

**One-Page Overview:**

Built Environment Category

**Solution Name:** Daintree Networks® ControlScope®, networked wireless building control for smart buildings

Daintree Networks, with over 80 million square feet under networked control, is a trusted and leading provider of smart building control and operation solutions, the core application for the Enterprise Internet of Things™. Daintree Networks ControlScope is an open standards-driven control, monitoring, and optimization solution for facility, operations, energy, and sustainability professionals. Using advanced wireless mesh networking and software, ControlScope delivers up to 70 percent energy savings, operational efficiencies and up-time as well as occupant comfort, while providing actionable decision-support information through Big Data analytics. Leveraging Daintree's Enterprise Internet of Things™, or E-IoT™ approach, the solution utilizes sensors to also monitor other conditions, such as air quality, humidity, building security and more that comprise the networked ecosystem of an organization.

Daintree Networks' ControlScope is the industry's first standards-driven, networked wireless solution that is accelerating the adoption of technology for smart building control and operation. The ControlScope technology enables commercial buildings to significantly reduce energy consumption and carbon emissions since buildings currently consume 41 percent of all energy worldwide and produce 21 percent of the world's carbon emissions. ControlScope provides an open-standards-driven solution that allows interoperability with devices from other vendors, which means competitive pricing, and the flexibility to customize the network to match the customer's specific energy control needs. The ControlScope technology can provide the return on investment to one to three years.

ControlScope powers a wireless mesh network formed using ZigBee® standards-based lighting fixtures, sensors, wall switches, thermostats, and plug load controllers. By enabling new devices such as wireless sensors to be placed where needed, rather than restricted to where they can be wired, and adapting existing lights and sensors for wireless communication, Daintree's solution increases the flexibility to add wireless control to an existing or new building infrastructure. Buildings can gradually transform into a full wireless network for ease of space design and regulatory compliance.

Further benefits include occupant comfort and productivity – good lighting can increase productivity by nearly 10 percent, while employees make 44 percent more mistakes in too-cold office environments – and reduced business risk. Retail and food service chains depend on outdoor signage and lighting to denote when stores are open or closed. When signs and lights unexpectedly go out, an otherwise open restaurant may look closed to potential customers, leading to loss of revenue.

Commercial and industrial facilities that use ControlScope have realized considerable energy savings, which improve over the life of the building. United Stationers, a wholesale business-products distributor, achieved monthly lighting savings of 94 percent after it installed an intelligent lighting system consisting of LED fixtures and Daintree ControlScope in the office and break rooms at its Sacramento, Calif., site.

Mack Technologies, a leading provider of complex electronic manufacturing services, implemented ControlScope and LED fixtures in retrofitting its 108,000-square-foot Westford, Mass., manufacturing facility. As the largest retrofit deployment to date of LED lighting and lighting control in any New England manufacturing space, this initiative not only saved Mack Technologies over \$50,000, or 40 percent, of its annual energy costs, but Mack also received \$130,000 in federal and state tax credits and incentives from the utility supplier.

In April this year, Daintree Networks' technology aided Universal Music Group (UMG), the world's leading music company, in a progressive office building energy-saving project, one of the first and biggest of its kind in Southern California. UMG's project included installing technology for daylight harvesting, dimming, LED lighting fixtures, and occupancy sensors across 150,000 square feet of space over four floors. The project also allows UMG to comply with California's Title 24 requirements, which call for a 25-percent reduction in energy consumption in both commercial and residential buildings compared with previous state requirements.

Facing compliance with new, more stringent energy-efficiency standards, facilities can realize efficiency improvements of up to 70 percent or more utilizing the ControlScope wireless approach. Moreover, the ControlScope open standards-based solution can deliver cost and flexibility benefits over proprietary wireless systems – signaling that a new era in networked-wireless building energy management has arrived. And, with open standards driven technology of ControlScope, a company can expand the solution to address the broader Enterprise Internet of Things™ issues.