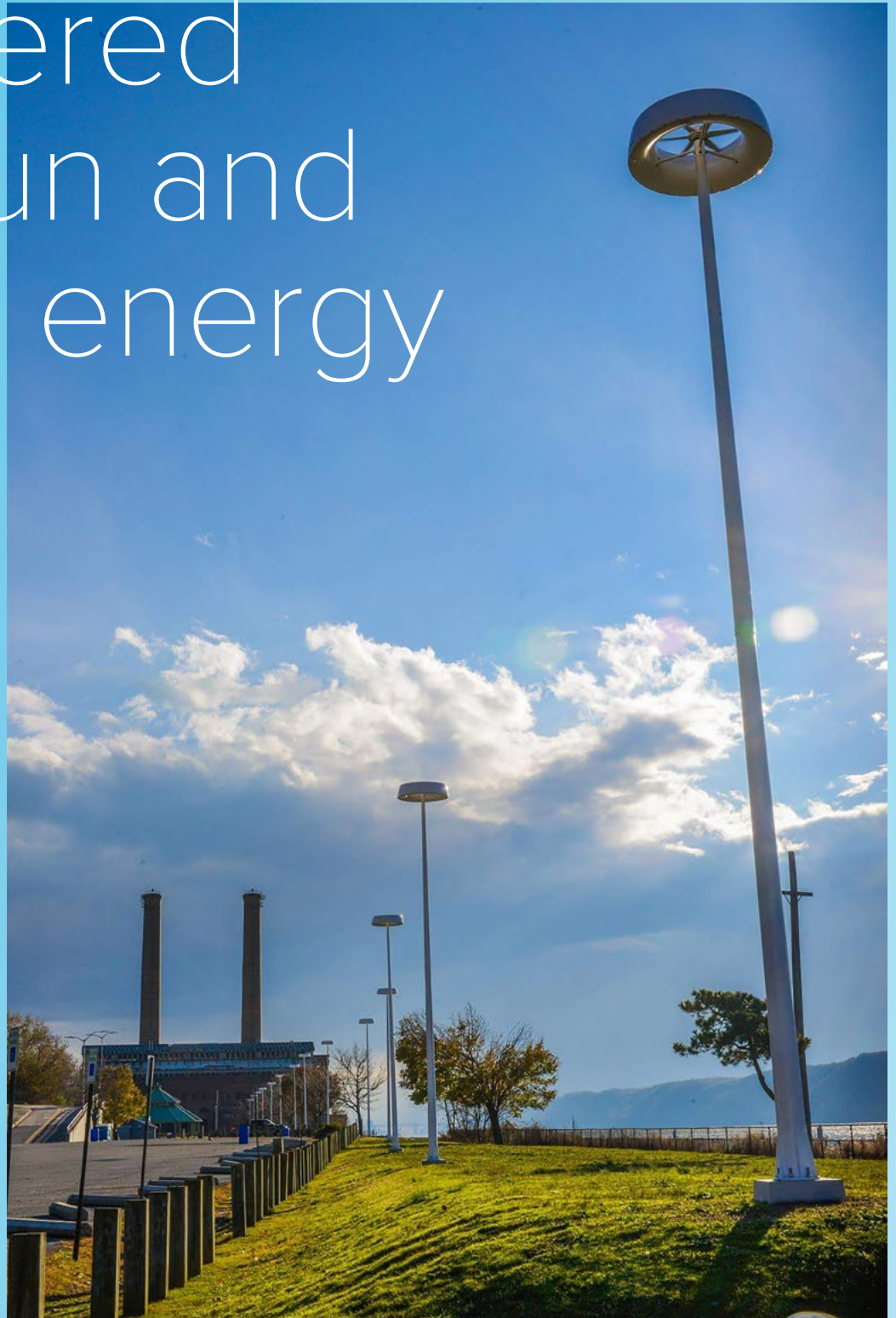


Omniflow®

Smart Cities Solutions

Powered
by sun and
wind energy



www.omniflow.io

Smart IoT Platform OMNILED 07 / 035

Smart IoT Lamppost powered by wind and solar with integrated energy storage and grid connection that enables multiple integrated applications.

With our solution its possible to transform a simple street light into a carbon neutral device that can be used for multiple IoT purposes.

The grid connected unit first uses the available renewable energy. Only if the batteries are depleted it will consume part of the energy from the grid.

With this, Omniflow systems achieve dramatic savings >90% compared with regular lighting and even >60% with standard LED.

Some projects can be done Off-Grid. Please contact us for site evaluation.

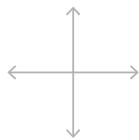


Member of
WORLD ALLIANCE | by **SOLARIMPULSE**
for EFFICIENT SOLUTIONS | FOUNDATION



Technology

Hybrid Wind & Solar



Dimensions

Omniled 07
1.0 / 3.9 ft (h x d)

Omniled 035
0.5 / 2.0 ft (h x d)



Weight

Omniled 07
88 lb

Omniled 035
13 lb



Solar power

Omniled 07
60 W (peak)

Omniled 035
15 W (peak)



Wind power

Omniled 07
100 W (rated @25 mph, steady)

Omniled 035
15 W (rated @25 mph, steady)



Battery

Omniled 07
500 Wh C10 Lead Crystal

Omniled 035
172 Wh C10 Lead Crystal



Lighting power

Omniled 07
30/ 45/ 60/
90/ 120/ 180

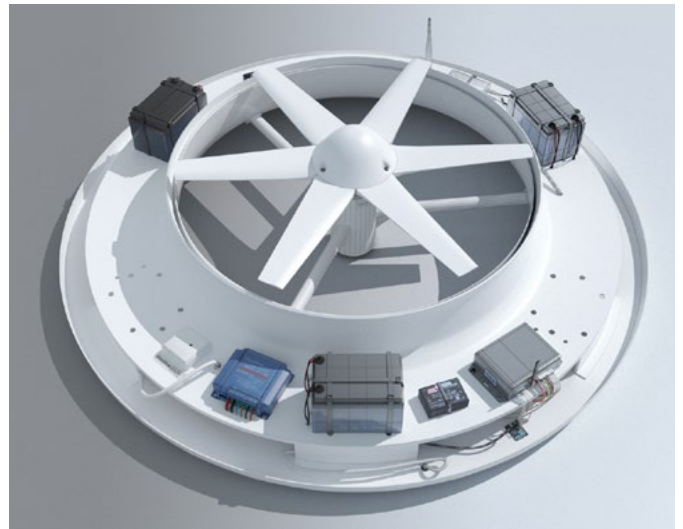
Omniled 035
12/ 24/ 48



Lumen luminance

Omniled 07
5100/ 6960/ 9300/
12630/ 18600/ 25260 lm

Omniled 035
2124/ 3684/ 7368 lm



Pole height

Omniled 035
20/ 26/ 33/ 39 ft

Omniled 035
10/ 13/ 16 ft



Wind power

Omniled 07
100 W (rated @25 mph, steady)

Omniled 035
15 W (rated @25 mph, steady)



Generator

Omniled 07 / Omniled 035
Direct drive iron-less start
permanent magnet



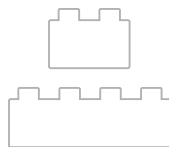
Color temperature

Omniled 07 / Omniled 035
2700 - 6000 K



Control

Omniled 07 / Omniled 035
OmniConnect IoT Platform



Services

Omniled 07 / Omniled 035
Wi-Fi, 4G/ 5G, Small Cell,
IP cameras and Video Analytics,
EV Charger, Edge computing

OMNIFLOW SMART POLE



SMART LUMINAIRE

Wind turbine
Solar photovoltaic
Built-in batteries



INTEGRATED SERVICES

Ultra efficient LED system
Computer vision / analytics
Connectivity 5G / Wi-fi
Telecom: Small Cells
Air quality monitoring



OUTDOOR DISPLAY

QLED
Advertisement, informative



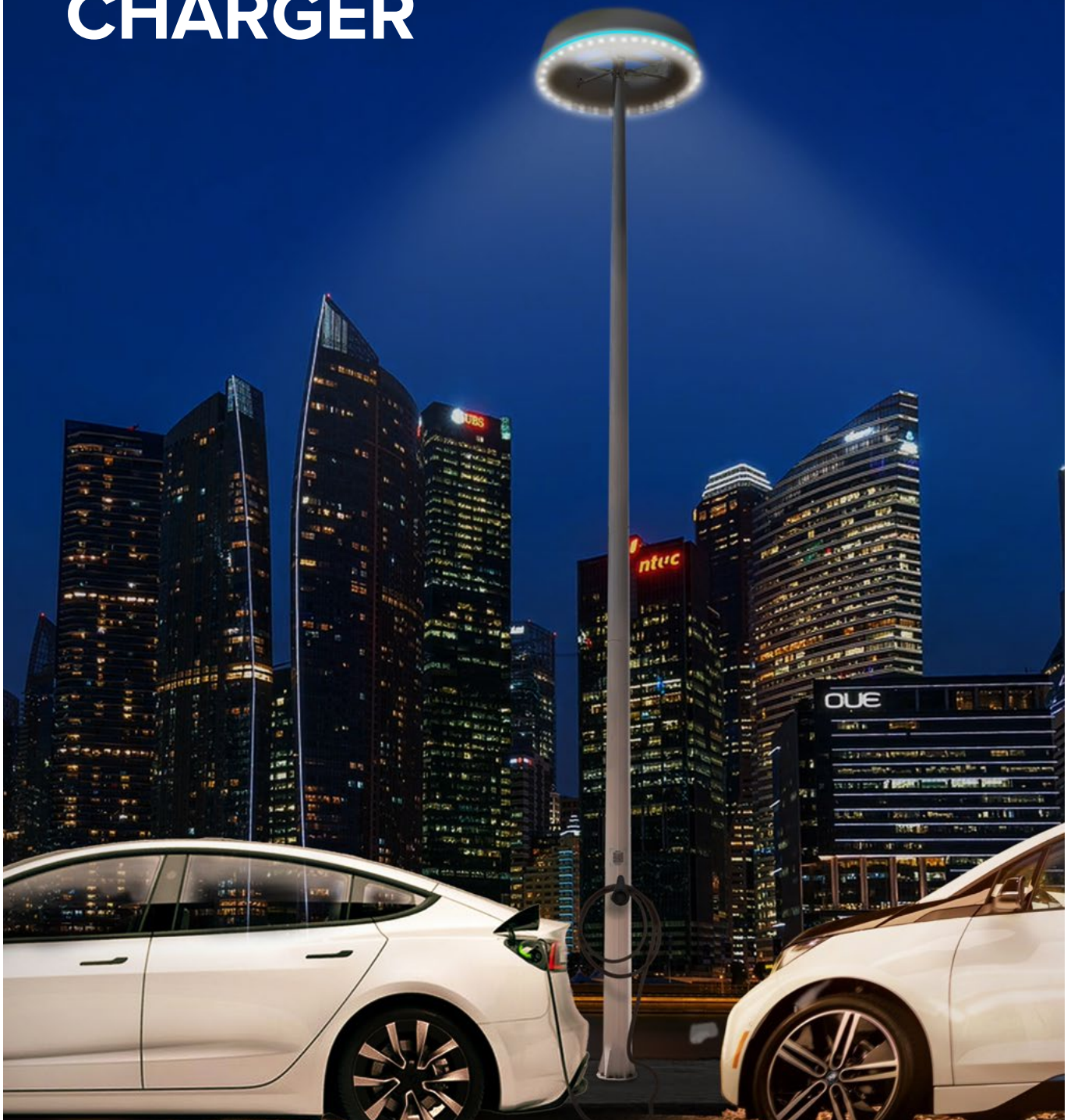
OMNICHARGER

Integrated EV Charger up to 22 kW
QR code payment system

The Omniflow Smart Luminaire is an innovative solution that transforms existing street lights into smart poles, bringing intelligence and sustainability to urban spaces without replacing infrastructure. Using renewable energy, it integrates IoT technology to boost energy

efficiency and reduce costs while expanding city connectivity. This versatile luminaire supports multiple applications, from enhancing public safety to monitoring environmental conditions and gathering urban data, making it ideal for the smart city of tomorrow.

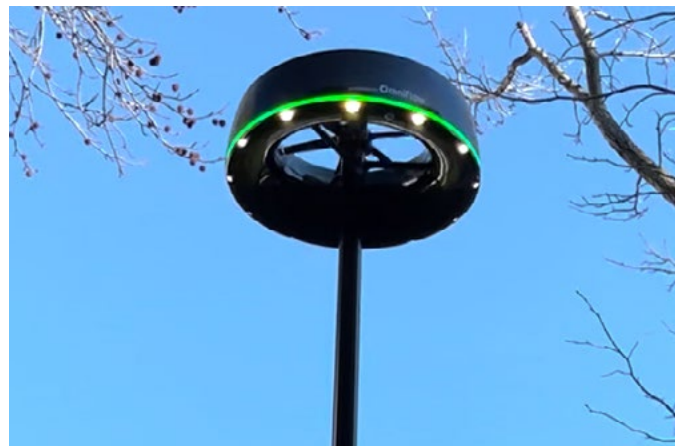
OMNI CHARGER



Our sustainable Smart luminaire powered by wind and solar with a built-in EV Charging Station is the perfect innovative product to facilitate the availability of charging points. All the elements are located inside the luminaire making it much easier to deploy using existing standard poles and power cables.

By embracing this technology, the city can achieve savings exceeding 90%, empowering the deployment of up to 650 EV chargers with a power output of 7kW or an impressive 1,500 chargers with a power output of 3kW.

[Visit our website for more details](#)



Solar power

Omniled 07
60 W (peak)

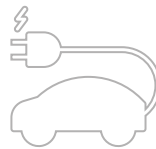
Omniled 035
15 W (peak)



Wind power

Omniled 07
100 W (rated @25 mph, steady)

Omniled 035
15 W (rated @25 mph, steady)



EV Charger

Omniled 07
up to 22 kW
Type 1, 2 and socketed version

Omniled 035
up to 7.2 kW
Type 1, 2 and socketed version



Color LED status

Omniled 07 / Omniled 035

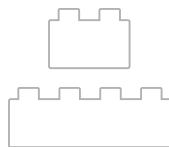
● green LED - available

● blue LED - charging



Compliances

Mobi.e approved
Protocol OCPP1.6J
ISO15118
IEC61851
MID certified meter



Services

Omniled 07 / Omniled 035
Wi-Fi, 4G/ 5G, Small Cell,
IP cameras and Video Analytics,
Computer vision, Edge computing

Certified manufacture by:



OMNICONNECT

Digital Twin Urban Platform

IoT Monitoring and Control

OmniConnect is the Omniflow's platform that gives you full visibility and control over your smart urban infrastructure.

Through a real-time digital twin, you can monitor, manage, and optimize the performance of all Omniflow devices from a single, intuitive interface.

Designed for **seamless integration**, OmniConnect allows you to:

- Visualize your devices' status and key metrics in real-time.
- Remotely control and configure device settings.
- Analyze data to improve operational efficiency and sustainability.

With **AI-embedded driven services**, OmniConnect provides:

- **Cost Savings:** Reduce operational expenses by monitoring and maintaining devices remotely.
- **Improved Decision-Making:** AI-powered insights help you make smarter, faster decisions.
- **Simplified Maintenance:** Quickly detect and resolve issues before they escalate, reducing downtime.

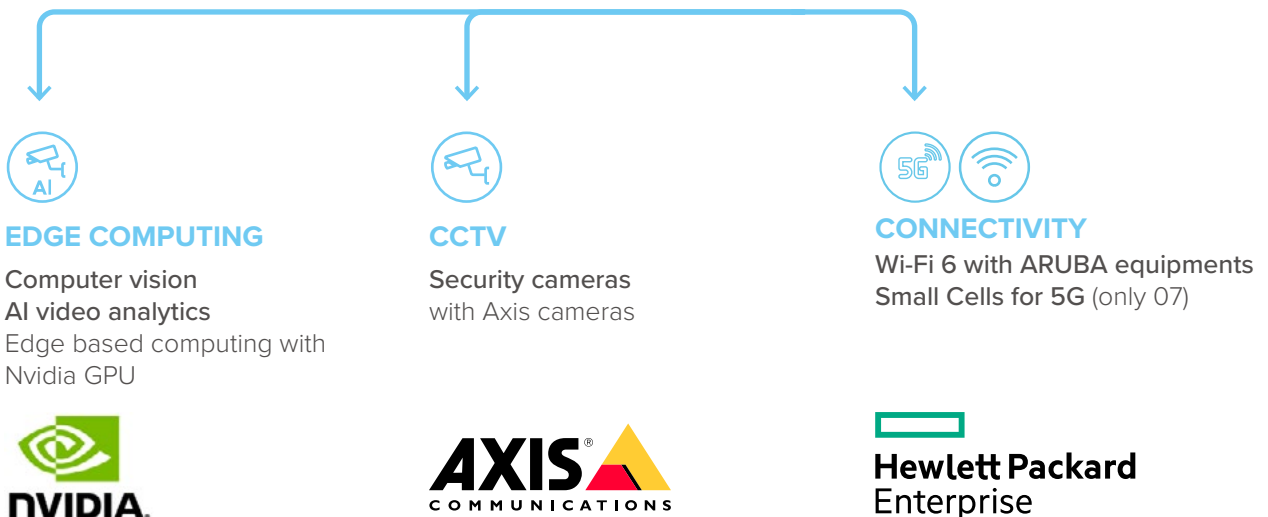


Take full control of your smart urban equipment with OmniConnect and drive efficiency, sustainability, and innovation through the power of AI.

Smart City solutions

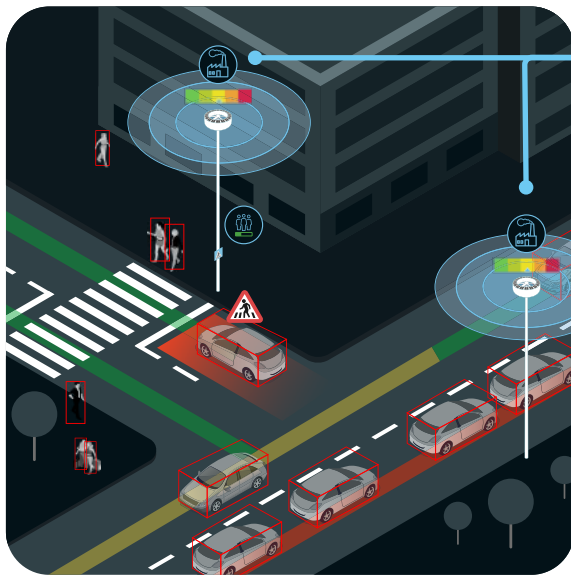
Our Omniflow solution is an integrated Smart Lamp Post powered by wind and solar with integrated battery storage. It transforms a regular street light into a sustainable smart infrastructure capable of housing multiple added value services like 5G/LTE Small Cell, public wifi, security cameras, EV charging, IoT sensors/gateways and even integrated audio for public communication. Our solution has the added benefit of being a resilient solution that can still provide lighting, surveillance and other functionality during grid outages through the integrated battery storage.

We can **use existing poles** in most cases because most of the services are integrated inside the Omniflow protective shell in the top so this transformation is much more economical avoiding expensive and time consuming civil works. To transform a simple old light into a smart pole you will only need to change the head of the unit.



Air Quality Monitoring

As cities expand and traffic congestion worsens, the combustion of fossil fuels in vehicles becomes a significant contributor to air pollution. To combat this challenge effectively, **accurate and real-time data on roadside air quality is indispensable.** This is where Omniflow's Air Quality Sensor steps in, providing a comprehensive solution for monitoring pollution caused by the combustion of fossil gases in traffic.



BUILT-IN SENSORS



EDGE COMPUTING

Computer vision / analytics
 Optical sensors
 ≈ 95% accurate
 Connectivity 5G | LTE small cell
 IoT cloud based control system

AI/ML Traffic Analytics

Discover how our advanced traffic flow monitoring system revolutionizes urban environments by optimizing vehicle and pedestrian movement, enhancing safety, and transforming city experiences.

Traffic flow with Omniflow utilizes on the edge computer vision technologies, processing data locally for reduced data consumption and privacy protection with no video stream being sent out of the Omniled. Our system offers a multitude of applications for smart cities, including:

- » [Optimizing Traffic Signals](#)
- » [Enhancing Public Transportation](#)
- » [Improving Road Safety](#)
- » [Urban Planning](#)
- » [Event Management](#)

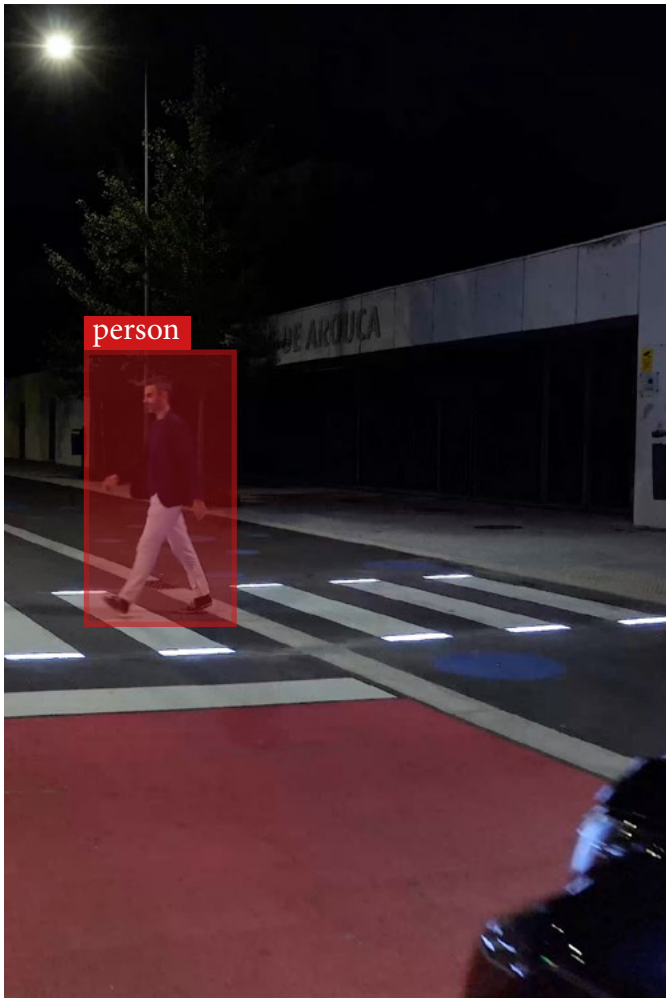
Air Quality Sensor

Technical Data

Gas	NO ₂
Range	0 - 1000 µg/m ³
Resolution	0,01 µg/m ³
Particles	PM ₁ PM _{2,5} PM ₁₀
Range	0 - 500 µg/m ³
Resolution	0,01 µg/m ³

Edge Computing System

Technical Data	Omniled 035	Omniled 07
Optical sensors	up to 2	up to 4
Resolution	Full HD	
AI Performance	472 GFLOPS	

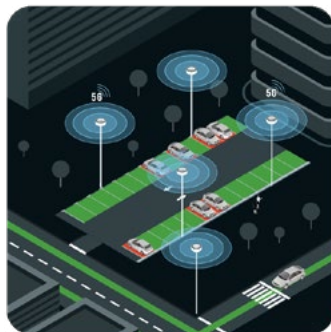


AI/ML

People Counting

Discover how our advanced people counting system revolutionizes urban environments by optimizing traffic, enhancing safety, and transforming city experiences. People counting with Omniflow utilizes on the edge computer vision technologies, processing data locally for reduced data consumption and privacy protection with no video stream being sent out of the Omniled. Our system offers a multitude of applications for smart cities, including:

- » [Managing Public Spaces](#)
- » [Traffic Management](#)
- » [Retail Analytics](#)
- » [Security and Safety](#)
- » [Urban Planning](#)



COMPUTER VISION

Optical sensors
 ≈ 95% accurate
 up to 60 parking spaces
 per Smart Lamppost



EDGE COMPUTING

IoT cloud based
 monitoring and control system
 Connectivity 5G / Wi-Fi

AI/ML

Smart Parking

Smart parking with Omniflow utilizes on the edge computer vision technologies, processing data locally for reduced data consumption and privacy protection. Control room operators can easily flag parking offenses like incorrect space occupation through the OmniConnect dashboard, and parking users can easily identify available parking spaces. This system benefits cities by **reducing congestion, improving air quality, and ensuring equitable parking access**. Private parking operators also gain from optimized space utilization and enhanced customer satisfaction.

Real-Time Occupancy

- spot by spot
- occupancy rates

Export data for API integration:

- displays
- external platform

Alerts for parking offenses like:

- no parking areas
- special parking spaces
- EV charger spaces occupied without use

Data storage up to 3 years

Edge Computing System

Technical Data	Omniled 035	Omniled 07
Optical sensors	up to 2	up to 4
Resolution	Full HD	
AI Performance	472 GFLOPS	

Telecom Infrastructure for 5G Densification

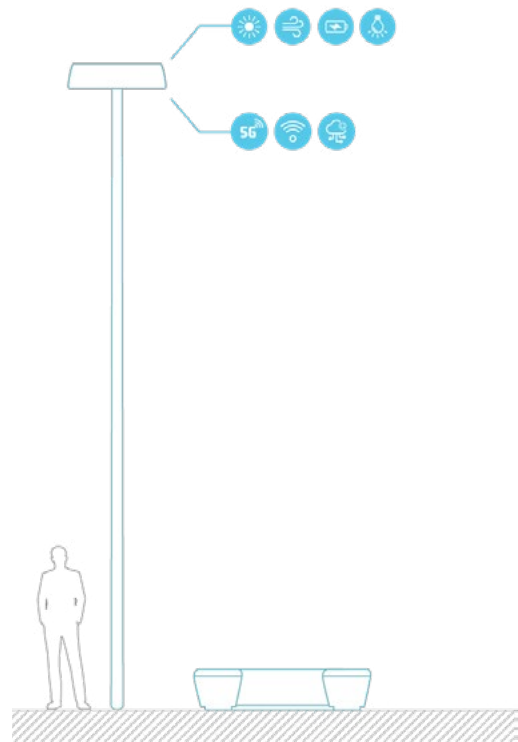
Small Cell Ready Infrastructure for 5G Densification. A multi-service smart infrastructure designed for fast deployment, reduced OPEX and seamless integration in any urban environment - while keeping the city beautiful, efficient and connected. Sustainable, compact and fully integrated telecom deployment - powered by wind, solar and smart storage.



Integrated solutions engineered for Fast, Aesthetic, and Efficient telecom deployment

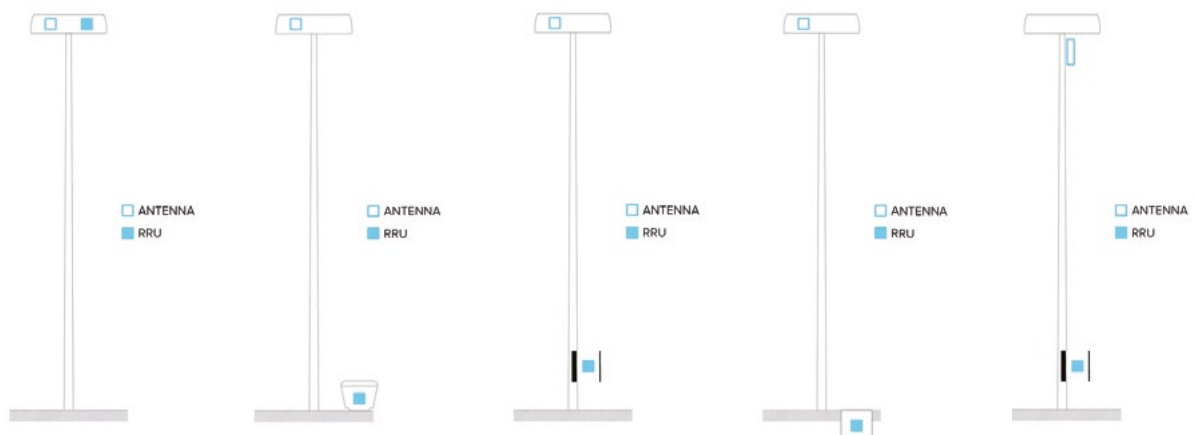
OmniLED 07 & OmniBench: the new standard for urban 5G rollout:

- » **Densification without visual clutter**
- » **Retrofit existing poles**
- » **Minimized civil works**
- » **Lower OPEX**
- » **Multi-service platform**
- » **Neutral host readiness**



Flexible deployment models

OmniLED supports several mounting configurations for radios and basebands, ensuring optimal performance, accessibility, and urban integration across different deployment scenarios.



Tech specs

Omniled 07

Models

OMNILED Smart Hybrid	Wind & Solar generation with built in battery, optional lighting (see Smart Lighting for options)
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Wind Turbine

Generator	Permanent magnet generator – Axial flux type
Diffuser	Single-element flatback shroud
Rotor	6 blades, reinforced polyamide PAG Dimension: 2.3 ft diameter
Controller	12VDC Programmable PWM
Noise	<28 db(A) at 82ft @ 18mph (very low)
Power	100W rated power (@25 mph, steady)
Regulation	Turbine stops rotating when system is fully charged, wind is too high or by remote manual shutdown

Solar

Solar Cell	n-type, monocrystalline Si, >22%Eff @STC
Controller	MPPT Solar Charge Controller
Power	60Wp, 0 degrees Optional: Additional Mast Integrated Panels from 70Wp to 150Wp

Battery

Battery Bank	500Wh (3x 12V 14Ah C10 Lead Crystal) Optional: Lithium Battery Pack
Charging	Initial Charging Current 4.2A/14.7V/ (77 °F)
Cycle Life	Typical 3,392 cycles (@40% DOD, 77 °F), Max 6,000+ cycles

Smart Lighting

Luminaire	15, 30 or 60 LED array Lens: Optical Grade PMMA 5100 lm (30W) 6960 lm (45W) 9210 lm (60W) 12630 lm (90W) 18600 lm (120W) 25260 lm (180W) Efficiency 170 lm/W at 350mA (30W) Efficiency 196 lm/W at 125mA (10W) Light Pattern: Type III & Type V CRI >70 Optional: from 2700K - 6000K Light Temperatures
Control	OmniConnect IoT Platform Remote On/Off/Dim with Timer, Time control, Auto Night/Day Operation mode defined by 3 battery voltage levels Auto DIM via integrated infrared motion sensor 2 (Two) additional functionalities independently programmed and triggered by night/day, Time or Sensors events
Lighting Spacing	Indicative spacing (simulation recommended): 115-131.2ft (39ft mast) 82-98ft (26ft mast) 66-82ft (20ft mast)

Mast

Height	20ft, 26ft, 33ft or 39ft
Material	Galvanized Steel
Paint	C3 or C4 paint scheme (optional) Color: RAL 9010 *only use approved mast designs

Body Shell

Material	Composite Fiberglass/Resin Transparent to radio waves
Finishing	Marine grade gel coat
Colour	RAL 9010 Optional: Other colours available by request.
Space inside	Can fit 3 (Three) objects up to: 10.6 x 15.7 x 2.0 in Antennas or other electronics. See Optional accessories

OmniBrain

Energy	AI energy and functionalities management system Connection to: Wind, Solar, Battery, Sensors, LED drivers and extra functionalities.
Light functions	PWM for LED driver control 2 (Two) motion sensor control (infrared*; optical or radar) *1 (One) infrared motion sensor included
Accessory Ports	2 (Two), 12VDC/5A (Max) each
Communications	Communication link via integrated industrial 2G/ 4G modem with included Global SIM card
Built in memory	Stores 5 days hourly based vital data. Voltage (V) Current (A) Rotor Speed (MPH) Temperature (°F)

General

Dimensions	1.0ft height, 3.9ft diameter
Weight	88 lb (500Wh batteries & without optionals)
Nominal Voltage	12VDC
Ingress Protection	IP55
Impact Protection	IK08
Mounting	Mounts on 3.1in tube 2 (Two) crossed stainless steel M10 bolts for fixing
Transportation	Package dimensions: 4.3ft x 4.3ft x 1.1ft Foam protected Up to 5 units stackable 20 units on 20" container 45 Units on 40" container
Approvals and Standards	CE and UKCA Marking UL/CSA Listed – UL 6142, CSA 22.2, UL 1004-1, UL 1004-4, UL1598 Eye Safety IEC 62471 Safety IEC 60598, IEC/EN 60529, IEC 62031, UL 8750 CAN/ CSA No. 250.13 IEC 61400-2 Small wind design 2005/88/EC Noise limits ISO 2394:1998(E) Reliability for structures EMC Directive 2014/30/EU – EN 61000-3-2, EN 61000-3-3, EN55015, EN61547-1 Low Voltage Directive (LVD) 2016/95/EC
Grid-Tie (optional)	Input Voltage: 230VAC/50Hz or 110VAC/60Hz Isolation Class: Class II Ingress Protection: IP 67
Operating conditions	Temperature: -4 to 131 °F Max wind speed: 100.7 mph
Protection	20A 32V fuse
Optional Accessories	IoT integration inside Body Shell for multi-application: - Wifi Ethernet Router AP - Wifi Ethernet Fiberoptic Router AP - LoRA Gateway (under consultation) - Transmission - 4G/ 5G Modem, ethernet, fiber, P2P, P2MP - Small Cell integration (under consultation) - Weather station - Environmental sensors (under consultation) - Surveillance cameras: IP modular camera (single dual or quad lens) integrated 1080p WDR Forensic Capture IP PTZ Camera (mast mounted) IP Thermal Camera (mast mounted) Video analytics: Smart parking, perimeter security, smoke and fire detection, audio processing, people counting, heat map... **only use approved accessories
Monitoring Software	Remote web management cloud based Open API for Smart City platform integration Realtime reporting and control of device subsystems and accessories AI and machine learning capability User and Administrator Level control Configuration and reading of 92 telemetry parameters Alarms settings Maintenance triggers by proprietary algorithm Single unit and group configuration Multi-unit light synchronization by Time Control function Real time unit test (Shows actual program being used by blinking code on lighting system) Day, Week, Month, Year data report
Warranty	2-year warranty, Extended EOL support option



ALL UNITS ARE GRID CONNECTED
FOR OFF-GRID PROJECTS, SITE ENERGY EVALUATION IS NECESSARY, PLEASE CONTACT OMNIFLOW
A. OMNIFLOW® IS REGISTERED TRADEMARK IN VARIOUS JURISDICTIONS
B. OMNIFLOW® PRODUCTS ARE PROTECTED BY INDUSTRIAL PATENT AND DESIGN PATENT IN VARIOUS JURISDICTIONS

Tech specs

Omniled 035

Models

OMNILED Smart Hybrid	Wind & Solar generation with built in battery, optional lighting (see Smart Lighting for options)
----------------------	---

Wind Turbine

Generator	Permanent magnet generator – Axial flux type
Diffuser	Single-element flatback shroud
Rotor	6 blades, reinforced polyamide PAG Dimension: 1.1 ft diameter
Controller	12VDC Programmable PWM
Noise	<28 db(A) at 82ft @ 18mph (very low)
Power	15W peak power
Regulation	Turbine stops rotating when system is fully charged, wind is too high or by remote manual shutdown

Solar

Solar Cell	n-type, monocrystalline Si, >22%Eff @STC
Controller	MPPT Solar Charge Controller
Power	15Wp, 0 degrees Optional: Additional Mast Integrated Panels from 35Wp to 50Wp

Battery

Battery Bank	172Wh (2x6V 7.2Ah C10 Lead Crystal) Optional: Lithium Battery Pack
Charging	Initial Charging Current 4.2A 14.7V/ (77 °F)
Cycle Life	Typical 3,392 cycles (@40% DOD, 77 °F), Max 6,000+ cycles

Smart Lighting

Luminaire	12 LED array Lens: Optical Grade PMMA 2124 lm (12W) 3684 lm (24W) 7368 lm (48W) Efficiency 170 lm/W at 350mA (12W) Efficiency 196 lm/W at 125mA (4W) Light Pattern: Type III & Type V Optional: from 2700K - 6000K Light Temperatures
Control	OmniConnect IoT Platform Remote On/Off/Dim with Timer, Time control, Auto Night/Day Operation mode defined by 3 battery voltage levels Auto DIM via integrated infrared motion sensor 2 (Two) additional functionalities independently programmed and triggered by night/day, Time or Sensors events
Lighting Spacing	Indicative spacing (simulation recommended): 26-39ft (10ft mast) 33-49ft (13ft mast) 39-59ft (16ft mast)

Mast

Height	10ft, 13ft, 16ft
Material	Galvanized Steel
Paint	C3 or C4 paint scheme (optional) Color: RAL 9010 *only use approved mast designs

Body Shell

Material	Composite Fiberglass/Resin Transparent to radio waves
Finishing	Marine grade gel coat
Colour	RAL 9010 Optional: Other colours available by request
Space inside	Can fit 3 (Three) objects up to: 5.3 x 7.9 x 1.0 in Antennas or other electronics. See Optional accessories

OmniBrain

Energy	AI energy and functionalities management system Connection to: Wind, Solar, Battery, Sensors, LED drivers and extra functionalities.
Light functions	PWM for LED driver control 2 (Two) motion sensor control (infrared*; optical or radar) *1 (One) infrared motion sensor included
Accessory Ports	2 (Two), 12VDC/5A (Max) each
Communications	Communication link via integrated industrial 2G/ 4G modem with included Global SIM card
Built in memory	Stores 5 days hourly based vital data. Voltage (V) Current (A) Rotor Speed (mph) Temperature (°F)

General

Dimensions	0.5ft height, 2.0ft diameter
Weight	13lb (172Wh)
Nominal Voltage	12VDC
Ingress Protection	IP55
Impact Protection	IK08
Mounting	Mounts on 1.8 in tube Fixes with 3 self drilling screws Optional: Pole Adapter for different diameter mounts
Transportation	Package dimensions : 2.1ft x 2.1ft x 0.6ft Foam protected Up to 10 units stackable 295 units on 20" container 594 units on 40" container
Approvals and Standards	CE and UKCA Marking UL/CSA Listed – UL 6142, CSA 22.2, UL 1004-1, UL 1004-4, UL1598 Eye Safety IEC 62471 Safety IEC 60598, IEC/EN 60529, IEC 62031, UL 8750 CAN/ CSA No. 250.13 IEC 61400-2 Small wind design 2005/88/EC Noise limits ISO 2394:1998(E) Reliability for structures EMC Directive 2014/30/EU – EN 61000-3-2, EN 61000-3-3, EN55015, EN61547-1 Low Voltage Directive (LVD) 2016/95/EC
Grid-Tie (optional)	Input Voltage: 230VAC/50Hz or 110VAC/60Hz Isolation Class: Class II Ingress Protection: IP 67 Rated Power: 30-80W
Operating conditions	Temperature: -4 to 131 °F Max wind speed: 101 mph
Protection	20A 32V fuse
Optional Accessories	IoT integration inside Body Shell for multi-application: -Wifi Ethernet Router AP -Transmission - 4G/ 5G Modem, ethernet, fiber, P2P, P2MP -Environmental sensors (under consultation) -Surveillance cameras: IP modular camera (single lens) integrated 1080p WDR Forensic Capture IP PTZ Camera (mast mounted) IP Thermal Camera (mast mounted) Video analytics: Smart parking, perimeter security, smoke and fire detection, audio processing, people counting, heat map... **only use approved accessories
Monitoring Software	Remote web management cloud based Open API for Smart City platform integration Realtime reporting and control of device subsystems and accessories AI and machine learning capability User and Administrator Level control Configuration and reading of 92 telemetry parameters Alarms settings Maintenance triggers by proprietary algorithm Single unit and group configuration Multi-unit light synchronization by Time Control function Real time unit test (Shows actual program being used by blinking code on lighting system) Day, Week, Month, Year data reports
Warranty	2-year warranty, Extended EOL support option



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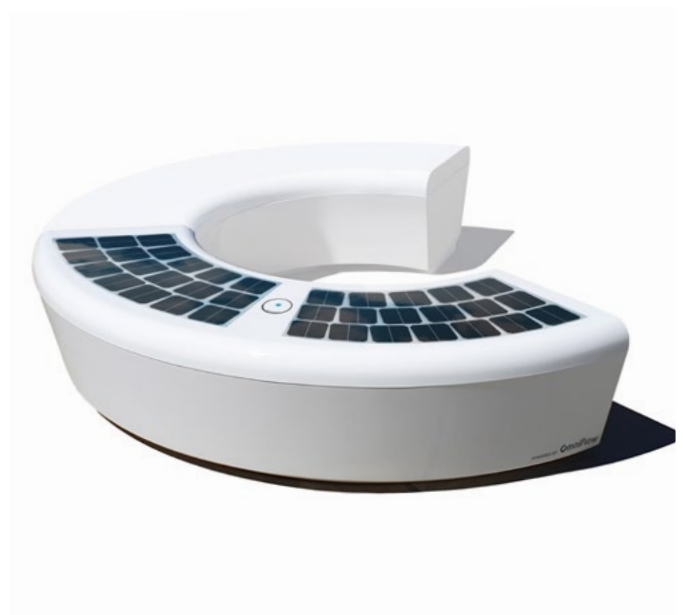
Omnibench

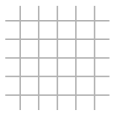
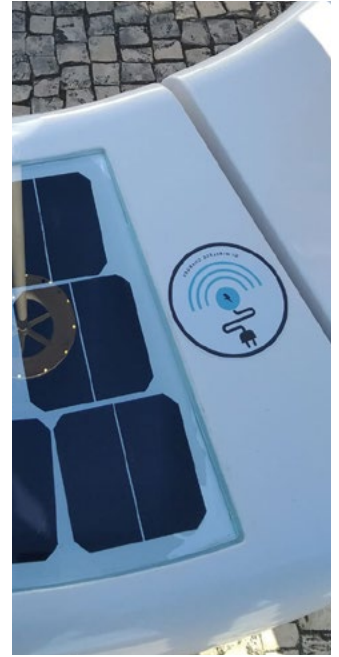
Omnibench is a smart urban furniture designed for public spaces and patented by Omniflow.

The contemporary design is inspired in the Omniled Smart Lamppost shape and can interact with this product with multiple optional features like, architectural lighting, USB or wireless charging points and electric bicycles docking stations.

The water tight bench can be opened and be used for other technical purposes like the installation of a camouflaged base station for a telecommunications provider or simply more batteries.

The Omnibench can be filled with sand/water or simply bolted to the ground.

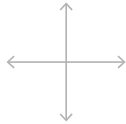




Features

Modular Design
Solar Optional

IoT monitor and control



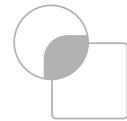
Dimensions

7ft x 1.6ft (w x h)



Weight

110 lb per module



Finishing

Marine grade gel coat



Color

RAL 9010



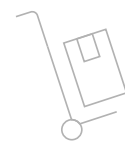
Space inside

Can fit 3 (three) objects up to:
19.7 x 19.7 in
4.1 ft (external radius)



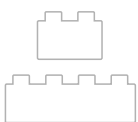
Installation

Bolted to the ground
Filled with water
Filled with sand



Transportation

Package dimensions:
7 x 3.1 x 1.6 ft
Up to 6 units stackable



Optional

Architectural lighting
USB Charger ports
Wireless Induction Charger
Wi-Fi AP
LoRA Gateway
Small Cell Basestation

Tech specs

Omnibench

Models

OmniBench

Solar Optional

Solar Cell n-type, monocrystalline Si, >22%Eff @STC

Controller MPPT Solar Charge Controller

Power 120Wp, 0 degrees

Battery Optional

Battery Bank 500Wh (3x 12V 14Ah C10 Lead Crystal)
Up to 2400Wh (2x 100Ah 12V C10 Lead Crystal)

Charging Initial Charging Current 4.2A14.7V/ (77 °F)

Cycle Life Typical 3,392 cycles (@40% DOD, 77 °F), Max 6,000+ cycles

Body Shell

Material Composite Fiberglass/Resin
Transparent to radio waves

Finishing Marine grade gel coat

Color RAL 9010

Space inside Can fit 3 (Three) objects up to:
19.7 x 15.7 x 11.8 in

General

Dimensions 1.6 ft height, 7 ft maximum length

Weight 110 lb per module

Nominal Voltage 12VDC

Ingress Protection IP55

Impact Protection IK08

Mounting Mounts:
Bolted to the ground
Fill with water
Fill with sand

Transportation Package dimensions:
7ft x 3.1ft x 1.6ft
Up to 6 units stackable

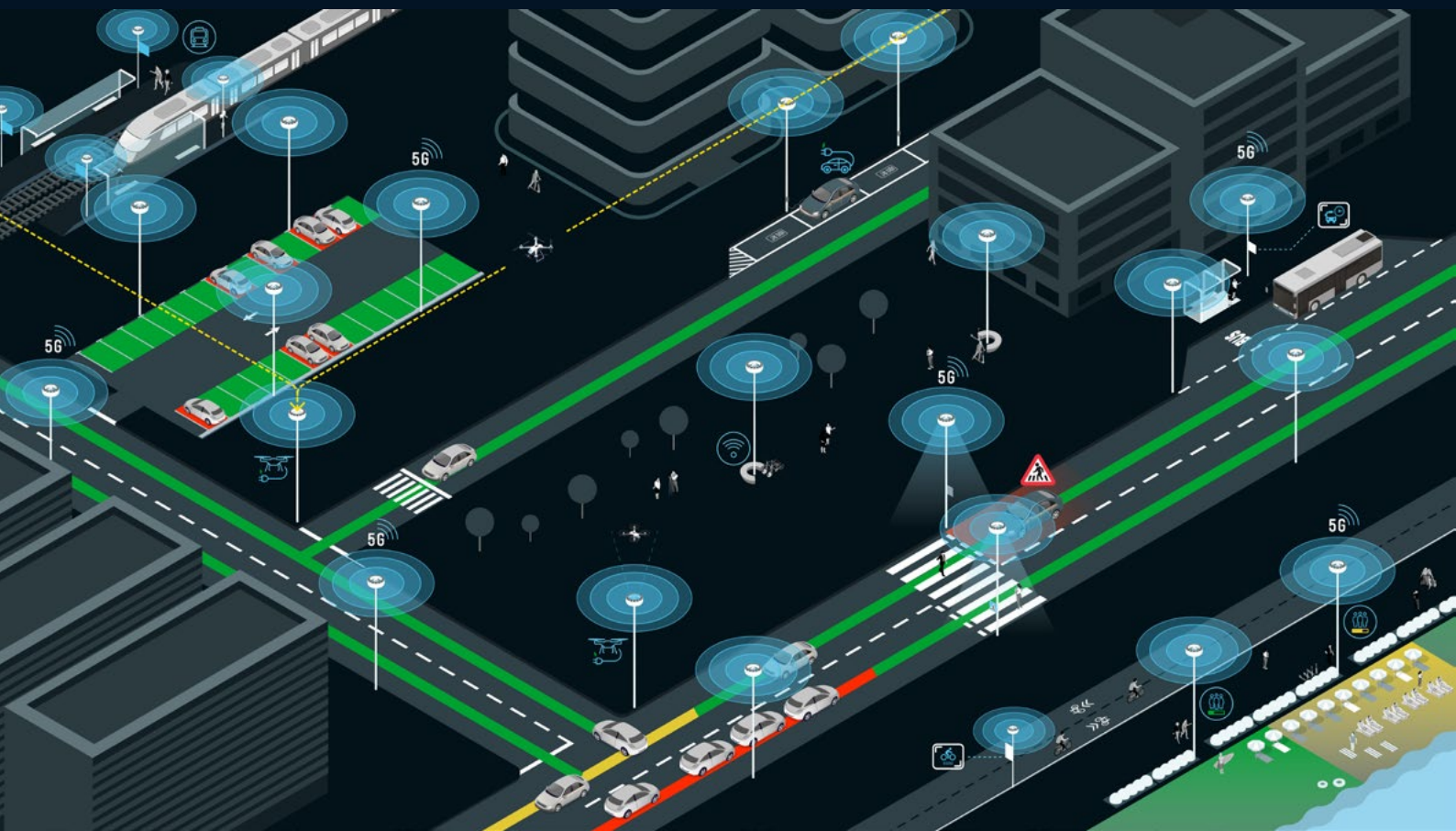
Optional Accessories IoT integration inside Body Shell for multi-application:

- Bottom lighting (bench)
- E-Bike Charging Station
- E-Scooter Charging Station
- USB Charger ports
- Wireless Charger
- Wifi Ethernet Router AP
- Wifi Ethernet Fiberoptic Router AP
- LoRA Gateway (under consultation)
- Transmission - 4G Modem, ethernet, fiber, P2P, P2MP
- Small Cell integration (under consultation)

Warranty 2-year warranty, Extended EOL support option



Sustainable Smart City Solutions



Smart Pole

The Omniflow Smart Pole is a comprehensive solution that combines the core Smart Luminaire with additional integrated services and other options like outdoor display and EV charger, transforming traditional streetlights into smart, sustainable infrastructure. This solution allows cities to seamlessly transition urban infrastructure to the digital era.

5G base-stations (small cells)

5G or LTE small cells can be integrated within our products creating the perfect street level solution to deploy sustainable network infrastructure.

Radio and antennas can be integrated both on Omniled 07 and also on Omniflow Smart Bench.

EV Charging

The Omniflow Smart Luminaire with an integrated EV Charger offers a cost-effective, efficient solution to accelerate the transition to electric vehicles. Its primary advantage is leveraging existing cables and transformers, which are already equipped to handle the required power levels, thereby eliminating the need for additional infrastructure investments.

Pedestrian Crosswalk

We designed an intelligent crosswalk system to enhance pedestrian safety in areas with high vehicle and foot traffic. Using advanced technologies like sensors and smart signaling, this system improves safety and helps prevent accidents.

Bus Stop

Smart Bus Stop provides the users of public transportation of a better service experience improving safety, information, connectivity and comfort.

The pole integrates the Omniflow smart IoT pole powered by wind and solar that can host, light, information display, Wi-fi AP, Security camera and USB/wireless charging.

Smart Parking

The computer vision is capable of identifying if specific parking places are free or occupied. This information can be processed in the cloud or in the edge.

The metadata can be sent to display, app or directly to the car.



V2X

Events detected by computer vision will be transmitted C-V2X our using a RSU (road side unit) the information can be directly transmitted to the vehicles and pedestrians near the event.

Traffic Monitoring

The integrated IP cameras can be used to stream the video to a control center or video processing can be executed inside our unit to detect vehicles and events.

Edge Computing

Local processing is used to process the raw data coming from our sensors on our local computer. The system is also capable of processing low frame rate video analytics like smart parking. For more demanding applications a local GPU can be used for video analytics, data processing or content on the edge.

Micro Mobility

Our Omniled and Omnibench can be used to charge e-scooters, e-bikes or just parking.

All the electronics and control can be hosted inside of the Smart Bench solution that can also have additional solar power capability to reduce the power consumption from the grid.

Wi-fi Access Point

Public WI-FI access points can be hosted in all of Omniflow products.

Our solution is agnostic in terms of particular vendors used to provide the service.

All of our products are transparent to radio waves, so the AP can be installed inside our weather protective enclosure.

Security

Our systems can host up to 4 IP security cameras completely integrated into the shell of our Omniled solution. The integrated IP cameras can be used to stream the video to a control center or the video processing can be executed inside our unit using the camera processing capacities or edge computing.



Weather/ environmental/ IoT sensors

All this IoT sensors and gateways can be easily integrated in our units where we can offer the power, connectivity and space to host all this services.

Drone Charging/ control Hub

We can retrofit existing lamp posts with Omniflow smart pole powered by wind and solar using the existing poles and avoiding expensive and time consuming civil works.

Every Omniflow smart pole can be upgraded to host the drone charging pad and 5G, so with Omniflow you will be able to create sustainable networks and highways for autonomous drone services.

Smart urban lighting

Our solution achieves a power reduction of more than 90% transforming a simple street light into a carbon neutral object that can be used for multiple IoT purposes in a single infrastructure without the need of creating new ones.

We have 2 available models for smart lighting, the Omniled 07 for pole heights of 20-39ft and the Omniled 035 for pole heights of 10-16ft .

Rail Stations

By retrofitting old lights with highly efficient and beautifully designed Omniflow systems our customers are reaching savings of more than 90% translating into good investments and good ROI.

Information can be displayed on digital signage together with Wi-Fi, Audio and security cameras.

Parking lots

By retrofitting old lights with highly efficient and beautifully designed Omniflow systems our customers are reaching savings of more than 90% translating into good investments and good ROI.

Lights can be dimmed after closing time and motion sensor activated to help the security team to secure the perimeter. We also normally supply in this projects Wi-Fi and security cameras that can be also used for Smart Parking.

Beach/ Crowd monitoring

Omniflow's technology analyses how busy the beach or location is and shows real-time occupancy levels on a local E-ink screen or an app so a user can make an informed decision about where to go.

Audio warnings can also be used.

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