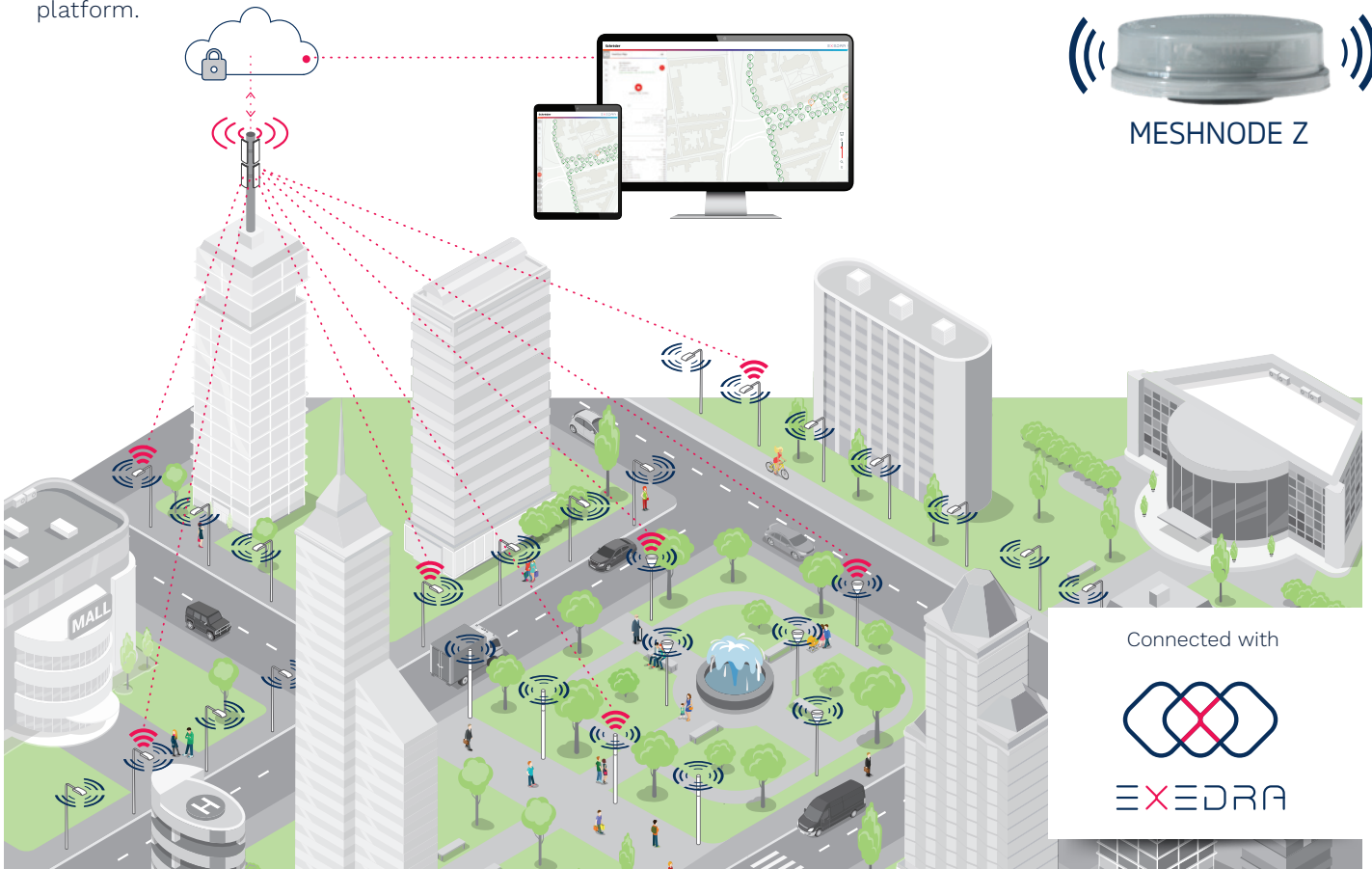


# OWLET IV Zhaga luminaire controllers

OWLET IV Zhaga luminaire controllers operate Schröder's luminaires and any Zhaga-D4i luminaires from third parties through the Zhaga book 18 interface. They offer easy installation and have fast plug-and-play commissioning. OWLET IV controllers use both cellular and mesh radio networks, optimising geographical coverage and redundancy for continuous operation. DATALIFT use mesh network to aggregate information from a cluster of MESHNODEs, and forward this on to the IoT platform using cellular connectivity.

Among other features, OWLET IV controllers use advance cybersecurity mechanisms to protect the deployment in the city and provide accurate power outage information to city's streetlight managers. OWLET IV controllers are managed with EXEDRA, Schröder's advanced smart lighting management platform.



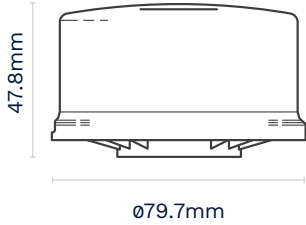
## Key advantages

- **Auto-commissioning**  
Easy installation and plug-and-play
- **Auto-geolocation**  
GPS-location detection and time synchronisation
- **Real time dynamic lighting**  
Mesh technology to broadcast sensor triggering event locally within a cluster of luminaire controllers
- **Last gasp messaging**  
Power outage detection allowing a last message when power cuts off
- **Asset management**  
Imports luminaire asset data according to DALI Part 251
- **Tunable white**  
Ability to control luminaires with variable colour temperature (DT8)

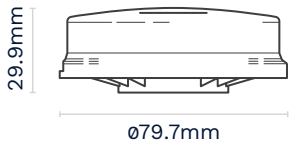
## Features

- Gateway less hybrid network architecture using self-healing 6LowPAN Mesh network & cellular connectivity
- Built-in GPS
- Built-in photocell to control each luminaire based on local ambient light level
- Embedded self-test capability to check proper installation
- Supporting D4i internal bus
- Offering responsive light-on-demand use cases triggered by local sensors
- End-to-end encrypted communication
- Over-the-Air firmware update

**TECHNICAL INFORMATION - DATALIFT Z & MESHNODE Z**



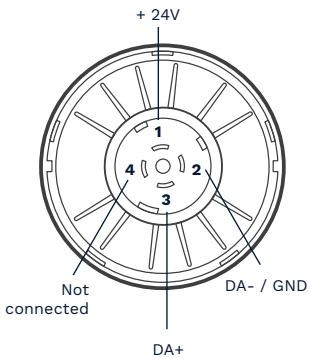
**DATALIFT Z**



**MESHNODE Z**

**Electrical connections**

ZHAGA TWIST LOCK (bottom view)  
ZHAGA BOOK 18



**Metering and accuracy**

Measured parameters	Power, Voltage, Power Factor, Energy
Fault monitoring	Abnormal power consumption, Under/over input voltage, Low-power factor, Driver/light source failure, Temperature
Energy metering accuracy	Not applicable: metering is catered for in the Zhaga-D4i luminaire.

**Housing**

Material	Makrolon 6557 Transparent, UV stable, Flame retardant
Colour	RAL 7042 traffic grey
Protection class	Ingress protection rating IP 66 / DIN EN 60529
Impact protection	IK 08

**Average power consumption**

Operating wattage	<2W
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**Operating conditions**

Ambient temperature (ta)	-40°C to +70°C -40°F to 158°F
Relative humidity	5% to 90%
Operating voltage	24VDC ±10%

**Standards & certificates**

Approvals	CE / D4i (pending) / RCM / UKCA
Standards	RE Directive (2014/53/EU) 2011/65/EU (RoHS) and its amendments (EU) 2015/863, (EU) 2017/2102.
EMC	ETSI EN 301 489-1 V2.2.3 ETSI EN 301 489-17 V3.2.4 ETSI EN 301 489-19 V2.1.1 ETSI EN 301489-52 V11.2
Radio	ETSI EN 300 328 V2.2.2 ETSI EN 303 413 V1.1.1 ETSI EN 301 511 V12.5.1 ETSI EN 301 908-13 V11.1.2
DALI	IEC62386-101/103 and DiiA Part 351
Human exposure	EN 62311
Connector	Zhaga book 18
Electrical safety	EN 61347-1:2015 (Part 1) EN 61347-2-11:2001 (Part 2-11)

**Radio communications**

Low-power mesh	IPv6, RPL, 6LowPAN, MAC - IEEE 802.15.4e, PHY - IEEE 802.15.4.g, 2400MHz @ +10dBm
Cellular modem (DATALIFT only)	GSM/EDGE: 900MHz & 850MHz / 1800MHz & 1900MHz  LTE-M & NB-IoT (Cat-NB2): B1 (2100MHz) / B3 (1800MHz) / B8 (900MHz) / B5 (850MHz) / B20 (800MHz)

**DALI interface**

Protocol	D4i (IEC62386 + DiiA Part 351)
Load capacity	Up to 4 devices
Device type	MESHNODE: Type A DATALIFT: Type D
ESD rating	4kV (according to EN61000-4-2)
Protection	Short circuit protected

**GNSS (Global Navigation Satellite System)**

Supports	GPS system (L1C/A signals), Glonass system (L1OF signal), and SBAS (Satellite Based Augmentation System)
Position accuracy	Up to 2.5m/8ft (with > 6 satellites)

**Security features**

Authentication	Based on unique X.509v3 device certificates Mesh Access Control using IEEE802.1x and EAP-TLS
Encryption	ECC P256 used in TLS X509v3 AES-CCM-128 based Mesh Frame Security RSA-2048 used for firmware signing
Cipher suites	TLS_ECDHE_ECDSA_WITH_AES_128_CCM

**Ordering information**

Model	Part number	Description
DATALIFT Z	01-78-664	2.4GHz Mesh, Cellular LPWA
MESHNODE Z	01-78-665	2.4GHz Mesh