KHOMP

ZigBee Repeater to expand signal and network capabilities

Key Features

- Indoor Endpoint Repeater in ZigBee Mesh Network
- Easy installation/maintenance on walls
- Greater transmission power
- Expands the signal and capabilities of the ZigBee network
- Rechargeable battery, ensuring 72 hours of mesh network use during power outages in the local electricity grid
- Supply via µUSB, with optional power supply*****

* *Optional items incur additional costs..*

Applications

- Corporate
- Health
- Industry

Overview

The NIR 10ZI is an IoT transmitting endpoint to integrate IoT projects using the ZigBee wireless communication network. The endpoint is installed in places that have a telemetry gateway, such as Khomp's ITG 200. Through the ZigBee protocol (IEEE 802.15.4), the NIR 10ZI receives/sends the data read on the network to the gateway to which it is connected. The ZigBee network gateway, in turn, is responsible for transmitting the information received to a server, which may be on a local network or, even, in the cloud. The NIR 10ZI is ideal for short and medium distance applications, within corporate environments (for example).

It was developed to increase the distance between the NIT transmitter endpoints and the NIR repeater endpoints of the ZigBee network, reducing the number of repeaters in the mesh network and consequently reducing the cost of deployment in the field.

The rechargeable battery also provides cost savings on the network; the endpoints do not need an additional battery bank to keep operating in case of a power outage from the public electrical grid.

Model

Khomp provides the NIR 10ZI and its peripherals with the following features:

Model	Product	Description
NIR 10ZI	Indoor Endpoint Repeater 802.15.4 ZigBee	Indoor Node IoT Repeater 802.15.4 ZigBee 20 dBm and rechargeable battery

Technical specifications

ZigBee

- ZigBee v3.0 protocol
- Frequency range: 2.4 GHz
- Power: up to 20 dBm on NIR 10ZI
- Sensitivity of -104,5 dBm
- Communication distance: A few tens of meters, according to the installation area

Period between transmissions

- Default: 5-minute period
- Maximum : 1 day and 12 hours
- Minimum : 30 seconds

Endpoints of the NIR model in batteries

- NIR 10Z has built-in rechargeable battery, battery life (without recharging) is estimated at:
  - Up to 4 days battery life is small scenarios (with 5 devices connected, with transmission every 5 minutes)
  - Minimum duration of 2 days (with 20 devices connected, transmission every 30 seconds)
  - The battery recharge time is up to 5 hours, with the battery completely discharged

Warranties and certifications

- Full warranty (legal + Khomp warranty): 1 year
  - Legal Warranty: 90 days
  - Khomp Warranty: 9 months
- ISO 9001 certified industry
- Product certificate by Anatel

Physical/Environmental

- Indoor installation
- Internal antenna integrated to the board
- Wall mounting bracket
- One USB Micro-B port (for power)
- Product Dimensions: 103x78x45 mm
- Transport box dimensions: 187x113x72 mm
- Gross weight: 240 g
- Net weight: 135 g
- Operating Temperature: 14 ºF to 140 ºF
- Operating humidity: 0–100% (relative humidity)
- Supply:
  - Rechargeable LiPo Battery
  - Battery should last 72h after power outage
  - LiPo battery operable voltage level: 1 A / 3,3–4,2 V
  - Power when using an external source: < 2 Watts
  - USB: Input 5–12 VDC
  - It has an external button integrated into the internal selector switch to turn on/off battery power
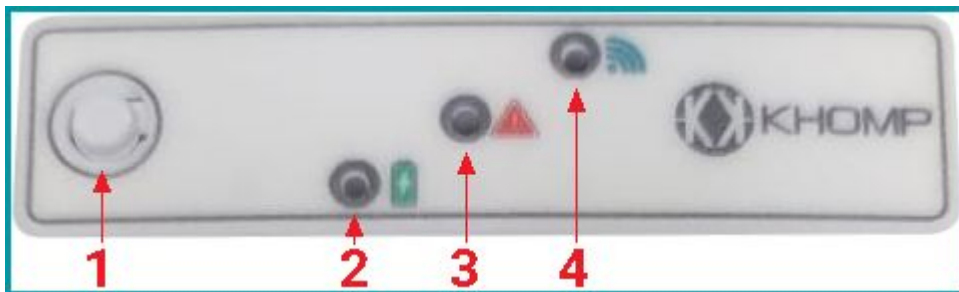
Optional items*

- USB power adapter:
- Output: 5 VDC

* *Optional items incur additional costs.*
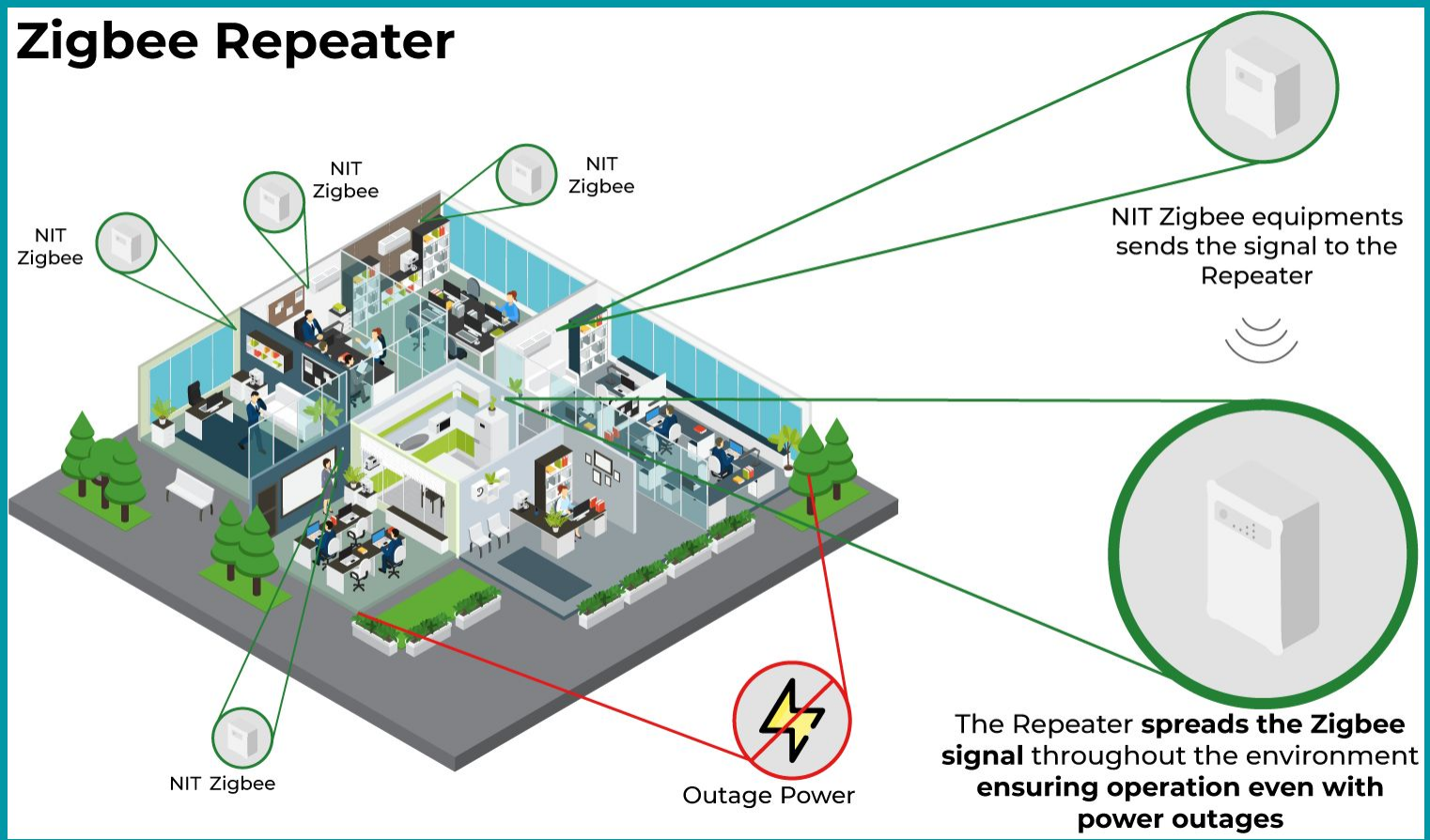
Product images

Botton and LEDs

The button and LEDs are located on the front of the NIR 10ZI.

Key:

1. *Button for restoring factory settings.*
2. *RGB Battery LED (lower indicator).*
3. *RGB Status LED (middle indicator).*
4. *RGB Network LED (upper indicator).*

Zigbee Repeater

NIT Zigbee

NIT Zigbee

NIT Zigbee

NIT Zigbee

NIT Zigbee equipments sends the signal to the Repeater

The Repeater **spreads the Zigbee signal** throughout the environment **ensuring operation even with power outages**

Outage Power

Subtitle: *Endpoint installed in rooms to expand the signal and capabilities of the ZigBee network that monitors the indoor climate quality (through IoT sensors).*

The NIR 10ZI is not capable of integrating with TagoIO.

This equipment is not entitled to protection against harmful interference and may not cause interference to duly authorized systems.
For inquiries, use the link: sistemas.anatel.gov.br/sch

"Incorporates a product approved by Anatel under number 13931-22-03237"