

MICA



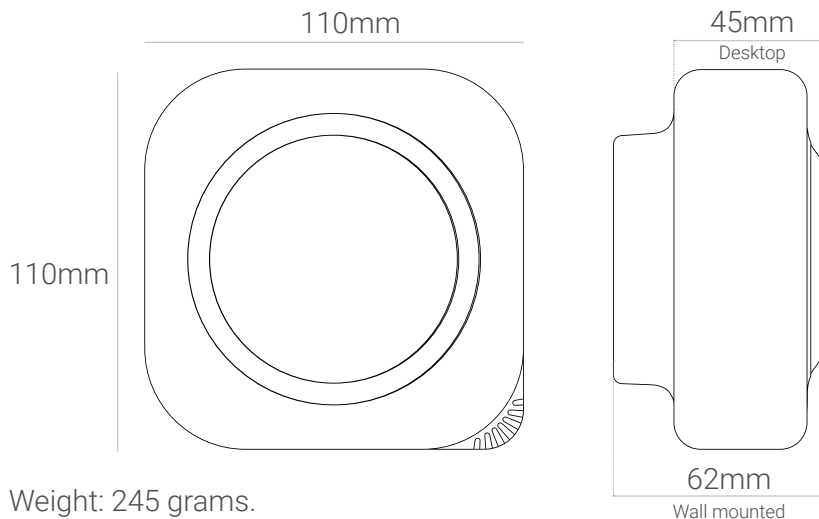
General information



Features

Multifunction touch button.
Customizable status light ring.
USB type C connector.
Wi-Fi Connectivity.*

Dimensions and weight



Weight: 245 grams.

Power supply options **

USB type C cable + EU 5V USB power adapter (for desktop only).
Alternating current 110 - 240V 50-60 Hz 0.2A fast connector.
Direct current 8 - 36V 2A 10W fast connector.
PoE (802.3af and above) 54VDC 12.95W RJ45 connector.

Other connectivity options **

LoRaWAN.
Sigfox.
NB-IoT / LTE-M.
Ethernet.

Local communication options **

Modbus RTU (RS-485).
Modbus TCP/IP (wireless) .
BACnet IP
API.
MQTT.

* The device can only connect to 2.4 GHz WiFi networks with 802.11 b/g/n (802.11n up to 150 Mbps) protocols. Supported authentication and security protocols: WPA2 (Personal), WPA2 Enterprise, WPA3 (Personal), and WPA3 Enterprise.

** Connectivity other than Wi-Fi, power supply other than USB type C and any local communication option must be specified and requested by the customer.



Sensors

Temperature

Sensor: Silicon bandgap / Unit: °C
Range: -40 - 125 °C / Resolution: 0,1 °C
Accuracy: $\pm 0,5$ °C
Lifespan¹: >10 years

Relative Humidity

Sensor: Capacitive / Unit: %RH
Range: 0 - 100 %RH / Resolution: 1 %RH
Accuracy: ± 2 %RH
Lifespan: >10 years

CO₂

Sensor: NDIR / Unit: ppm
Range: 400 - 10.000 ppm / Resolution: 1ppm
Accuracy: $\pm(30 + 3\% \text{ m.v.})$ ppm
Lifespan: >10 years

TVOC

Sensor: MOx / Unit: VOC Index Points ($\mu\text{g}/\text{m}^3$ / ppb)*
Range: 0 - 500 VOC Index Points (0 - 1000 ppm) / Resolution: 1 VOC Index Points
Accuracy: ± 15 VOC Index points or $\pm 15\% \text{ m.v.}$, whichever is larger
Lifespan: >10 years

PM_{2,5}

Sensor: Particle laser / Unit: $\mu\text{g}/\text{m}^3$
Range: 0 - 1.000 $\mu\text{g}/\text{m}^3$ / Resolution: 1 $\mu\text{g}/\text{m}^3$
Accuracy: $\pm (5 \mu\text{g}/\text{m}^3 + 5\% \text{ m.v.})$ (0 -100 $\mu\text{g}/\text{m}^3$), $\pm 10\% \text{ m.v.}$ (101-1000 $\mu\text{g}/\text{m}^3$)
Lifespan: >10 years

PM₁₀

Sensor: Particle laser / Unit: $\mu\text{g}/\text{m}^3$
Range: 0 - 1.000 $\mu\text{g}/\text{m}^3$ / Resolution: 1 $\mu\text{g}/\text{m}^3$
Accuracy: $\pm 25 \mu\text{g}/\text{m}^3$ (0 -100 $\mu\text{g}/\text{m}^3$), $\pm 25\% \text{ m.v.}$ (101 - 1000 $\mu\text{g}/\text{m}^3$)
Lifespan¹: >10 years

[1] Lifespan is based on the average lifetime of the sensor, at which the specified accuracy is guaranteed. After the indicated years, it is recommended to replace the sensor to guarantee the accuracy of the measurement.

* The measurements can be displayed in either relative Index Points values (recommended) or in $\mu\text{g}/\text{m}^3$ or ppb concentrations. You can select the option that best suits you from My inBiot. [More information](#).

Additional sensors

Noise

Sensor: MEMS Microphone / Unit: dB

Range: 30 - 120 dB / Resolution: 1 dB

Accuracy: ± 5 dB

Indicators

Indoor Air Quality [↗](#)

Range: 0 - 100 index point

Resolution: 1 index point

Thermohygrometric Comfort [↗](#)

Range: 0 - 100 index point

Resolution: 1 index point

Resistance to Mold Growth [↗](#)

Range: 0 - 100 index point

Resolution: 1 index point

Resistance to Virus Spread [↗](#)

Range: 0 - 100 index point

Resolution: 1 index point

Ventilation Efficiency [↗](#)

Range: 0 - 100 index point

Resolution: 1 index point

Use notes



1. To install and configure your MICA, please refer to [repository](#) on our website.

2. Authorized Accessories: To ensure proper performance and device safety, use only inBiot-supplied cables and power adapters. inBiot is not responsible for any malfunction, damage, or loss of warranty resulting from the use of non-compliant accessories.

3. Some sensors require preheating so they may not display data for the first few minutes or hours after powering up.

4. During the first 24 hours after connecting the MICA, ensure that clean ambient air concentration values are reached through proper ventilation to ensure optimal initial calibration.

5. Maintain sufficient ventilation periodically to ensure sensor performance, as some operate with auto-calibration algorithms.

6. The CO₂ calibration cycle is 48 hours by default. If you wish to change it, access the “calibration” section of the [inBiot Setup App](#).

7. Recommended operating conditions: 10 - 40°C and 20 - 80%RH. Maximum operating conditions: -10 - 50°C and 0 - 90%RH.

8. MICA devices ventilate both through the sides and through the air intake located at the back, so it is essential not to cover them to ensure correct sensor measurements.

9. MICA devices should not be installed in air ducts or in areas exposed to drafts with high air flow rates, as this may affect its performance, accuracy and lifetime.

10. MICA devices should not be installed in locations exposed to direct sunlight or near heat sources, as measurements may be affected.

11. Refrain from manipulating or using unofficial spare parts for device repair or maintenance. Any attempt to do so will result in the automatic loss of device warranty.

12. The MICA is designed for indoor air quality monitoring. Outdoor use is under the customer’s responsibility and any damage resulting from such use will invalidate the warranty.

13. Avoid installing MICA in indoor spaces with continuous relative humidity above 85% without condensation, as it could cause irreparable damage to the device.

14. For any further questions, please contact us using the form available on inBiot’s [support page](#).

