

HOW TWO-NODE ARCHITECTURE CAN TRANSFORM CITIES

Smart lighting systems are critical components for smart cities of the future. Two-node architecture is the foundation that makes smart lighting — and smarter cities — possible.

STREET LIGHTING EFFICIENCY AND IMPACT

Why should cities, municipalities, and utilities care about the connectivity and capabilities that smart lighting can deliver? Consider these statistics:

THE US DEPARTMENT OF ENERGY SUGGESTS THAT LIGHTING IS RESPONSIBLE FOR

15% OF GLOBAL ELECTRICITY CONSUMPTION REDUCE COSTS UP TO 500% BY FULLY EMBRACING SMART CITY ECHNOLOGIES SUCH AS SMART STREETLIGHTS, NEXT-GENERATION POWER GRIDS, AND INTELLIGENT TRAFFIC LIGHTS⁴

MANY CITIES COULD

\$5 TRILLION IN GLOBAL ANNUAL COSTS COULD POTENTIALLY BE SAVED BY ADOPTING SMART CITY TECHNOLOGIES²



The greater control provided by the smart lighting capabilities enabled by two-node architecture — such as adaptive lighting based on motion sensing and traffic monitoring can help reduce energy usage for cities.³

WHAT IS TWO-NODE ARCHITECTURE?

Two-node architecture is a streetlight design standard that allows the asset to go beyond lighting and act as the platform for smart cities. In addition to offering greater control and further energy savings, these systems can also collect and process citywide data, helping pave the way for a smarter, more sustainable and optimized city.



ILLUMINATING SMART CITIES:

How Two-Node Architecture Delivers Innovation



ADDED SMART FUNCTIONS

Communication and analytics from smart street lighting can provide smart sensing benefits such as pollution, air quality and traffic monitoring, parking control, and more.



STANDARDIZED INTERFACES ENABLE INTEROPERABILITY

Zhaga standards ensure standardized interfaces that support interoperable components, which allows LED luminaires to be upgraded and serviced.



POTENTIAL NEW REVENUE STREAMS

Cities and utilities can monetize smart streetlights so they become a revenue source.



VERSATILITY FOR THE FUTURE

As more devices are developed and released, cities can plug them into lighting systems using two-node architecture for added functionality.



OPERATIONAL SAVINGS AND COST EFFICIENCIES

Smart capabilities can improve system energy efficiency and streamline operations and maintenance.

INNOVATIVE, FUTURE-READY STREET LIGHTING PRODUCTS FOR SMART CITIES

As an industry leader in the development of two-node architecture, TE Connectivity (TE) provides an extensive portfolio of flexible and reliable solutions for smart street lighting systems.



<u>Learn how</u> upgrading to two-node architecture can unlock a wide range of capabilities and lay the groundwork for more connected, efficient, and powerful smart city networks.

Connect with TE today

²ABI Research: Smart Cities and Cost Savings

³U.S. Department of Energy: Key Accomplishments & Results; Outdoor lighting Accelerator

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