esera
IoT I Automation

IoT READY IN 3 MINUTES

Patented
Plug and Play
Hardware

made
in
Germany

ESERA GmbH

We are a respected hardware manufacturer from Bavaria, Germany, specializing in IoT, IIoT, and Industry 4.0 solutions for various industries, including Smart Buildings, data centers, rail applications, Industry 4.0, and public safety. Our extensive product portfolio includes sensors, actuators, gateways, and controllers.

Since our founding in 2009, we have established ourselves internationally and continuously develop innovative hardware solutions. Our founder, Andreas Geisler, leads the company and drives efficient product development.

ESERA devices are rugged and designed for long-term operation. Our high-quality embedded hardware and software ensure reliable performance.

Our products are ideal for high-security applications, operating independently of the Linux kernel and equipped with TPM chips for data security. This guarantees the protection of sensitive data in critical environments.

ESERA devices are highly customizable to meet our customers' specific requirements, ensuring we always provide the optimal solution for every application and environment.

TECHNOLOGY LEADER IN OUR MARKET SEGMENT

Our expertise lies in patented PLUG and PLAY hardware solutions, which make IoT applications ready for use in just 3 minutes.

Our ESERA Gateways can manage up to 30 sensors simultaneously, with each sensor capable of delivering up to five measurements.

IT / OT / IoT - OUR PROMISE

TIME SAVINGS
Stay on track with your project schedule! Utilize our patented PLUG and PLAY hardware to save valuable time. With ESERA, your IoT implementation is completed and ready for use in just 3 minutes, allowing you to focus on what matters most: your success.

COST SAVINGS
Reduce your costs with our patented PLUG and PLAY hardware. While implementing a traditional PLC control system typically takes up to 2 days, you can get started with ESERA in just 3 minutes. Maximum efficiency for your budget!

ABOVE-AVERAGE NUMBER OF SENSORS AND DATA RECORDS
ESERA Gateways can manage up to 30 sensors simultaneously, each providing up to five measurements – well above the market average.

LONG LIFESPAN
ESERA devices ensure long-lasting operation in challenging environments, offering high-quality embedded hardware and software solutions.

HIGH DATA SECURITY
ESERA products are ideal for high-security applications. With independence from the Linux kernel and TPM chips, they provide the highest level of data security in critical environments.

MODULAR AND CUSTOMIZABLE DEVICES
ESERA devices are highly adaptable to meet various use cases. Customized adjustments enable the most optimal solution for every need."

FIVE PILLARS OF ESERA

PLUG and PLAY
Extremely high time and cost savings: Our patented PLUG and PLAY sensor system, "Auto-E-Connect," enables fast installation, maintenance, and service thanks to fully automatic setup and intuitive handling.

USER FRIENDLY
Our products enable easy and intuitive operation with minimal commissioning times. Comprehensive documentation includes detailed instructions and visual aids. Training or technical expertise is not required.

SECURE
Our devices provide maximum protection against hacker attacks through transparent interfaces, flexible command management, the absence of a Linux kernel, and complete data control. Customers retain sovereignty over their data, allowing the use of our hardware in security and high-security applications..

DURABLE
ESERA devices are durable and robust, designed for challenging environments, including harsh conditions, extended temperature ranges, and flexible power supply solutions.

ECO FRIENDLY
We use green energy to minimize CO_2 emissions. Additionally, we employ recycled plastics to save resources and reduce waste.
Our climate-neutral certification process has already begun *)

*) The climate-neutral certification is conducted by an independent certification body."

OUR NETWORK

PARTNERS

tresmo

GUARD STACK

Telegärtner Elektronik

esera
iot | automation

OmegaLambdaTec
Pioneering Smart Data Solutions

WE
WÜRTH ELEKTRONIK

kiconn

ASSOCIATIONS

bayme vbm

commendIT

Arbeit für Schwaben IHK Schwaben

hwk
Handwerkskammer für Schwaben

FROM SENSOR TO VISUALIZED DATA OUTPUT

IoT, or the "Internet of Things," connects physical devices and objects for data exchange over the internet. The goal is to enhance device communication for more efficient processes, better control, and new applications.

In IoT, various devices, from everyday items to industrial machines, are interconnected. Sensors and actuators play a crucial role by capturing data and executing actions. These connected devices can be controlled and monitored in real-time over the internet. ESERA's IoT solutions offer clear, visually processed real-time data through cloud data processing. Your advantage: process optimization, cost savings, and early damage prevention.

✔ Latest data transfer modes

✔ Fast, fully automatic and intuitive

✔ Thanks to our patented PLUG and PLAY system 'Auto-E-Connect,' sensors are automatically connected to the gateway and ready for use within just three minutes

✔ Our hardware was developed from the ground up with the highest level of security. It does not rely on a Linux kernel and does not use any unknown libraries.

PROTOCOLS AND DATA TRANSFER

lorawan **LPWAN 2**	**nb-iot** **LTE/4G/5G**	**mqtt** **IoT Protokoll**
modbus/rtu **Seriell-Industrial**	**modbus/tcp** **ETH-Industrial**	**opc ua** **IoT Protokoll** *coming soon*

CLOUD SERVICES

IoT CLOUD - A VERSATILE PLATFORM

A cloud plays a significant role in processing sensor data, especially in the context of IoT and the associated analysis and readable data output.

Using a cloud for sensor data provides a flexible and powerful platform for collecting, processing, visualizing, and gaining insights from this data. Depending on the requirements of a specific project or application, different cloud services and platforms can be utilized.

ttn
The Things Network
IoT Network

ms azure
Secure IoT Cloud

akenza
IoT Cloud

sap
Secure IoT Cloud

mindsphere
Siemens IoT Cloud

wago
Energy Management

xonitor
GuardStack
Data Management

elastic
Data Analytic

telefonica
IoT Connectivity
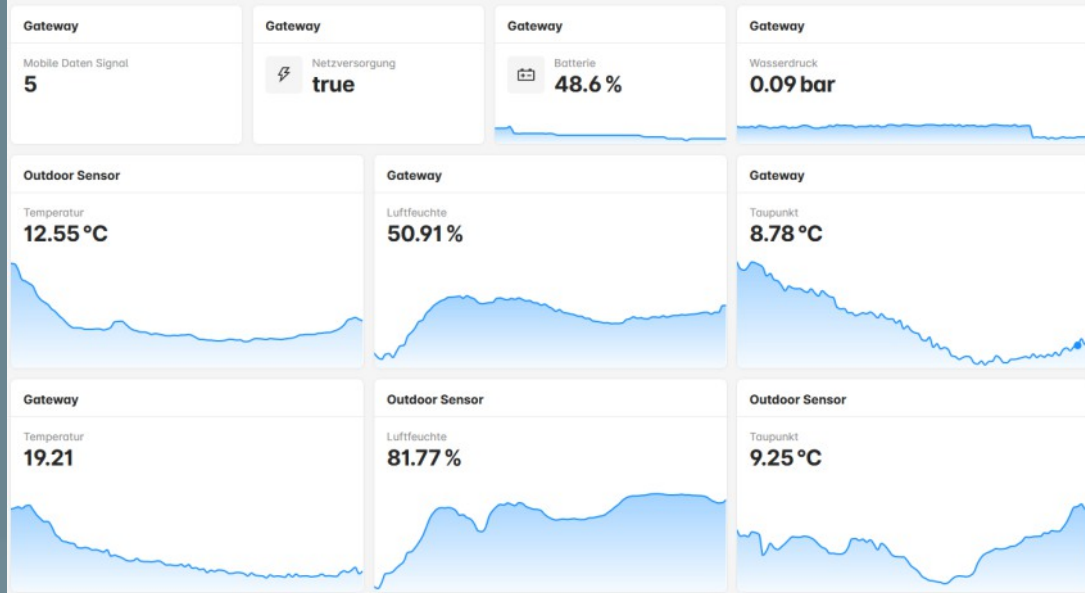
THE PERFECT SENSOR

ESERA devices are highly customizable to meet the specific requirements of our customers. This allows us to offer the most optimal solution for any application and environment with our tailored sensors at any time:

- Sensor type
- Measuring range and accuracy
- Interfaces and data transmission
- Mounting and attachment options
- Operating environment
- Certifications
- Special functions/requirements
- Calibration needs

VISUALIZATION

Our extensive network of experienced partner companies allows us to offer our customers individual solutions for visualization, alerting, data analysis, and more.

CONCEPT AND APPLICATION EXAMPLES

THE ESERA - CONCEPT

Our state-of-the-art gateways make it possible to connect up to 30 sensors per gateway in no time through PLUG and PLAY. Each of these sensors can provide up to five measurements. The sensor data is transferred to the cloud within a few seconds. In just three minutes, you will receive usable and visually processed results.
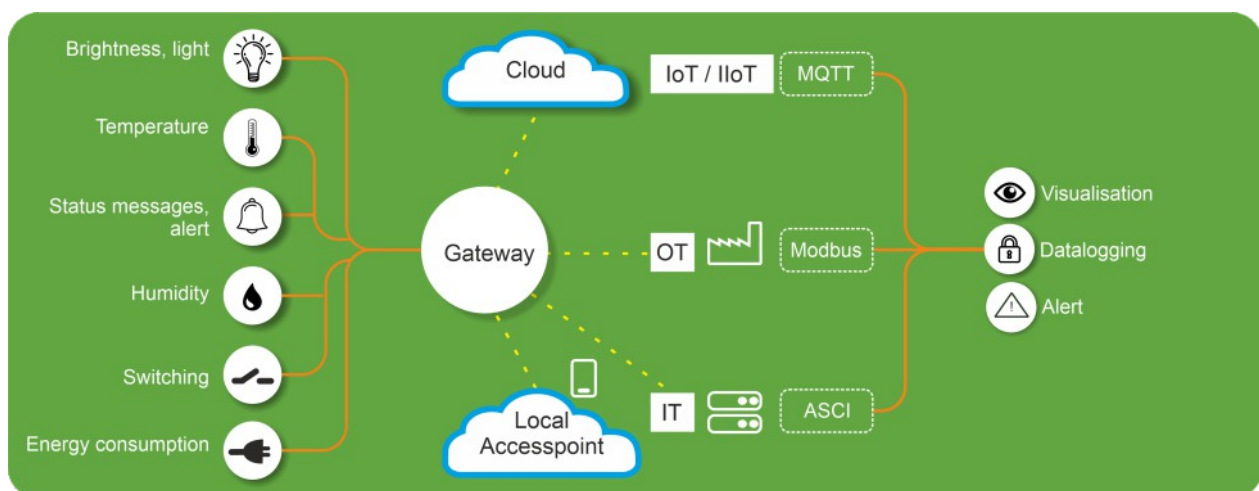
EXAMPLES OF APPLICATION

DATACENTER
Indoor monitoring according to EN 50600 (Level 1 to 3) for precise monitoring of temperature, humidity, and dew point.

CONSTRUCTION SITE MONITORING
Building monitoring from the construction phase to completion. Early detection and alerting in case of damage events.

ENERGY MANAGEMENT
Capturing, optimizing, controlling, and regulating energy consumption and requirements.

AUTOMATIC RESTART SYSTEM
Automatic restart of computer systems or machines after an unexpected failure.

### ENERGY AND ENVIRONMENTAL MONITORING (e.g. MINICIPALITIES, PUBLIC FACILITIES)
Measurement of environmental parameters such as particulate matter, CO_2, air quality, ozone and more.

SMART BUILDING, SMART HOME
Intelligent building automation solution for efficient control of heating, shading, lighting, and more.

TEMPERATURE MONITORING (e.g. INDUSTRY, MEDICINE, MEANS OF TRANSPORTATION, COLD STORAGE)
Temperature monitoring for early detection of hazardous situations and preventive intervention.
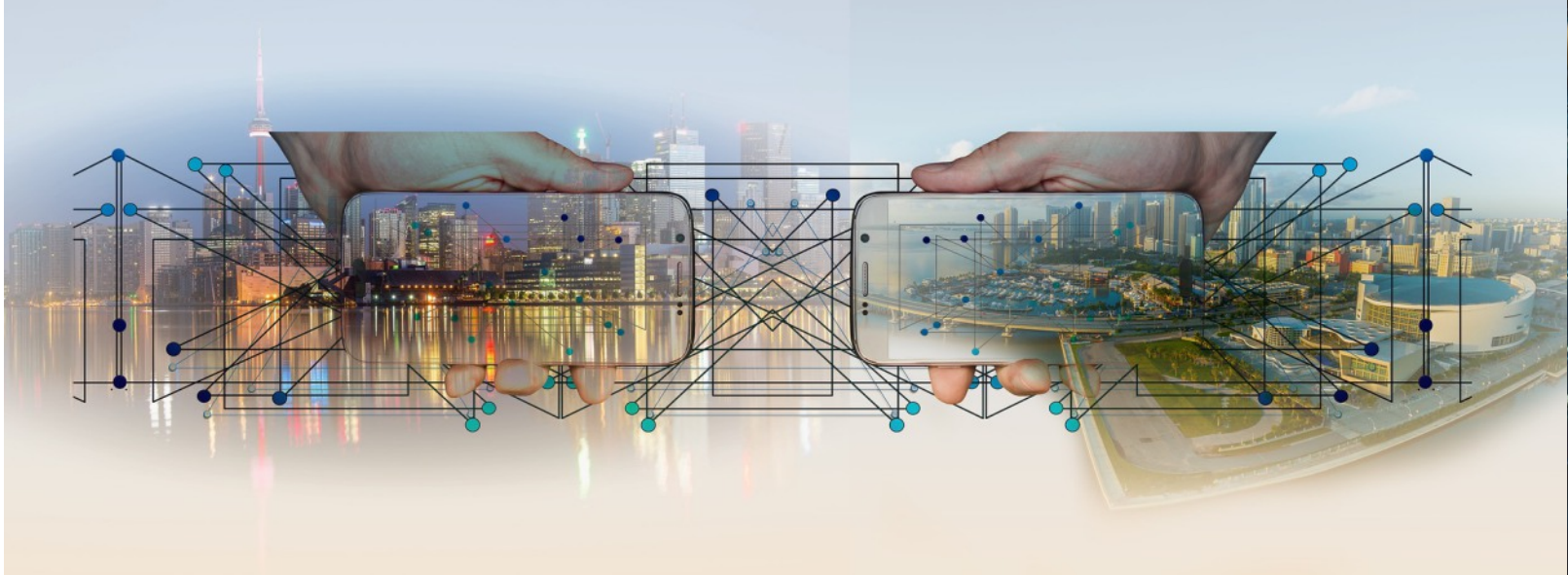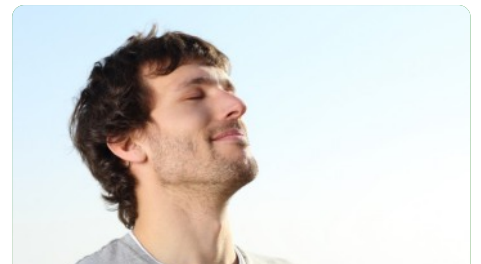
Temperature

Air humidity, rel.

VOC, Air Quality

Co2, Carbon dioxide
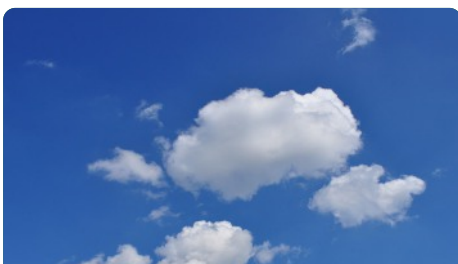
Smoke, fire

Particulate matter

Barometric air pressure, hPa

Differential pressure sensor

Ozone, O3

Nitrogen dioxide, No2

Your individual sensor

Water, moisture

GO FOR ESERA

Breaking boundaries, expanding possibilities: Our devices are the key to a connected future in which systems and services intelligently communicate, and captured data is presented in a visually appealing way.

- **Quick Integration**: No technical expertise needed. You can achieve immediate, actionable results in any IoT environment with our patented PLUG and PLAY system.
- **Reliable Performance:** Our gateways ensure a consistent and stable connection, no matter how complex your network becomes, even in challenging environments.
- **Time and Cost Savings:** Time-consuming setups are a thing of the past. In just three minutes, instead of an average of 2 days, your traditional PLC control system is ready for use.
- **Security:** With state-of-the-art security protocols, we ensure the protection of your data.

conova Conova Data Center	**noris network** Noris Network Data Center	**spacenet** SpaceNet AG Data Center
bundeswehr Bundeswehr, mobile Data Center	**esera**	**sbb** Swiss National railway
blackned Blackned Military Data Management	**salzburg ag** Telephony and Internet application	**liebherr** Liebherr Aerospace, Security technology

www.esera.de   info@esera.de   +49 8341 999 80-0

PATENTED
PLUG and PLAY
HARDWARE

Contact us

ESERA GmbH
Adelindastraße 20
87600 Kaufbeuren
GERMANY

Phone: +49 8341 99980-0
info@esera.de
www.esera.de

https://lnk.esera.de/le89aeyv

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