

LUMINEXT RF4: OLC400 Zhaga Wirepas / GATEWAY RF4

- Suitable for all fixtures with Zhaga book 18 connector
- Large scale usable and expandable
- With GPS sensor for automatic commissioning
- 2,4 GHz / Wirepas Network Technology

The RF4 system

The RF4 system consists of the OLC400 Zhaga Wirepas outdoor lamp controller (OLC) and the Gateway RF4 Wirepas with a possible extension module the CC-100 Wirepas Cabinet Controller.

The OLC's are usually placed on the top Zhaga connector of the fixture and form automatically a wireless RF mesh network at 2.4Ghz using the Wirepas technology.

In the event of a failure of one or more OLCs, for example due to a defective mast fuse, phase or group, the network remains operational. The network is self-repairing, as the functions are taken over by other OLCs. Even if a Gateway fails, the communication is taken over by another Gateway and the network continues to function.

The RF4 network can be expanded indefinitely by adding OLCs and gateways. There is no hard limit to the number of OLCs per Gateway.



The OLC400 Zhaga Wirepas

The OLC 400 Zhaga Wirepas is an outdoor lamp controller for remote control, dimming, monitoring and management of public lighting. This OLC is suitable for all fixtures with a Zhaga connector and can control D4i drivers based on DALI 2.0. The OLC400 Zhaga Wirepas has a digital input for additional Smart City functions.

The OLC400 Zhaga sends the following information to the Luminizer platform:

- The set and the actually followed dimming schedule
- Measurements and asset data are read from D4i driver
- DALI lamp and driver status information
- GPS coordinates
- Sensors: light intensity, accelerometer, temperature

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The RF4 Cabinet Controller Wirepas

The RF4 Cabinet Controller Wirepas is a controller for remote control, monitoring and management of the power supply cabinet. The controller has relays and I/O to switch the power and do phase monitoring on incoming power. Functionality can also be realized here with, for example, a manual switch to switch ON the lights (power) and connected OLCs to be sent to a certain level via the network.



The Gateway RF4 Wirepas

The Gateway RF4 Wirepas opens up the wireless OLC lighting network with the Internet. With a built-in LTE CAT-M1 router with fall-back to 2G, a wireless Private APN connection to the management software is maintained when the installation is live. The Gateway receives the settings via this secure connection and reports data about the lighting and any defects. In the event of calamities, the commands given from the central unit, such as 'all lighting to 100%', are carried out via an 'override' by the Gateway.

- Easy mounting in a cabinet or on the pole
- Function takeover by another gateway in case of failure

LUMINEXT RF4: OLC400 Zhaga Wirepas

Model	OLC400 Zhaga Wirepas
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ELECTRICAL DATA

Mains Supply	24VDC
Max Lamp Power	Not applicable
Power Consumption	<1W, nominal

HOUSING

Material	Receptacle PBT, top PC, gasket LSR
Protection	IP66 / IK09
Dimensions	80 x 33 mm (diameter x height)

ENVIRONMENT

Temperature	-40°C to +65°C
Relative Humidity	0-100%

FEATURES

Dimming Interface	DALI, IEC 62386, D4i, support 8 independent drivers
Digital Input	Max 40VDC
Measurements	No measurements, electrical data is read from the driver
Sensors	Accelerometer (XYZ position), Lux sensor, Temperature sensor, GPS

COMMUNICATON

RF Communication	Mesh, 2.4 GHz, GFSK
RF Protocol Software	Wirepas features decentralized network infrastructure, all devices can route, multi gateway support, multi-channel operation, efficient collision free spectrum used to allow dense networks.
Security	Encryption AES 128bits
Related Products	The OLC400 Zhaga must be used with a Gateway RF4 Wirepas.

OEM

Manufacturer	Capelon AB, Sweden
Part ID	P632-1320

STANDARDS

Approval	RED Directive 2014/53/EU, EMC Directive 2014/30/EU, ROHS Directive 2011/65/EU LVD Directive 2014/35/EU
Radio	EN 301 489-1, EN 301 489-17, EN 301 489-17, EN 300 328, ver 2.2.2
EMC	EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3
FCC/ICES	47CFR15.107, 47CFR15.109 and ICES-005 Issue 5
Safety	EN 62368-1

ORDER INFORMATION

Productnumber	10.75.400 - OLC400 Zhaga Wirepas
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The EU-Declaration of Conformity is available on <https://www.luminext.eu/rf4-system/>

CONTACT INFORMATION

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LUMINEXT RF4: RF4 Cabinet Controller Wirepas

Model	RF4 Cabinet Controller Wirepas
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ELECTRICAL DATA

Mains Supply	3Ph+N+PE, 230/400VAC: only one phase required, 90 -265 VAC, 50/60Hz
Max Lamp Power	Not applicable
Power Consumption	Nominal 2W, max 10W

HOUSING

Material	Lexan 940 and Noryl VO 1550, UL94-V0
Protection	IP30
Dimensions	105 x 57 x 86 mm, 6 DIN modules 35mm DIN

ENVIRONMENT

Temperature	-40°C to +60°C
Relative Humidity	5-95%, non-condensing

FEATURES

Relays	3 Relay, max 6A @ 250VAC resistive load
I/O	2 Digital Inputs 230VAV, 2 Digital Inputs max 35VDC, 1 analog input 40-20mA/0-10V
Serial Communication	1 RS-232/485 (modbus), 1 RS-232
Power Supply Output	24VDC, 12W can be used to supply the Gateway RF4 Wirepas
Mains Supervision	Each phase line is monitored
Other	Pluggable terminals, LED indicator for Power and Status, RTC backup (72 hours)

COMMUNICATON

RF Communication	Mesh, 2.4 GHz, GFSK, Integrated PCB Antenna Optional with externa antenna for long range
RF Protocol Software	Wirepas features decentralized network infrastructure, all devices can route, multi gateway support, multi-channel operation, efficient collision free spectrum used to allow dense networks.
Security	Encryption AES 128bits
Related Products	The OLC400 Zhaga must be used with a Gateway RF4 Wirepas.

OEM

Manufacturer	Capelon AB, Sweden
Part ID	P610-1111

STANDARDS

Approval	RED Directive 2014/53/EU, EMC Directive 2014/30/EU, ROHS Directive 2011/65/EU LVD Directive 2014/35/EU
Radio	EN 301 489-1, EN 301 489-17, EN 300 328, ver 2.2.2
EMC	EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, EN 61000-6-2, EN 61000-6-3
FCC/ICES	47CFR15.107, 47CFR15.109 and ICES-003
Safety	EN 62368-12020 and A11

ORDER INFORMATION

Productnumber	10.75.401 - CC-100 Wirepas Cabinet Controller
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LUMINEXT RF4: Gateway RF4 Wirepas

Model	Gateway RF4 Wirepas
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ELECTRICAL DATA

Mains Supply	18-30Vdc
Power Consumption	< 3W Nominal

HOUSING

Material	PC/PBT/Aluminium
Protection	IP6K9K
Dimensions	Ø 135mm Height 40mm
Installation	Center screw installation

ENVIRONMENT

Temperature	-40°C to +60°C
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FEATURES

Processor	ARM Cortex-A7 800Mhz
Mememory	eMMC 4GB, DDR3L RAM512MB
Modem / router	2G / 4G-LTE-CAT-M1
Antenna	Built-in vertical antennas for 2.4Ghz Mesh and Cellular

COMMUNICATON

RF Communication	Mesh, 2.4 GHz, GFSK
RF Protocol Software	Wirepas features decentralized network infrastructure, all devices can route, multi gateway support, multi-channel operation, efficient collision free spectrum used to allow dense networks.
Security	Encryption AES 128bits
Related Products	The Gateway RF4 Wirepas must be used with an OLC400 Zhaga Wirepas.

OEM

Manufacturer	Capelon AB, Sweden
Part ID	P700-1112

STANDARDS

Approvals	RED Directive 2014/53/EU, EMC Directive 2014/30/EU , RoHS Directive 2011/65/EU, LVD 2014/35/EU
Radio	EN 301 489-1, EN 301 489-17, EN 301 489-52, EN 300 328, ver 2.2.2
EMC	EN 55032, EN 55035, EN 61000-3-2, EN 61000-3-3
FCC/ICES	47CFR15.107, 47CFR15.109 and ICES-003 Issue 6
Safety	EN 62368-12020 and A11

ORDER INFORMATION

Productnumber	20.75.401 - Gateway RF4 Wirepas tbv kastmontage 20.75.402 - Gateway RF4 Wirepas tbv mastmontage
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