

Steorā[®]

THE SMART BENCH



A new generation street bench

Global environmental circumstances call for concrete steps toward change in behavior of urban citizens. Cities are overcrowded, and renewable energy and environmental protection have become the key economic and social challenges.

Street furniture is a simple entry point to a world of smart cities. A relatively simple looking product, but with vast usage potential, a solar powered bench comes with multiple functionalities – a wireless charging pad and charging ports for wired phones and other smart devices, night illumination, energy saving main controller, data collecting etc.

Our smart bench has in-built sensors for data collection and analysis, gathering information on, for example, the number of bench users, operability of various components, and atmospheric conditions. Additionally, bench owners can easily change settings on the dashboard.

With its simple design and convenient size, Steora can be installed anywhere, outdoors and indoors.



Why Steora?

Overall usage experience and feedback will serve as the basis for future development of smart solutions for digitalization in sustainable environments. Therefore, Steora is a perfect and unique Internet of Things (IoT) product for smart environments or smart cities.

When resolving the challenges of sustainability, we focus on the nexus between people, technology, and urban design. In order to facilitate the implementation of strategic enhancements to civic spaces for better living, we have created Steora, the most ingenious smart bench ever designed.



Our products are in accordance with mandatory European directives: EMC Directive 2014/30/EU, LVD 2014/35/EU, Radio Equipment Directive 2014/53/EU.

This is a guarantee that they are in compliance with CE, and therefore completely safe for outdoor usage.

Steora STANDARD

Simplicity at its best

Steora Standard is the smart bench of choice in the world. It is designed for outdoor spaces exposed to plenty of sunlight, such as city squares, marinas or parks.

Steora Standard is 100% solar powered, and does not require any additional power supply or infrastructural changes.

The controller is specially developed to produce up to 30% more energy. In winter days, it monitors weather conditions and powers off the bench in case of bad weather.

With its simple, balanced design and convenient size, Steora can be installed to substitute regular street benches, bringing a touch of modern aesthetic to outdoor spaces together with solar-powered Wi-Fi hotspot and charging stations.

Delivery time: **7 - 14 days**

Minimum order: **1 pc**

Available colors:



Signal
White



Pastel
Green



Grey
Beige



Window
Grey



Photovoltaic modules

Monocrystalline / Total power: 110W



Battery pack

Type: AGM / Capacity: 72Ah



USB charging

Number of ports: 2

Power (per port): 5W (1A)

Other: short circuit protection, LED light



Wireless charging

Power: 10W / Efficiency: up to 70%



Internet technology

4G LTE / Speed: up to 150Mbps / Range: 4 - 20 meters

Other: custom SSID, user and web page restriction, custom homepage...



Sensors

Temperature (-45°, + 60°)

Humidity (0% - 100%)

Device charging counters (cable and wireless)

Energy production & consumption

Internet connections counter & data traffic usage

Battery status

Rain sensor - shuts down bench if heavy rain

System sensor - analyses every device inside the bench



Cooling system

Type: air cooling / Number of fans: 4

Air flow: 370 m³/h

Temperature trigger: 35°C



Ambient light

Range: 2 meters

Color: White



Steorá



Steora HYBRID

Feel the power

Steora Hybrid is a powerful model which includes all the functionalities of Steora Standard with an addition of integrated AC charging module.

It is mainly designed for use in countries with less sunlight during winter days. Combining the energy from solar panels and AC grid power, the bench retains all its functions throughout all the seasons, adapting to outside conditions.

Grid power is mostly used during lower insolation days. When the solar battery charge drops below 30%, AC module switches on to quickly recharge the battery system.

Since it can draw power from the AC grid, Steora Hybrid offers additional features such as seat heating, or powering other devices in its vicinity.

Delivery time: **7 - 14 days**

Minimum order: **1 pc**

Available colors:



Signal
White



Pastel
Green



Grey
Beige



Window
Grey



Photovoltaic modules

Monocrystalline / Total power: 110W



Battery pack

Type: AGM / Capacity: 72Ah



USB charging

Number of ports: 2
Power (per port): 5W (1A)
Other: short circuit protection, LED light



Wireless charging

Power: 10W / Efficiency: up to 70%



Internet technology

4G LTE / Speed: up to 150Mbps / Range: 4 - 20 meters
Other: custom SSID, user and web page restriction, custom homepage...



Sensors

Temperature (-45°, + 60°)
Humidity (0% - 100%)
Device charging counters (cable and wireless)
Energy production & consumption
Internet connections counter & data traffic usage
Battery status
Rain sensor - shuts down bench if heavy rain
System sensor - analyses every device inside the bench



Cooling system

Type: air cooling / Number of fans: 4
Air flow: 370 m³/h
Temperature trigger: 35°C



Ambient light

Range: 2 meters
Color: White



AC grid connector

Supply voltage: 230V AC
Power: 150W



Steora URBAN

The future - now

Steora Urban is the first street bench ever with a built-in LCD display.

Since it is designed to employ both solar power and AC grid power, Steora Urban is a perfect fit for low-light locations, and indoor usage in highly frequented areas.

19" LCD display on Steora Urban can be used for broadcasting city news, announcements, pictures, or any piece of information of public interest.

Using our advanced software with simple user interface (UI), users can easily upload various content, and set parameters for duration and frequency for each bench.

Steora Urban requires AC grid power for 24/7 operation.

Delivery time: **up to 60 days**

Minimum order: **1 pc**

Available colors:



Signal
White



Pastel
Green



Grey
Beige



Window
Grey



Photovoltaic modules

Monocrystalline / Total power: 110W



Battery pack

Type: AGM / Capacity: 72Ah



USB charging

Number of ports: 2 / Power (per port): 5W (1A)

Other: short circuit protection, LED light



Wireless charging

Power: 10W / Efficiency: up to 70%



Internet technology

4G LTE / Speed: up to 150Mbps / Range: 4 - 20 meters

Other: custom SSID, user and web page restriction, custom homepage...



Sensors

Temperature (-45°, + 60°)

Humidity (0% - 100%)

Device charging counters (cable and wireless)

Energy production & consumption

Internet connections counter & data traffic usage

Battery status

Rain sensor - shuts down bench if heavy rain

System sensor - analyses every device inside the bench



Cooling system

Type: air cooling / Number of fans: 4

Air flow: 370 m3/h / Temperature trigger: 35°C



Ambient light

Range: 2 meters / Color: White



AC grid connector

Supply voltage: 230V AC / Power: 150W



LCD display

Size 19" / 250cd/sqm



Clear throughout the day:

● 12.5°C

Precipitation: 0 %
Max.: 12.7 °C
Wind: 12 km/h v
Humidity: 10 km
67 %

THU

● 18°C

Heavy clouds
clearing in the
afternoon

Min.: 8 °C
Precip: 0 %
Wind: 3 km/h v

FRI

☀ 16°C

Cloudy, clearing
and milder

Min.: 11 °C
Precip: 20 %
Wind: 20 km/h v

SAT

● 17°C

Partly cloudy
clearing in the
afternoon

Min.: 10 °C
Precip: 1 %
Wind: 3 km/h v



Steora.com

Steora URBAN+

The world within reach

Steora Urban+ is the most advanced street bench in the world. It is designed for use in highly frequented areas such as city streets, squares and other buzzing locations.

The signature feature of Steora Urban+ is the 19" super-bright LCD display, which can be used for showing ads, videos, pictures, or various information to the public (e.g. weather report).

Thanks to advanced software, users can easily upload videos or pictures to benches of their choice, and set campaign duration and frequency.

Video campaigns can also be connected to a Wi-Fi homepage, allowing bench users to view the same campaign on their smartphones.

Steora Urban+ requires AC grid power for 24/7 operation.

Delivery time: **up to 90 days**

Minimum order: **10 pcs**

Available colors:



Signal
White



Pastel
Green



Grey
Beige



Window
Grey



Photovoltaic modules

Monocrystalline / Total power: 110W



Battery pack

Type: AGM / Capacity: 72Ah



USB charging

Number of ports: 2 / Power (per port): 5W (1A)

Other: short circuit protection, LED light



Wireless charging

Power: 10W / Efficiency: up to 70%



Internet technology

4G LTE / Speed: up to 150Mbps / Range: 4 - 20 meters

Other: custom SSID, user and web page restriction, custom homepage...



Sensors

Temperature (-45°, + 60°)

Humidity (0% - 100%)

Device charging counters (cable and wireless)

Energy production & consumption

Internet connections counter & data traffic usage

Battery status

Rain sensor - shuts down bench if heavy rain

System sensor - analyses every device inside the bench



Cooling system

Type: air cooling / Number of fans: 4

Air flow: 370 m³/h / Temperature trigger: 35°C



Ambient light

Range: 2 meters / Color: White



AC grid connector

Supply voltage: 230V AC / Power: 150W



Camera

Night recording: Yes



Super-bright display

Size 19" / 1000cd/sqm



Steora CCTV

The future of urban security

Steora CCTV is developed to improve the safety of public spaces.

Combining smart tech for safer environments, it is intended for all locations which call for a higher level of security and public surveillance. Steora CCTV is equipped with 4 cameras, one on each side of the bench, creating 360° live stream.

The cameras also have night recording function with integrated infrared light.

Live stream is then available online, as well as an API for integration in any other website, or for recording on the NVR.

The bench is weather-resistant and vandal-resistant. Steora CCTV requires AC grid power for 24/7 operation.

Delivery time: **up to 90 days**

Minimum order: **1 pc**

Available colors:



Signal
White



Pastel
Green



Grey
Beige



Window
Grey



Photovoltaic modules

Monocrystalline / Total power: 110W



Battery pack

Type: AGM / Capacity: 72Ah



USB charging

Number of ports: 2

Power (per port): 5W (1A)

Other: short circuit protection, LED light



Wireless charging

Power: 10W / Efficiency: up to 70%



Internet technology

4G LTE / Speed: up to 150Mbps / Range: 4 - 20 meters

Other: custom SSID, user and web page restriction, custom homepage...



Sensors

Temperature (-45°, + 60°)

Humidity (0% - 100%)

Device charging counters (cable and wireless)

Energy production & consumption

Internet connections counter & data traffic usage

Battery status

Rain sensor - shuts down bench if heavy rain

System sensor - analyses every device inside the bench



Cooling system

Type: air cooling / Number of fans: 4

Air flow: 370 m3/h

Temperature trigger: 35°C



Ambient light

Range: 2 meters

Color: White



AC grid connector

Supply voltage: 230V AC

Power: 150W



Camera

Night recording: Yes

Angle: 360°



Steora E

Power up & connect

Steora E is the only bench in Steora family without PV modules.

It is designed for indoor usage at highly frequented locations such as transit stations (bus stops, metro or train stations), shopping centers or airports.

Steora E offers the same functionalities as Steora Standard model.

Elegant design of the seating plate is achieved by combining black acrylic glass cover with integrated wireless charger.

Steora E requires AC grid power for 24/7 operation.

Delivery time: **7 - 14 days**

Minimum order: **1 pc**

Available colors:



Signal
White



Pastel
Green



Grey
Beige



Window
Grey



USB charging

Number of ports: 2
Power (per port): 5W (1A)
Other: short circuit protection, LED light



Wireless charging

Power: 10W / Efficiency: up to 70%



Internet technology

4G LTE / Speed: up to 150Mbps / Range: 4 - 20 meters
Other: custom SSID, user and web page restriction, custom homepage...



Sensors

Temperature (-45°, + 60°)
Humidity (0% - 100%)
Device charging counters (cable and wireless)
Energy consumption
Internet connections counter & data traffic usage
System sensor - analyses every device inside the bench



Ambient light

Range: 2 meters
Color: White



AC grid connector

Supply voltage: 230V AC
Power: 150W



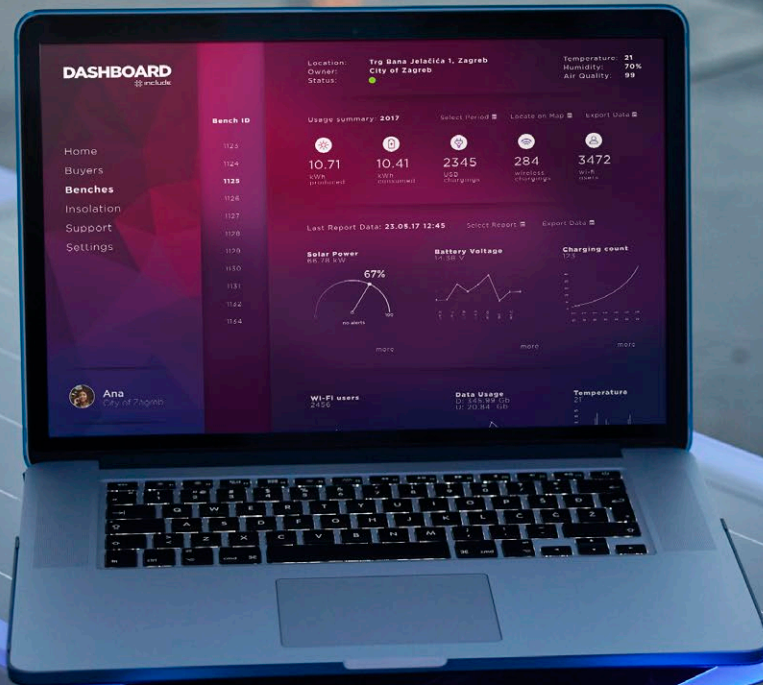
24/7 Dashboard

Steora's dashboard is actually the brain of the bench.

Once they purchase Steora, our customers get their personal profile on Include's web based dashboard. At any time, from any location, Steora owners can get fresh data feed from their benches to learn about their current status. This is a feature that makes Steora smart bench more advanced than any other similar product on the market.

The dashboard performs the following functions:

- overview of all locations where Steora benches are installed,
- reporting information on the number of charged devices,
- the number of WiFi users and their internet consumption,
- remote control of internet access (including changing passwords),
- remote control of ambient lights and charging signal lights (including setting times to turn the lights on and off automatically),
- and providing weather info like a mini meteo station (measuring humidity, temperature, and precipitation in the area).



Home

Buyers

Benches

Insolation

Support

Settings



Ana
City of Zagreb

Logout

Bench ID

1123

1124

1125

1126

1127

1128

1129

1130

1131

1132

1134

Location:

Trg Bana Jelačića 1, Zagreb

Owner:

City of Zagreb

Status:



Temperature: **21**

Humidity: **70%**

Air Quality: **99**

Usage summary: **2017**

Select Period

Locate on Map

Export Data



10.71

kWh
produced



10.41

kWh
consumed



2345

USB
chargings



284

wireless
chargings



3472

wi-fi
users

Last Report Data: **23.05.17 12:45**

Select Report

Export Data

Solar Power
66.78 kW



more

Battery Voltage
14.38 V



more

Charging count
123



more

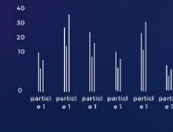
Wi-Fi users
2456



Data Usage
D: 345.99 Gb
U: 20.84 Gb



Temperature
21°



Additional options

Extra wireless charger

Additional wireless charging pad
with Qi wireless charging technology

Bench models: All

Minimum quantity: 1 pc

Seat heating system

Heaters integrated in the seating plate
able to raise temperature to 35°C

Bench models: Hybrid, Urban, CCTV

Minimum quantity: 10 pcs

Optical fiber connection

Equipment inside the bench
for connecting optical fiber cable

Bench models: All

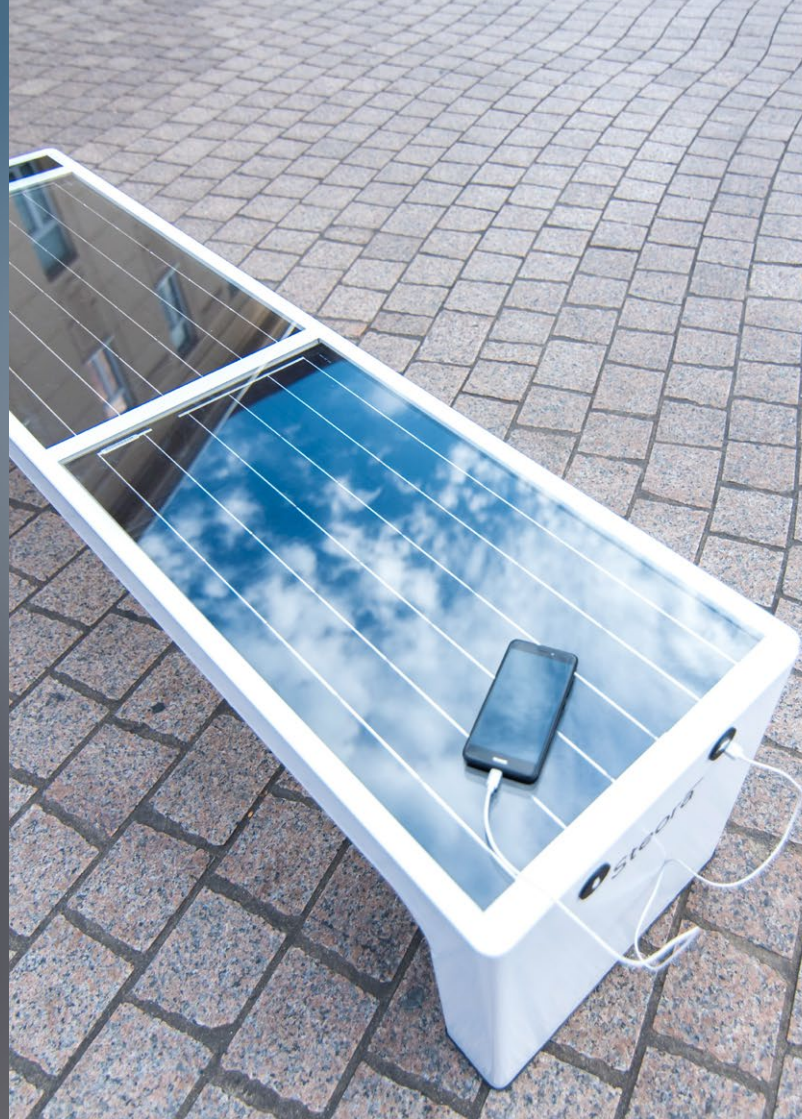
Minimum quantity: 1 pc

Wood vinyl wrap

Specially designed, high-quality vinyl
wrap in wooden texture available in
different colors

Bench models: All

Minimum quantity: 10 pcs





Designed & Produced in EU

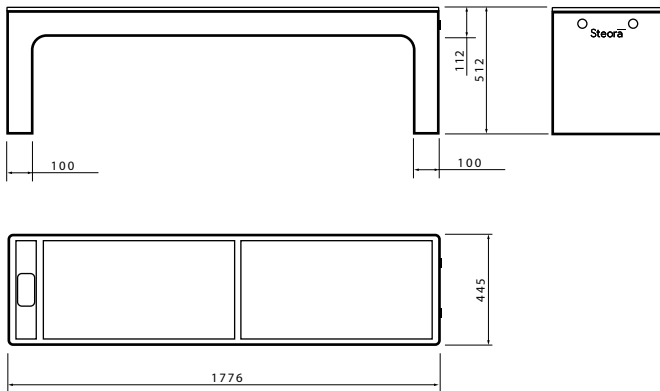


For more info,
please visit include.eu
or scan the QR code.

FaQ

What are Steora smart bench dimensions and weight?

Dimensions: W: 178cm; D: 45 cm; H: 50cm. Weight: 88 kg.



How long does it take to fully charge a phone device?

Charging time depends on charging type and smartphone model. When using wireless charger, it usually takes up to 90 minutes to fully charge a device, as the technology is still in development phase. Charging speed when using USB ports is usually between 1 and 1.8% of battery per 1 minute. Charging speed also depends on whether the smartphone is in use while charging, or in the stand-by mode.

How come the bench does not have a back rest?

Our bench was designed to fit seamlessly into any environment, and allow seating from all sides. A back rest would disrupt this concept and potentially create problems with charging since shadowing negatively affects the energy yield of PV modules.

How many days can Steora work without sunlight?

This depends on several factors such as the number of bench users, amount of sun and clouds in the course of a day, etc. Usually, Steora can function normally up to 5 days without direct sun exposure, before the primary functions start to power off to save the battery. USB charging ports are the last to shut down.

How long does it take for a bench to be fully charged?

In summer days, Steora can charge its battery system within 1 day, while in winter this can take up to 10 days. That is why Steora is mostly in standby mode during winter (this refers only to Steora Standard, as all other models are AC grid connected and maintain full functionality throughout the year).

What surface should the bench be installed on?

Steora has to be installed on a solid surface – concrete, asphalt or stone. The surface needs to be at least 10 cm deep.

We create amazing
technology products.



We are Include.

A European hardware company, founded by a 22-year-old innovator Ivan Mrvoš, we earned recognition following a large investment in 2017, quickly becoming one of the best producers of smart street furniture in Europe.

Based in Solin, Croatia, in a 2000 m² facility with 35 highly educated employees, we are recognized as a serious development IoT platform, growing rapidly in terms of company size, sales volume and global reach.

With global footprint of more than 500 benches on 25 markets around the world, we are involved in major 'Smart city' projects, and have made our presence known in 130 cities and municipalities across 5 continents.



Our highly skilled R&D team works on development of both hardware and software solutions, which in effect means we have the capability to develop any IoT, or solar powered solution for smart cities.

Our supply channels, in combination with production department, sales and customer care unit, can respond quickly and deliver even the most complex solutions of the highest quality to our customers.

We believe that technology is a driver of equality and inclusion. Our mission is to find undiscovered potential around us, and use it to create amazing technology products, designed to improve lives of urban users.

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Steorā®