

Smart Phoenix 5G



The Phoenix family of Street & Road fixtures by Juganu revolutionizes urban spaces by turning them into smart, connected environments.

These fixtures combine embedded sensors, cameras, and public Wi-Fi with **advanced edge processing**, enabling on-site intelligence and minimizing data transmission to the cloud.

Combined with Juganu’s proprietary wireless broadband infrastructure between fixtures, they enable **seamless connectivity across large spaces**. With a high system efficacy of up to 140 LPW, Phoenix1 fixtures deliver **significant energy savings**—up to 90% compared to HPS lamps and 30% compared to other LEDs.

The Phoenix1-5G integrates 5G cellular technology and supports 5G access throughout the network.

Features

Lighting (configurable at purchase)

- CCT Available in 3000K - 4000K
- Several types of optics for various road conditions

Multiple Data Sensors

- Dual high-resolution cameras
- Audio sensor

Connectivity

- JNET™ 2: Juganu multi-level wireless MESH topology
- JNET™ 1: Juganu wireless lighting management

Access

- 5G gNodeB (UC)
- Wi-Fi 6 for Public Access (2.4GHz)

Edge Processing

- Local data processing
- Distributed edge computing
- High compute power: Up to 47 TOPS
- Multi-sensor data processing
- Low Latency and High-Efficiency AI Processing



Smart Phoenix1-5G

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GENERAL INFORMATION

Dimensions (mm)	796*373*208 mm (31.3 x 14.7 x 8.2 in)
Weight	19.7 kg (43.4 lb)
Materials	Cast Aluminum body with powder paint, Polycarbonate (PC), Glass
Color	Grey (Ral7042)

OPERATING AND ELECTRICAL

Power Consumption	Up to 120W - Road Lighting Up to 90W – Smart space capabilities
Surge Protection	10 kV
Power Factor	> 0.92, max current THD 15% at 220V
Operating Voltage	110 – 240 VAC
Maximum Voltage	264VAC
Operating Frequency	47Hz – 63 Hz
Dimming	Wireless control
Operating Temperature	-40°C to 50°C (-40°F to +122°F)
Cooling	Passive cooling
Water Resistance (IP Rating)	IP66
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 , 4000K (configurable at purchase)
Color Rendering Index (CRI)	>70
System Efficacy	Up to 140 lm/w for road lighting

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EMBEDDED 5G

Duplexing mode	TDD
Peak throughput	DL 500 Mbps, UL 200 Mbps (DDSUU) (100 MHz BW)
Max. Modulation	DL: 256 QAM, UL: 64 QAM
MIMO layers	DL:2, UL:2
EIRP	<27 dBm
Spectrum support	n48, n78

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EMBEDDED CAMERAS

Number of Cameras	2
Resolution	Sensor: Sony, Max Resolution: 12MP 4056(H) x 3040(V)
Field of View (FOV)	87° H, 104° D Additional lenses are optional and can be configured at the time of purchase

INTEGRATED SENSORS

GPS location accuracy	2 meters
Audio (Microphone)	Digital microphone for noise level (dB)

ACCESS POINT SERVICE

Wireless Technology	802.11ax ,WiFi 6 2.4GHz ,CH1-11 5GHz U-NII-1, U-NII-3 (band automatically enabled when JNET2 backhaul channel is not in use) Up to 250 connected Wi-Fi users
Antenna Types	Omni 4x4

WIRELESS LIGHTING CONTROL

Wireless Lighting control	Juganu proprietary mesh technology SubG frequency 868/915/433 MHz
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JNET 2 MULTI-LEVEL WIRELESS BACKHAUL

Wireless technology, dual radio	802.11ax WiFi6, WiFi6E ready, MIMO 4x4, BW: 20 MHz, 40 MHz ,80 MHz, 160MHz (optional) Frequency band: 5160-7115MHz U-NII-1, U-NII-3, U-NII-4, U-NII-5, U-NII-6, U-NII-7, U-NII- 8
Antenna Types	Omni 4x4
Max Aggregated EIRP	<36dBm

EDGE PROCESSING

GPU	384 NVIDIA CUDA® cores and 48 Tensor cores
CPU	6-core NVIDIA Carmel Arm
Memory	16GByte Flash
Main AI Processor Performance	21 TOPS

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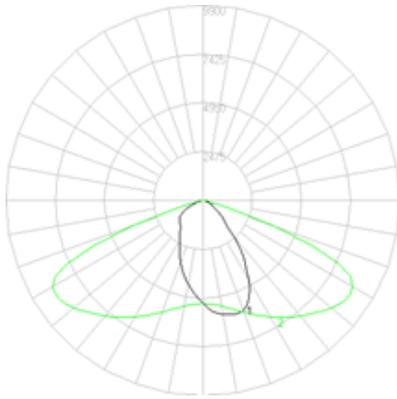
STANDARDS (additional local standards applicable)

The product is designed to meet following standards:

Group	Standard abbreviation	Description
EMC	FCC Part 15 Subpart B CISPR 32	Emission
	ETSI EN 301 489-1,3 ETSI EN 301 489-17,19	Immunity
Radio	ETSI EN 301 893	Radio Standards
	EN 300 220-1,2	
	FCC Part 15 Subpart C	
Photometrics	EN 13032-1	Photometric
	IESNA LM-79 – 2008	Photo-biologic, exempt Blue light
	IEC 62471:2006 IEC62778 and IEEE1789	
Mechanics and Environment	IEC 60529, IEC60598-1	Protection rate
	ETSI EN 300 019-1-4 Class 4.1 IEC60598-1	Environmental
	IEC 60598-2-3	Wind Load
	ISO9227 1000H	Solt Fog
	IEC 62262	Mechanical Impact
Safety	IEC 60598-2-3 IEC60598-1 IEC 62368-1	Contains: Dielectric strength Insulation resistance Leakage current Protection against electric shock Torque resistance of screws and fittings Weight/wind
	UL 1598	UL Standard for Safety of Luminaires for the North America market
	IEC 62031	Safety of LED board
	EN61347-1, EN61347-2-13, EN62384	LED driver safety
Luminaire Performance Test	EN 62722-1:2016 EN 62722-2-1:2016, EN 62717	Lumens and CRI performance test over 1000 hours
	ISTMT TM-21, LM-80	Temp. of LED, Driver

Photometric Curves

D01 Type I, Short



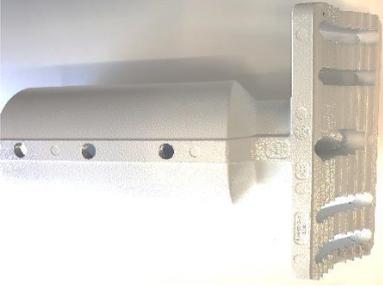
Mounting

- 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)

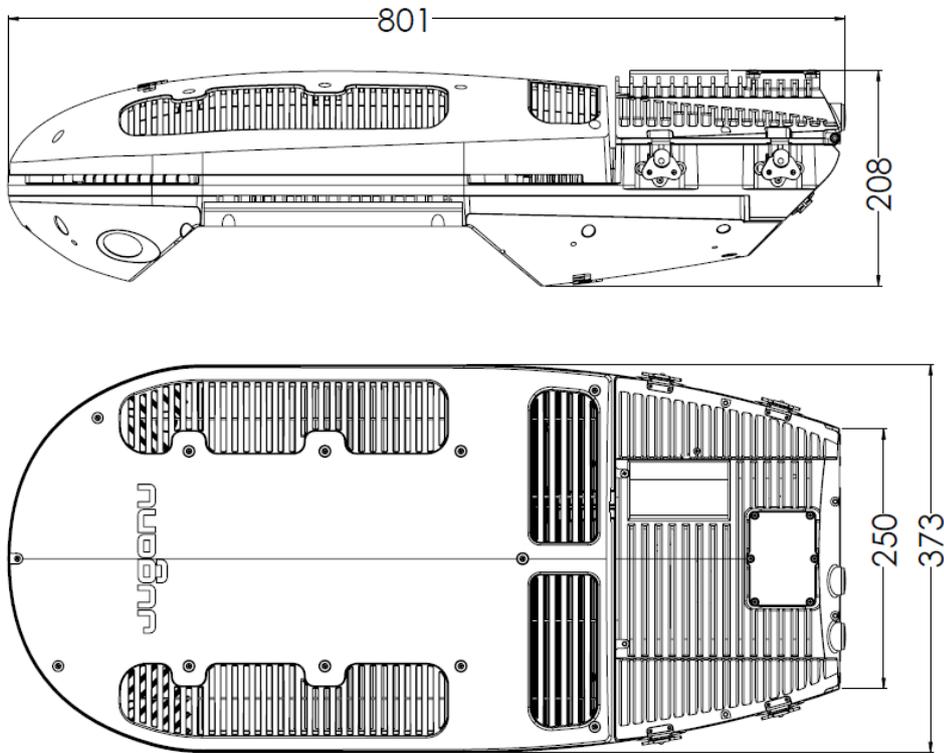
Power [W]	Typ. efficacy [LPW]	Total lumens [LM]
120W	140	16,800

Package Contents

<input type="checkbox"/> Phoenix1-5G fixture	
<input type="checkbox"/> Mounting arm	
<input type="checkbox"/> M25 cable gland	
<input type="checkbox"/> 3-pin AC junction box connector	

Mechanical Dimensions

Phoenix1-5G



Packaging and Weight

Lighting Fixtures Dimensions(mm)	Packaging Dimensions (mm)	Net Weight	Gross weight
796*373*208 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

Ordering Information

Product	Family	CCT	Distribution curve	Camera Lens
JLED-SL	Phoenix1-5G	xx	Dxx	Fxx

		Default
CCT (other values possible)	30 – 3000K	
	40 – 4000K	Default
Distribution curves (see distribution curve)	D01 - Type I, Short	Default
	F01 – H-87°, V-68°, D-104°	Default
Lenses	F02 - H-69°, V-54°, D-82°	
	F03 - H-52°, V-40°, D-63°	

Ordering Example

Order Code: *JLED-SL-Phoenix1-5G-40 -D01-F01*

Description

Phoenix1-5G Street Light, 4000K, D01 Optics,87H 68V 104D camera lens