signify interact

interact Pro



LCN1840/05
Wireless gateway

Specification Sheet

Find out more about Interact
www.interact-lighting.com

LCN1840/05

The Interact Pro wireless gateway (WG) is the basis of the lighting system and connects the system to the cloud via the internet. The IP backbone between the WG enables communication between the luminaires and the cloud. The WG connects with the luminaires by means of ZigBee.

Product description

The WG features an easy commissioning process during initial installation and is ready for later expansions.

The WG is powered by a 5 V_{dc} Class 2/SELV power adapter. The system is easily scaled up by connecting multiple WGs over Ethernet.

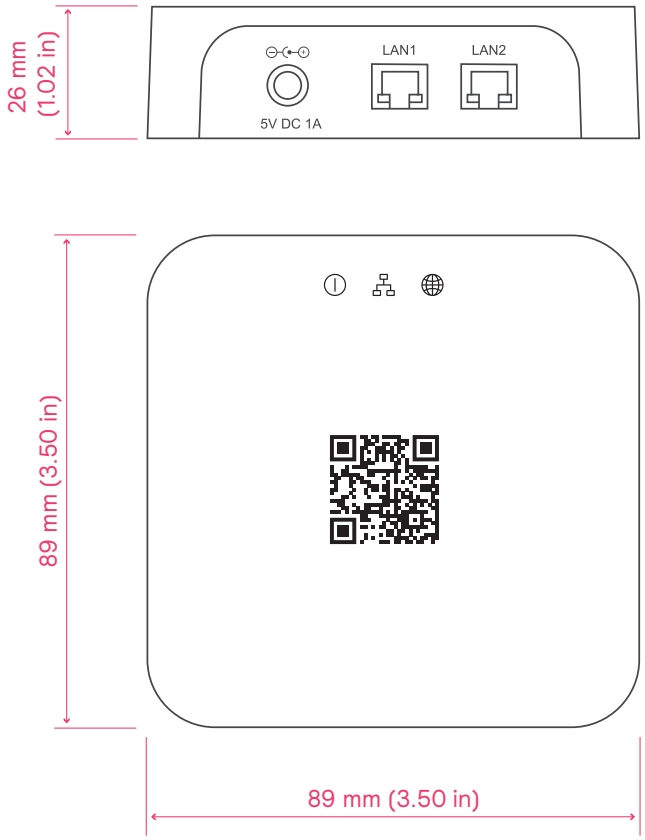
Wireless communication complies with the ZigBee Pro standard (IEEE 802.15.4, WPAN) in the 2.4 GHz frequency band. The WG must be placed within 10 m (33 ft) from one or more of the ZigBee luminaires to form a mesh network. Communication between the wireless devices and the WG is encrypted, as well as the communication between the WG and the devices on the Interact Pro network.

The WG establishes a secure wireless ZigBee connection with an average of 200 end points. The wireless connections allow bidirectional control and sensor data exchange between the end points and the Interact Pro network.

Features and benefits

- White enclosure, mounting bracket
- Three LED indicators for feedback on power, connectivity, and communication
- Has an unique QR code to install and commission.
- Controls associated end points without access to cloud (lighting behavior).
- Lighting behavior of end devices remain operational upon failure.
- Can be remotely managed, upgraded, and controlled.
- The underlying lighting network will implement graceful degradation upon failures.
- Secure wireless communication based on the ZigBee PRO standard (IEEE 802.15.4, WPAN) operating at 2.4 GHz radio frequency (RF).
- Functions for the WG and all connected devices can be modified with software configurable settings.

Dimensional drawing



Wireless communication

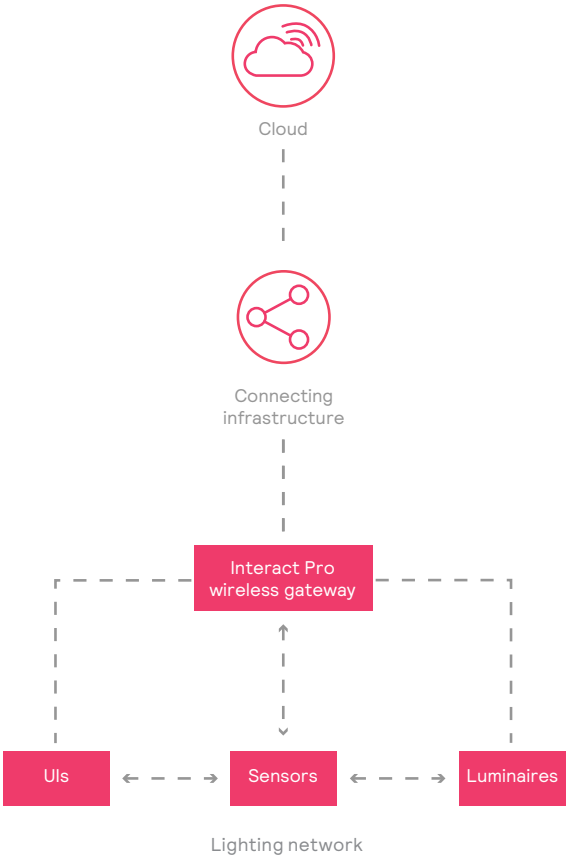
The wireless network is based on the ZigBee PRO standard (IEEE 802.15.4, WPAN) which is targeted at radio-frequency (RF) applications and operates at 2.4 GHz. The ZigBee protocol enables fully distributed peer-to-peer communication models. This means no master / slave relationship whereby the application is divided over the devices in the network. Every device knows how it functions within the network. The result is that if one device does not function (removed or defect), the remaining devices keep functioning as intended.

The network is based on a mesh network, so devices pass on the received commands. The distance between the devices should not exceed 10 m (33 ft). The advantage of a mesh network is the capability for self-healing routing, enabling automatic route discovery over the mesh network. ZigBee has tolerance for a large number of co-located networks due to use of multiple communication channels and CSMA-CA channel access. The commands have network security according to AES 128-bits network encryption. Other connected lighting wireless devices like the kinetically-powered ZigBee Green Power (ZGP) Switches make use of the same protocol so they can be combined to interact in a seamless way.

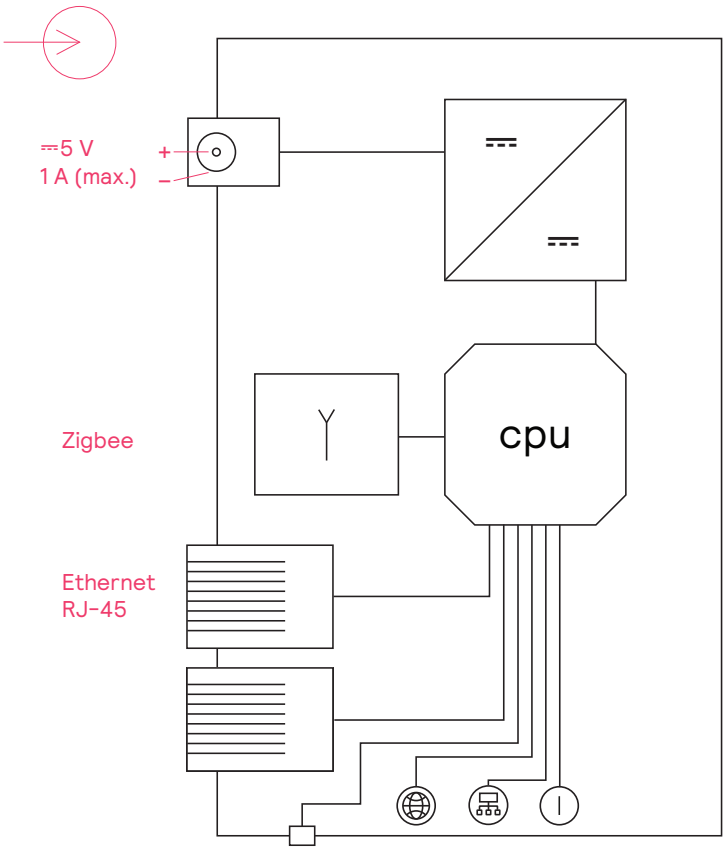
The WG supports encrypted and secure wireless network communication. Third party ZigBee devices can only join the ZigBee network if their unique identifiers are explicitly enabled in the Interact Pro system.

Note
Wireless signals may be subject to radio frequency interference.

Application area



Electrical diagram



Specifications

General characteristics		
Supply options		
Power supply	In: 100 to 240 V_{ac}, 50/60 Hz Out: 5 V_{dc} Class 2/SELV; 1 A	
Allowed supply ripple	Max. 0.5 V_{pp}	
Power consumption	Max. 2.5 W	
Communication ports	2 x 10/100 BaseT Ethernet port ZigBee port	
Supported Ethernet protocols	IPv6, TCP, UDP	
Environmental conditions operating		
Ambient temperature range	−20 to +45 °C (−4 to +113 °F)	
Relative humidity range	0 to 80%, non-condensing	
Environmental conditions storage		
Temperature range	−40 to +80 °C (−40 to +176 °F)	
Relative humidity range	10 to 90%, non-condensing	
Connector type		
Supply in	1 x DC plug 5.5 mm (0.2 in)	
Ethernet	RJ-45	
Wireless communication	ZigBee PRO standard (IEEE 802.15.4, WPAN)	
Housing		
Material	ABS	
Color	Signal white (RAL9003)	
Dimensions (length, width, height)	91 x 91 x 26 mm (3.6 x 3.6 x 1 in)	
Weight	95 g (0.21 lb) (incl. mounting bracket)	
Power adapter	Power plug SELV/Class2 Exchangeable plugs for EU and NA mains socket	Universal Mains 100 to 240 V_{ac} 50/60 Hz Length of cable 1.5 m (4.92 ft)
Mounting bracket		
Material	ABS	
Color	Signal white (RAL9003)	
Dimensions (length, width, height)	97 x 97 x 34 mm (3.8 x 3.8 x 1.3 in)	
User controls	Reset Push Button, Status LEDs (Power, Network, Portal)	
Real time clock	Mains / Battery powered **Battery life:** 2 years no supply / 10 years with supply	

Regulatory compliance	
Certifications	
Approbation (Europe)	CE, UKCA, UL, FCC, IC, RCM
R&TTE RF	ETSI EN 300 328 EN 62311
R&TTE EMC	ETSI EN 301 489-1/17 EN 55032 EN 61000-3-2 EN 61000-3-3
Approbation (US & Canada)	FCC Part 15.247; 15.107; 15.109 IC RSS-247 ICES-003
Safety	EN 62368-1 (UL60950-1 and CAN/CSA-C22.2 No. 60950-1-07)
Immunity	IEC 61000-4-2, 3, 4, 5, 6, 8, 11
Reliability	IEC 60068
Environmental standard	ROHS/Reach
Battery information	**1xCR1632, Li-Mno2**

Packing data

Type	Dimensions	Qty/Box	Material	Weight (net)	Weight (gross)
LCN1840	110 x 80 x 110 mm (4.3 x 3.1 x 4.3 in)	**1**	Cardboard	0.18 kg (0.40 lb)	0.31 kg (0.68 lb)

Ordering data

EU Version

Type	MOQ	Ordering number	EAN code level 1	EAN code level 3	EOC
LCN1840/05 Interact Pro wireless gateway IA Pro L	1	9137 010 37703	8718696 775790	8718696 775806	775790 00

US Version

Type	MOQ	Ordering number	UPC code level 1	UPC code level 3	Catalog code
LCN1840/05 Interact Pro wireless gateway IA Pro L NA	1	9137 010 37713	046677476335	50046677476330	LCN1840/05

Specific Data Notice

This Specific Data Notice applies to the wireless gateway as specified in this product specification/data sheet (the "**Gateway**") that is part of or works with a professional system offered by Signify for use in the European Union and supplements and/or corrects the Generic Data Notice For Professional Systems and Services that can be found at: https://www.signify.com/global/legal/digital-terms/data-notices (the "Generic Data Notice") by providing additional and/or more specific details specific to this Gateway.

Terms starting with a capital in this Specific Data Notice, will have the meaning as attributed thereto in the Generic Data Notice, unless explicitly defined otherwise in this document.

When used in a professional connected lighting system of Signify with the Interact Pro software services ("**Interact Pro**") the Gateway is capable of generating *:

- Operational Data, on energy consumption, failures and burning hours of connected light points and nodes in the system by polling every 15 minutes the connected Zigbee light points/nodes for such Data

* The type and volume and format of Product Data that is actually generated depends on the actual devices used in the system, the product and/or software configuration and subscription to the relevant Software Service. For further details on data generation capabilities of such devices, please check the product specification/data sheets of such devices.

The aforementioned Product Data is communicated via the Gateway to the Interact cloud where these are stored. Product Data is not stored on the Gateway itself. Operational Data cannot be accessed directly from the Gateway. Operational Data that is Readily Available Data can be accessed as indicated in the software specification sheet of Interact Pro.

This Specific Data Notice may be changed by Signify from time to time. The current version of this notice will apply and can be obtained at request via the point of contact as indicated in paragraph 7 of the Generic Data Notice.

Find out how Interact can transform your business
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