Testing and Certification for Power over HDBaseT (PoH) Cables

HDBaseT technology creates unprecedented opportunities to merge uncompressed full HD digital video, audio, 1000BaseT Ethernet, USB and various control signals and power onto a single 100m 4-pair communications cable equipped with RJ-45 connectors. However, as cable power levels increase, the heat generated within these cables increases as well. When cables are bundled together — a common occurrence in typical installations — they may operate at temperatures above their temperature rating, presenting safety concerns. Additionally, higher temperatures in copper wires also increase cable insertion loss, which can adversely affect cable performance.

Address safety and performance concerns with HDBaseT certification

To support continued safety, UL Solutions worked with HDBaseT Alliance to develop a certification program for Power over HDBaseT (PoH) cables.

In the certification program, we test and evaluate HDBaseT cables in accordance with UL 4299, Outline of Investigation for Power Over HDBaseT (PoH) Cables. We test cables in a specified bundle at 100 watts and verify the HDBaseT parameters at the temperature measured during operation.

HDBaseT Recommended Cable Program

When designing installations, owners, specifiers and installers need cable that supports HDBaseT. The HDBaseT Alliance established the Recommended Cable Program to empower manufacturers to independently demonstrate their cables support HDBaseT. The latest version of HDBaseT — Spec 3.0 — doubles the uncompressed bandwidth that can be delivered over an HDBaseT channel. This increase places greater demands on the communications cable infrastructure, underscoring the importance of cabling that has been properly tested to the HDBaseT specifications.

UL Solutions is an HDBaseT Alliance Recognized Testing Facility and performs rigorous testing to evaluate whether submitted cables meet requirements for inclusion in the Recommended Cable Program. We can test all versions of HDBaseT, including Spec 3.0.

Benefits of the program

A consistent test method for evaluating cable performance when subjected to elevated temperatures caused by power handling and bundling.

Test-based requirements allow for innovation in cable design.

Factory inspection and market surveillance under UL Solutions Follow-up Services program to support ongoing compliance and reduce risk.

Broad industry recognition of the UL Certification Mark.

Easy partnership with UL Solutions for the addition of PoH certification.

To submit cables for the HDBaseT's Recommended Cable Program, Power over HDBaseT Cable certification or for additional information, visit **UL.com/poh**

About UL Solutions
A global leader in applied safety science, UL Solutions transforms safety, security and sustainability challenges into opportunities for customers in more than 100 countries. UL Solutions delivers testing, inspection and certification services, together with software products and advisory offerings, that support our customers' product innovation and business growth. The UL certification Marks serve as a recognized symbol of trust in our customers' products and reflect an unwavering commitment to advancing our safety mission. We help our customers innovate, launch new products and services, navigate global markets and complex supply chains and grow sustainably and responsibly into the future. Our science is your advantage.

UL Solutions

Safety. Science. Transformation.™

EM23CS724191