gridComm

www.gridcomm-plc.com

STREET LIGHTING IS LONG OVERDUE FOR DISRUPTION

- An energy-inefficient expense on a city's electricity and maintenance budgets
- They are non-responsive and linear in operational capacity
- Cost cities up to 40% in increased electricity costs due to inability to respond in real-time to environmental requirements
- Repair and maintenance crews for streetlight networks are inefficient; without real-time data on failures and faults, maintenance engineers are required to perform physical checks on site

GRIDCOMM CREATES RELIABLE SMART CITY NETWORKS BY CONNECTING IOT SENSORS OVER EXISTING POWER LINE INFRASTRUCTURE AND WIRELESS, TRANSFORMING STREETLIGHTS INTO DYNAMIC, RESOURCE-EFFICIENT PLATFORMS.

- SAVES CITIES 40% IN ENERGY COSTS
- STRONG GROWTH TRAJECTORY
- ENDORSED BY BLUE-CHIP TECHNOLOGY PARTNERS
- ROBUST RECURRING REVENUE MODEL
- FUTURE-PROOF COMPATIBILITY WITH IOT AND 3RD PARTY SMART CITY APPS
- COMPLETE TECHNOLOGY OWNERSHIP

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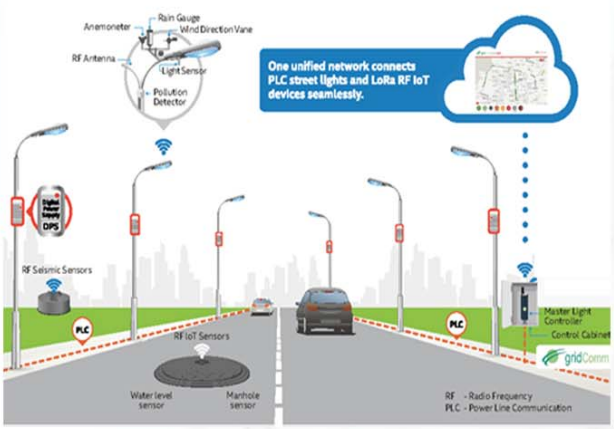
STREET LIGHT SOLUTION

gridComm provides a complete smart lighting solution that creates a network over a city's power lines, when coupled with our street light control software, saves millions of dollars in electricity and maintenance costs per year. It also creates a smart city backbone upon which gridComm then connects thousands of sensors to measure weather, pollution, traffic among others.

Intelligent lighting operations alone can shrink a city's annual electricity consumption by as much as 40%. Granting unprecedented control, a smart city network enables hundreds of thousands of IoT sensors to communicate and deliver detailed data in real-time.



THE MOST RELIABLE POWERLINE NETWORK

gridComm removes the need for prohibitively expensive new infrastructure by 'piggy-backing' onto the city's existing powerlines. It's patented 18 channel chip design, provides a redundancy for noisy powerlines. In addition to Smart Street Lighting, gridComm's hybrid PLC+RF solution lays the foundation for a city-wide sensory network to be implemented via the street light and power line infrastructure. The addition of the 19th channel for sensor connectivity creates the world's most reliable smart city network solution, with end-to end technology delivery from sensors to gateway to software.

MAKING SMART CITIES SMARTER

In combination with gridComm's sensor partners, a city-wide central nervous system can be formed from the aggregation of weather, pollution, parking, traffic and environmental sensors. These third-party technologies help cities to become significantly more cost and resource efficient.

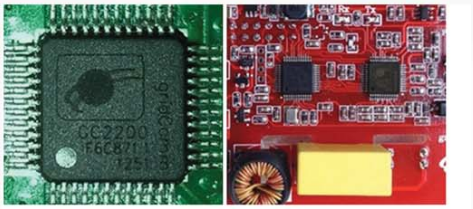
SECURITY

The gridComm network is completely *secured and protected,* from the hybrid power line communications/RF network nodes, which are AES-128 protected, to the cellular TCP network, which is backed by Intel gateway platform and Intel's Wind River McAfee software, which includes OpenSS, IPSEC VPN, or Cisco's gateway and security services.

THE PRODUCT

THE GRIDCOMM SOLUTION

Providing the world's most reliable smart city network solution with complete technology ownership from sensors to gateway and analytics



THE PRODUCTS

This includes the Street Light Management Software (server or cloud-based), the Master Light Controller (concentrator), the Digital Power Supply/Smart Light Controller and the fundamental communication enabler, gridComm GC2200 PLC chip. Having a complete end-to-end system ensures that one party is responsible for the vertically integrated system.

ANALYTICS: GREATER CITY INSIGHTS

Analytics are used to monitor deviations from baseline data on the lamp voltage and current to more accurately predict impending fault conditions. Predictive maintenance can now be used to circumvent outages or to increase time before failure rates by analysing and then acting on the data obtained.

THE TECHNOLOGY

THE MOST RELIABLE REAL-TIME SMART CITY NETWORK

Competing solutions don't work on noisy power lines found throughout Asia. These solutions use **a single, fixed channel for communications that fails when electrical noise interferes with this single channel.** **gridComm uses 18 redundant channels with an additional wireless channel.** Even if there is noise on some channels, redundancy with the other channels enables error free data transmission. We work where our competitors can't.