generally apply to protection, performance, administration and compatibility;
225 they specify the minimally compliant requirements. Advisory or desirable criteria are presented
226 when their attainment will enhance the general performance of the cabling system in all its con-
227 templated applications.

228 A note in the text, table, or figure is used for emphasis or offering informative suggestions or
229 providing additional information.

230 **Metric equivalents of United States customary units**

231 The dimensions in this Standard are metric or United States customary with approximate con-
232 versions to the other.

233 Floor area conversions are approximate. It is assumed that 1 m² is equal to 10 ft².

234 **Life of this Standard**

235 This Standard is a living document. The criteria contained in this Standard are subject to revi-
236 sions and updating as warranted by advances in building construction techniques and telecom-
237 munications technology.

238

239 1 SCOPE

240 This Standard specifies requirements for telecommunications infrastructure for healthcare facilities (e.g. hospitals, clinics). It specifies cabling, cabling topologies, and cabling distances. Additionally, pathways and spaces (e.g. sizing and location), and ancillary requirements are addressed. Telecommunications cabling specified by this standard is intended to support a wide range of healthcare facilities and systems.

245 In addition to telecommunication systems, the telecommunications cabling specified by this standard is intended to support a wide range of clinical and non-clinical systems (e.g., RFID, IBS, nurse call, security, access control, pharmaceutical inventory), particularly those which utilize or can utilize IP-based infrastructure.

249 2 NORMATIVE REFERENCES

250 The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

- 254 • ANSI/TIA-568.0, *Generic Telecommunications Cabling for Customer Premises*
- 255 • ANSI/TIA-568.1, *Commercial Building Telecommunications Infrastructure Standard*
- 256 • ANSI/TIA-568.2, *Balanced Twisted-Pair Telecommunications Cabling And Components Standard*
- 257
- 258 • ANSI/TIA-568.3, *Optical Fiber Cabling and Components Standard*
- 259 • ANSI/TIA-568.4, *Broadband Coaxial Cabling and Components Standard*
- 260 • ANSI/TIA-568.5, *Balanced Single Twisted-Pair Telecommunications Cabling and Components Standard*
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- 262 • ANSI/TIA-569, *Telecommunications Pathways and Spaces*
- 263 • ANSI/TIA-606, *Administration Standard for Telecommunications Infrastructure*
- 264 • ANSI/TIA-607, *Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises*
- 265
- 266 • ANSI/TIA-758, *Customer-Owned Outside Plant Telecommunications Infrastructure Standard*
- 267
- 268 • ANSI/TIA-862, *Structured Cabling Infrastructure Standard for Intelligent Building Systems*
- 269
- 270 • ANSI/TIA-4966, *Telecommunications Infrastructure Standard for Educational Facilities*
- 271 • ANSI/TIA-5017, *Telecommunications Physical Network Security Standard*
- 272 • TIA TSB-162, *Telecommunications Cabling Guidelines for Wireless Access Points*
- 273 • TIA TSB-5018, *Structured Cabling Infrastructure Guidelines to Support Distributed Antenna Systems*
- 274
- 275