DALI+ and wireless gateways explained in new DALI Alliance Technical Guides

Piscataway, NJ, USA – October 22, 2021 – The DALI Alliance, the global industry organization for DALI lighting control, has published two new Technical Guides that give more details about the DALI specifications for wireless and IP-based connectivity. One Technical Guide examines wireless lighting control with DALI gateways, while the other explores the DALI+ specification for providing DALI lighting control over wireless and IP-based networks. Both comprehensive guides are available for free at www.dali-alliance.org/downloads.

DALI has become one of the world's most popular open protocols for digital lighting control. Based on the open global standard IEC 62386, DALI was originally built around wired networks, but has recently broadened its scope to encompass wireless applications. The two new Technical Guides set out different ways of using wireless connectivity for lighting control, giving designers the flexibility to match the control system to their specific requirements.

As described in the first Technical Guide, wireless to DALI gateways allow existing DALI wired products to be used in a non-DALI wireless ecosystem. Initially, the DALI Alliance has specified two gateways, with Bluetooth mesh and Zigbee as the wireless ecosystems.

Devices in the ecosystem communicate using their existing protocol, and talk with the gateway. The gateway allows the ecosystem to control the light output and fading of the drivers in the DALI system. Some of the DALI system data can be accessed by the ecosystem, including lamp failure information and selected data from Parts 251-253 (luminaire, energy and diagnostics data).

The alternative approach (and subject of the second Technical Guide) is to use DALI+, which is DALI over wireless and IP-based DALI networks. DALI+ uses existing DALI commands transported across wireless and/or IP-based carriers.

Initially, DALI+ supports Thread, an IP-based, low-power, wireless mesh networking protocol, as the carrier. In future, the DALI Alliance is considering adding DALI+ support for other carriers including Bluetooth mesh, Ethernet (including Power over Ethernet, or PoE) and Wi-Fi.

The Technical Guide describes many aspects of DALI+ systems and architecture, including the functionality of bridges which can link DALI+ and wired DALI systems, as well as addressing, security, and commissioning.

For further details about both approaches to wireless lighting control with DALI, download the Technical Guides at www.dali-alliance.org/downloads.

About the DALI Alliance:

The DALI Alliance (also known as the Digital Illumination Interface Alliance or DiiA) is an open, global consortium of lighting companies that drives the growth of lighting-control solutions based on

internationally standardized Digital Addressable Lighting Interface (DALI) technology. The organization operates the DALI-2 and D4i certification programs to boost levels of cross-vendor interoperability. As lighting continues to evolve and converge with the IoT, the DALI Alliance is also driving the standardization of wireless and IP-based connectivity solutions. For more information, visit www.dali-alliance.org.

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