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| **Advanced Cable Certifier Specification** |
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# Cabling/Testing Standards

## Key Specifications/Standards

The tester must be capable of testing to the following standards: TIA 1152-A and IEC 61935-1. Refer to the table below for details. The unit should meet Cat8 specifications.

|  |  |  |  |  |  |
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| **TIA 568-C (Cable / Components)** | **TIA 568-C (Link)** | **ISO/IEC 11801 (Cable / Components)** | **ISO/IEC 11801 (Link)** | **Frequency**  **Bandwith** | **Required Tester Accuracy** |
| **Cat 5e** | **Cat 5e** | **Cat 5e** | **Class D** | **1-100 MHz** | **Level Iie** |
| **Cat 6** | **Cat 6** | **Cat 6** | **Class E** | **1-250 MHz** | **Level III** |
| **Cat 6A** | **Cat 6A** | **Cat 6A** | **Class EA** | **1-500 MHz** | **Level IIIe** |
|  |  | **Cat 7** | **Class F** | **1-600 MHz** | **Level IV** |
|  |  | **Cat7A** | **Class FA** | **1-1000 MHz** | **Level V** |
| **Cat 8**  **Cat 8.2** | **Cat 8 (30m)**  **Class II (30m)** | **Cat 8.1**  **Cat 8.2** | **Class I (30m)**  **Class II (30m)** | **1-2000 MHz** | **Level 2G**  **Level VI** |

## Accuracy

Measurement accuracy verified by ETL to exceed TIA level IIIe, Level IV and V.

**New Specifications**

## TIA Category 8

TIA Category 8 is now a standard. An advanced cable certifier should support the latest specifications/

* 1MHz to 2000MHz
* Support for 40GBASE-T (IEEE P802.3bq)
* 30m Channel length, 26m permanent link length
* Support for improved Cat6A components and backwards compatible to 5e
  + RJ45 plug/Jack (Cat 8.1)
  + F/UTP or S/FTP cable
* Extension of Cat6A to 2000MHz
* Additional higher performance based on enhanced CAT7A components (CAT 8.2)
* Offers Direct Attach testing

## Testing to higher frequencies

* Level 2G testers (moving up from Level V)
  + Specified through 2000MHz
  + TIA 1152-A Standard (similar to ISO/IEC 61935-1)
* Test parameters
  + Wiremap
  + Length
  + Insertion loss
  + NEXT
  + ACR-F
  + Return loss
  + Delay
  + PSNEXT
  + PSANEXT
  + ACR-N (ISO/IEC only)

# Testing Configurations

## Media and Standards

* Cat5e/6/6A/7/8
  + Permanent Link
  + Patch Cord
  + MPO/MTP fiber

## Equipment configuration

* Ability to operate test from either end of a cable run
* Configuration of up to three Remote units reporting to one Local unit
* Full touchscreen operation from Local or Remote units
  + Display of test results and faults
* Modular adapters with replaceable leads/cables