

# LifeQuality Jeweller

Smart air quality detector. Runs automation scenarios when the set temperature, humidity, and CO<sub>2</sub> concentration thresholds are exceeded.



An Ajax hub is required for operation. Find the detailed information on the device at the link:

 [ajax.systems/support/devices/lifequality/](https://ajax.systems/support/devices/lifequality/)



## Key features

-  Detailed statistics of indicators in the Ajax apps
-  Notification of indicators exceeding the set limits
-  Up to 2,5 years of operation from pre-installed batteries
-  Remote control and configuring via the Ajax apps
-  Automation scenarios by CO<sub>2</sub> level, temperature, and humidity
-  LED indication of the CO<sub>2</sub> level
-  Easy wall or ceiling mounting with SmartBracket mounting panel
-  Adding to the system via QR code



## Device for maximized productivity

High air quality is the key to productive work, good health, and healthy sleep. LifeQuality provides comprehensive CO<sub>2</sub> concentration, temperature, and humidity information through Ajax apps. This allows you to understand whether the microclimate in the room is optimal and what exactly you should improve if not.

## How CO<sub>2</sub> affects productivity

Level of CO<sub>2</sub> concentration

200 ppm	<b>up to 450 ppm</b> Average outdoor level of CO <sub>2</sub> (carbon dioxide) concentration <sup>1</sup>
400 ppm	
600 ppm	<b>451-1000 ppm</b> Acceptable indoor level of CO <sub>2</sub> (carbon dioxide) concentration Does not affect cognitive ability <sup>1</sup>
800 ppm	
1000 ppm	<b>1001-1399 ppm</b> Causes eye irritation, sore/dry throat, stuffy/congested/runny nose, sneezing, coughing Decreases concentration <sup>2</sup>
1200 ppm	
1400 ppm	<b>1400-1999 ppm</b> Causes headache, dizziness, tiredness Adverse health effects expected by prolonged exposure <sup>2</sup>
1600 ppm	
2000 ppm	<b>2000-2499 ppm</b> Causes wheeze, dry throat, difficulty concentrating Increases risks for health expected by prolonged exposure <sup>2</sup>
2200 ppm	
2400 ppm	
2600 ppm	<b>2500+ ppm</b> The substantial reductions in decision-making performance <sup>3</sup>

# Part of a comprehensive system

In the Ajax apps, an installer sets the temperature, humidity, and CO<sub>2</sub> concentration thresholds to run automation scenarios. Users will enjoy high-quality air in the room thanks to the LifeQuality in combination with automation devices from Ajax, supply systems, humidifiers, and air conditioning.



The detector is suitable for any room. You can offer it as a solution for offices, industrial premises, and for home use.



Scenarios by temperature



Scenarios by CO<sub>2</sub> level



Scenarios by humidity

## Precise readings

The Swiss detector **SHT40** by **Sensirion** ensures the accuracy of LifeQuality's temperature and humidity readings. The Swedish detector **Sunrise** from **Senseair** measures CO<sub>2</sub> concentration.. These reliable detectors are used even in medical equipment.

The combined humidity and temperature detector is installed in an isolated area of the board so that the detector readings are not affected by the heating of other elements of the device. To measure CO<sub>2</sub>, an NDIR detector is used instead of VOC sensors calculating carbon concentration mathematically. LifeQuality does not give false readings that can occur due to substance vapours, aerosols, or perfumes.

## Measurement accuracy



±0,2°C



±1,8%



± (30 + 3%) ppm

# In-app monitoring

Your customers can log into the Ajax app to check indoor air quality at any moment. LifeQuality indicators are available on the devices and rooms screen.

Users can check the indicators for a certain time or date. In the app, each indicator is represented by a chart for dynamic air quality assessment and time dependence detection.



Measurement storage  
up to 2 years



Measurement discreteness  
up to 1 minute



**Jeweller + Wings**  
communication technology

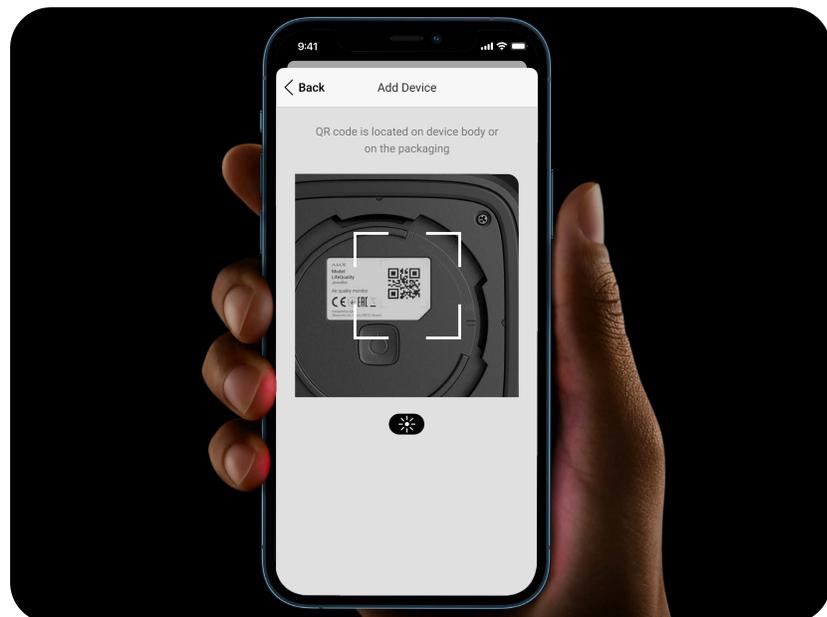


**Jeweller and Wings** are radio protocols for fast and reliable two-way communication between hubs and connected devices. The protocols provide a wireless radio communication range of up to 1,700 m, which allows you to install detectors even in a large open space.

Jeweller provides all the necessary information. This way, users will always have access to detector readings in the Ajax apps, regardless of the number of system devices. Wings transmits large amounts of data after the communication loss and recovery between the detector and the hub.

# Quick pairing and installation

LifeQuality saves the installer's time. The detector connects to an Ajax security system in less than a minute. You simply need to open the Ajax app, scan the QR code, and add a detector to a room and group.



No need to disassemble the enclosure. SmartBracket mounting panel allowing to securely fix it on a wall or flat surface. The detector is equipped with an accelerometer to notify if someone tries to remove the device from the mounting panel or change its position.

## Technical specifications

Communication with control panel or range extender

 **Jeweller communication technology**

 **Wings communication technology**

### 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)**

≤ 20 mW

**Communication range**

up to 1,700 m

In an open space.

Compatibility

### Hubs

Hub 2 (2G)

Hub 2 (4G)

Hub 2 Plus

Hub Hybrid (2G)

Hub Hybrid (4G)

### Range extenders

ReX 2

<p>Additional features</p>	<p><b>Automatic calibration</b> once every 1–14 days</p> <p><b>Manual calibration</b> Run in Ajax apps. Suitable for non-ventilated rooms.</p> <p><b>Backup storage</b> If the detector loses communication with the hub (or radio signal range extender), it stores all measured values for up to 3 days.</p>	<p>Installation</p>	<p><b>Operating temperature range</b> from 0°C to +50°C</p> <p><b>Operating humidity</b> up to 85%</p> <p><b>Protection class</b> IP50</p>
<p>Enclosure</p>	<p><b>Colour</b> white, black</p> <p><b>Dimensions</b> 77 × 77 × 34.5 mm</p> <p><b>Weight</b> 127 g</p> <p><b>Accelerometer against dismantling</b></p>	<p>Complete set</p>	<p>LifeQuality Jeweller 2 × CR123A battery Pre-installed SmartBracket mounting panel Installation kit Quick Start Guide</p>

<sup>1</sup> – [CO2 monitoring and indoor air quality, REHVA Journal, 2021](#)

<sup>2</sup> – [Consultation on Residential Indoor Air Quality Guidelines for Carbon Dioxide, Water and Air Quality Bureau, Health Canada, 2020](#)

<sup>3</sup> – [Is CO2 an Indoor Pollutant? Direct Effects of Low-to-Moderate CO2 Concentrations on Human Decision-Making Performance, Environ Health Perspect 120:1671–1677, 2012](#)