

AJAX-LQ-SNSR-B

AJAX - LifeQuality Wireless Smart Air Quality Monitor- Black

Product Overview

Ajax - LifeQuality Wireless Smart Air Quality Monitor - Black, Digital temperature and Humidity Sensor, Carbon dioxide concentration measurement, From 400 to 10000 ppm measurement range, 2 x CR123A Battery, Up to 2.5 years of autonomous operation.



Specifications

Features:

Guarding your productivity

Poor air quality threatens health and reduces productivity. It has been proven that high concentration of carbon dioxide (CO₂) causes apathy and drowsiness and reduces the ability to make important decisions by more than 50%.

LifeQuality is a smart air quality monitor with temperature, humidity, and CO₂ sensors that helps evaluate air quality dynamics at home, in the office, workplace, or in any other space. Users get medical-grade measurement accuracy, comprehensive in-app information, and automation scenarios. An Ajax system with LifeQuality and automation devices turns on the ventilation or humidifier if the air quality indicators are differing comfortable.

Private residence

Many daily actions, such as cleaning or cooking a meal, can affect the air quality and cause health problems. LifeQuality

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provides comprehensive information about temperature, humidity, and CO₂, so it's easy to control the optimal microclimate in each room and maintain it for special health conditions. To have a normal temperature in the kitchen or fresh air in a bedroom before sleeping is as easy as breathing now.

Office

Carbon dioxide levels strongly affect the brain's functioning, hence productivity. LifeQuality is explicitly designed to ensure a healthy working environment to achieve high-quality performance. With Ajax automation devices and scenarios, it's easy to build an automatic climate control system to guard your productivity in every office space.

Industrial premises

Production operates with standards that require significant accuracy and consistency of every system involved in the process. The microclimate is essential for safety and production quality, so its indicators must comply. LifeQuality detectors are ready to be a part of a huge climate control system bringing the best of Ajax technologies of long-range communication and outstanding battery life.

Kindergarten and school

Polluted air can be quite detrimental and impact children's development during active growth. It affects the learning process by exacerbating fatigue, attention problems, respiratory illnesses, and asthma. LifeQuality detectors and Ajax automation devices, in combination with the HVAC system, can increase the well-being of students and teachers. At the same time, Ajax apps will deliver instant notifications and comprehensive data.

Basement and underground facility

As a basement maintenance tool, LifeQuality will keep away condensation and mold by monitoring humidity and temperature level. The ventilation system and dehumidifier can be integrated and automatically react to LifeQuality measurements.

Store

Monitor and control the ideal storage conditions for food, flowers, or pharmaceutical products. LifeQuality will ensure that all products are fresh and well-preserved, giving accurate measurements without deviations. Create a safe working space for staff and keep a comfortable climate for shopping.

Room for manoeuvre

LifeQuality is easy to carry around, so you can monitor air quality in a hotel room, a friend's house, or even a moving car. LED indication will inform of dangerous air quality wherever you take the detector. Built-in memory allows saving measurements for up to 72 hours without communication with the hub or range extender. And when the connection is restored, all the data is sent to Ajax apps and synchronized with the charts.

- LED indication
- 72 h of the backup memory
- Detailed in-app history

Medical-grade accuracy inside

- LED indicatorThere is no need to open Ajax apps to determine indoor air quality status. The LED lights up green, yellow, red, or purple depending on the CO₂ level. All you need is one tap on the detector's logo.
- EnclosureThought-out to the smallest detail, the enclosure reflects the placement of sensors inside and has an optimal system of openings for air ventilation. Available in white or black.
- Temperature and humidity sensorSHT40 from Sensirion is a digital sensor from Swiss developers. The sensitive element is designed to work in difficult conditions, such as industrial facilities with a high condensation risk. SHT40 has a self-diagnosis mechanism and provides an accuracy of ± 0.2 degrees C for temperature and $\pm 2\%$ for humidity.
- CO₂ sensorSunrise by Senseair is an optical NDIR sensor designed by Swedish developers. It measures carbon dioxide in the air directly without using mathematical models. With an average consumption of 45 μ A, the sensor is energy effective and guarantees a minimum of 15 years of measurements with an accuracy of $\pm (30 + 3\%)$ ppm.
- BatteriesTwo pre-installed replaceable CR123A batteries provide up to 3 years of battery life without recharging the detector

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or connecting it to the mains.

- SmartBracketThe mounting panel is designed to easily fix the device on a flat surface without disassembling the enclosure. The detector can be removed from the panel with one move to take it with you. A built-in accelerometer notifies if the detector has been removed from the mounting panel or changed its position.

Charts

Charts show the trend of indicators over the last hour, day, week, month, or year. Ajax Cloud server encrypts and securely stores the air quality history for up to 2 years. The data is accessible at any moment to view, track, and analyze.

Full monitoring for the building

With PRO Desktop, building admin staff can observe not only security but Ajax devices for automation and comfort. Device statuses, event log, and microclimate data - the operator has a complete picture in one intuitive interface, all informative and centralized. The installer can remotely change the settings and provide additional services according to the object specifics.

All-around installation with no wires

LifeQuality does not need recharging or plugging into a power outlet. With a 3-year battery life and no wires, the detector can be installed at any location on the wall or ceiling. Or even used inside a moving car. The batteries are replaceable, so after three years of operation the installer pops the new ones, and LifeQuality continues to operate as usual.

- Up to 3 years of battery life
- Replaceable batteries
- Does not require a power outlet

Advanced microclimate automation

LifeQuality is a part of the Ajax ecosystem and can interact with automation devices, users, and installers through Ajax apps. Scenarios based on LifeQuality indicators can control the microclimate in any room, giving a wide range of appliances to integrate. For example, WallSwitch will turn on heating or ventilation when the specified indicator has reached the limit, and Socket will turn off the humidifier when high humidity becomes uncomfortable.

Unique wireless technologies

The Ajax system uses two-way secure radio communication based on Jeweller and Wings proprietary protocols. Radio protocols work in parallel and focus on their own function, guaranteeing instant data and delivery even with communication interruptions and a weak signal.

Ajax wireless technology has up to 1,700 meters of radio signal communication range in an open space, making it on average longer than competing solutions from different manufacturers. Automatic power adjustment makes it energy efficient by not using the maximum power of radio transmitters in system devices on a regular basis. It is also more stable, using less noisy radio frequencies.

- Up to 1,700 meters of radio communication range with a hub
- Encrypted two-way radio communication
- Notifications about jamming and connection loss

Jeweller

The Ajax radio protocol uses polling to display current device statuses and transmits alarms, events, and all the readings into the Ajax apps. Jeweller features encryption and authentication to prevent spoofing.

Wings

Wings is a backup communication channel. Transmits large data packages in case of connection loss and sends data backups from the detector to the hub after restoring the connection.

Scaled and comprehensive

The ReX 2 range extender connects to the hub via radio and Ethernet using the wire as the additional communication channel. This allows covering the most complex objects like a multi-floor office with underground parking or a warehouse with several buildings. ReX 2 avoids obstacles and interference, doubling the radio communication range. Up to 5 range extenders can

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operate within one Ajax system to expand the network coverage to the stadium size.

- Up to 5 range extenders within one system
- Ethernet as an alternative communication channel

Intuitive installation and connection

LifeQuality is ready to operate straight out of the box. There is no need to disassemble the enclosure. SmartBracket mounting panel allows you to securely install the detector on any flat surface. Ajax apps help quickly make the device a part of the automated system. No need to visit the object to disable the device or change the settings.

Specifications:

Compatibility	
Hubs	Hub 2 (2G)
	Hub 2 (4G)
	Hub 2 Plus
	Hub Hybrid (2G)
	Hub Hybrid (4G)
Radio signal range extenders	ReX 2
Communication	
Jeweller communication technology	Proprietary wireless communication technology to transmit events.
	It features:
	Two-way communication.
	Protection against spoofing.
	Block encryption with a dynamic key.
	Instant notifications.
	Remote configuration via the Ajax apps.
Frequency bands	866.0-866.5 MHz
	868.0-868.6 MHz
	868.7-869.2 MHz
	905.0-926.5 MHz
	915.85-926.5 MHz
	921.0-922.0 MHz
	Depends on the sales region.
Maximum effective radiated power (ERP)	up to 20 mW
	Automatic power regulation to reduce power consumption and radio interference.
Radio signal modulation	GFSK
Radio communication range	up to 1,700 m
	Between the detector and a hub/range extender in an open space.
	Calculate radio communication range
Encrypted radio communication	All the data stored and transmitted are protected by block encryption with a dynamic key.
Radio frequency hopping	To prevent radio interference and jamming.

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Wings communication technology	Proprietary wireless communication technology for backup connection with the hub (or radio signal range extender).
	It features:
	Two-way communication.
	Block encryption with a dynamic key.
	Re-uploading data packets in case of error during data transfer.
Frequency bands	866.0-866.5 MHz
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	868.7-869.2 MHz
	905.0-926.5 MHz
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Encrypted radio communication	All the data stored and transmitted are protected by block encryption with a dynamic key.
Radio frequency hopping	To prevent radio interference and jamming.
Sensitive elements	
Sensitive elements	Temperature and humidity sensor
	CO2 (carbon dioxide) sensor
Temperature measurement	
Sensitive element	Digital temperature and humidity sensor
	Values in the Ajax apps are updated depending on the frequency of the "hub-detector" polling interval, but not less than once per minute.
Measurement range	from 0 degreesC to +50 degreesC
	The value is available in the device States in the Ajax app.
Measurement accuracy	+/-0.2 degreesC
Measurement pitch	0.1 degreesC
	The minimum temperature change value recorded in the Ajax apps.
	Comfort level from 14 to 21 degreesC
	Temperature range
Humidity measurement	
Sensitive element	Digital temperature and humidity sensor
	Values in the Ajax apps are updated depending on the frequency of the "hub-detector" polling interval, but not less than once per minute.
Measurement range	from 0% to 100%
	The value is available in the device States in the Ajax app.

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Measurement accuracy	+/-1.8%
Measurement pitch	1%
	The minimum humidity change value recorded in the Ajax app.
	Comfort level from 30 to 60%
	Humidity range
Carbon dioxide (CO2) concentration measurement	
Sensitive element	digital carbon dioxide sensor
	Values in the Ajax apps are updated depending on the frequency of the "hub-detector" polling interval, but not less than once per minute.
Measurement range	from 400 to 10,000 ppm
	The value is available in the device States in the Ajax app.
Air quality assessment levels	normal air: up to 1000 ppm
	moderately polluted air: from 1000 to 1400 ppm
	polluted air: from 1400 to 2000 ppm
	critically polluted air: more than 2000 ppm
	Effects on well-being:
	from 1000 to 2500 ppm- lethargy
	from 2500 to 5000 ppm-possible adverse health effects
	5000 ppm and above-the maximum permissible concentration during an 8-hour working day.
Measurement accuracy	+/-30 ppm or +/-3%
	When the CO2 concentration is less than 5,000 ppm. For higher concentrations, the measurement error increases.
Measurement pitch	1 ppm
	The minimum value of the change in carbon dioxide concentration recorded in the Ajax app.
	Acceptable level to 1100 ppm
	CO2 range
Additional features	
Charts	of temperature, humidity, and carbon dioxide concentration
	Available in the Ajax apps. The data is updated in real time. Measurements are stored for up to 2 years.
	Discrete value: 1 minute.
LED indication	green: Normal air
	yellow: Slightly polluted air
	red: Polluted air
	purple: Critically polluted air
	The LED indicator on the device enclosure lights up in the event of a critical change in air quality. The user can also turn on the indication by touching the touch sensitive button on the front panel of the detector.

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Automatic calibration	once every 1-14 days
	The detector selects a calibration interval depending on the circumstances and automatically calibrates the carbon dioxide sensor. In normal conditions (ventilated room), manual calibration is not required. The digital humidity and temperature sensor does not require additional calibration.
Manual calibration	is run in the Ajax apps. Suitable for unventilated rooms. We recommend calibrating the detector once every 2-3 weeks in such rooms.
Scenarios	reactions to changes in temperature, humidity, and carbon dioxide concentration
	For example, turning on plenum ventilation if the air quality deteriorates.
Backup memory	up to 3 days
	If the detector loses communication with the hub (or radio signal range extender), it stores all measured values. After the connection is restored, all values are sent to the Ajax app.
	Recommendations
	The device is designed only for indoor installation at any height. It is not necessary to use the SmartBracket mounting panel.
	The detector can be placed on a table or shelf.
Sabotage protection	
Accelerometer	Notifies on attempts to tear off the detector from a surface, remove it from the mounting panel, or move the detector if it is placed on a table or shelf.
Protection against spoofing	device authentication
Communication loss detection	within 36 seconds
	The detection time depends on the Jeweller or Jeweller/Fibra settings.
Power supply	
Power supply	2 x CR123A battery
	Up to 2.5 years of autonomous operation.
Enclosure	
Dimensions	77 x 77 x 34.5 mm
Weight	127 g
Operating temperature range	from 0 degreesC to +50 degreesC
Operating humidity	up to 85%
Protection class	IP50
Colours	
Colours	Black
	White
Complete set	

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Complete set	LifeQuality Jeweller
	SmartBracket mounting panel
	2 x CR123A battery (pre-installed)
	Installation kit
	Quick start guide

Product Information Online

For the latest product information, availability and purchasing details, please visit the product page:

Product page:

<https://www.comx-computers.co.za/AJAX-LQ-SNSR-B-AJAX-LifeQuality-Wireless-Smart-Air-Buy-p-294669.php>

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