



esera^{leaf}

**WE LIVE IOT AND
INDUSTRY 4.0**

PLUG and PLAY . USER FRIENDLY . SECURE . DURABLE . ECO FRIENDLY

ABOUT US - 15 YEARS OF ESERA



OUR COMPANY

We are a renowned hardware manufacturer from Bavaria, Germany, specializing in IoT and Industry 4.0 solutions. For almost 15 years, we have been dedicated to the development and production of an innovative environmental and energy measurement system. Our system comprises sensors, actuators, gateways, and controllers, and it has been awarded a European patent for its plug-and-play system under the name "Auto-E-Connect." This achievement highlights our technological leadership in the industry.

Since our establishment in 2009, we have continuously evolved and successfully established ourselves in the international market. Our founder, Andreas Geisler, serves as both the managing director and the driving force behind our innovative and efficient product development. We are a highly motivated team that lives innovation.

WE ARE THE LEADER IN OUR MARKET SEGMENT

Our core competency lies in the development and production of innovative electronic hardware. This is produced with a focus on sustainability. We specialize in providing IoT solutions for various application areas such as IoT applications, smart buildings, data centers, railway applications, Industry 4.0, defense, and many others.

OUR PRODUCTS OFFER MANY ADVANTAGES FOR OUR CUSTOMERS

SAVING TIME AND MONEY

Thanks to ESERA's patented plug-and-play system, "Auto-E-Connect," sensors can be ready for use in a matter of seconds. Immediately after the initial installation, sensor data is outputted in the desired format within a few seconds.

ABOVE-AVERAGE NUMBER OF DATA POINTS

ESERA gateways offer the capability to manage up to 30 sensors simultaneously, going beyond the standard market offerings. Each individual sensor can provide up to four different datapoints.

LONG LIFE

ESERA devices are designed for long operating lifetimes, even under harsh conditions. Our focus is on providing high-quality embedded hardware and software solutions.

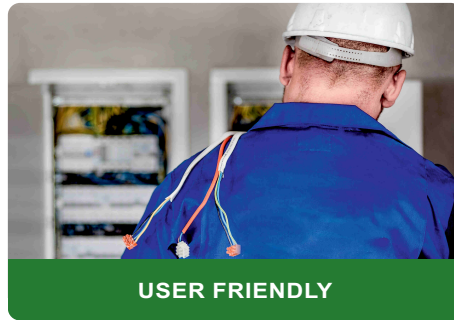
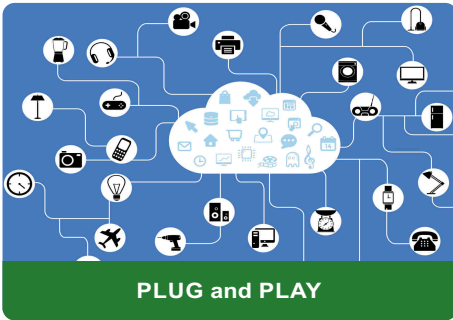
HIGH DATA SECURITY

ESERA products are ideal for high-security applications. They are independent of the Linux kernel and incorporate TPM (Trusted Platform Module) chips designed for data security. As a result, our products provide a high level of security and protection for sensitive data in critical environments.

MODULAR AND CUSTOMIZABLE DEVICES

ESERA devices offer versatile customization options to meet a wide range of use cases and deployment scenarios. Devices are tailored according to the specific requirements of customers. This allows us to deliver the most optimal and secure solution for each intended purpose at any given time.

THE 5 PILLARS OF ESERA



PLUG and PLAY

Extremely high time and cost savings: With our patented PLUG and PLAY sensor system "Auto-E-Connect", installation, maintenance and service can be carried out in the shortest possible time. The fully automatic installation and configuration enables fast commissioning.

Our products are designed to be easy to install. This eliminates the need for time-consuming installation processes and costly programming work.

USER FRIENDLY

Our products are characterized by their intuitive and easy handling, resulting in minimal commissioning times. Both our hardware and user interfaces are designed to be user-friendly, allowing operation without the need for extensive training or technical expertise.

In addition, we provide comprehensive documentation that includes detailed instructions and visual representations. By combining intuitive handling, extensive documentation, and reliable customer support, we ensure that our customers can fully utilize the potential of our products.

SECURE

Our devices offer maximum protection against hacking attacks through transparent and traceable interfaces, flexible command management, the absence of a Linux kernel, and the ability to have full data control. Another important aspect is the complete data control, which allows our customers to maintain ownership and control over their data. With comprehensive control over data transmission and storage, our devices can be used in security and high-security applications where the protection of sensitive information is of utmost importance.

DURABLE

ESERA devices are known for their long-term stability and robust construction, specifically designed for use in demanding environments. They are engineered to operate reliably even under extreme conditions, including harsh environments, extended temperature ranges, and with flexible power supply solutions.

ECO FRIENDLY

In the production of our devices, we prioritize a resource-efficient production environment. We use green energy to minimize fossil fuel consumption during the production process and reduce CO2 emissions. We opt for the use of recycled plastics to decrease the use of new raw materials and minimize waste.

The certification process to become a climate-neutral company has already been initiated. *)

*) The climate-neutral certification is carried out by an independent certification body.

CONNECTIVITY

lorawan
LPWAN 2

nb-iot
LTE/4G/5G

mqtt
IoT protocol

modbus/rtu
Serial-Industrial

modbus/tcp
ETH-Industrial

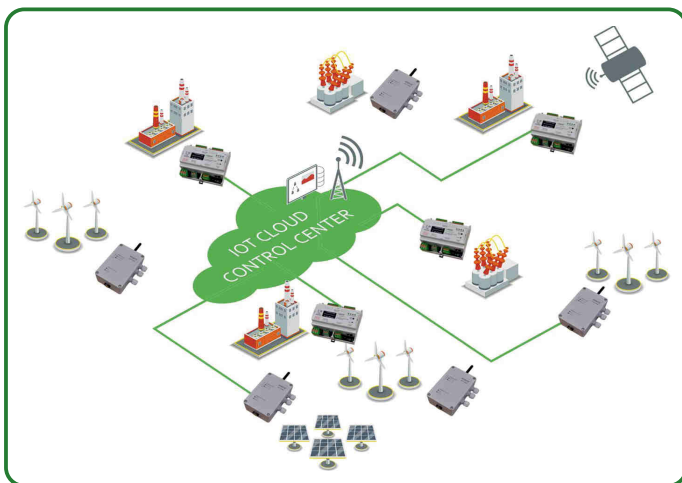
opc ua
IoT protocol

coming soon

INTERNET OF THINGS - FROM SENSOR TO THE CLOUD

There are many different interpretations of the term IoT. We translate IoT quite simply as remote data retrieval from sensors.

In essence, remote data querying is an existing technology. Sensor data has been collected, transmitted, and sent to a database (cloud service) for many decades. A visualization or dashboard is connected to this database. Thus, the entire path from the sensor to the human-readable data has been implemented.



- ✔ State-of-the-art transmission technology (radio, cable)
- ✔ Fast, fully automatic and intuitive
- ✔ Thanks to our patented plug-and-play system, "Auto-E-Connect," sensors are automatically connected to the gateway and are ready for use within just one minute.
- ✔ Our hardware has been developed from the ground up with the highest level of security in mind.
It is not based on a Linux kernel and does not rely on any unknown libraries..

**HARDWARE THAT IS SIMPLE AND DURABLE.
IMPLEMENT YOUR PROJECT SAFELY WITH ESERA!!**

CLOUD SERVICES, SOFTWARE

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

blackned
Data Management

elastic
Data Analytic

telefonica
IoT Connectivity

PRODUCT PORTFOLIO



SENSORS



GATEWAYS



CONTROLLER

Our sensors, actuators, gateways and controllers are extremely versatile and can be used in various environments and applications. They can be used for fixed installations as well as for mobile use. The devices can be powered by a battery or AC adapter.

Our products are customizable to meet the individual requirements of our customers. This means that our existing devices can be easily adapted to suit their specific needs.

Therefore, we always provide the optimal and secure solution for a wide range of applications and use cases.

SENSORS AND VISUALIZATION

SENSOR WISH LIST

Of course, we will be happy to assist you in creating a wish list for the sensors you need for your application. When discussing and creating an individual offer, we can take the following points into account:

Sensor type: For example, temperature sensor, humidity sensor, pressure sensor, gases, etc.

Measuring range and accuracy: Please specify the parameters you want to use.

Interfaces and data transfer: Which interfaces do you need for data transmission?

Mounting and fixing options: Requirements for mounting or fixing the sensor?

Environmental conditions: In which environmental condition should the sensor be used?

Certifications: If your application requires specific certifications, please let us know.

Additional functions: Are there any special functions or requirements that the sensor should fulfill?

Calibrate: Should the sensor be calibrated?

VISUALIZATION

When developing visualization solutions, we rely on our network of cooperation partners.

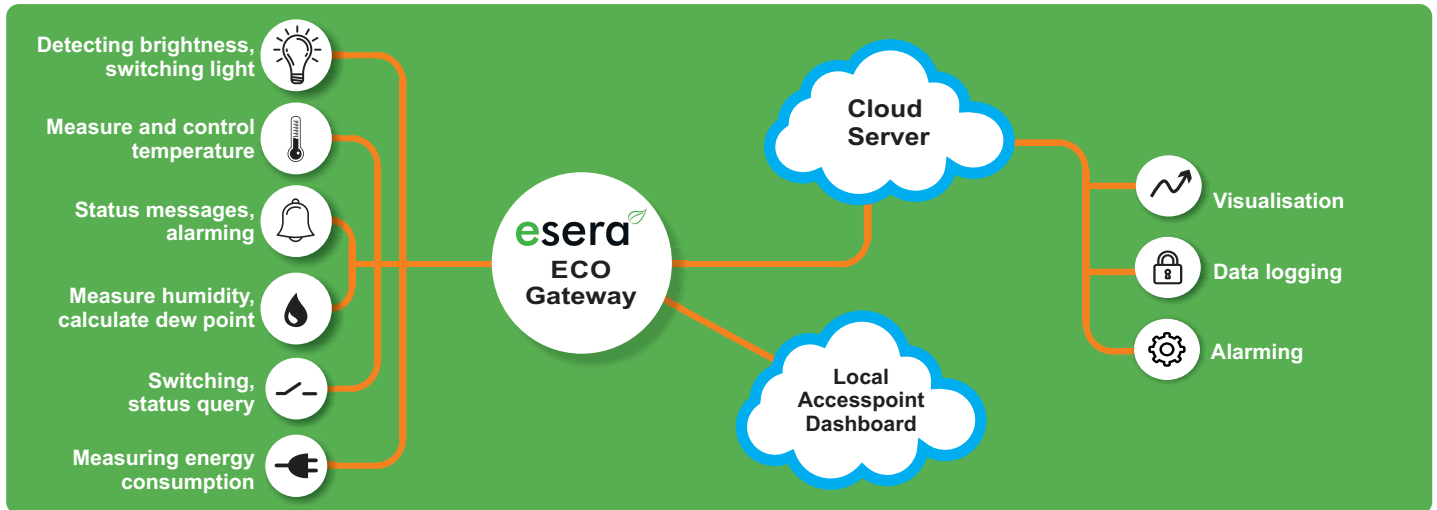
With our network of experienced partner companies, we ensure that we find the right solution for every type of visualization, alarm functionality, and data analysis.



GATEWAYS

THE ESERA CONCEPT

Time-saving installation of state-of-the-art gateways with up to 30 sensors via a plug-and-play system. Send sensor data to the cloud via wireless or wired connections. Time-saving installation of state-of-the-art gateways with up to 30 sensors via a plug-and-play system. Send sensor data to the cloud via wireless or wired connections.



APPLICATION EXAMPLES

DATA CENTER

Our energy consumption optimization system is a comprehensive indoor monitoring solution compliant with EN 50600, providing a granularity of level 1 to 3. With our highly precise sensors, we continuously monitor temperature, humidity, dew points, and sudden temperature fluctuations in your data center.

CONSTRUCTION SITE MONITORING

Building monitoring from construction to completion. Early detection and alerting of damage events such as water ingress, risk of mold growth, fire, burglary, theft, and more.

ENERGY MANAGEMENT

To capture and optimize energy consumption, control and regulate energy demand, storage, and energy generation, such as PV systems, large consumers, electromobility, and battery systems.

COLD CHAIN MONITORING IN KITCHENS AND VEHICLES

Our solution provides real-time monitoring, alarm functions, and reporting to ensure that you are always informed about the condition of your food. It offers comprehensive monitoring and documentation of food temperatures, both in kitchens and during transportation.

ENERGY AND ENVIRONMENTAL MONITORING FOR COMMUNITIES, PUBLIC INSTITUTIONS AND SCHOOLS

Our system enables reliable measurement of a wide range of environmental parameters, including particulate matter, CO₂, air quality, ozone, and many others. Additionally, we also capture energy consumption data, allowing for optimizations and insights into energy usage.

This enables the identification of environmental pollutants, monitoring of air quality indicators, and the ability to respond to changes.

SMART BUILDING, SMART HOME

Our intelligent control solution for building automation enables efficient control and management of various systems, such as heating, shading, lighting, and more. With smart sensors and actuators, you can optimize energy consumption while enhancing the comfort and efficiency of your building.

TEMPERATURE MONITORING OF GRAIN SILOS

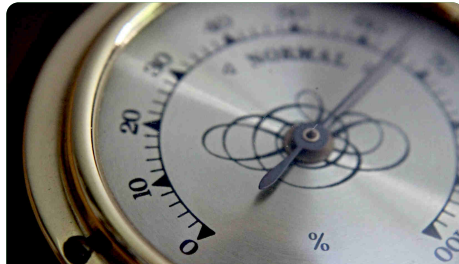
Our solution enables continuous temperature monitoring within grain silos to detect potential hazardous situations and take timely action.

By deploying temperature sensors at strategic locations within the silo, we can continuously monitor the temperature and capture real-time data. sensors at strategic locations in the silo, we can continuously monitor the temperature and collect the data in real time.

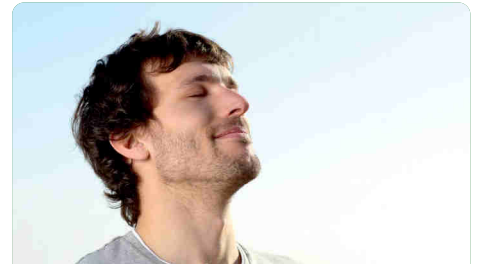
SENSORS



Temperature



Air humidity, rel.



VOC, Air Quality



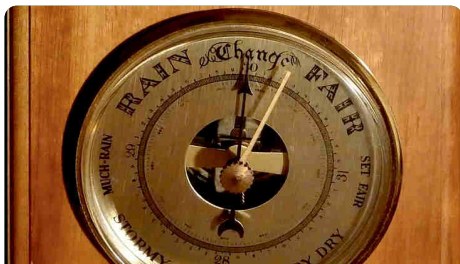
Co2, Carbon dioxide



Smoke, fire



Particulate matter



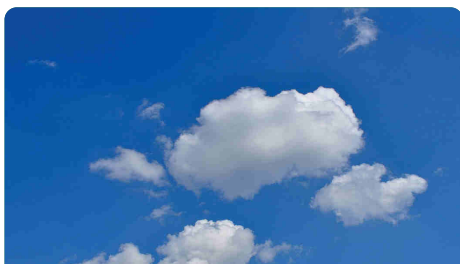
Barometric air pressure, hPa



Differential pressure sensor



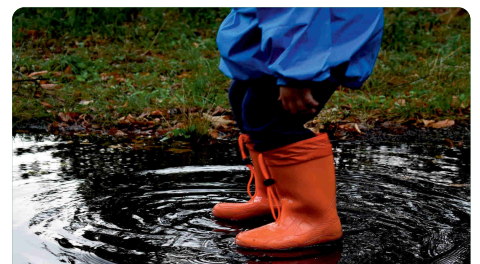
Ozone, O3



Nitrogen dioxide, No2



Your individual sensor



Water, moisture

Do you have a project in mind or do you plan a project?

Contact us

by email at info@esera.de or by telephone under **+49 8341 99980-0**.

REFERENCE CUSTOMERS

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

COOPERATION PARTNERS

We are a proud member of commendIT, the strong entrepreneur-network in Bavaria. This network includes nearly 80 partnercompanies that offer a broad expertise in areas such as IT, IoT, design,service and many others.

commendIT

In addition, we have contractual cooperation partners for a variety of IoT and Industrie 4.0 topics. Three of our cooperation partners are listed below as examples..

**GUARD
STACK**



kiconn

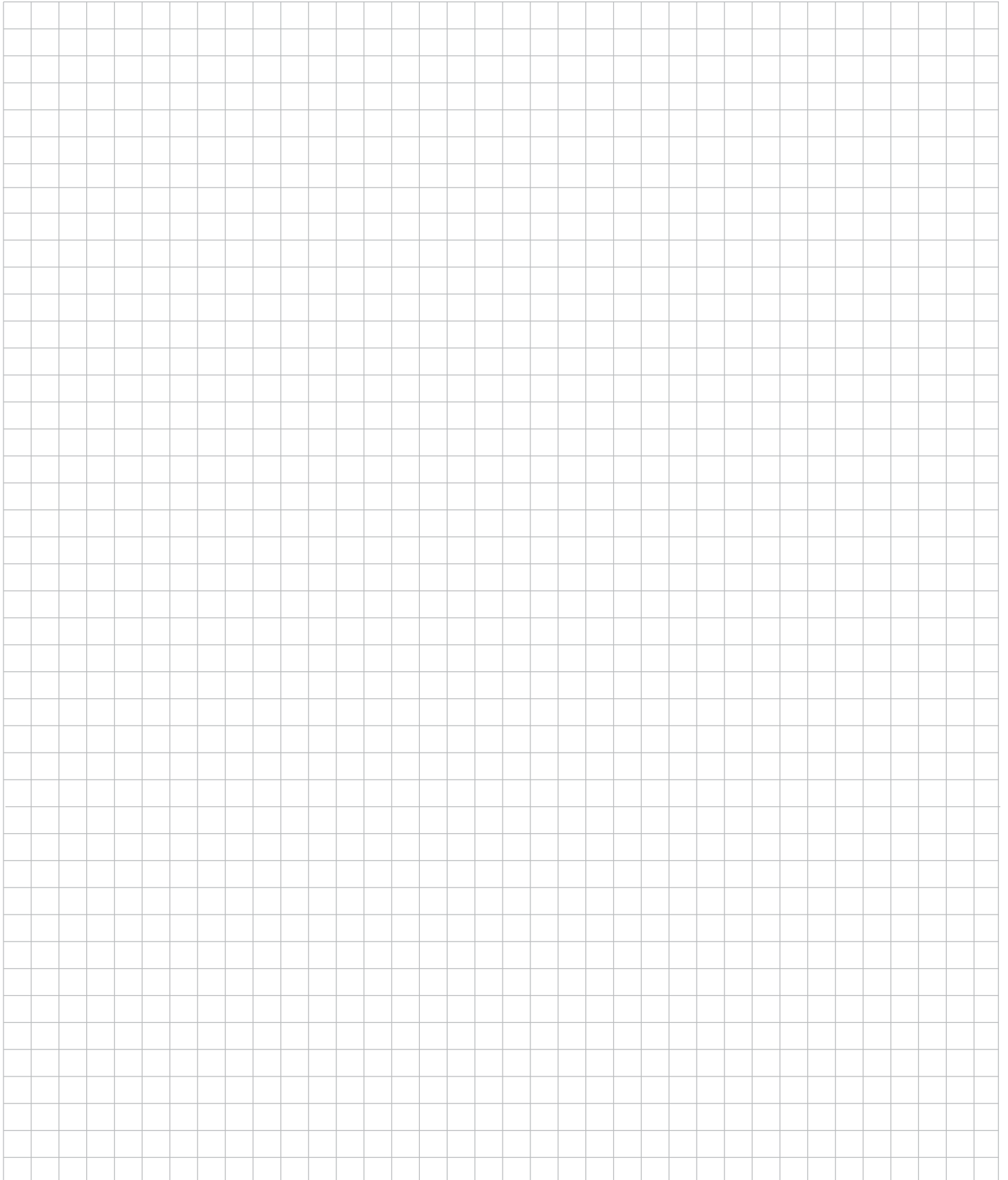
bbf

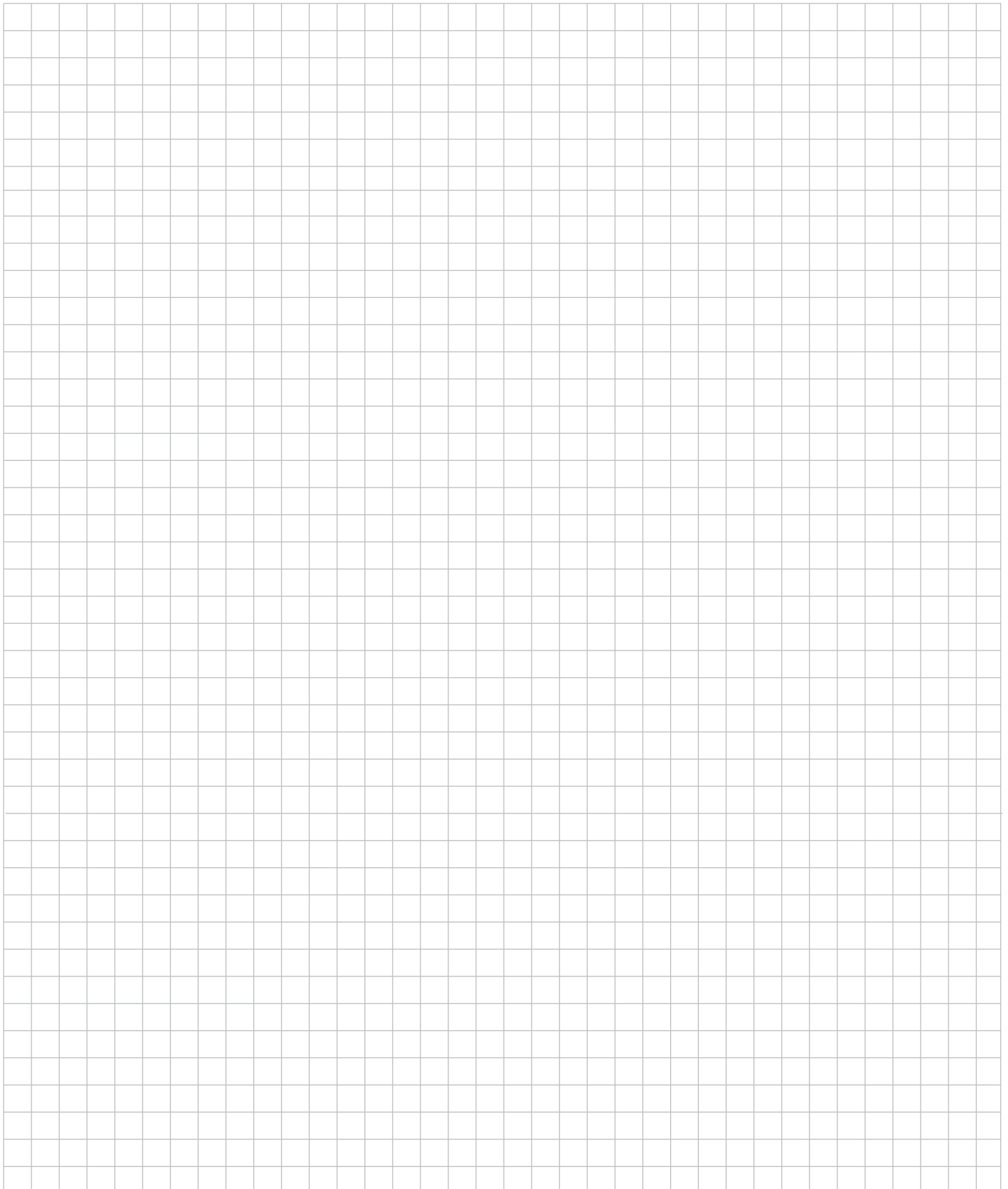
IT+IOT MONITORING

COMMERCIAL KITCHEN SYSTEMS

BIG DATA MANAGEMENT

YOUR NOTIES







**Do you have a project in mind?
Safe implementation with ESERA!**

THEREFORE ESERA

IMPLEMENT YOUR PROJECT SECURELY WITH ESERA!

PLUG and PLAY . USER FRIENDLY . SECURE . DURABLE . ECO FRIENDLY

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