Climate

LoRaWAN®
Product catalogue

We
make any
building
smart.
www.mclimate.eu

LoRa Alliance® Member

Contents

About us

MClimate is a cutting-edge European IoT company dedicated to engineering smart solutions that optimize energy use, improve indoor air quality, and reduce waste. With a foundation in both hardware and software, we envision buildings and homes that respond intelligently to their environment — and help people live more sustainably, comfortably, and efficiently.

Our mission is simple but powerful: to help people and organizations reduce energy consumption, improve indoor air quality, and make buildings more sustainable — without compromising comfort or performance. From smart thermostats and CO_2 sensors to water control systems and building management platforms, MClimate solutions empower facility managers, utility companies, and end-users to monitor, control, and optimize their environment.

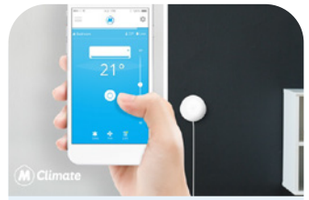
We are proud to be both gateway-agnostic and IoT-platform agnostic, ensuring easy integration into existing infrastructure. Our LoRaWAN®-based devices are designed for long battery life, scalability, and reliable performance, making them suitable for projects of every size — from single homes to large municipal buildings. Together, we are building a smarter, greener, and more connected future.

Rigorous Quality Control

ISO 14001 CERTIFIED

ISO 9001 CERTIFIED

ISO 27001 INFORMATION SECURITY ISO 27001



Founded 2014

Founded in 2014, we've started as a Smart Home B2C business

We make any building **smart.**

Specialist in Smart Buildings

Main focus on energy efficiency and building decarbonization

10 years of MClimate

10+ years

of experience in manufacturing and HW and SW development

High-quality EU products designed to last

Dedicated production in 2 facilities in Bulgaria with OEM capabilities

500k+

Vicki devices sold and installed since launch.
A leader in launching innovative products first

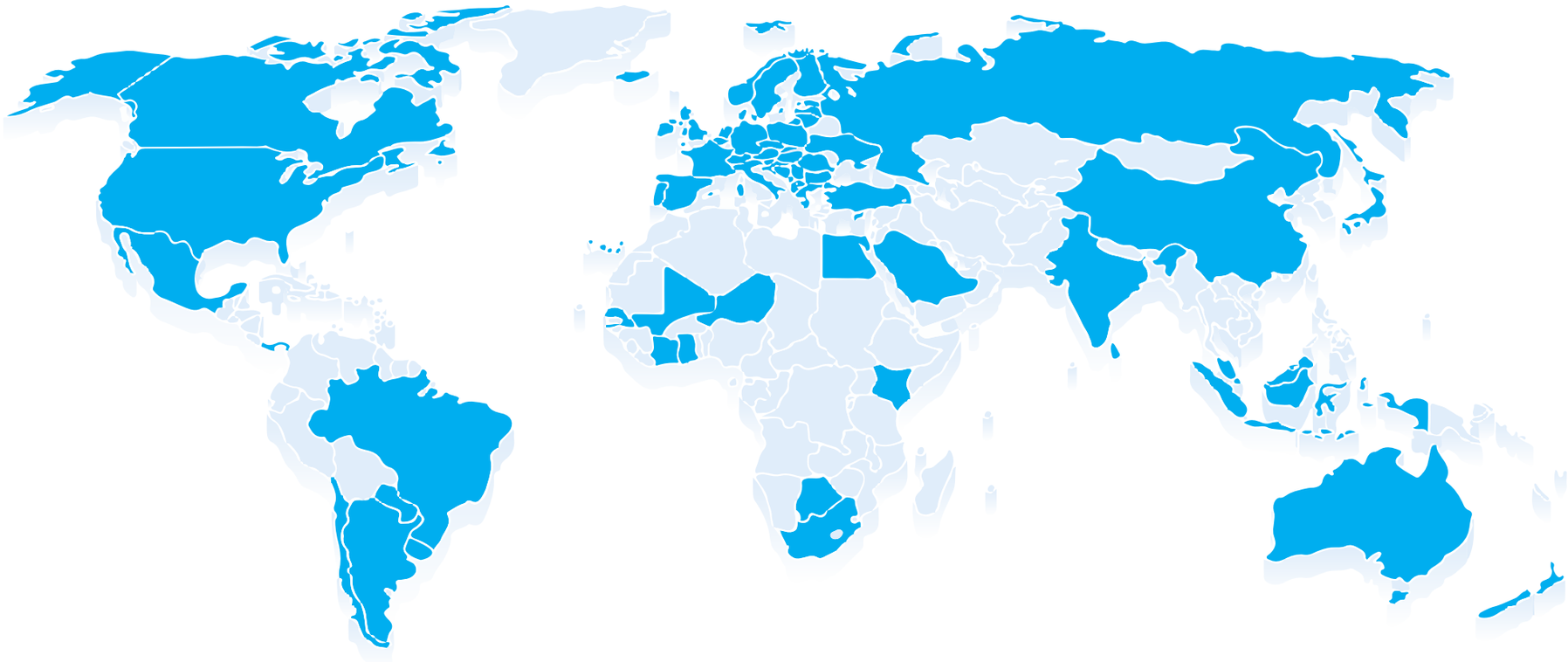
2
EU based production facilities

60+
International markets covered

20+
Designed hardware IoT devices for smart automation

30k+ per month
Devices delivered

2500+
Smart buildings served



STARTUP OF THE YEAR

endeavor

BULGARIAN STOCK EXCHANGE SOFIA

FUTURE HUB Europe SCALE UP 4 EUROPE

pwc GROWTH BUILDERS

European Bank for Reconstruction and Development

2015, 2016
Selected by the InvestBulgaria Agency

2017
Becomes an Endeavor company

2020
Selected in the Top10 BG Fastest Growing Scale Ups

2021
Participation in EU accelerators for smart city and smart region solutions

2022
PwC and Growth Builders PropTech Solutions

2022
Funding round to fund further growth in Europe and launch of Enterprise v2 with EBRD

2023
Introducing new maintenance-free solar-powered smart devices series

Smart Buildings

Our mission to provide digital, connected, smart and low carbon footprint buildings automation products and services to our customers is fully aligned with major corporates and government objectives to prepare their assets and clients for the future through innovation.

- ↯35% Monitor and save energy, time and money and do your part for the environment
- Quick time to market with low upfront investment and high ROI
- Work towards carbon neutrality goals and 2030 targets in line with the UN's SDGs
- Use AI and data to drive business insights and optimise risk and business strategies
- Increase existing revenues and utilise resources more efficiently
- Improve occupant experience, wellbeing, engagement and customer retention

SUSTAINABLE DEVELOPMENT GOALS

7 AFFORDABLE AND CLEAN ENERGY

11 SUSTAINABLE CITIES AND COMMUNITIES

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

What types of buildings do we serve best?


Hospitals


Schools


Social housing


Care homes


Municipality buildings


Hotels


Offices


Houses


Villas


Block of flats

Commercial buildings


Storage facilities

Successful stories

VOYTECH

Optimizing retirement homes heating system in the UK

How IoT can help district heating improve energy consumption and management.

LEARN MORE
https://mclimate.eu/pages/case-study-retirement-homes

School buildings energy optimization in Denmark

Improving indoors climate for students with smart IoT solutions.

LEARN MORE
https://mclimate.eu/pages/case-study-schools

Office building energy management in Germany

Achieving ESG goals, starting with smart energy management.

LEARN MORE
https://mclimate.eu/pages/case-study-german-bank

LoRaWAN® Benefits

Long operational range
The wider the coverage, the better and cheaper the IoT infrastructure. With LoRaWAN®, the range is nearly 8 km in urban settings and 15 km in suburban areas.

Long battery life of up to 10 years
Specifically designed to dramatically reduce the power consumption and extend the battery life, LoRaWAN® based data transmission and reception requires low current (less than 30 mA).

Bidirectional communication
Fully bidirectional communication enables a wide variety of uses cases requiring uplinks and downlinks. LoRaWAN® devices can deliver status messages even to remote locations.

Open source standard
The LoRaWAN® standard is based on an open protocol approach managed by the LoRa® Alliance which supervises the development of the standard and ensures interoperability.

Indoor penetration
The LoRa® waves can pass through obstacles and allow deep indoor penetration and adds the ability to reach sensors monitoring water or gas meters located underground.

Low capex and opex
The LoRaWAN® open standard combined with cost-free operation frequencies and low-cost base stations allows operators to roll out networks quickly and with minimum investment.

Scalability
Wireless, easy to set up and able to support thousands of connected end-devices and millions of messages transmitted. Its fast deployment allows for large scale projects to come to live quicker and cheaper.

High security
LoRaWAN® security design adheres to state-of-the-art principles: use of standard, well-vetted algorithms, and end-to-end security ensuring mutual authentication, integrity protection and confidentiality.

How it works?

Collect data
Sensors & Actuators

Transfer data
LoRaWAN® Gateway

Organize data
LoRaWAN® Network Server

Control & Monitor
IoT Platform

End-to-end ecryption for Data security & integrity

Integrations with Network Providers

THE THINGS NETWORK · THE THINGS INDUSTRIES · ThingPark by actility · ThingPark Community · helium · TEKTELIC communications · elementiot · firefly · senet a netmore Company · netmore · Milesight

ChirpStack · LORIOT · kerlink communication is everything · melita.io · machineQ A COMCAST COMPANY · orbiwise · akenza.io · Wattsense

Our products & Solutions

Our LoRaWAN® range is focused on sustainability, health and wellbeing and security - it aims to provide connected, smart and low carbon footprint buildings automation products and easily scalable retrofit solutions.

Climate & Energy Control

Vicki Smart Radiator Thermostat LoRaWAN®

Wireless Thermostat LoRaWAN®

Fan Coil Thermostat LoRaWAN®

Melissa AC Controller LoRaWAN®

COMING SOON

16A Switch & Power Meter LoRaWAN®

16A Dry Switch LoRaWAN®

Smart Sensing & Automation

CO2 Sensor & Notifier LoRaWAN®

CO2 Display LoRaWAN®

CO2 Display Lite LoRaWAN®

CO2 + PIR lite LoRaWAN®

PIR mini LoRaWAN®

HT Sensor LoRaWAN®

HT + PIR lite LoRaWAN®

Multipurpose Button LoRaWAN®

Open/Close Sensor LoRaWAN®

Water Control & Leak Detection

Flood Sensor LoRaWAN®

T-Valve LoRaWAN®

SOLUTION

Climate & Energy Control

Heating and cooling spaces accounts for up to 60% of a building's energy usage. When we add the control of electrical appliances this should be the first item on anybody's list to make quick energy efficient win. But consuming less energy doesn't only mean you will save money and help reduce your CO2 impact on the Earth. We prove that it can also mean more precise temperature and humidity control as well as better comfort for occupants.

LEARN MORE
https://mclimate.eu/pages/climate-energy-control

SOLUTION

Smart Sensing & Automation

"Actionable" is the key word. Our solution doesn't simply collect CO_2, temperature, humidity, light level, and occupancy data for later analysis. Instead, it helps create a healthier environment by enabling building managers to make informed decisions, trigger smart automations, and achieve greater operational, energy and cost efficiency.

LEARN MORE
https://mclimate.eu/pages/smart-sensing-automation

SOLUTION

Water Control & Leak Detection

Water damage can cost a fortune. Usually a flooding happens once, but when it does, it costs you time, money and effort to fix it. Our solution is a combination of two devices - a water valve (certified for drinking water) and flood sensor, both battery-operated. This allows you to not only know when there's a flood in your building, but also lets loT take care of shutting off the water supply and minimising the damage.

LEARN MORE
https://mclimate.eu/pages/water-control

Vicki LoRaWAN®

MC-LW-V02-BI-RUGGED

Vicki is a smart thermostatic radiator valve (TRV) retrofitting radiators with thermostatic valve and allowing for temperature control and monitoring from distance. Manual target temperature selection is possibly by rotating the outer ring of the device. The target temperature is displayed on the device.

Product features

30% White Black

- Manual adjustment of temperature
- 2-digits display
- Automatic temperature control algorithm
- Automatic temperature control algorithm with external temperature reading
- Manual valve openness control
- Open window detection
- Child lock
- Heating profiles/Schedules
- Geolocation
- Alarms
- Consumption reports
- Multiroom Control
- FUOTA (Firmware Update Over The Air)
- Smartphone & WEB control

Applications

Smart Buildings | Smart Home | Residential buildings | Commercial buildings | Energy optimization | Environment monitoring

Available in Black

MC-LW-V02-BI-B-RUGGED

Vicki LoRaWAN® Smart Radiator Thermostat is now also available in black, perfect for anyone with a black radiator or a more minimalist, modern interior.

Proven Solution

Pioneered in 2018 as the first LoRaWAN TRV, now perfected after 7+ years of development.

EU-Made

With a fault rate of less than 1% in the last 2 years, designed to the highest quality and regulatory standards.

30k+ monthly

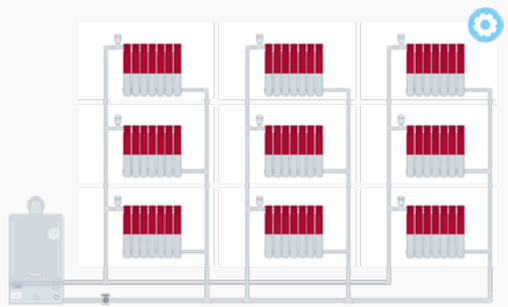
Vickies sold and installed since launch.

LoRaWAN®, CE & FCC Certified

Rugged backplate

Rugged backplate has significantly improved mechanical durability, withstanding up to 8x higher impact mass and at least 2x static force compared to the original plastic backplate.

Automatic Hydraulic Balancing

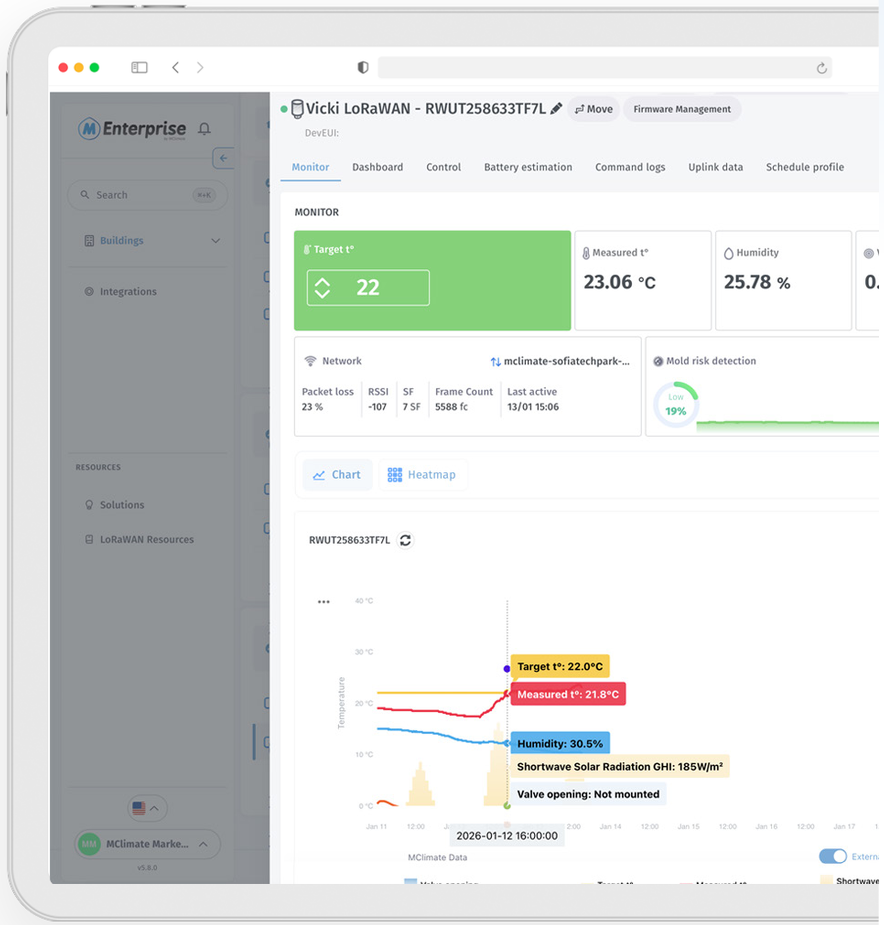


ANDROID APP ON Google play

Available on the iPhone App Store

Change and set temperature at home, wherever you are.

Enterprise by MClimate



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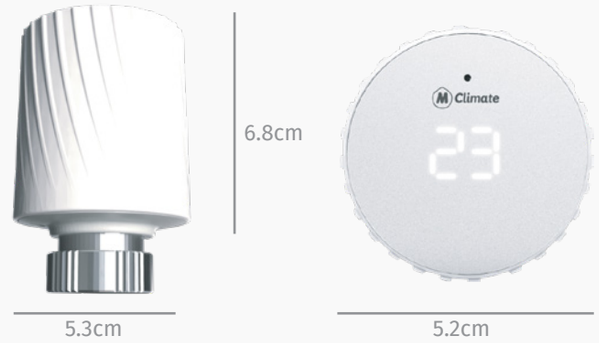
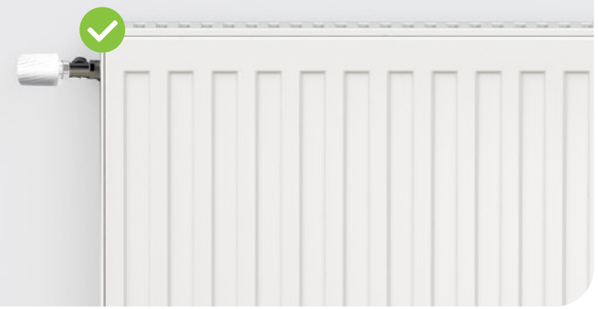


Compatibility

Vicki works seamlessly with district heating and thermostats. Compatible with M30x1.5M fitting and RA, RAV and RAVL Valve Adapters.



Technical Details

Design
ABS + PC reinforced with Glass Fibers, Anodised copper (metal nut)

Operating Conditions:
Temperature: - 20 - 60°C and Humidity: 0-80% RH (non-condensing)

Dimensions
54x78x50mm, 107gr

Battery Type
2 x AA with operating voltage 3 VDC

Battery life
10 years (depending on configuration and environment)

Wireless Technology
LoRaWAN® 1.0.3

Wireless Security
LoRaWAN® End-to-End encryption (AES-CTR)

Device Type
Class A End-device

Supported Features
OTAA , ADR , Adaptive Channels setup

How does it work?

Radiator — Vicki LoRaWAN® — LoRaWAN® Gateway

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LoRaWAN® Network Provider

Cloud · Enterprise · API

MClimate App,
Other Clouds & Apps

IoT Platform

Scan the QR code to access the full product specifications and API Documentations or visit the link:
https://mclimate.eu/pages/lorawan-resources

MClimate Wireless Thermostat LoRaWAN®

MC-LW-WT-01

MClimate Wireless Thermostat is a stand-alone thermostat entirely by solar energy using an organic solar panel. The device features a 2.9" e-ink screen, sensor for movement (PIR), temperature and humidity sensor, LUX sensor and 3 buttons. The user can change the target temperature and see current indoor conditions. The device sends an uplink after any event as well as periodically. The data from the Wireless Thermostat can be used in any LoRaWAN-compatible system, incl. Building Management Systems to control different appliances in the building.

Product features

- Temperature sensor
- Thermostat
- Humidity Sensor
- 4xAA Power supply/USB Type-C
- Alarms
- E-ink display
- Organic solar panel
- Motion sensor
- Lux meter
- Analytics
- FUOTA (Firmware Update Over The Air)
- Smartphone and WEB control

Applications

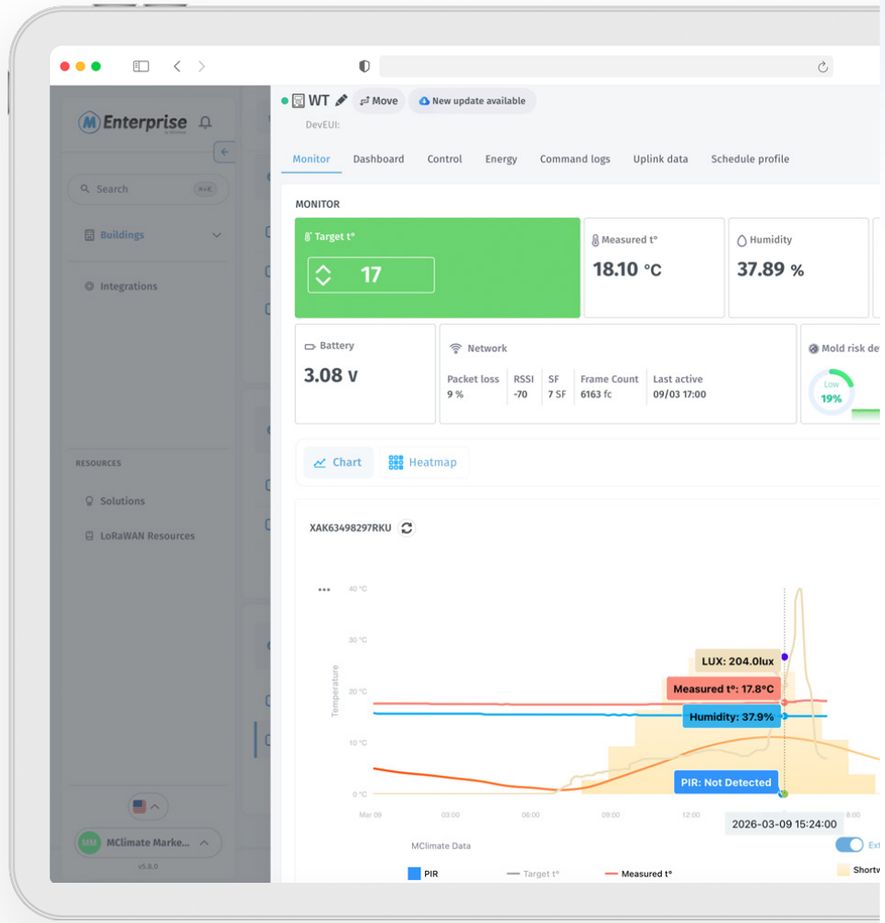
Smart Buildings | Smart Home | Residential buildings | Commercial buildings | Energy optimization | Environment monitoring

ANDROID APP ON Google play

Available on the iPhone App Store

Change and set temperature at home, wherever you are.

Enterprise by MClimate



Dimensions

10.5 cm

11.5 cm

10.5 cm

2.3 cm

Technical Details

Design
ABS, Stainless steel, tempered glass

Operating Conditions:
Temperature: 0° - +50°C and Humidity: 0-80% RH (non-condensing)

Dimensions
105mm X 115mm X 23mm, 170gr

Power supply
Solar-powered Lithium-ion capacitor (LIC) AND/OR 4xAA 1.5VDC batteries AND/OR USB-C

Battery life
10 years (depending on configuration and environment)

Wireless Technology
LoRaWAN® 1.0.3

Wireless Security
LoRaWAN® End-to-End encryption (AES-CTR)

Device Type
Class A End-device

Supported Features
OTAA , ADR , Adaptive Channels setup

How does it work?

MClimate Wireless Thermostat LoRaWAN®

LoRaWAN®

LoRaWAN® Gateway

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LoRaWAN® Network Provider

Cloud · Enterprise · API

MClimate App, Other Clouds & Apps

IoT Platform

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MClimate Fan Coil Thermostat LoRaWAN®

MC-LW-FCT-01

The Fan Coil Thermostat (FCT) is a LoRaWAN device for 2- and 4-pipe Fan Coil Units, accommodating 3-speed or ECM fans. Ideal for building retrofitting, it enhances energy efficiency and reduces heating/cooling expenses significantly. With its 4.2” e-ink fast refresh display it allows the end-users to change the target temperature and see current indoor conditions. Its fully open and transparent communication protocol allows seamless integration into different systems including MClimate Enterprise platform.

Product features

- FUOTA (Firmware Update Over The Air)
- Compatible with 2-pipe and 4-pipe FCUs
- Compatible with ECM or 3 speed fans
- Temperature and Humidity sensor
- 4.2" e-ink fast-refresh display
- Anti-theft stainless steel bracket
- Multipurpose Analog/Digital Input/Output (pipe temperature monitoring; external contact - e.g. door/window sensor or hotel card occupancy; dew point sensor; filter alarm)
- Simple 4 buttons interface - ON/OFF/Mode, Increase temp; Decrease Temp, Select FAN speed.
- Keys lock (select which keys are disabled)

Applications

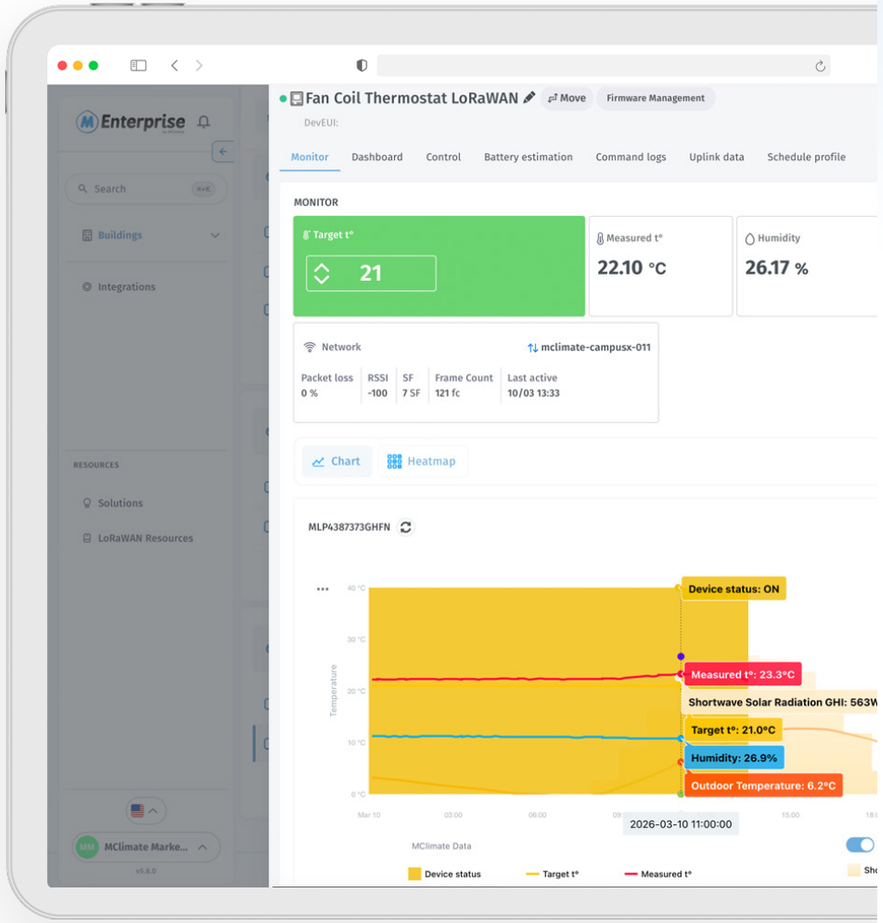
Smart Buildings | Smart Home | Residential buildings | Commercial buildings | Hotels

ANDROID APP ON Google play

Available on the iPhone App Store

Change and set temperature at home, wherever you are.

Enterprise
by MClimate



Dimensions

Technical Details

Design
ABS, Stainless steel, tempered glass

Operating Conditions:
Temperature: 0°- +50°C and Humidity: 0-80% RH (non-condensing)

Dimensions
105mm X 115mm X 23mm, 170gr

Power supply
110-230VAC

Consumption
50mA MAX

Wireless Technology
LoRaWAN® 1.0.3

Wireless Security
LoRaWAN® End-to-End encryption (AES-CTR)

Device Type
Class A End-device

Supported Features
OTAA , ADR , Adaptive Channels setup

How does it work?

MClimate Fan Coil Thermostat LoRaWAN®

LoRaWAN®

LoRaWAN® Gateway

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LoRaWAN® Network Provider

Cloud · Enterprise · API

MClimate App, Other Clouds & Apps

IoT Platform

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Melissa AC Controller LoRaWAN®

COMING SOON

MC-LW-MELISSA-01

Melissa is a smart LoRaWAN A/C controller that enables remote management of your air conditioner, enabling features such as scheduling, real-time alerts, and improved energy efficiency.

Product features

- Database with 1000+ AC remote controls
- 100+ brands compatibility
- Record custom IR signals
- IR sensor
- Temperature sensor
- Humidity sensor
- Heating profiles/Schedules
- FUOTA (Firmware Update Over The Air)
- Smartphone and WEB control

Applications

Smart Buildings | Smart Home | Residential buildings | Commercial buildings | Hotels

16A Switch & Power Meter LoRaWAN®

MC-LW-16ASPM-01

The MClimate 16A Switch & Power Meter LoRaWAN® is a compact 16A relay and electricity meter. The device is small enough to fit behind most wall switches and power equipment, enabling you to automate, track, and control your electrical appliances. This is possible as the device has 4 terminals L, N, N, Lout, and it works in a way that connects and disconnects Lout from L. With an overheating protection mechanism, FUOTA (Firmware Upgrades Over The Air), and operation in LoRaWAN Class C, the MClimate 16ASPM is ideal for rapid building retrofitting.

Product features

- FUOTA (Firmware Update Over The Air)
- Electricity Meter
- Voltage Meter
- Current Meter
- Internal temperature sensor and overheating protection

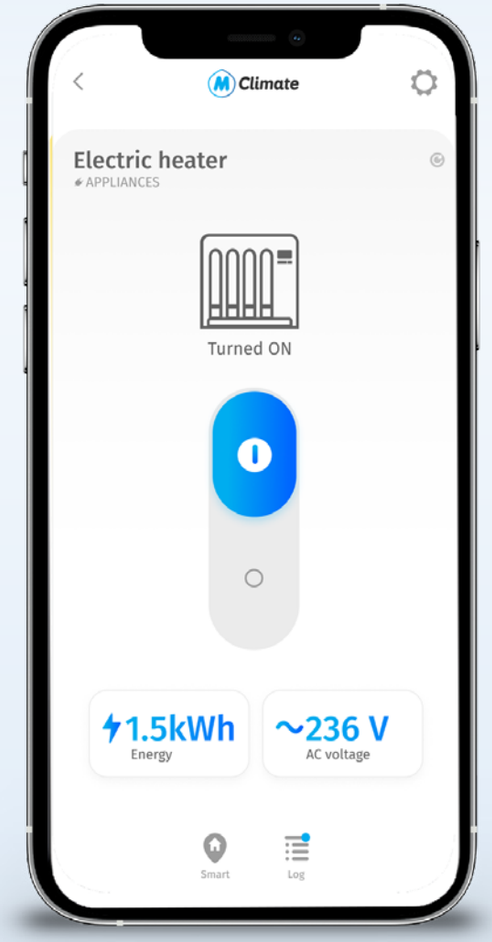
Applications

Smart Buildings | Smart Home | Residential buildings | Hotels | Commercial buildings | Energy optimization

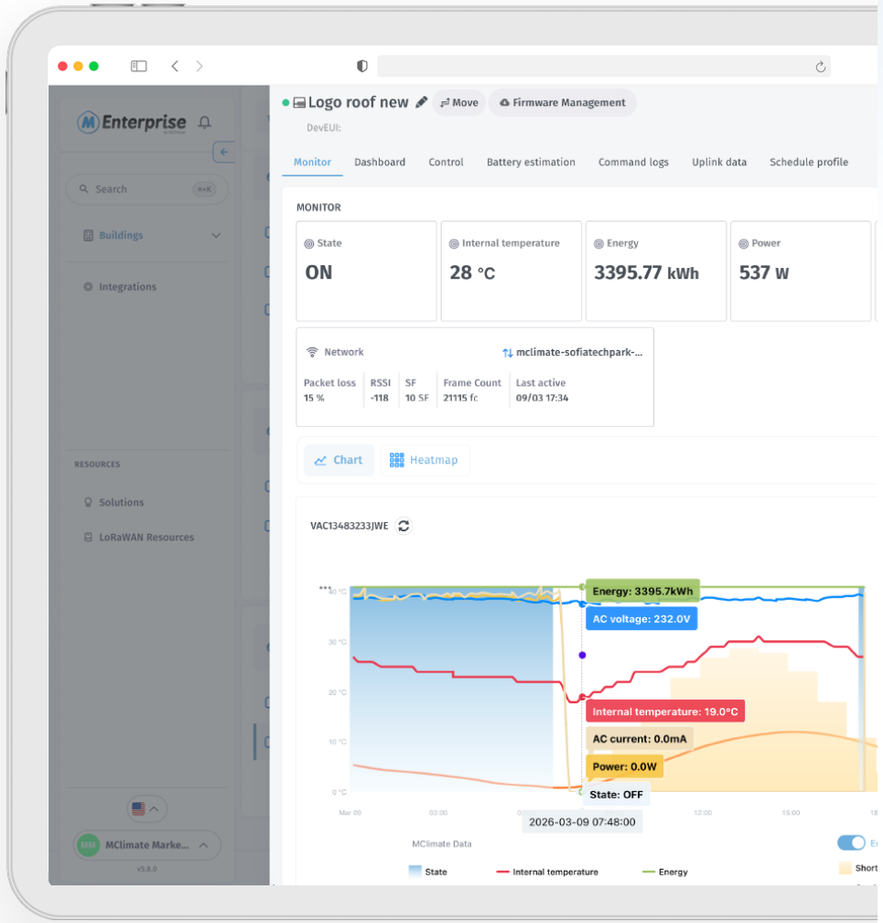
ANDROID APP ON Google play

Available on the iPhone App Store

Control Electrical Power wherever you are.



Enterprise
by MClimate



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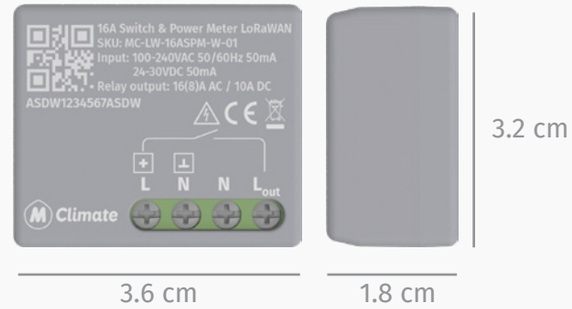


Technical Details

Design
PC UL-94 V0

Operating Conditions:
Temperature: 0 - 40°C and Humidity: 0-80% RH (non-condensing)

Dimensions
32mm x 36mm x 18mm, 24.5gr

Power supply
100-240VAC / 24-30VDC

Consumption
50mA

Wireless Technology
LoRaWAN® 1.0.3

Wireless Security
LoRaWAN® End-to-End encryption (AES-CTR)

Device Type
Class C End-device

Supported Features
OTAA , ADR , Adaptive Channels setup

How does it work?

16A Switch & Power Meter LoRaWAN®

LoRaWAN® Gateway

LoRaWAN® Network Provider

IoT Platform

MClimate App,
Other Clouds & Apps

Scan the QR code to access the
full product specifications and API Documentations or visit the link:
https://mclimate.eu/pages/lorawan-resources

16A Dry Switch LoRaWAN®

MC-LW-16ADS-01

The MClimate 16A Dry Switch LoRaWAN is a miniature device that features a dry 16A relay. The device is small enough to fit behind most wall switches and outlets. The device has 4 terminals L, N, I, O, connecting and disconnecting I from O. The device operates in LoRaWAN Class C, features FUOTA (Firmware Upgrade Over The Air) and has overheating protection.

Product features

- FUOTA (Firmware Update Over The Air)
- Internal temperature sensor and overheating protection

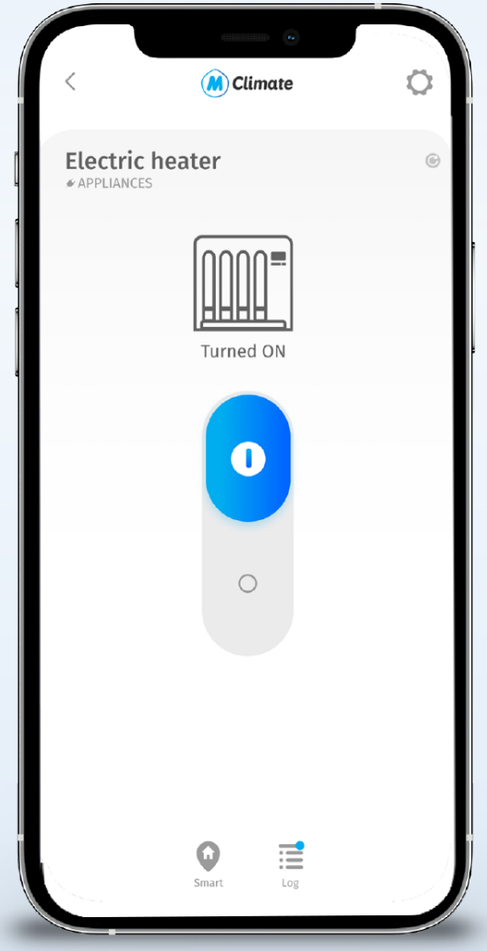
Applications

Smart Buildings | Smart Home | Residential buildings | Hotels | Commercial buildings | Energy optimization

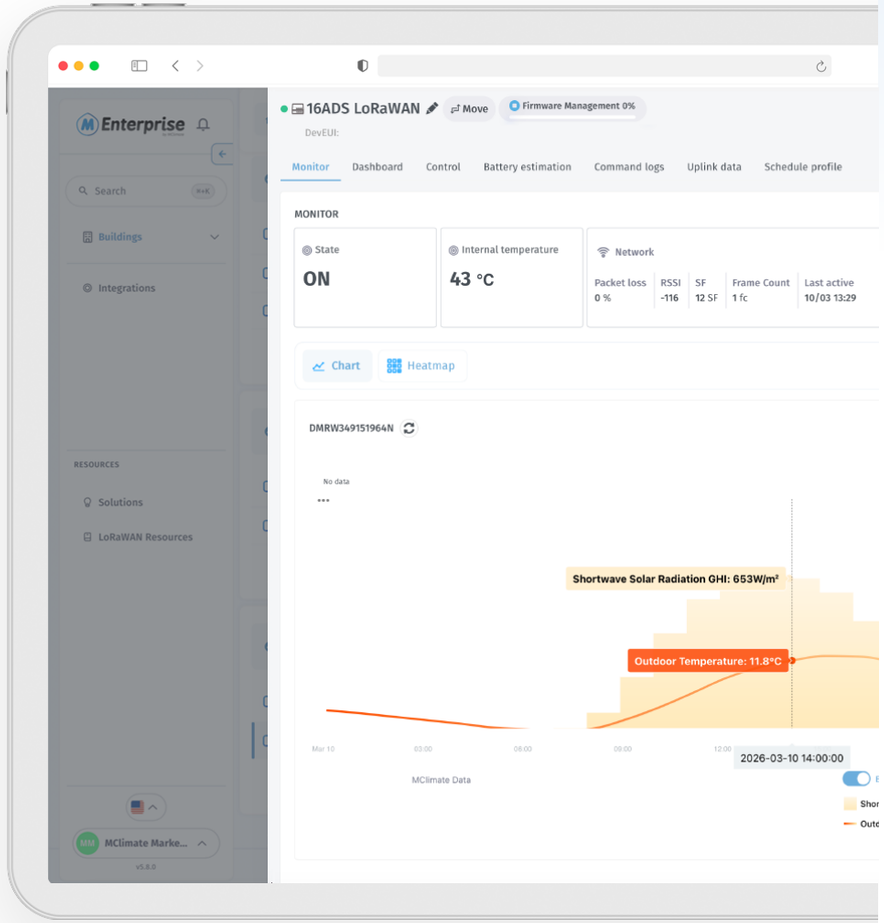
ANDROID APP ON Google play

Available on the iPhone App Store

Control Electrical Power wherever you are.



Enterprise by MClimate



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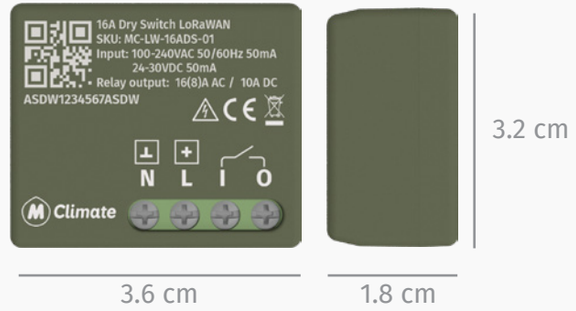

Technical Details

Design
PC UL-94 V0

Operating Conditions:
Temperature: 0 - 40°C and Humidity: 0-80% RH (non-condensing)

Dimensions
32mm x 36mm x 18mm, 24.5gr

Power supply
100-240VAC / 24-30VDC

Consumption
50mA

Wireless Technology
LoRaWAN® 1.0.3

Wireless Security
LoRaWAN® End-to-End encryption (AES-CTR)

Device Type
Class C End-device

Supported Features
OTAA , ADR , Adaptive Channels setup

How does it work?

16A Dry Switch LoRaWAN®

LoRaWAN

LoRaWAN® Gateway

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CO2 Sensor LoRaWAN®

MC-LW-CO2-01

MClimate CO2 Sensor and Notifier is a device that uses NDIR technology to measure the actual CO2 and has built-in temperature and humidity sensors. The device also has acoustic and visual notification abilities to indicate occupants whether a room should be ventilated.

Product features

- CO2 Sensor (NDIR)
- Temperature Sensor
- Humidity Sensor
- RGB LED
- Acoustic Buzzer
- 2xAA Power supply
- Ultra-low power consumption
- Alarms
- Analytics
- Family Accounts
- Smartphone & WEB control
- FUOTA (Firmware Update Over The Air)

Applications

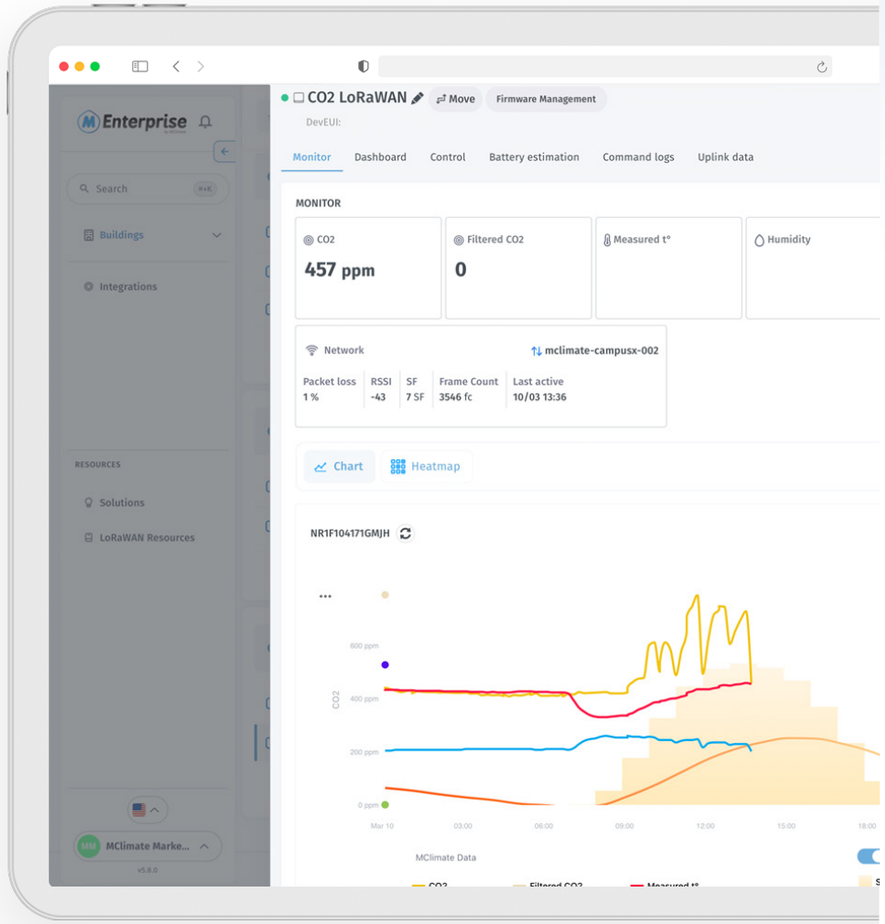
Smart Buildings | Smart Home | Residential buildings | Commercial buildings | Energy optimization | Environment monitoring

ANDROID APP ON Google play

Available on the iPhone App Store

Monitor CO2 at home, wherever you are.

Enterprise
by MClimate



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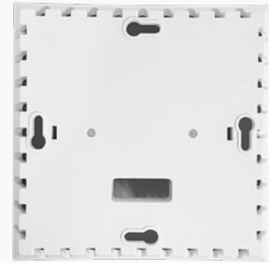


Technical Details

Design
ABS

Operating Conditions:
Temperature: - 20 - 60°C and Humidity: 0-80% RH (non-condensing)

Dimensions
80x80x20mm, 68gr

Battery Type
2 x AA with operating voltage 3 VDC

Battery life
10 years (depending on configuration and environment)

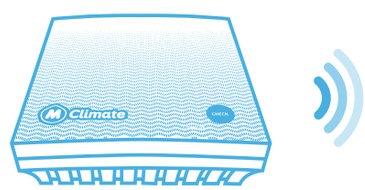
Wireless Technology
LoRaWAN® 1.0.3

Wireless Security
LoRaWAN® End-to-End encryption (AES-CTR)

Device Type
Class A End-device

Supported Features
OTAA , ADR , Adaptive Channels setup

How does it work?



CO2 Sensor LoRaWAN®

LoRaWAN®

LoRaWAN® Gateway

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LoRaWAN® Network Provider

Cloud · Enterprise · API

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Other Clouds & Apps

IoT Platform

Scan the QR code to access the full product specifications and API Documentations or visit the link:
https://mclimate.eu/pages/lorawan-resources

CO2 Display LoRaWAN®

MC-LW-CO2-E-INK-01

MClimate CO2 Display LoRaWAN® is a stand-alone CO2 sensor powered entirely by solar energy using an organic solar panel. The device features a 2.9" e-ink screen, sensor for movement (PIR), temperature and humidity sensor, LUX sensor and NDIR CO2 sensor. The user can see the current levels of CO2 as well as historical trend. The device sends an uplink when it detects movement as well as periodically. The data from the CO2 Display can be used in any LoRaWAN® compatible system, incl. Building Management Systems to control demand-based ventilation. Sensor information can be exposed as datapoints in Modbus, BACnet and KNX systems through the use of a special gateway.

Product features

- CO2 Sensor (NDIR)
- Temperature sensor
- Humidity Sensor
- 4xAA Power supply/USB Type-C
- Alarms
- E-ink display
- Organic solar panel
- Motion sensor
- Lux meter
- Analytics
- FUOTA (Firmware Update Over The Air)
- Smartphone and WEB control

Applications

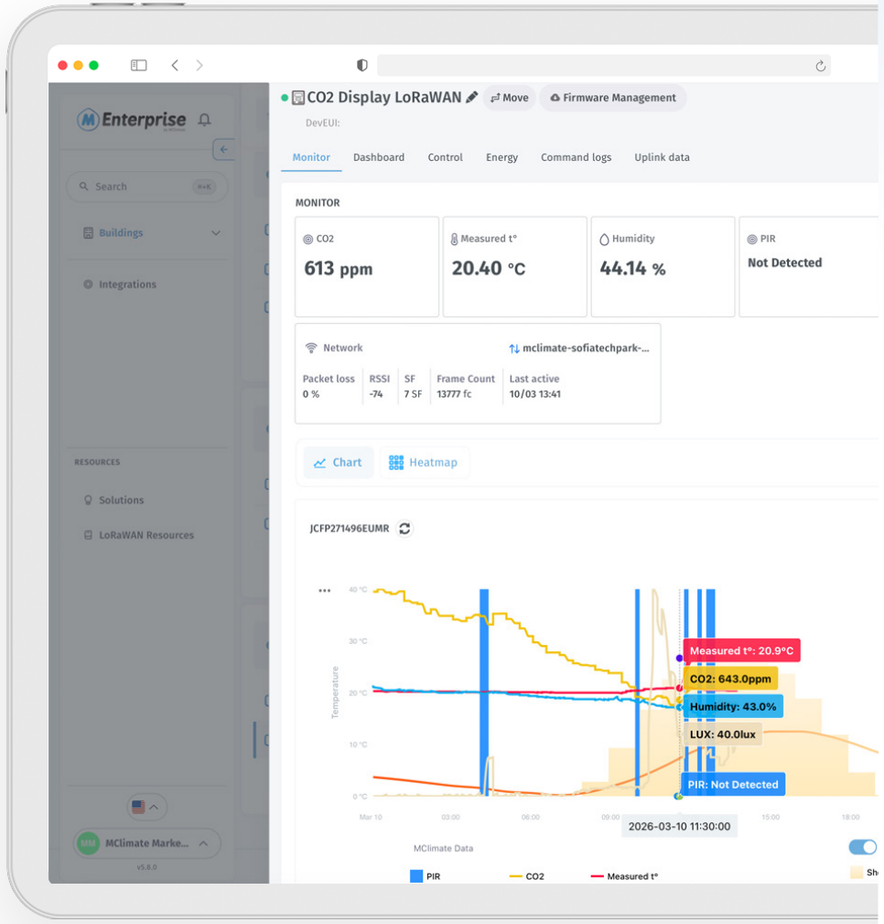
Smart Buildings | Smart Home | Residential buildings | Commercial buildings | Energy optimization | Environment monitoring

ANDROID APP ON Google play

Available on the iPhone App Store

Monitor CO2 at home, wherever you are.

Enterprise
by MClimate



Dimensions

Technical Details

Design
ABS, Stainless steel, tempered glass

Operating Conditions:
Temperature: 0° - +50°C and Humidity: 0-80% RH (non-condensing)

Dimensions
105mm X 115mm X 23mm, 170gr

Power supply
Solar-powered Lithium-ion capacitor (LIC) AND/OR 4xAA 1.5VDC batteries AND/OR USB-C

Battery life
10 years (depending on configuration and environment)

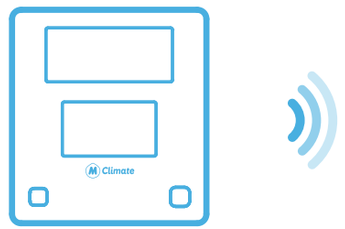
Wireless Technology
LoRaWAN® 1.0.3

Wireless Security
LoRaWAN® End-to-End encryption (AES-CTR)

Device Type
Class A End-device

Supported Features
OTAA , ADR , Adaptive Channels setup

How does it work?



CO2 Display LoRaWAN®

LoRaWAN

LoRaWAN® Gateway

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LoRaWAN® Network Provider

Cloud · Enterprise · API

MClimate App,
Other Clouds & Apps

IoT Platform

Scan the QR code to access the full product specifications and API Documentations or visit the link:
https://mclimate.eu/pages/lorawan-resources

CO2 Display Lite LoRaWAN®

MC-LW-LITE-CO2-E-INK-01

MClimate CO2 Display lite LoRaWAN is a stand-alone CO2 sensor powered entirely by solar energy using an organic solar panel. The device features a 2.9" e-ink screen, sensor for movement (PIR), temperature and humidity sensor, LUX sensor and NDIR CO2 sensor. The user can see the current levels of CO2 as well as historical trend. The device sends an uplink when it detects movement as well as periodically. The data from the CO2 Display can be used in any LoRaWAN compatible system, incl. Building Management Systems to control demand-based ventilation. Sensor information can be exposed as datapoints in Modbus, BACnet and KNX systems through the use of a special gateway.

Product features

- Solar-powered & battery free
- LUX sensor
- 1.54" e-ink display
- Temperature and Humidity sensor
- NDIR CO2 sensor
- Anti-theft bracket
- FUOTA (Firmware Update Over The Air)

Applications

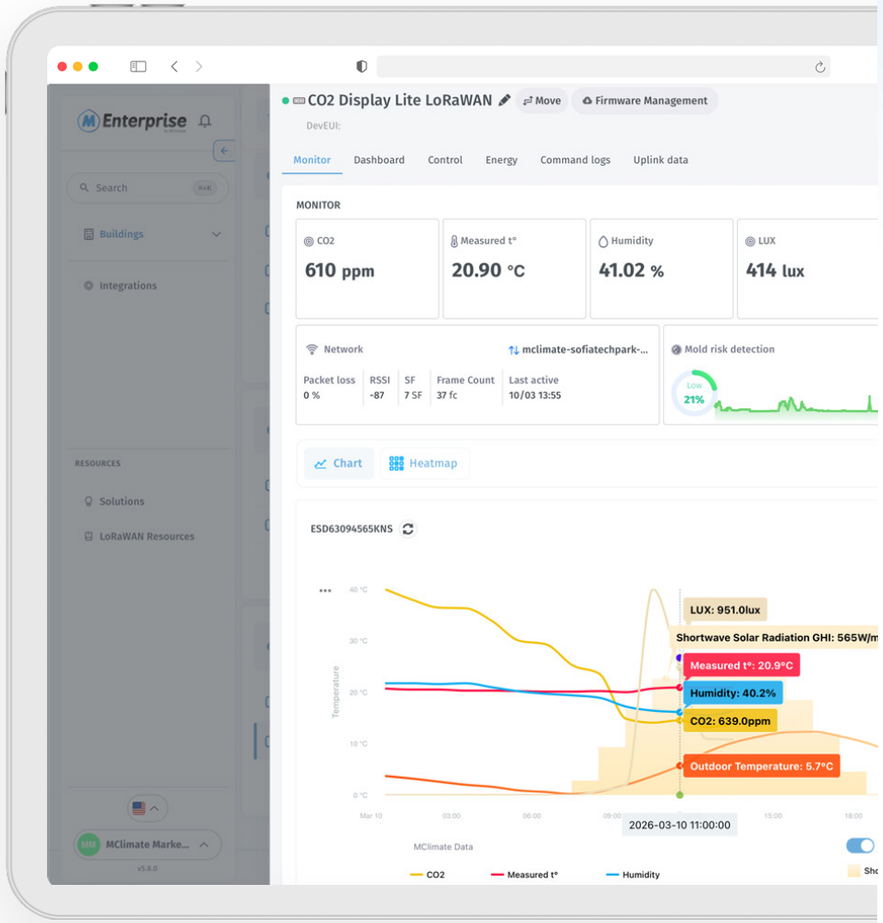
Smart Buildings | Smart Home | Residential buildings | Commercial buildings | Energy optimization | Environment monitoring

ANDROID APP ON Google play

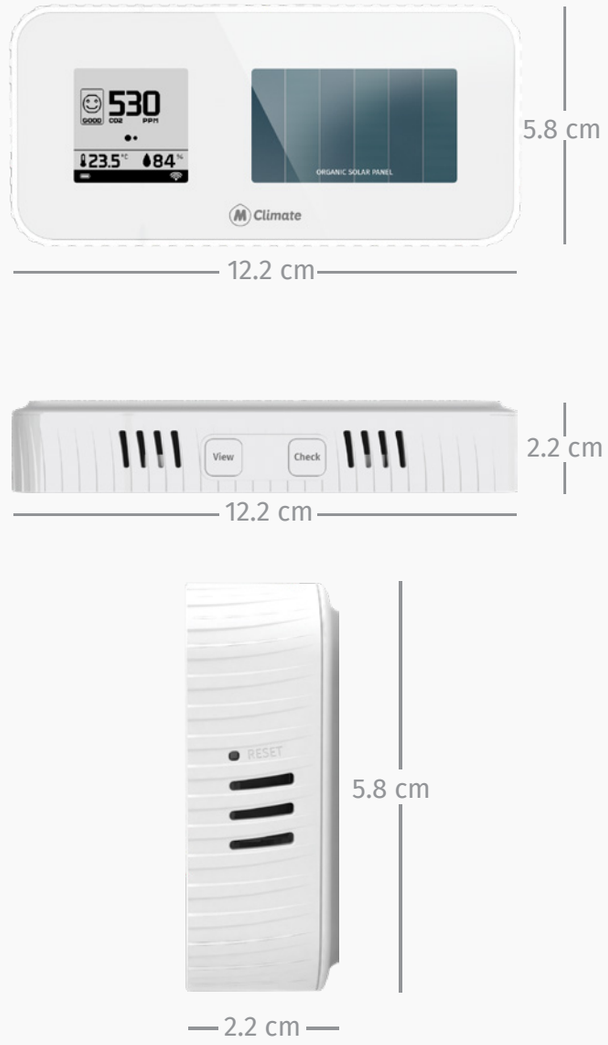
Available on the iPhone App Store

Monitor CO2 at home, wherever you are.

Enterprise by MClimate



Dimensions



Technical Details

Design
ABS, Stainless steel, tempered glass

Operating Conditions:
Temperature: 0°- +50°C and Humidity: 0-80% RH (non-condensing)

Dimensions
122mm x 58mm x 22mm, 80gr

Power supply
Solar-powered Lithium-ion capacitor (LIC)
AND/OR USB-C

Battery life
Indefinite powered by solar

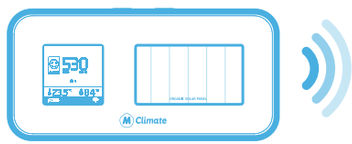
Wireless Technology
LoRaWAN® 1.0.3

Wireless Security
LoRaWAN® End-to-End encryption (AES-CTR)

Device Type
Class A End-device

Supported Features
OTAA , ADR , Adaptive Channels setup

How does it work?



CO2 Display Lite
LoRaWAN®

LoRaWAN®

LoRaWAN® Gateway

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LoRaWAN® Network Provider

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MClimate App,
Other Clouds & Apps

IoT Platform

Scan the QR code to access the
full product specifications and API Documentations or visit the link:
https://mclimate.eu/pages/lorawan-resources

CO2 + PIR lite LoRaWAN®

MC-LW-LITE-CO2+PIR-01

MClimate CO2 + PIR lite LoRaWAN is a stand-alone sensor powered by 2xAA batteries lasting for up to 15 years with the default configuration. The device features NDIR CO2 sensor, PIR (occupancy) sensor, as well as temperature and humidity sensors.
The data from the CO2 + PIR lite can be used in any LoRaWAN compatible system, incl. Building Management Systems to control demand-based ventilation. Sensor information can be exposed as datapoints in Modbus, BACnet and KNX systems through the use of a special gateway.

Product features

- PIR (occupancy) sensor
- NDIR CO2 sensor
- Temperature and Humidity sensor
- FUOTA (Firmware Update Over The Air)
- Ultra low power consumption
- Sends message on occupancy
- Counts total amount of movements
- Double-sided tape on the back

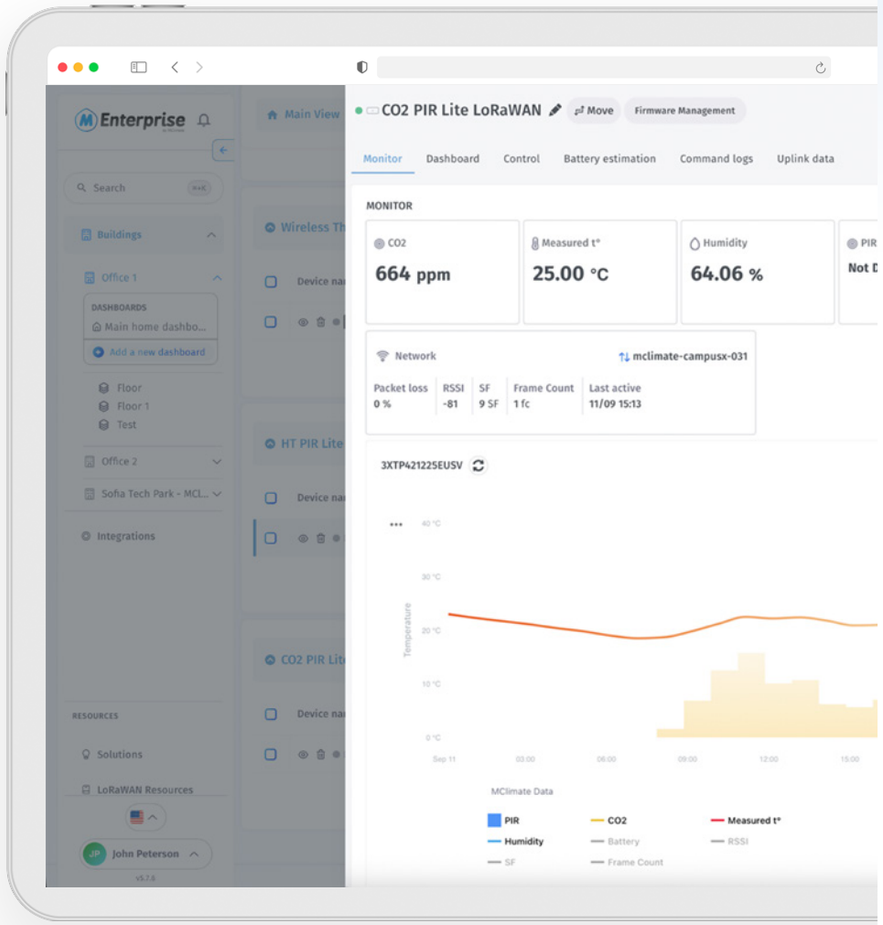
Applications

Smart Buildings | Smart Home | Residential buildings | Commercial buildings | Energy optimization | Environment monitoring

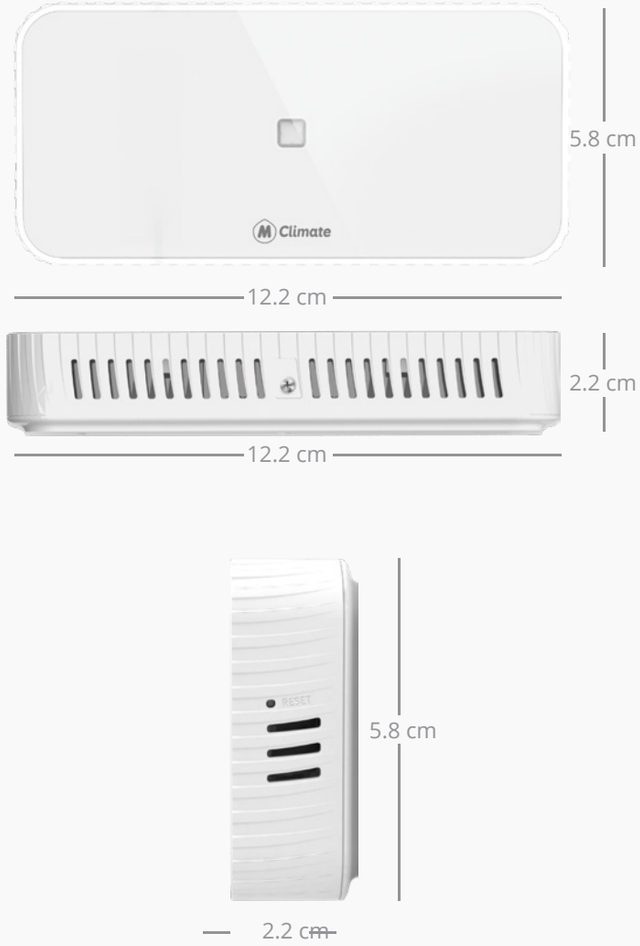
Google play | App Store

Occupancy-Driven Energy Optimization

Enterprise by MClimate



Dimensions



Technical Details

Design
PC/ABS

Operating Conditions:
Temperature: 0°- +50°C and Humidity: 0-80% RH (non-condensing)

Dimensions
122mm x 58mm x 22mm, 75gr

Power supply
2xAA batteries (each 1.5VDC)

Battery life
More than 10 years (depending on configuration and environment)

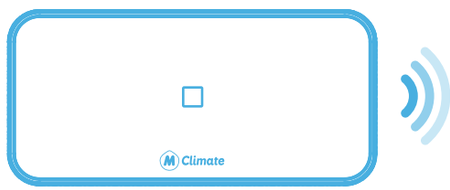
Wireless Technology
LoRaWAN® 1.0.3

Wireless Security
LoRaWAN® End-to-End encryption (AES-CTR)

Device Type
Class A End-device

Supported Features
OTAA , ADR , Adaptive Channels setup

How does it work?



CO2 + PIR lite LoRaWAN®

LoRaWAN

LoRaWAN® Gateway

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Other Clouds & Apps

IoT Platform

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HT Sensor LoRaWAN®

MC-LW-HT-01

MClimate HT Sensor LoRaWAN® is an indoor temperature and humidity sensor with 10+ years of battery life, configurable settings and beautiful and discreet design.

Product features

- Temperature sensor
- Humidity Sensor
- 2xAA Power supply
- Alarms
- Analytics
- Smartphone and WEB control
- FUOTA (Firmware Update Over The Air)

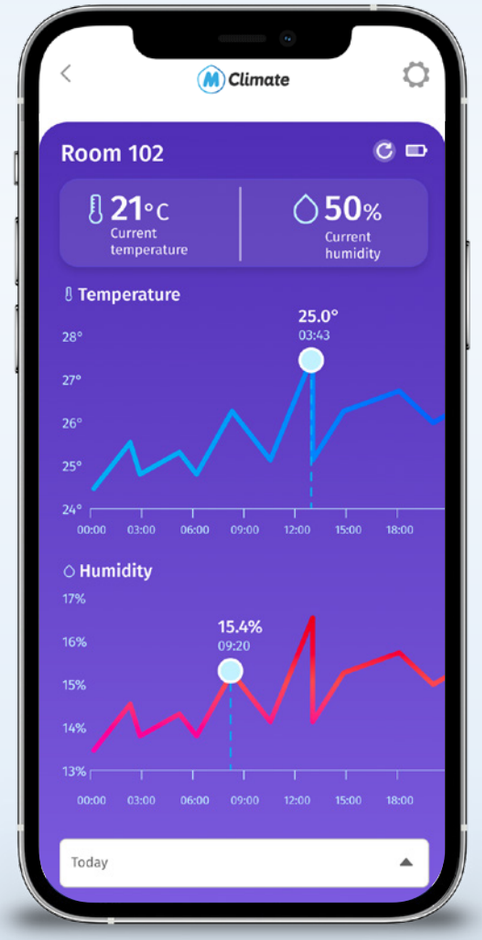
Applications

Smart Buildings | Smart Home | Residential buildings | Commercial buildings | Energy optimization | Environment monitoring

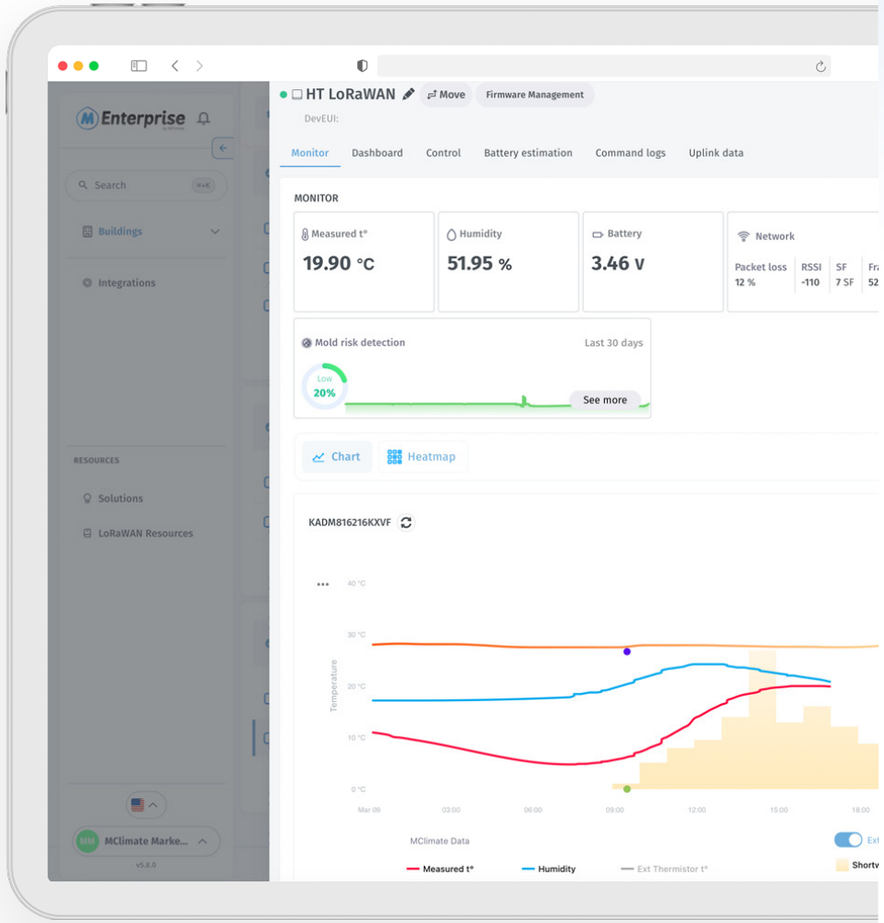
ANDROID APP ON Google play

Available on the iPhone App Store

Monitor temperature & humidity at home, wherever you are.



Enterprise by MClimate



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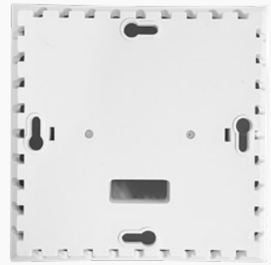


Technical Details

Design
ABS

Operating Conditions:
Temperature: - 20 - 60°C and Humidity: 0-80% RH (non-condensing)

Dimensions
80x80x20mm, 68gr

Battery Type
2 x AA with operating voltage 3 VDC

Battery life
10 years (depending on configuration and environment)

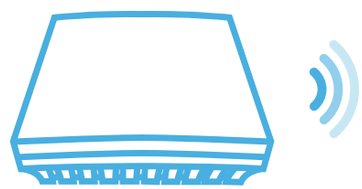
Wireless Technology
LoRaWAN® 1.0.3

Wireless Security
LoRaWAN® End-to-End encryption (AES-CTR)

Device Type
Class A End-device

Supported Features
OTAA , ADR , Adaptive Channels setup

How does it work?



HT LoRaWAN®

LoRaWAN

LoRaWAN® Gateway

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LoRaWAN® Network Provider

Cloud · Enterprise · API

MClimate App,
Other Clouds & Apps

IoT Platform

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PIR mini LoRaWAN®

MC-LW-PIR-MINI-01-BI

MClimate PIR mini LoRaWAN is a compact stand-alone sensor powered by 2xAA batteries lasting for up to 15 years with the default configuration. The device features PIR (occupancy) sensor, as well as temperature, humidity and lux sensors.
The data from the PIR mini can be used in any LoRaWAN compatible system, incl. Building Management Systems to control demand-based ventilation. Sensor information can be exposed as datapoints in Modbus, BACnet and KNX systems through the use of a special gateway.

Product features

- PIR (occupancy) sensor
- LUX sensor
- Temperature and Humidity sensor
- Firmware Update Over The Air (FUOTA)
- Ultra low power consumption
- Sends message on occupancy
- Counts total number of movements
- Double-sided tape on the back

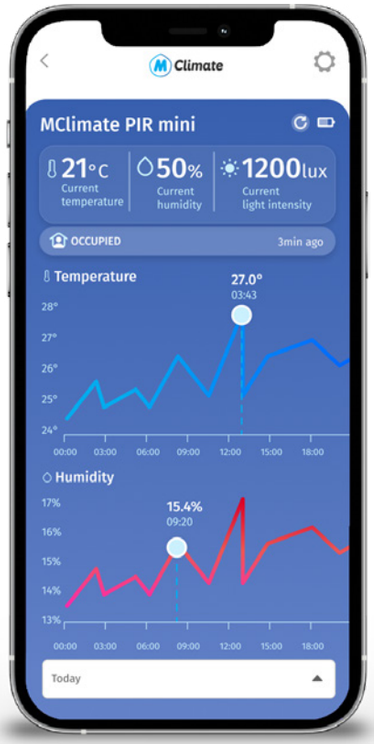
Applications

Smart Buildings | Smart Home | Residential buildings | Commercial buildings | Energy optimization | Environment monitoring

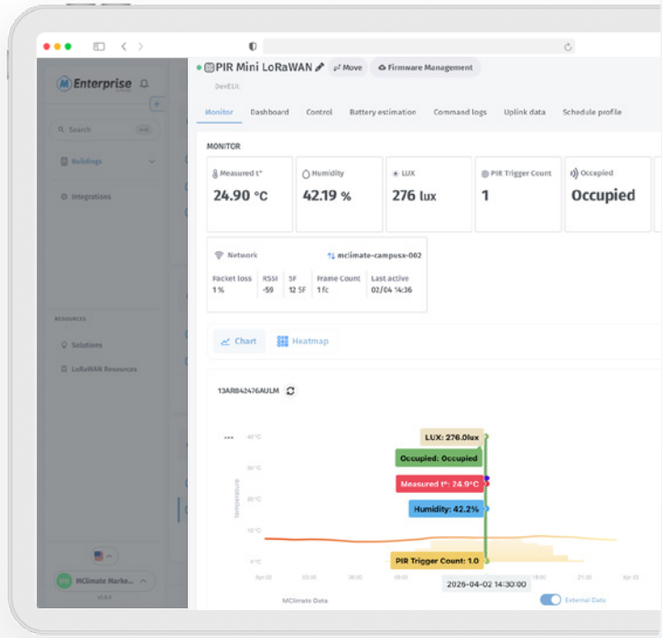
ANDROID APP ON Google play

Available on the iPhone App Store

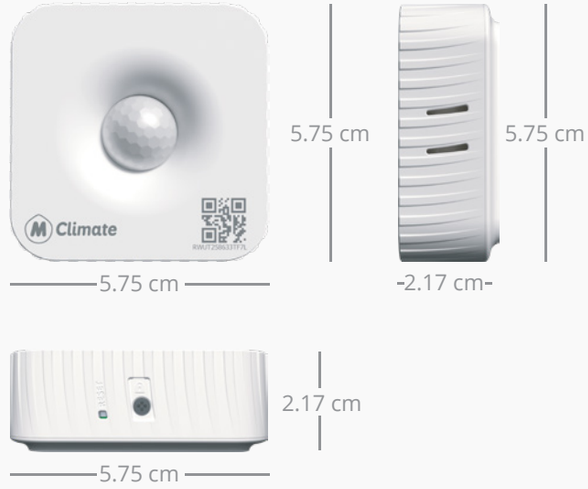
Occupancy-Driven Energy Optimization



Enterprise by MClimate



Dimensions



Available in Black

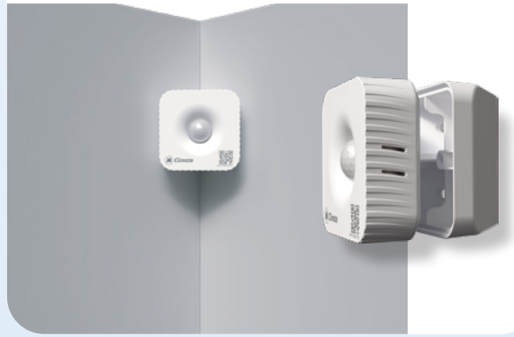
MC-LW-PIR-MINI-01-BI-B

Additional accessories

Adjustable Detection Angles

Five interchangeable limiter covers that reshape the PIR mini field of view to match the space — each tuned to a defined horizontal and vertical detection angle, with a mounting strategy to suit the space it serves.

45° mounting accessory for mini-series



Technical Details

Design
PC/ABS

Operating Conditions:
Temperature: 0° - +60°C and Humidity: 0-95% RH (non-condensing)

Dimensions
57.5mm x 57.5mm x 21.7mm, 34gr

Power supply
2xAA batteries (each 1.5VDC)

Battery life
More than 10 years (depending on configuration and environment)

Wireless Technology
LoRaWAN® 1.0.3

Wireless Security
LoRaWAN® End-to-End encryption (AES-CTR)

Device Type
Class A End-device

Supported Features
OTAA , ADR , Adaptive Channels setup

How does it work?

PIR mini LoRaWAN®

LoRaWAN® Gateway

LoRaWAN® Network Provider

IoT Platform

MClimate App,
Other Clouds & Apps

Scan the QR code to access the full product specifications and API Documentations or visit the link:
https://mclimate.eu/pages/lorawan-resources

HT + PIR lite LoRaWAN®

MC-LW-LITE-HT+PIR-01

MClimate HT + PIR lite LoRaWAN is a stand-alone sensor powered by 2xAA batteries lasting for up to 15 years with the default configuration. The device features PIR (occupancy) sensor, as well as temperature and humidity sensors.
The data from the HT + PIR lite can be used in any LoRaWAN compatible system, incl. Building Management Systems to control demand-based ventilation. Sensor information can be exposed as datapoints in Modbus, BACnet and KNX systems through the use of a special gateway.

Product features

- PIR (occupancy) sensor
- Temperature and Humidity sensor
- FUOTA (Firmware Update Over The Air)
- Ultra low power consumption
- Sends message on occupancy
- Counts total amount of movements
- Double-sided tape on the back

Applications

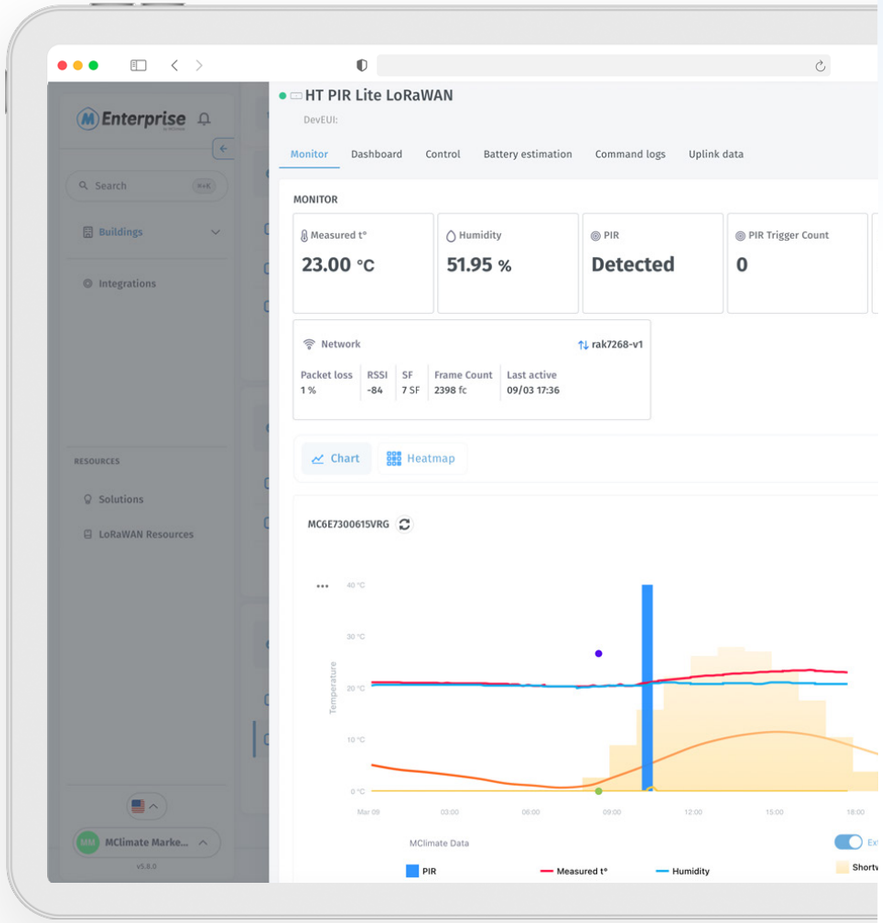
Smart Buildings | Smart Home | Residential buildings | Commercial buildings | Energy optimization | Environment monitoring

ANDROID APP ON Google play

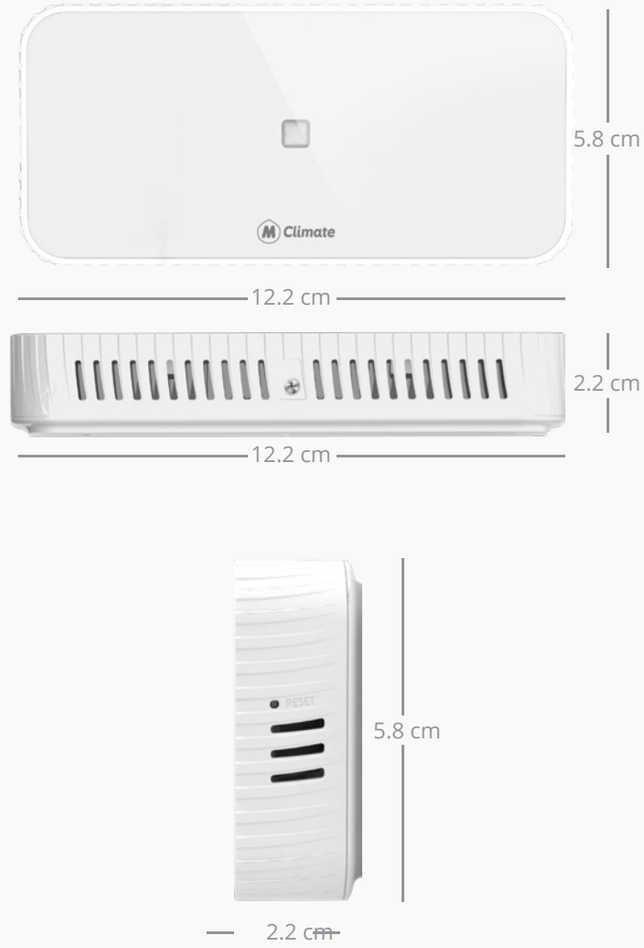
Available on the iPhone App Store

Occupancy-Driven Energy Optimization

Enterprise by MClimate



Dimensions



Technical Details

Design
PC/ABS

Operating Conditions:
Temperature: 0° - +50°C and Humidity: 0-80% RH (non-condensing)

Dimensions
122mm x 58mm x 22mm, 70gr

Power supply
2xAA batteries (each 1.5VDC)

Battery life
More than 10 years (depending on configuration and environment)

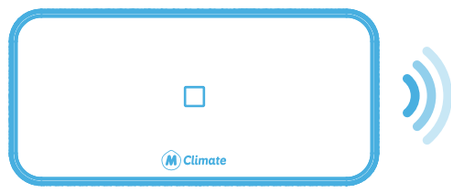
Wireless Technology
LoRaWAN® 1.0.3

Wireless Security
LoRaWAN® End-to-End encryption (AES-CTR)

Device Type
Class A End-device

Supported Features
OTAA , ADR , Adaptive Channels setup

How does it work?



HT + PIR lite LoRaWAN®

LoRaWAN

LoRaWAN® Gateway

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LoRaWAN® Network Provider

Cloud · Enterprise · API

MClimate App,
Other Clouds & Apps

IoT Platform

Scan the QR code to access the full product specifications and API Documentations or visit the link:
https://mclimate.eu/pages/lorawan-resources

Multipurpose Button LoRaWAN®

MC-LW-BTN-01

MClimate Multipurpose Button LoRaWAN® is a simple device with many applications. Featuring a single button with 3 types of clicks and a temperature sensor, only your imagination limits what happens when the customer presses the button.

Product features

- Button with 3 click types (single, double and triple)
- Temperature sensor
- Ultra-low power consumption
- Alarms
- Schedules
- Smartphone and WEB control
- FUOTA (Firmware Update Over The Air)

Applications

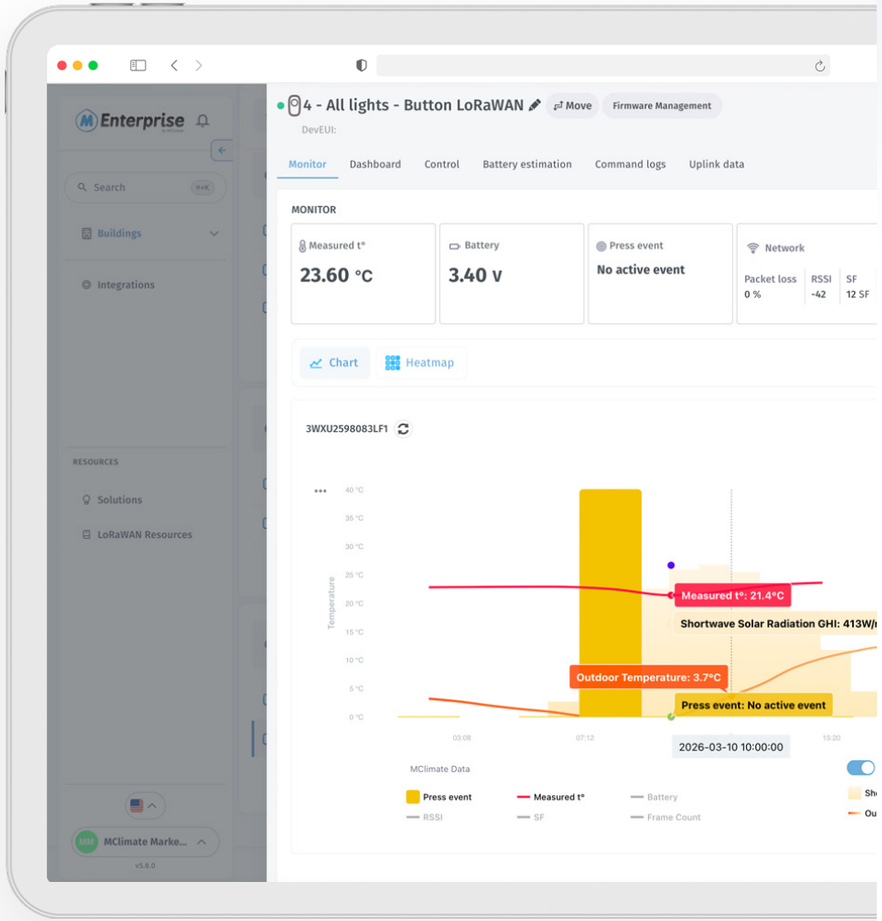
Smart Buildings | Smart Home | Residential buildings | Commercial buildings | Energy optimization | Environment monitoring

ANDROID APP ON Google play

Available on the iPhone App Store

Control Multipurpose Button wherever you are.

Enterprise by MClimate



Dimensions

Technical Details

Design
ABS

Operating Conditions:
Temperature: 0 - +50°C and Humidity: 0-80% RH (non-condensing)

Dimensions
71x41x18mm, 26gr

Battery Type
ER10280 with operating voltage 3 VDC

Battery life
< 10 years (depending on configuration and environment)

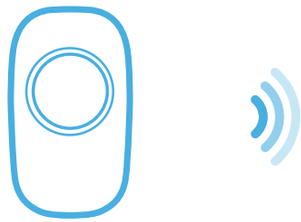
Wireless Technology
LoRaWAN® 1.0.3

Wireless Security
LoRaWAN® End-to-End encryption (AES-CTR)

Device Type
Class A End-device

Supported Features
OTAA , ADR , Adaptive Channels setup

How does it work?



Multipurpose Button LoRaWAN®

LoRaWAN®

LoRaWAN® Gateway

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IoT Platform

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https://mclimate.eu/pages/lorawan-resources

Open/Close Sensor LoRaWAN®

MC-LW-OC-01

MClimate Open/Close Sensor LoRaWAN® is a device detecting the event of opening or closing windows, doors, cabinets and more. It features long battery life, LED, temperature sensor and a button that triggers an uplink. The device sends an uplink for every event of opening/closing and keeps an internal counter of the total number of events.

Product features

- Magnetic reed
- Switch button
- Temperature sensor
- ER14250 or 1/2 AA Power supply
- Smartphone and WEB control
- FUOTA (Firmware Update Over The Air)

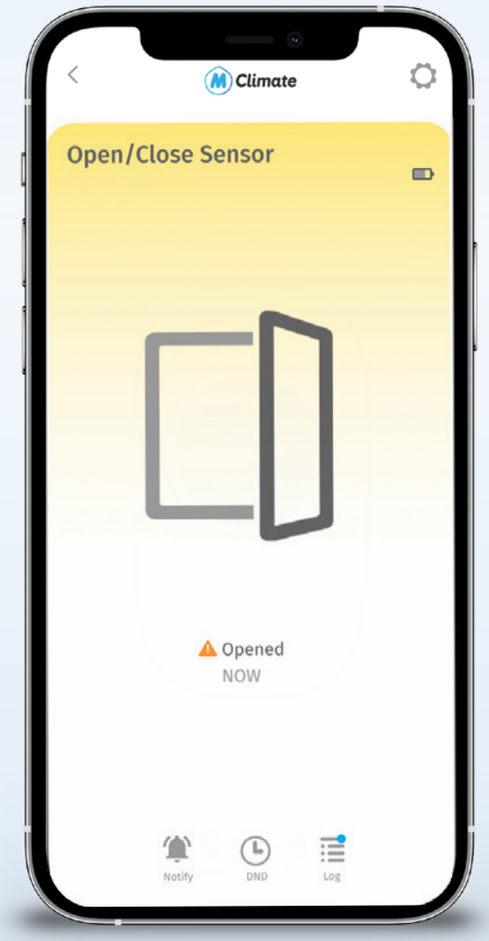
Applications

Smart Buildings | Smart Home | Residential buildings | Commercial buildings | Energy optimization | Environment monitoring

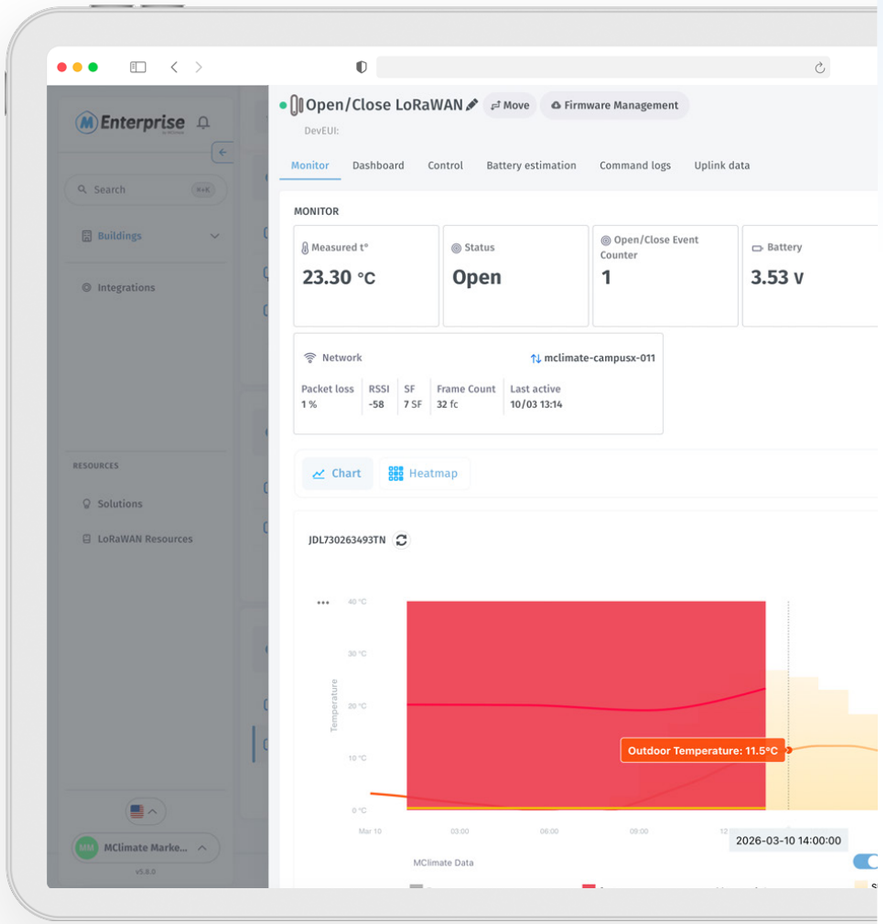
ANDROID APP ON Google play

Available on the iPhone App Store

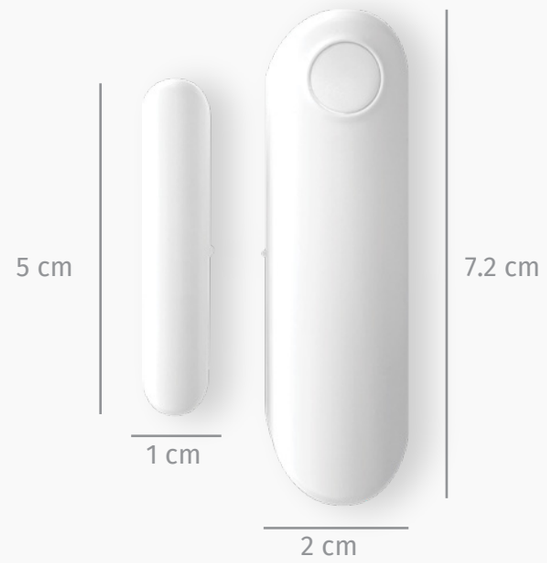
Monitor Open/Close Sensor wherever you are.



Enterprise by MClimate



Dimensions



Technical Details

Design
ABS

Operating Conditions:
Temperature: 0 - +50°C and Humidity: 0-80% RH (non-condensing)

Dimensions
Main unit: 72x20x20mm; Magnet: 50x10x15mm

Battery Type
ER10280 with operating voltage 3 VDC

Battery life
< 10 years (depending on configuration and environment)

Wireless Technology
LoRaWAN® 1.0.3

Wireless Security
LoRaWAN® End-to-End encryption (AES-CTR)

Device Type
Class A End-device

Supported Features
OTAA , ADR , Adaptive Channels setup

How does it work?

Open/Close Sensor LoRaWAN®

LoRaWAN® Gateway

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LoRaWAN® Network Provider

Cloud · Enterprise · API

MClimate App,
Other Clouds & Apps

IoT Platform

Scan the QR code to access the full product specifications and API Documentations or visit the link:
https://mclimate.eu/pages/lorawan-resources

T-Valve LoRaWAN®

MC-LW-T-VALVE-01

T-Valve is a LoRaWAN® water valve used in residential or commercial buildings. 3/4" and 1"1/4 versions available. T-Valve gives you the opportunity to stop a potential water damage from happening, by being able to control the main water supply in your property from distance. No more floods and damages.

Product features

- 3/4" and 1"1/4 versions available for remote water supply control
- Water temperature
- Environment temperature
- Wired Flood Sensor (optional)
- Housing tampering detection
- Magnetic tampering detection
- Buttons for manual control
- LEDs for valve and device status indication Buzzer
- Alarms
- Analytics
- Smartphone and WEB control
- FUOTA (Firmware Update Over The Air)

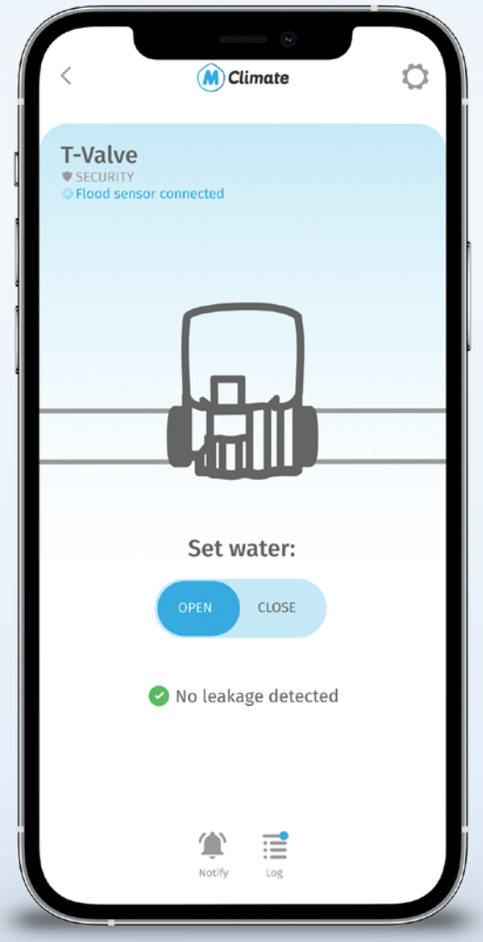
Applications

Smart Buildings | Smart Home | Residential buildings | Commercial buildings | Energy optimization | Environment monitoring

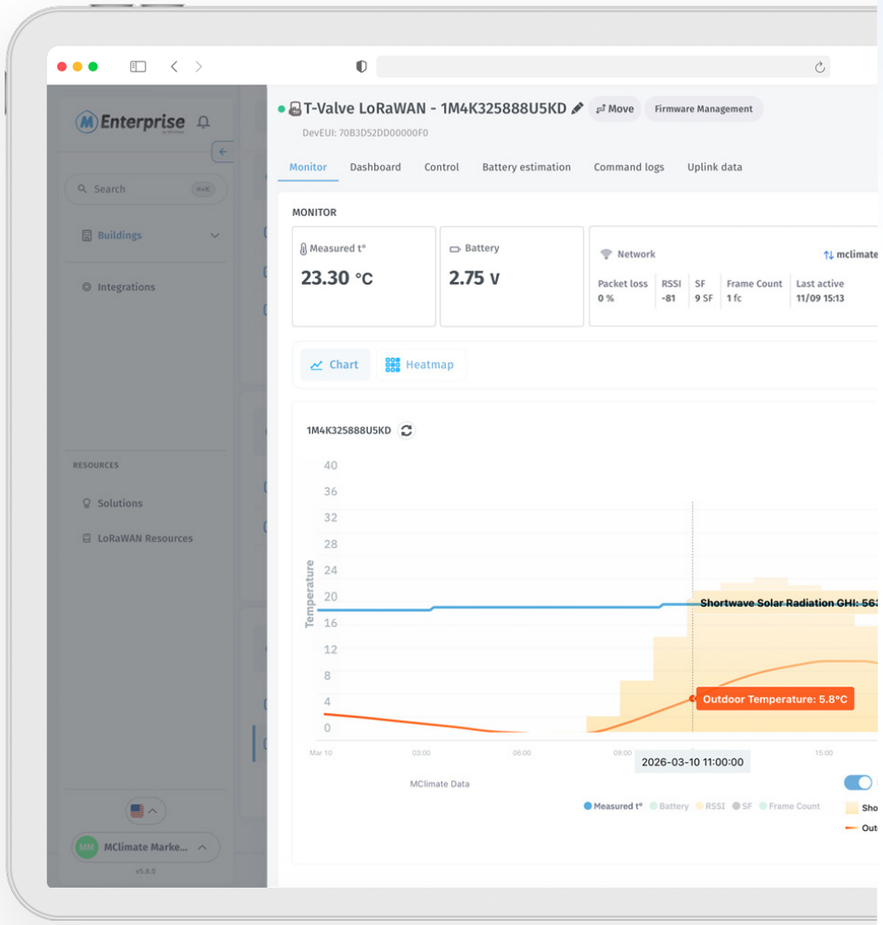
ANDROID APP ON Google play

Available on the iPhone App Store

Monitor your home from anywhere in the world and prevent leaks and damages.



Enterprise by MClimate



Dimensions

Technical Details

Design
PC/ABS; Valve PPE/PS

Operating Conditions:
Temperature: - 0 - 60°C and Humidity: 35%-90% RH (non-condensing)

Dimensions
105x117x90,8mm, 557gr

Battery Type
LiSO Cl2 ER26500 3.6V 9000mAh

Battery life
10 years (depending on configuration and environment)

Wireless Technology
LoRaWAN® 1.0.3

Wireless Security
LoRaWAN® End-to-End encryption (AES-CTR)

Device Type
Class A End-device

Supported Features
OTAA , ADR , Adaptive Channels setup

How does it work?

Scan the QR code to access the full product specifications and API Documentations or visit the link: **https://mclimate.eu/pages/lorawan-resources**

Flood Sensor LoRaWAN®

MC-LW-Flood

MClimate Flood Sensor is a compact flood sensor suitable for residential and commercial applications. If a flood is detected, data is immediately transmitted.

Product features

- Flood detection
- Device tampering detection
- Temperature sensor
- Buzzer
- LED
- Alarms
- Analytics
- Smartphone and WEB control
- FUOTA (Firmware Update Over The Air)

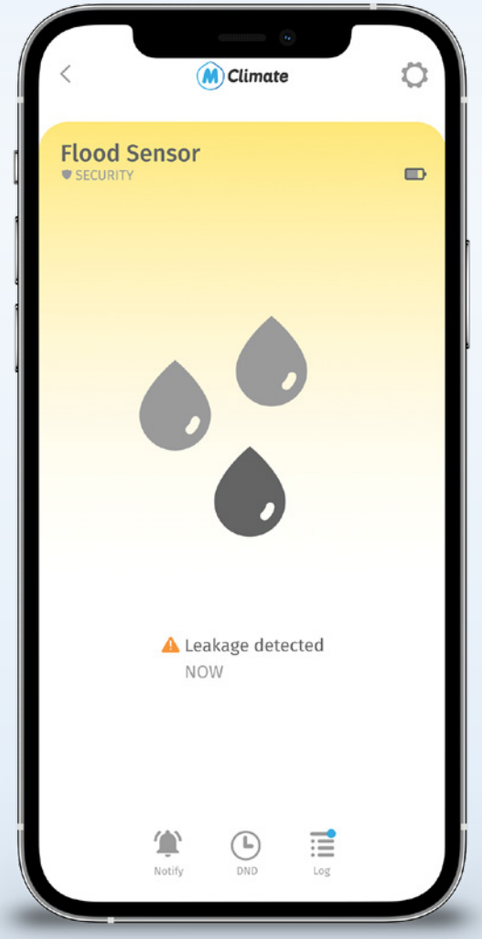
Applications

Smart Buildings | Smart Home | Residential buildings | Commercial buildings | Energy optimization | Environment monitoring

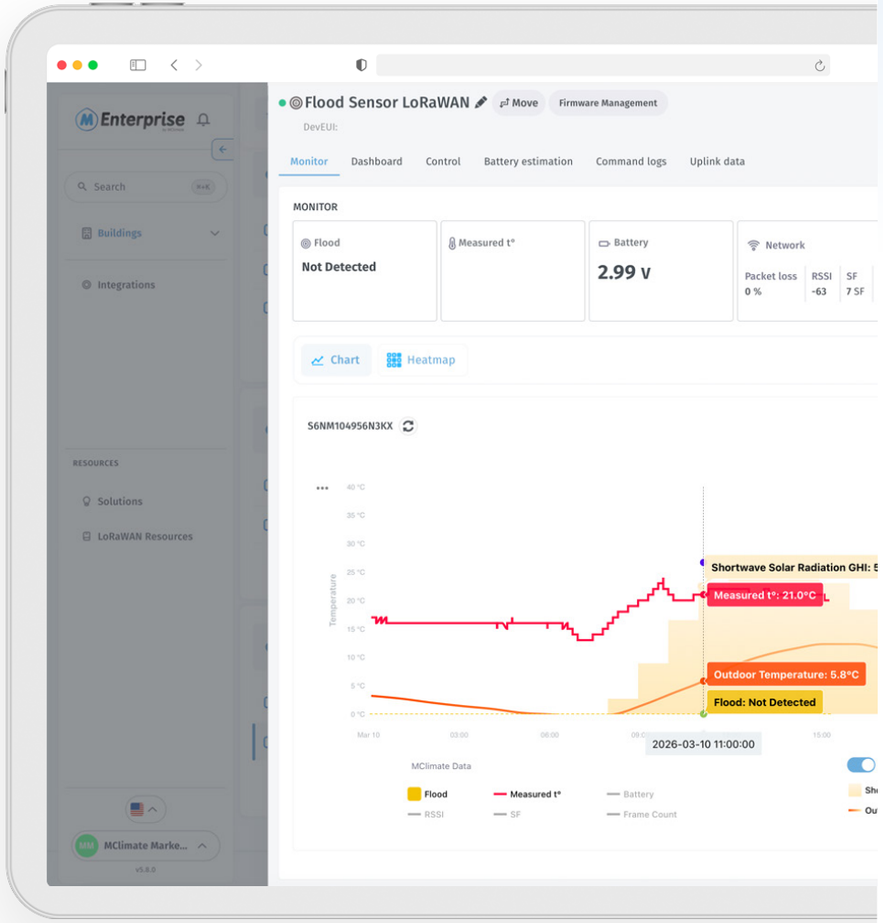
ANDROID APP ON Google play

Available on the iPhone App Store

Monitor your home from anywhere in the world and detect flood.



Enterprise by MClimate



Dimensions

Technical Details

Design
ABS

Operating Conditions:
Temperature: - 20 - 60°C and Humidity: 0-80% RH (non-condensing)

Dimensions
70x70x19mm, 33gr

Battery Type
CR123A, operating voltage: 3VDC

Battery life
10 years (depending on configuration and environment)

Wireless Technology
LoRaWAN® 1.0.3

Wireless Security
LoRaWAN® End-to-End encryption (AES-CTR)

Device Type
Class A End-device

Supported Features
OTAA , ADR , Adaptive Channels setup

How does it work?

Flood Sensor LoRaWAN®

LoRaWAN® Gateway

THE THINGS NETWORK · kerlink communication is everything · Actility · ChirpStack

LoRaWAN® Network Provider

Cloud · Enterprise · API

MClimate App,
Other Clouds & Apps

IoT Platform

Scan the QR code to access the full product specifications and API Documentations or visit the link:
https://mclimate.eu/pages/lorawan-resources

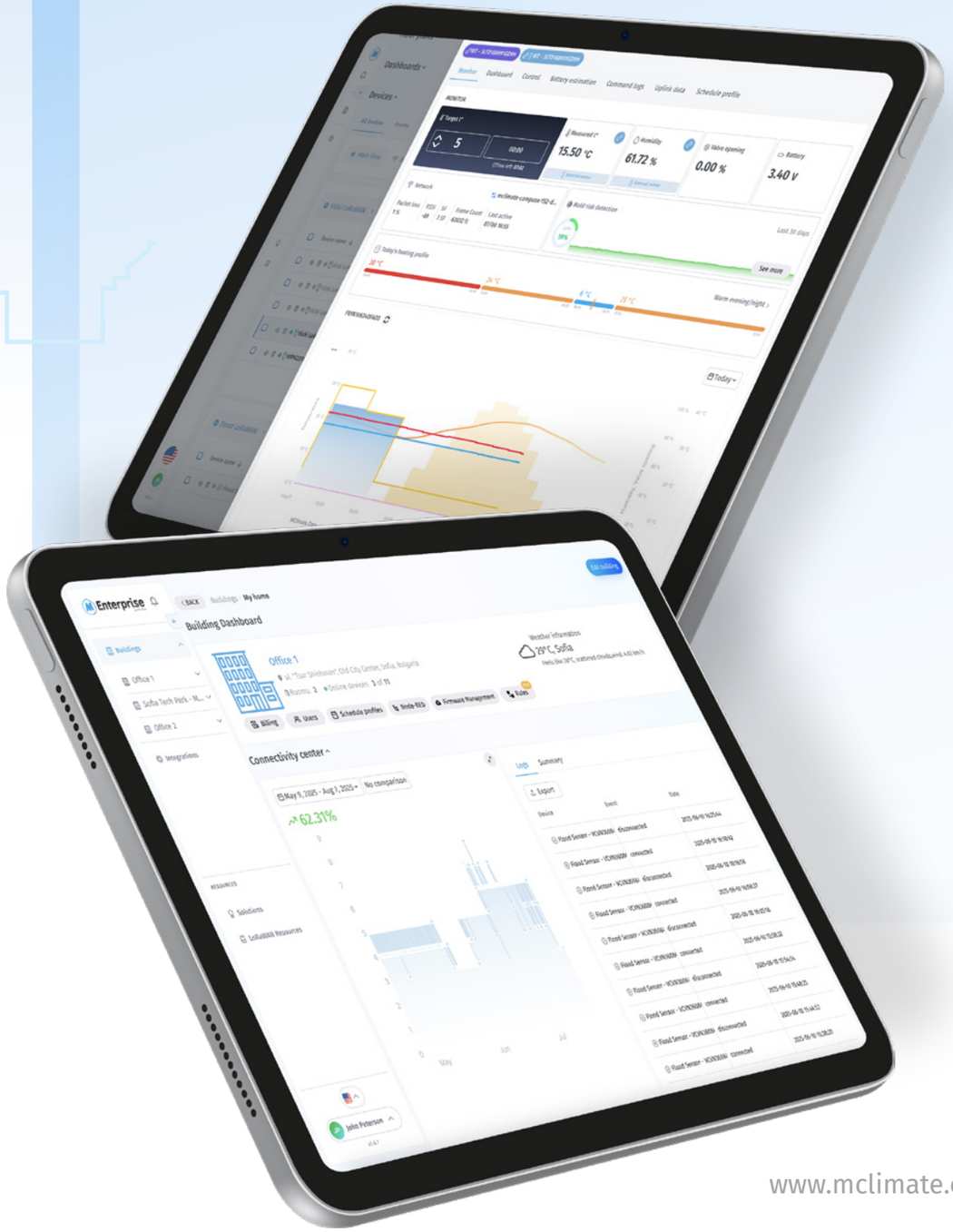
Powerful Building Management Platform

Enterprise
by MClimate

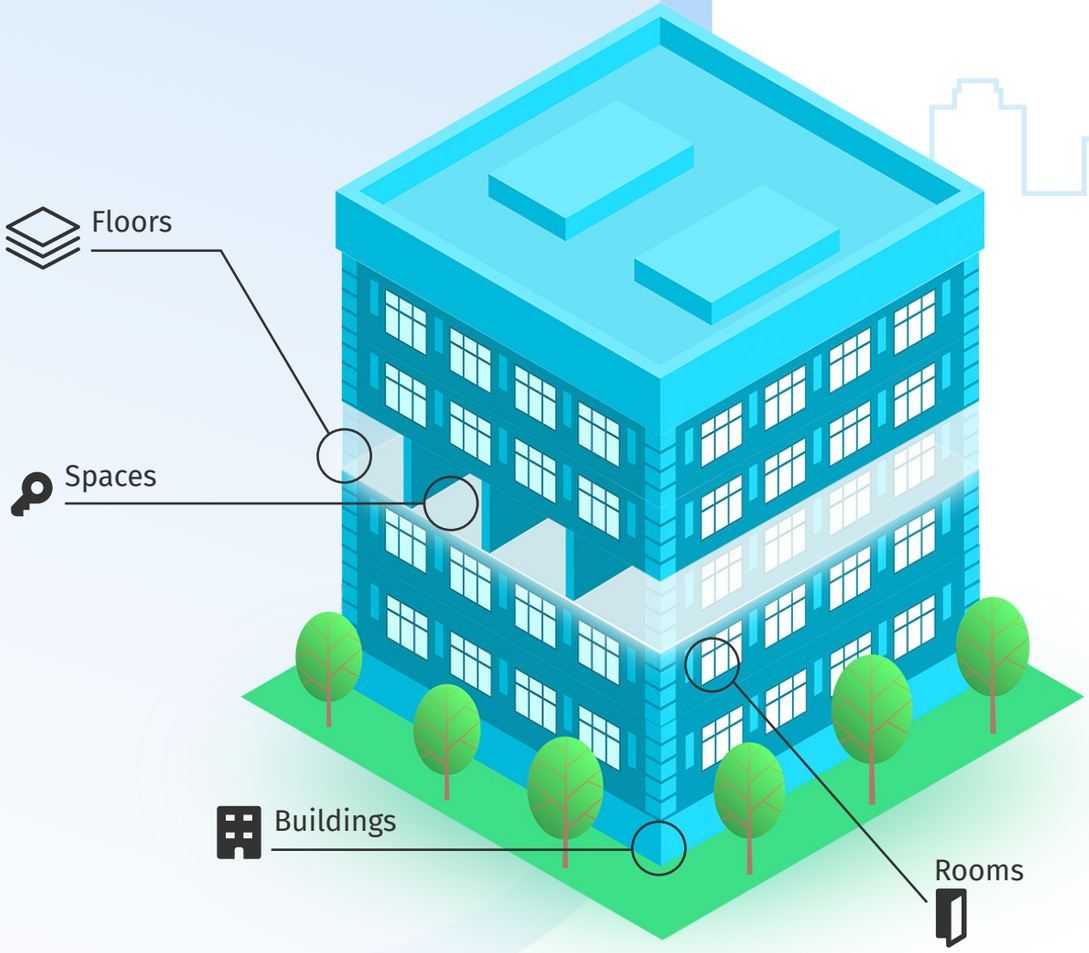
MClimate Enterprise is an integrated solution for smart automation of the heating/cooling, security and safety infrastructure of large apartment complexes, office buildings and hotels. The appliances used for your heating/cooling needs can perform better, optimize comfort and reduce energy consumption by up to 30%. MClimate offers a product line of Energy and Security devices compatible with your split and multi-split A/C's, water heaters, radiators and major electric appliances. With the centralized management WEB interface, your building management officers can monitor and control remotely all smart devices unit-by-unit, room-by-room, or the whole infrastructure simultaneously.

Features:

- Create a digital twin of your building (including floors, apartments & offices, rooms)
- User management - give limited access to each user to specific assets
- Floor map view - upload your floor plan and view your devices on a map
- Subscription management and invoices
- Create custom dashboards with selected devices
- Receive daily, weekly, monthly reports on specific assets on your email
- Rule engine - create custom rules and actions



www.mclimate.eu

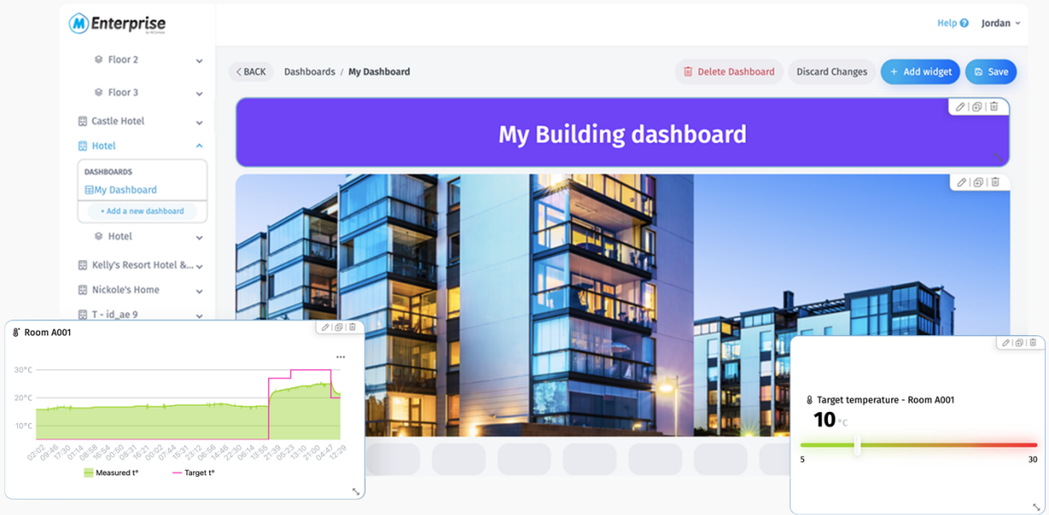


Digital twin of your building

Creating a digital twin of your building has numerous advantages. Once everything has its digital replica, you will be able to get a better understanding of your building and how one thing interacts with another. In MClimate Enterprise, you are able to re-create your building floor by floor and room by room. You can assign devices to a specific location in the building as well as retrieve analytics for a specific asset e.g. floor.

Applications

Smart Buildings | Smart Home | Residential buildings | Commercial buildings | Energy optimization | Environment monitoring

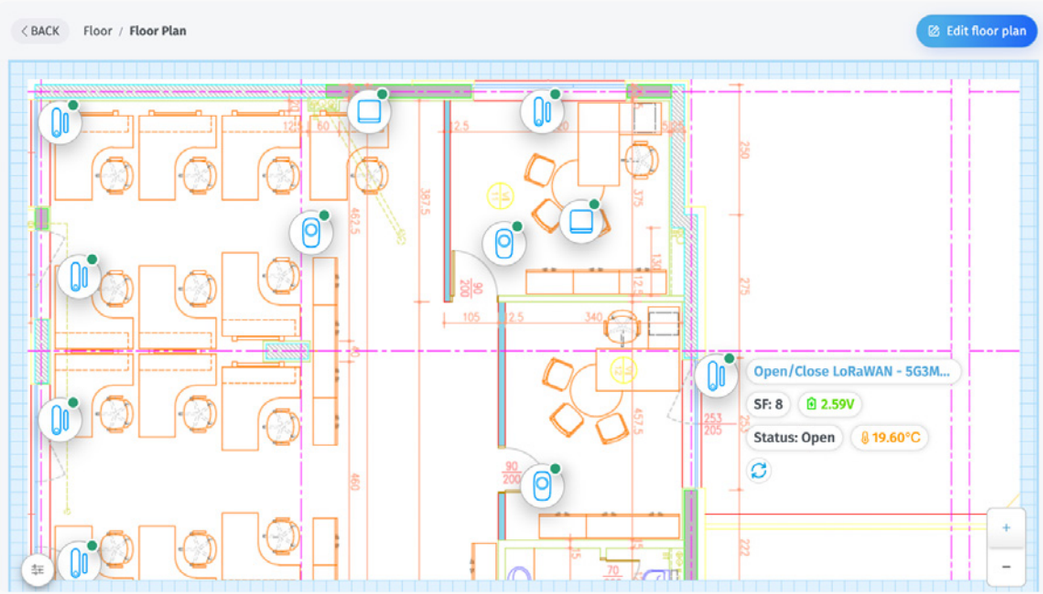


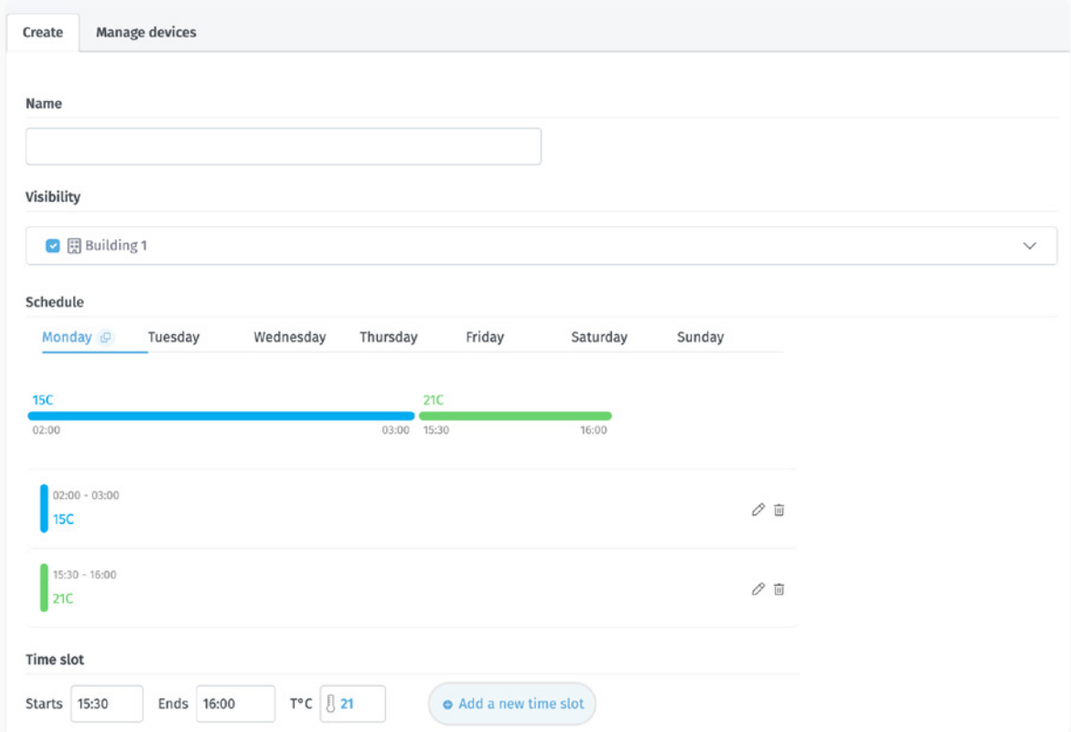
Custom dashboards

Easily create custom dashboards with the data you are most interested in. The dashboards offer a variety of widgets. Once you select a widget, you can resize it, move it to a different location, change colors and much more.

Floor map view

Navigate your building visually by creating customized floor plans. Get device information quickly and control them from a single place.



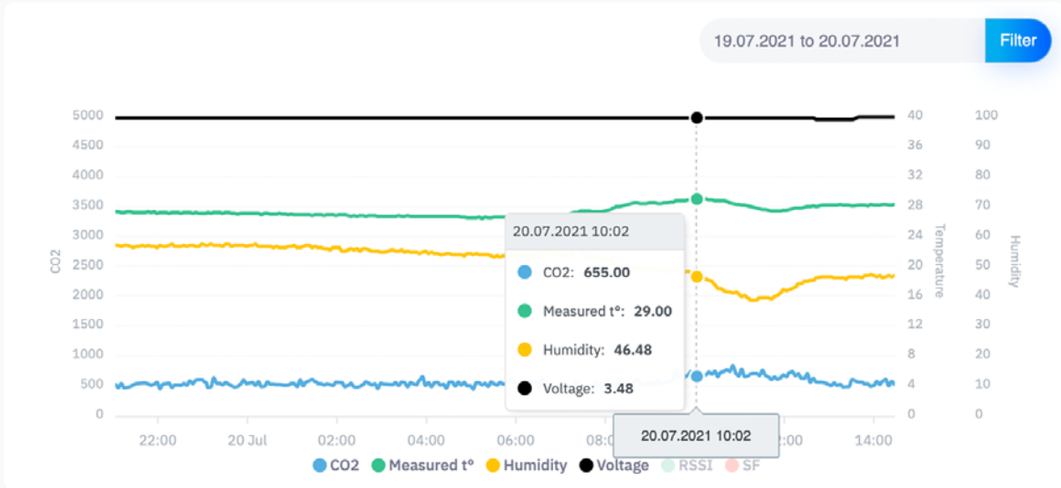


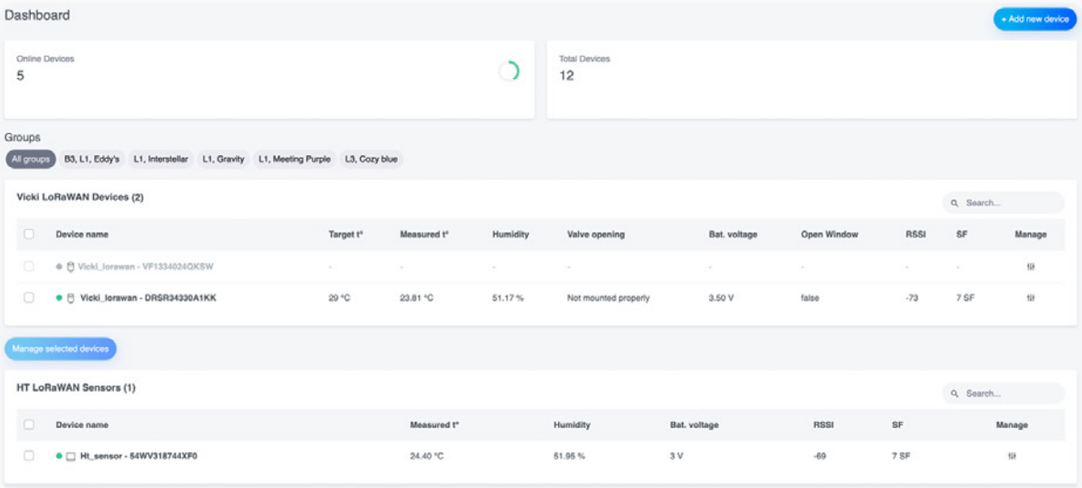
Heating profiles

Heating profiles allow you to create numerous different profiles and assign them to devices in your building. If you change the profile, all devices that follow it, will change. If your clients are using MClimate Home app, heating profiles are a great way to monitor their individual settings, offer support and also suggest them profiles that might save energy.

Analytics

Informed decisions are based on data. That's why we make it super easy for you to see live or historical data about your devices and their performance. Easily spot trends, extract detailed reports and more.



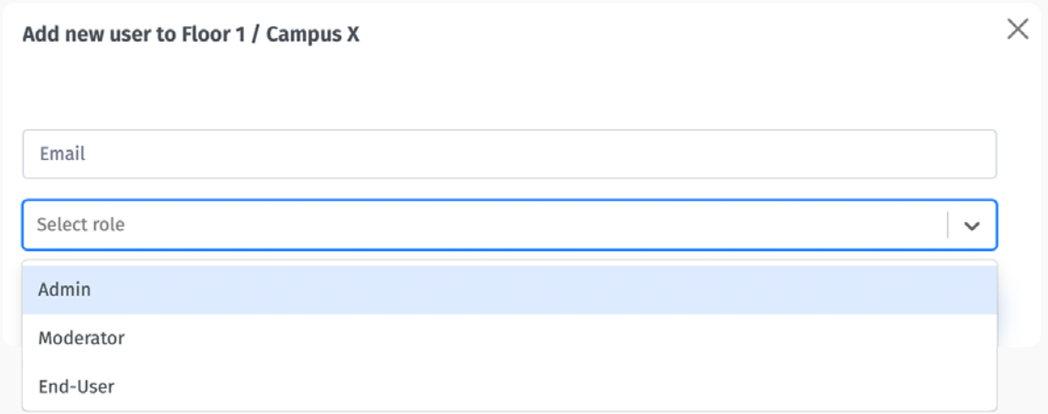


Control assets

Control your all MClimate devices in your building from the central dashboard, where you get an overview of the most important metrics about your building and also can drill-down to control and see more data. Filter the devices by buildings/floors/rooms, etc. to get a clear overview of a specific part of your building.

User management

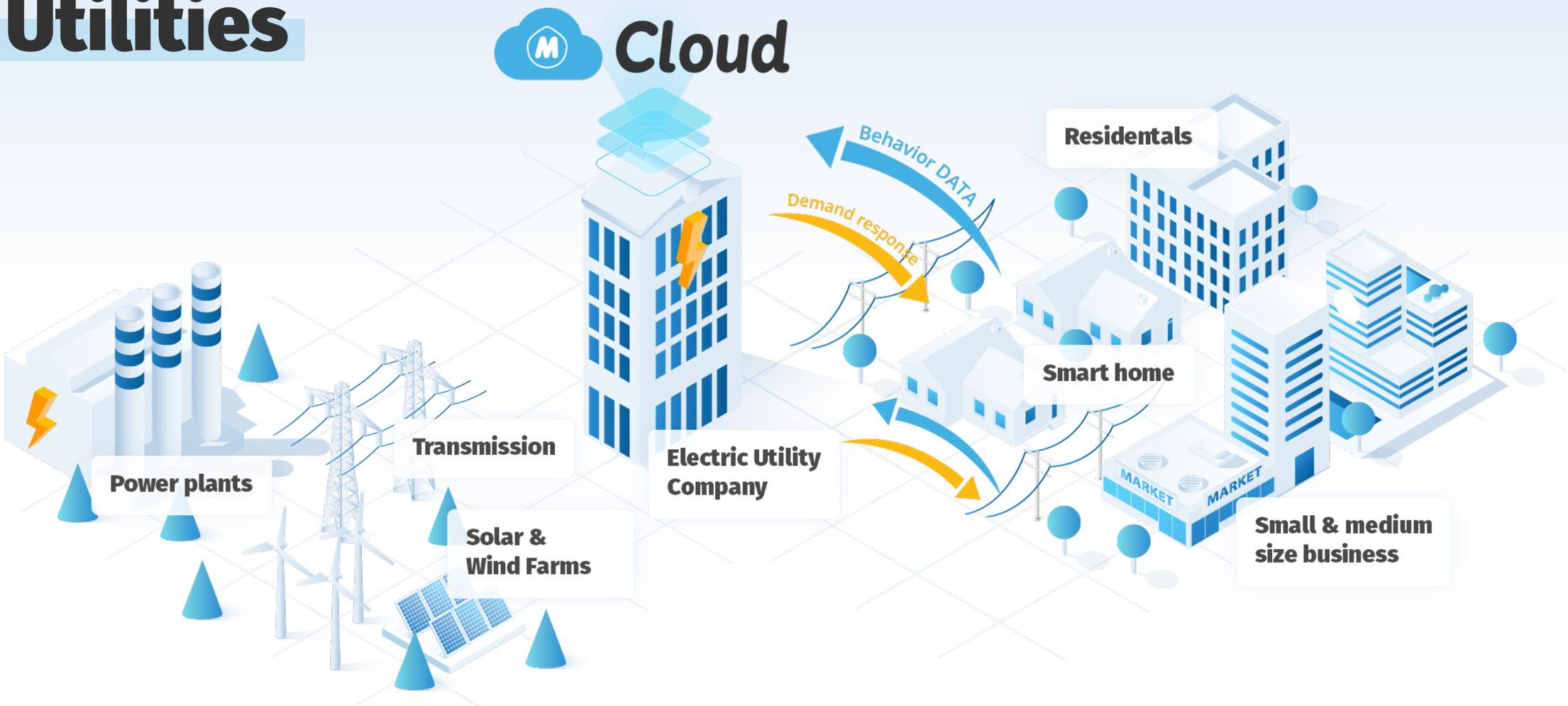
Easily manage user access to any of your assets. For example, you can give someone admin rights to a whole building or moderator rights to just a floor inside the building or you can e.g. give end-user access to only 1 apartment or room. Admins have full rights, moderators have full rights except for managing subscriptions.



Scan the QR code to learn more about MClimate Enterprise or just visit the link below:

https://mclimate.eu/pages/enterprise

Utilities



Existing smart meters are far away from giving consumers the "smart home experience" - some of the most intriguing opportunities in the sector are in service and products extending beyond the meter, where consumers interact with their energy use. MClimate offers smart home capabilities and consumer services with an entirely new set of capabilities that many utilities have not adequately developed. Utilities success in this domain will require strong partnerships to design and offer accessible services from the customer perspective outwards.

Utilities. Key benefits.

Demand response

We help utilities manage the grid and shave the peaks caused by higher renewable energy generation or peaks in electricity demand. People and businesses do not need to buy more expensive energy during the peaks and in the meanwhile utilities save money from additional infrastructure and power investments.

Customers' behavior tracking

We provide utilities with behind the meter data which they can use for customers' behaviour analysis in order to understand them better. In this way utilities can create personalized tariff offers as well as tailor-made energy programs and increase their customers' loyalty.

Energy engagement

We assist utilities in their efforts to raise customers' awareness of energy consumption and apply programs for energy savings.

Building energy management

We supply utilities with device solution that helps their customers track energy use and improve energy efficiency.

Home automation solutions give a great opportunity for utilities to escape from the "utility death spiral" and develop new business models.

Value proposition for utility companies

- Cost reduction
- New revenue streams by value added services
- Efficiency
- Quality of service
- Customer satisfaction
- Positive environment impact

Our case studies

German Utility & Energy Management: LoRaWAN® Based Building Solutions

Within 1 month of initial discussions, MClimate and the client started testing a LoRaWAN® based thermostat valve solution for the German market.

Key features of the solution include:

- Custom modes and integration with additional sensors using LoRaWAN®
- No upfront investment for the client
- Short delivery timeframe
- Solution applicable to large municipal and office buildings
- Thousands of units deployed within a limited timeframe due to EU based production

Nordics Telecom Energy Management: Residential Heating Control and monitoring

MClimate successfully delivered a white label product enabling the telco to have their own IoT state-of-art solution without spending years and a lot of money on product development.

Key features of the solution include:

- Low upfront investment with limited risk
- Ongoing EU based product support
- Scalability and short delivery lead time
- Rigorously tested and secure product
- Military-grade wide range radio technology

LoRa Alliance® Member

We make any building **smart.**
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