HDBaseT for Public Transportation
Whether by car, bus, train, foot, or flight, a significant portion of our lives is spent commuting. Besides the obvious environmental benefits of using public transportation, the freedom of not driving allows us to catch up with news, entertainment, and even work-related activities. Today’s expectation is to have an enhanced digital experience everywhere, and public transportation is no exception. Proper in-vehicle connectivity in public transportation is a must to deliver the ultimate ride experience, optimizing the delivery of content in trains, buses, airplanes, and in train platforms and bus stations. In addition, it provides an optimal solution not only for updates and information to travelers, but also for advertising possibilities, generating increased revenues for transportation companies.

The AV Challenges in Transportation

Delivery of content in buses and trains must contend with several limitations:

- Limited space for cabling
- Long distance transmissions
- Increased number of systems and devices that demand connection
- Power sourcing
- Need for scalability, particularly in bus and train stations
- Retrofitting existing infrastructure and future-proofing the system
- Electromagnetic interference
What is HDBaseT?

HDBaseT delivers high-throughput connectivity in the transportation sector, addressing the challenges and demands of the market, with a one-cable solution for long-distance, high bandwidth transmission.

HDBaseT – the ultimate connectivity technology developed by Valens – is a global standard for the transmission of ultra-high-definition video & audio, Ethernet, controls, USB and up to 100W of power over a single cable, for up to 100 m/328 ft. HDBaseT eliminates cable clutter without compromising performance and high quality, enabling real time, content transmission, with near-zero latency. HDBaseT can be transmitted over a variety of cables and connectors, including unshielded twisted pair, Category cable (standard or ruggedized), fiber, RJ-45 and M12 connectors.

Up to 100m over copper
or 10km over fiber
The HDBaseT Ride

HDBaseT is an optimal solution for several applications in the public transportation sector, such as:

On-board AV Infrastructure & Digital Signage

Digital displays allow passengers to receive up-to-the-second route updates, supporting both static and dynamic content and advertisement. HDBaseT supports daisy-chaining, multistreaming, and networking, simplifying and optimizing connectivity of several displays, cameras, and audio devices over one single cable. HDBaseT enables the seamless convergence and transmission required for displays, public announcement speakers, emergency microphones, security cameras, and stop buttons, as necessary.

*SMARC: Smart Mobility Architecture
Station Infrastructure

HDBaseT optimizes connectivity in train and bus stations, by converging several different interfaces over the same cable. Daisy-chaining, multistreaming and native networking provides further flexibility for the delivery of information, advertising, announcements and more. HDBaseT enables emergency mic operation, security camera applications and video transmission to displays around the stations.
**Infotainment**

HDBaseT provides the necessary infrastructure for high-quality entertainment, while ensuring stable and secure connectivity. HDBaseT enables in-seat connectivity, including USB support for streaming and device charging.

HDBaseT’s ability to converge different interfaces and transmit high bandwidth over a single twisted pair cable translates into overall lower total system cost, including less fuel consumption due to lower cabling weight.
HDBaseT: The Ultimate Connectivity Solution for Public Transportation

Valens’ HDBaseT solution translates into less cabling, less complexity, lower costs, and easier maintenance. HDBaseT for transportation provides a highly cost-effective solution for many transportation use cases, improving the transit experience for both passengers, authorities, and transportation companies.
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