

Kontakt.io Portal Light IR

PNR: KHWPO130F001

User Manual



The Portal Light IR is Kontakt.io's Bluetooth® Low Energy (LE) RTLS gateway and IR sensor. It scans and detects Kontakt.io BLE devices and sends received BLE data to Kio Cloud over the facility's existing Wi-Fi network. Additionally, it provides IR signal coverage for room level certainty positioning. With a Kontakt.io subscription, BLE beacons, tags, and badges are automatically processed in Cloud and Applications and can receive configuration/firmware updates over their BLE connection to a Portal Light IR.

Portal Light IR Installation Pre-requisites

- ✓ DC power adaptor 4.75 to 28 VDC (including USB)
- ✓ Signify Luminaire-based brackets or a snap-on ceiling fixture
- ✓ WiFi network (2.4 or 5 GHz)

Main Features

- ★ Location services, BLE device data in real-time and constant connection to Kontakt.io Cloud via Wi-Fi
- ★ x4 IR LEDs for room level RTLS
- ★ Dual BLE: RTK and STM BLE modules
- ★ Simplified deployment with Kontakt.io mobile application
- ★ Visual status Green LED
- ★ PIR sensor - power saving and movement detection
- ★ Over-the-air (OTA) configuration and firmware updates

Electrical Specifications

- Input: 4.75 – 28VDC power supply
- Internal device power: 3.3 VDC
- Coin-cell battery for RTC power (keep accurate time for Wi-Fi certificates) CR1025 3.0V, 30mAh

Environmental Specifications

- Operating Temperature 0C to 65C
- Storage Temperature -20C to 85C
- Operating Humidity 10%-95% RH(non-condensing)
- Storage Humidity 5%-95% RH(non-condensing)
- IP 54

Wi-Fi Specifications

Wireless Standards: IEEE 802.11 a/b/g/n
Frequency range: 2.412-2.484GHz & 5.180-5.825GHz
Data Rates: 802.11a : 6,9,12,18,24,36,48,54Mbps / 802.11b : 1,2,5,5,11Mbps / 802.11g : 6,9,12,18,24,36,48,54Mbps
MCS0--MCS7 @ HT20 /2.4GHz and 5GHz band
MCS0--MCS7 @ HT40 /2.4GHz and 5GHz band
Work Mode: Station
Security: WEP, WPA™ / WPA2™ PSK, WPA2 Enterprise, EAP TLS, EAP TTLS, PEAPv0, WPA3™ Personal

BLE Specifications

- **RTL8720DN:** ARM® V8 MCU / 2.402GHz -2.480GHz
- **BLUENRG-355MC:** Cortex®-M0+ / 2.402GHz -2.480GHz
- Bluetooth LE 5.0 and 5.2 compatible

Applications

Portal Light IR is used in workspaces and medical indoor spaces applications. Devices are meant to be installed on a ceiling using special Philips luminaires or with a standalone snap-on ceiling clips. It is also possible to mount device horizontally if ceiling installation is not possible.

The device is a unique combination of IoT Wi-Fi - BLE gateway and IR sensor. Not only it can connect to any 2.4GHz or 5GHz networks and enable data transfer of scanned BLE signals from surrounding Asset Tags, Smart Badges, Beacons and any BLE devices; but also is acting as IR emitter, filling room with IR signal that encodes room number, thus enabling room level location mechanism (proprietary to Kontakt.io).

Installation & Commissioning

- Portal Lights 2 are deployed in the area according to floorplans and RTLS design provided by Kontakt.io. Depending on selected RF density and room size it could require up to several devices to be installed in a single room.
- After Portal Light IR is connected to DC power it establishes connection to local Wi-Fi network that was pre-configured at factory. In case Wi-Fi credential are not available before shipping, user is able to use Kontakt.io mobile application to configure Wi-Fi SSID and Password with help of BLE OTA configuration functionality.
- User must select location of deployed device on Kontakt.io Smart Location using mobile or web applications. Portal Light IR will show up as online on application layer. Data is accessible via APIs or as outcomes in use-case specific applications.

ISED Warning

This device complies with Innovation, Science, and Economic Development Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The device is compliance with RF exposure guidelines, users can obtain Canadian information on RF exposure and compliance. The minimum distance from body to use the device is 20cm.

Le présent appareil est conforme après examen de ce matériel aux normes de conformité ou aux limites d'intensité de champ RF. Les utilisateurs peuvent sur l'exposition aux radiofréquences et la conformité et compliance d'acquiescer les informations correspondantes. La distance minimale du corps à utiliser le dispositif est de 20cm.



WARNING

Portal Light contains electronic elements which should be properly disposed of. If a Portal Light needs to be disposed of, please contact the manufacturer technical support first.

FCC Caution

This device complies with part 15 of applicable FCC Rules. Its operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirements. This equipment should be installed and operated with minimum distance 20cm between the radiator/your body.

Produced for:

Kontakt Micro-Location Sp. z o.o.
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Kontakt Micro-Location Sp. z o.o.
hereby confirms that the devices are compliant with:

- UL 62368-1:2019, UL 2043 or IEC 62368-1
- CE / Directive: RED 2014/53/EU
- UKCA Radio equipment regulations: SI 2017/1206
- FCC Part 15B, 15C Sec 15.247, 15E Sec 15.407, FCC 47 CFR 2.1093
- IC (ISED) RSS-247, RSS-102, ICES-003
- REACH Directive 2006/1907/EC
- RoHS 2011/65/EU (EU)2017/2102
- WEEE Directive 2012/19/EU