Battery-free Wireless Communication Technology for Sense and Control Applications

GreenPeak Technologies announces open standard, easy-to-install wireless communications devices for sensor applications that can operate without power cabling or a battery. These new wireless communication devices leverage three key technologies that enable it to operate in a battery-free environment without cabling.

The first is an ultra-low-power wireless transceiver and sensor interface design with efficient power-up and power-down modes that dramatically reduce power consumption. Second is an energy harvesting interface that enables the modules to utilize power provided by e.g. external solar, electromagnetic, and piezo-electric transducers. Third is a mesh technology that enables designers to create extended sensor networks without the need for battery-powered or cabled routing nodes. This innovative mesh technology is also self-forming and self-healing, making it easy and inexpensive to install.

&quotThe strength of a truly wireless sensor network can only be fully utilized when the wiring for both the data communications and power cables can be eliminated,&quot said Cees Links, CEO of GreenPeak Technologies. &quotGreenPeak is a company with a true battery-free vision that offers wireless communication solutions eliminating the need for both communication wiring and power cabling.&quot

GreenPeak is initially offering its low-power communication technology as the ‘Lime CM-08’ module, a tiny 5 cm^2 (less than one square inch) electronic component that OEM customers can integrate into their products. The tiny module functions as a stand-alone communication system, integrating a transmitter/receiver, antenna, and low-power mesh network software on a single device. The module’s software can be configured to manage the power of different types of energy harvesting devices. OEMs can also add their own applications to the module, thereby eliminating the need for an external processor and lowering total system cost.

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