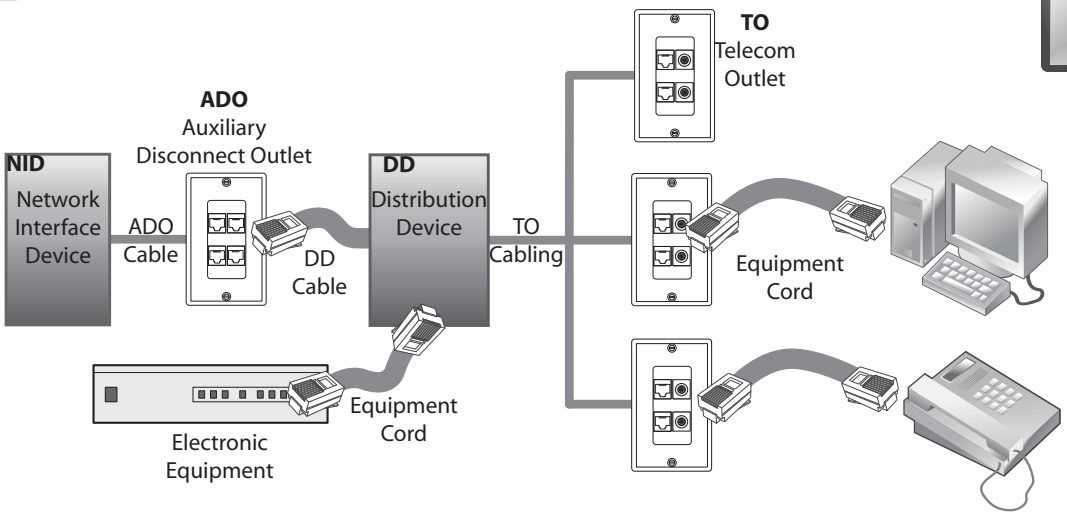
residential systems



Structured Cabling

Structured Cabling is a communications cabling infrastructure that consists of a number of smaller elements called subsystems. The current standard for residential structured cabling is the EIA/TIA 570-B, released in April of 2004.

Telecommunications Industries Association (TIA) publishes the TIA-570-B Residential Telecommunications Infrastructure Standard, which addresses residential structured cabling systems using coaxial cable and unshielded twisted-pair cables. The TIA-570-B standard also includes information on security, whole-house audio and home automation cabling. There is an update to this that is currently in the works and will provide additional performance requirements for the coaxial cabling to both accommodate current as well as future requirements, including high definition television (HDTV) streaming video. A structured cabling system consists of the following:

Network Interface Device (NID)

The NID contains a demarcation point between the exterior and interior of the residence. This is typically the point at which the service provider has responsibility for exterior cabling up to the NID, and the residential integrator has responsibility for the interior cabling beyond the NID.

Auxiliary Disconnect Outlet (ADO)

The NID is connected to the ADO, typically with one cable for each incoming service, such as telephone, cable television, satellite, etc. The ADO allows the incoming services to be quickly disconnected for the purpose of testing.

Distribution Device (DD)

The DD is connected to the ADO via a quick disconnect cable, known as the DD cable. The DD is the heart of the structured cabling system. It brings together outlet cabling and equipment cabling. When possible, the DD is centrally located in the residence, thus minimizing cabling lengths. In addition, it is placed in a location that provides a high degree of serviceability.

Telecommunications Outlet (TO)

The telecommunications outlets connect to the DD via TO cabling. The TO cables are typically UTP, coaxial, and optionally fiber optic. The telecommunications outlet provides the interface between the structured cabling system and the consumer equipment, such as telephones, televisions, and computers.

In many respects, a residential structured cabling system is a scaled-down version of commercial cabling system. Our table provides a comparison of the terminology difference between residential and commercial structured cabling systems.

Residential versus Commercial Cabling Systems

	Residential	Commercial
TIA Standard	570-B	568-B
Service disconnect	ADO	N/A
Connection between cross-connect panels	N/A	Backbone cabling
Cross-connects	DD	Main cross-connects, Horizontal cross-connects
Cable to TO	TO cable	Horizontal cable
User interface to system	TO	TO

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