Making Data Acquisition Easy
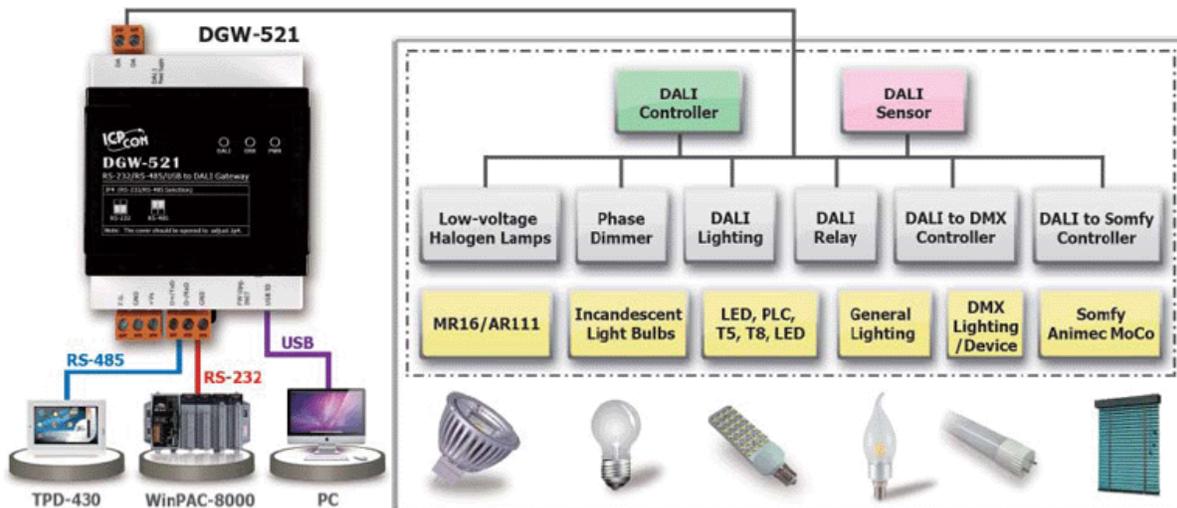
Industrial DALI Gateway

DALI stands for Digital Addressable Lighting Interface. It is a worldwide standard, specified by the International Electrotechnical Commission (IEC). The DALI protocol is set out in the technical standard IEC 62386. It is widely used in control lighting in building automation, it supports 0-10 V lighting control systems, and as an open standard alternative to Digital Signal Interface (DSI).

According to ZVEI, DALI is described as a protocol for communications and control of lighting equipment. This includes Control Gear (not just ballasts but also LED drivers, switching devices, emergency inverters, color control and so on) and Control Devices (buttons, rotaries and sliders, presence detectors, light sensors…) as well as the requirements for bus power supplies, which may be standalone devices or integrated with Control Gear or Control Devices.

Controllable lighting systems are the key for energy saving in building lighting installations – with the additional benefit of increased comfort and safety. DALI supports total control with variable output installation, such as dimming and individual control tasks. As a result, it can save up to 80 percent of energy savings.

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A single pair of wires comprise the bus used for communication to all devices on a DALI network. The network can be arranged in a bus or star topology, or a combination of these. DALI is not classified as SELV (Separated Extra Low Voltage) and therefore its wiring may be run next to mains cables or within a multi-core cable that includes mains power. Data is transmitted using Manchester encoding and has a high signal to noise ratio which enables reliable communications in the presence of significant electrical noise.

The DGW-521 is a communication gateway between the Modbus RTU/DCON and the DALI (Digital Addressable Lighting Interface) protocols, and allows a Host PC, PAC, or TouchPAD to access DALI devices by providing three interfaces that enable conversion from RS-232/RS-485/USB to DALI. The module provides a built-in DALI power supply that can be enabled or disabled via a switch. DALI is an international standard for lighting control interfaces, and is suitable for DALI lighting systems covering small areas. The maximum length of the DALI signal cables cannot exceed 300 m.

If you have other industrial communication requirements or have questions, we can certainly help you to choose the best solution. Please call our technical support team at (310) 517-9888 X102