

Phoenix1



The Phoenix1 family of Street & Road lights by Juganu turns every site into a smart space. The fixtures are efficient, lightweight, and reliable. High system efficacy of up to 140 LPW yields significant energy savings of 75%-90% compared to HPS lamps and up to 30% compared to other LEDs.

Optimized optics provide uniform illumination, while meeting international standards for Street & Road lights.

JLED™ fixtures withstand severe weather conditions, such as tropical rains and proximity to the sea.

Phoenix1 incorporates JNET (Juganu Network) capabilities, a Juganu end2end solution that utilizes existing public lighting infrastructure to transform public spaces into smart and fully connected environments. Phoenix1 includes high-resolution cameras with flexible angles and provides unmatched edge AI for superior streamlined analytics and video services.

Features

Light that Lights

- CCT (Typical) – 3000K to 5000K
- Several types of optics for various road conditions

Light that Senses

- Up-to 3 x FHD video cameras
- Audio sensor
- Environmental sensor

Light that Connects

- WIFI5/6/6E 4x4 Public Wi-Fi Access Point
- JNET™ 2 multi-level wireless backhaul

Light that Thinks

- up to 15 of TOPS CPU AI
- 28 TOPS of Accelerator AI
- Hybrid AI technology

Benefits

- Covers large areas with visual sensors, providing edge services
- Wi-Fi Safe City (Streaming /Processed video)
- IOT

Deployment

- Installation by connecting to AC mains

Light

- Efficient, uniform and glare-free light with 75%-90% savings in energy costs and 95% savings in maintenance costs
- Long Guaranteed operating lifetime



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City & Infrastructure

Product Data

Product Segment:	Outdoor Network Smart HUB
Product Type:	Street & Road lights with full embedded smart space capabilities
Product Family:	Phoenix1

Key Advantages:

- Once connected to AC mains, the fixtures create a wireless backhaul network, in parallel to other networks (such as 4G cellular) that allows providing access and other sophisticated services.
- The fixture includes high-quality public Wi-Fi access service and allows 100m radius coverage around the fixture. The access service allows fast roaming between the streetlight fixtures, creating ubiquitous street coverage.
- The fixture includes up-to 3 full HD visual sensors and supports streaming video from the fixture to control center.
- The fixture includes sophisticated edge analytics and application computer power engine, that allows multiple applications.
- JLED™ lighting: 140 LPW @ 120W; CRI > 70
- JNET 1™ management system: Sub-G, medium bandwidth Wireless network on lights and sophisticated cloud

GENERAL INFORMATION

Dimensions (mm)	796*373*207 mm (31.3 x 14.7 x 8.2 in)
Weight	18 kg (40 lb)
Materials	Cast Aluminum body electrostatic powder paint, Polycarbonate, protective glass

OPERATING AND ELECTRICAL

Power Consumption	Up to 120W - Road Lighting Up to 80W – Smart space capabilities
Surge Protection	10 kV
Power Factor	> 0.92, max current THD 15% at 220V
System Efficacy	Up to 140 lm/w for road lighting
Operating Voltage	110 – 277 VAC
Maximum Voltage	90 – 305 VAC
Operating Frequency	47Hz – 63 Hz
Dimming	Wireless control
Operating Temperature	–35°C to 55°C (-31°F to +131°F)
Cooling	Passive cooling
Water Resistance (IP Rating)	IP66 (with Salt fog and UV treatment)
Impact Protection	IK08

LIGHTING CHARACTERISTICS

Lumen Maintenance	TM21 based on ISTMT and LM80 L90 > 60,000 hours L70 > 140,000 hours
Correlated Color Temperature (CCT)	3000K - 5000K
Color Rendering Index (CRI)	>70

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EMBEDDED CAMERAS	
Number of Cameras	Up to 3 cameras
Resolution/fps	<ul style="list-style-type: none">Max Resolution: 12 MpxMax Frame Rate: up 30 fps
Field of View (FOV)	Up to 90° H, 110° D
INTEGRATED SENSORS	
GPS location accuracy	2 meters
Audio (Microphone)	Monitoring Range: 30 meters (45°)
Environmental	Pressure, Temperature, Humidity, Air Quality (IAQ up to 500) - future
WI-FI PUBLIC ACCESS SERVICE	
Wireless Technology	802.11ax , 2.4GHz
5G mobile	future*
WIRELESS LIGHTING MANAGEMENT	
Wireless Lighting control	SubG (915/433 MHz)
JNET 2 MULTI-LEVEL WIRELESS BACKHAUL	
Wireless technology, dual radio	802.11ax WIFI6, WIFI6E ready , MIMO 4x4, BW: 20, 40,80, 160Mhz
Bubble capabilities	Up to 25 JNET2 Nodes per Bubble Aggregate Throughput: up to 4 Gbps
Antenna Types	802.11ax – Omni 4x4 or Direction 4x4
Max Aggregated EIRP	802.11ax <36dBm
Security	1X.509, Mutual TLS Authentication, AES256, Blacklist
EDGE PROCESSING	
GPU	Qualcomm Adreno™ 650
CPU	Qualcomm Kryo™ 585
Memory	(128GByte (4x256Gbit) Flash
AI compute power	<ul style="list-style-type: none">15 of TOPS CPU AI28 TOPS of Accelerator AI

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Product Certifications

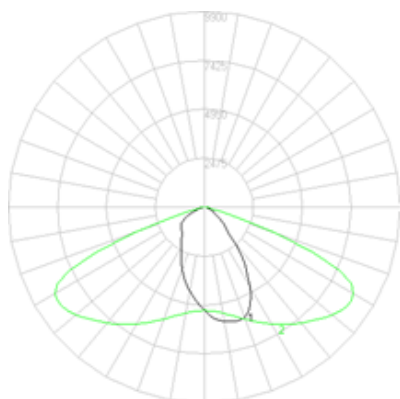
USA/Canada :	cTUVus
Colombia:	Retilap
Europe:	CE, company declaration
General:	ISO 9001:2015, ISO 14001:2015

STANDARDS (additional local standards applicable)
The product is designed to meet the following standards:

Group	Standard abbreviation	Description
EMC	CISPR 15,22 EM 55015 IEC 61000-3-2,3	Emission
	EN61547 EN 61000-4-2,3,4,5,6,8,11	Immunity 10KV surges
	EN 13032-1 IESNA LM-79 – 2008	Photometric
Photometrics	IEC 62471:2006 IEC62778 and IEEE1789	Photo-biologic, exempt Blue light
	IEC 60529, EN 60529	IP66, Dust and Humidity, Water Jets
	IEC 68-2-6	Vibration in 3 axes
Mechanics and Environment	ASTM G154/2006	UV
	ISO9227 MIL-STD-810G (168h)	Salt fog for 1000h for marine environment
Safety	IEC 60598-2-3:2002, AMD1:2011 Used in conjunction with: IEC60598-1:2014, AMD1:2017	Contains: Dielectric strength Insulation resistance Leakage current Protection against electric shock Torque resistance of screws and fittings Weight/wind
	UL 1598:2018 CSA C22.2 No. 250.0-18	UL Standard for Safety of Luminaires for the North America market
	IEC 62031:2008 + A1:2012	Safety of LED board
	EN61347-1, EN61347-2-13, EN62384	LED driver safety
	EN 62722-1:2016 EN 62722-2-1:2016 EN 62717	Lumens and CRI performance test over 1000 hours
Luminaire Performance Test	ISTMT TM-21, LM-80	Temp. of LED, Driver

Photometric Curves

D01 Type I, Short



Mounting

- Integral die cast mounting pole stop feature
- Suitable for 50.8 – 60 mm (2.00 - 2.36 in.) mounting pole
- Inclination: integrated with $\pm 15^\circ$, can be 90° for pole with no arm (post up)

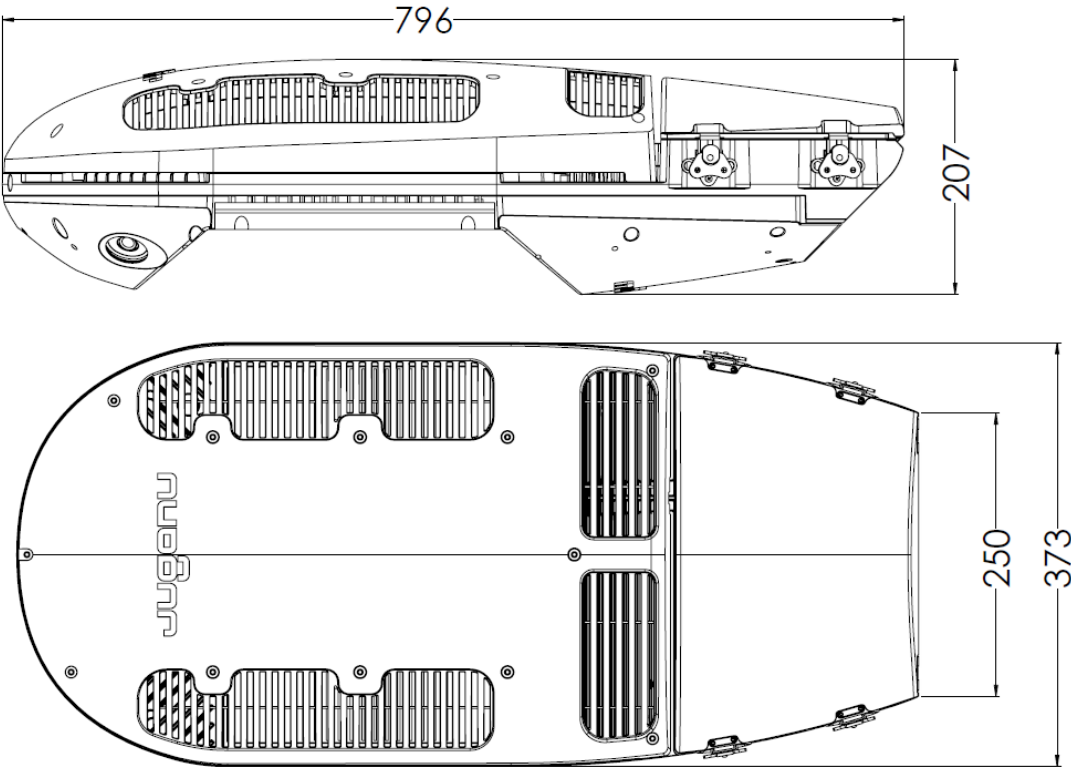
Performance (4000K)

Power [W]	Typ. efficacy [LPW]	Total lumens [LM]
120W	140	16,800

Packaging and Weight

Lighting Fixtures Dimensions(mm)	Packaging Dimensions (mm)	Net Weight	Gross weight
796*373*207 mm 31.3 x 14.7 x 8.2 in	1200*380*240 mm 47.3*15*9.5 in	18 kg 40 lb	20 kg 44 lb

Mechanical Dimensions



Ordering Information

Product	Family	Power	CCT	Distribution curve
JLED-SL	Phoenix1	xxW	xx	Dxx

		Default
Power	120W – Road Lighting	
	80W – Smart space	
CCT (other values possible)	30 – 3000K	
	40 – 4000K	standard
Distribution curves (see distribution curve)	D01 Type I, Short	standard

Ordering Example

Order Code: *JLED-SL-Phoenix1-120W-40-D01*

Description

Phoenix1 Street Light, 120W, 4000K, D01 Optics