

# MiniNode®

Version 2.0 - June 2023



Motion Sensor (PIR)

Temperature

Relative Humidity

RGB-LED light feedback

Battery Powered

ISM band & Bluetooth Wireless link to Gateway



**MiniNode® PIR** : Offers a calibrated, high accuracy wireless data logger with **sensing as a service** for professional applications with a supporting gateway and cloud based data platform

#### Standard Sensors:

Motion Sensor: Passive Infra Red (130° field of view)  
Temperature: -20 to +60 Deg C, ( $\pm 0.5$  °C)  
Relative Humidity: 1- 99% ( $\pm 3\%$ ),

#### Wireless Network:

EU: 868/433 Mhz ISM band, LoRA or FSK modulation  
USA/N.A: 916 Mhz ISM band, LoRA or FSK modulation  
ROW: 433 Mhz ISM band, LoRA or FSK modulation  
Bluetooth Low Energy

#### Environmental rating

Outer casing: IP41 rating - indoor use only for normal ambient conditions (non condensing)  
Expected lifetime: 15 years.

#### Data backhaul connectivity (with gateway only):

Option 1: Wifi - 802.11 a/b/g (standard)  
Option 2: 4G - LTE, UMTS/HSPA+ with GPRS/EDGE failover (optional)  
Cellular option come with built in e-SIM for global coverage.  
Sensor satellite extensions MiniNode@ : Via ISM band 433/868/915 Mhz

#### Security:

Dedicated cryptographic chip with SHA-256 Hash, high quality RNG and 72 bit UUID. MiniNode® data transmission is encrypted with AES128 bit.

#### HVAC integration:

MiniNode@ devices are pre-programmed to communicate to Lindab UltraLink damper solution via Bluetooth connection.

#### Power rating

Supply: 4.5V DC (3 x AA battery)  
Typical battery life : 24 months - depending on distance to gateway and battery quality.  
Can be optionally powered by micro USB cable also.

#### Sensing frequency :

Temp/Humidity data posts every 10 mins  
1 post per motion trigger (Ad-hoc)

#### Physical Attributes (MiniNode® only):

Dimensions : 114 x 67 x 21 mm  
Weight : 150 g / 0.33 lbs (without batteries)  
Enclosure material : ABS

#### Physical Attributes (Gateway only):

Dimensions : 150 mm x 150 mm x 30 mm  
Weight : 350 gms / 0.77 lbs  
Enclosure material : Polycarbonate + ABS alloy  
UL Yellow Card : UL-verified flammability and electrical characteristics

#### Packaging:

Dimensions : 280 mm x 150 mm x 100 mm  
Weight: 700 gms (including 1 x MiniNode®, 1 x Gateway and 1 xPower supply)  
Packing Material: cardboard and plastic shrink wrapping.

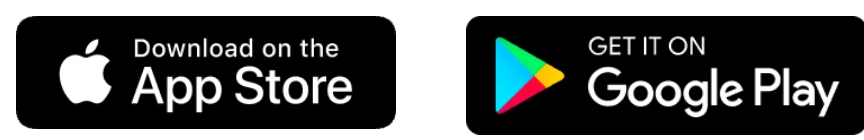
#### Calibration :

MiniNode® comes fully factory calibrated.

# MiniNode® : Integration Specifications



AirBird app is free to download for Apple and Android devices. App visualises data, delivers reports and notifications. App can also be used to pair an AirBird to the wireless Gateway



MiniNodes work with a wireless connection to a gateway (supplied separately). Each gateway can support upto several MiniNodes (please consult sales for topology advise). The Gateway comes with Wifi and 4G/LTE backhaul options. The Gateway is powered via a supplied micro USB power adaptor .

MiniNode® connects wirelessly to a Gateway to collect and forward data to a supporting cloud service and companion App. The solution is truly plug'n'play - you just need to setup the hardware on location and then login via your credentials to instantly start monitoring and building your own services.

