



Zerynth Edge Devices

Industrial IoT transformation for both
legacy and modern machinery



Zerynth Edge Devices are versatile data acquisition units designed for seamless integration into both old and new generation industrial machinery.

They modernize any machinery and industrial equipment, allowing companies to deploy their digital transformation in Industry 4.0. The edge devices are natively equipped with Zerynth Cloud Core software, designed for data acquisition, data processing, and data display over customized dashboards.

Industrial IoT solutions



Industrial process
monitoring and optimization



Power consumption
monitoring



Asset
Monitoring



Industrial machine
retrofitting

Return on Investment (ROI)



Reduced downtime
50% Less downtime thanks to
IoT-based maintenance



Reduced operational costs
10-30% less spent on operational
costs



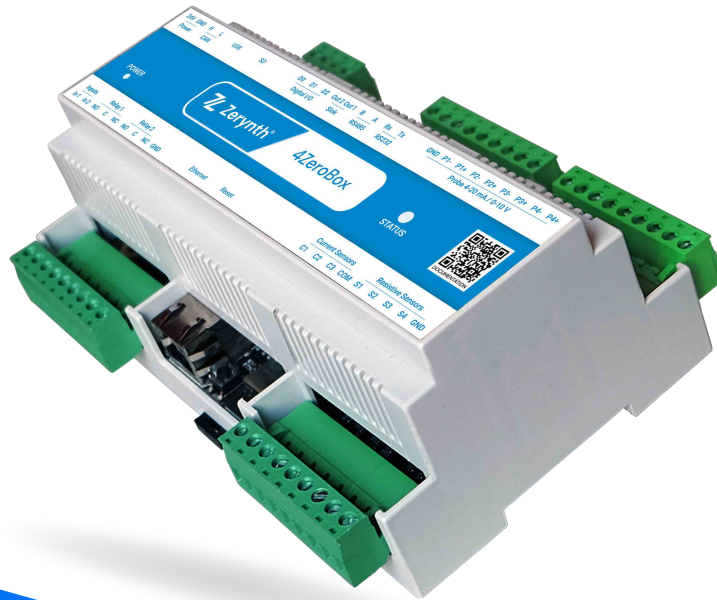
**Eligibility to receive fiscal
incentives**

The values of the KPIs are estimated based on the results obtained by the companies that have relied on our technologies.



4ZeroBox

Industrial IoT device for data acquisition, monitoring, and control of industrial machines.



Technical Features

- Integrated ZM1 IoT module.
- 9 to 36V Power Supply.
- DIN-rail mountable (9 slots).
- Wifi and Ethernet connection, with optional Bluetooth connectivity.
- Channels for analog and digital industrial sensors, communication protocols and relays.
- Supports LiPo battery, MicroSD card and Micro USB (type B).
- RGB status LED.
- Reset button.
- Supports the Zerynth OS (a Python-enabled OS) for IoT applications.
- Easy integration with BI tools, ERP, and MES.
- Ready for Zerynth Cloud Core.

Key Functionalities



GET INSIGHTS

Acquire valuable data from your machinery with onboard sensors.



IMPROVE PRODUCTION

Make informed decisions based on gathered data.



CUT COSTS

Enable predictive maintenance and remove unnecessary expenses.



4ZeroBox Mobile

Industrial IoT device for asset monitoring with Narrow-Band connectivity.



Technical Features

- Integrated ZM1 IoT module.
- 9 to 36V Power Supply.
- DIN-rail mountable (6 slots).
- Wifi and Ethernet connection, with optional Bluetooth connectivity.
- Cellular modem with support for LTE Cat M1 / LTE Cat NB2 / EGPRS with Integrated GPS GNSS.
- SMA Antenna for GSM/GPRS (SX) and GPS (DX).
- Industrial 3-axis accelerometer.
- Channels for analog and digital industrial sensors, communication protocols, and relays.
- Supports LiPo battery, MicroSD card, and Micro USB (Type C).
- zBUS for connection with Zerynth Expansion Boards.
- RGB status LED.
- Reset and user configuration buttons.
- Supports the Zerynth OS (a Python-enabled OS) for IoT applications.
- Easy integration with BI tools, ERP, and MES.
- Ready for Zerynth's SIM card and Zerynth Cloud Core.

Key Functionalities



CELLULAR CONNECTIVITY

Easy communication with industrial machines over 2G and NB-IoT.



ASSET MONITORING

Thanks to Accelerometer and GPS capabilities.



EASY DATA ACQUISITION

Thanks to Sensor channels, protocols and Modular Expansion system.



4ZeroBox Lite

Compact, entry-level Industrial IoT device for data acquisition and machine monitoring.



Technical Features

- Integrated ZM1 IoT module.
- 9 to 36V Power Supply.
- DIN-rail mountable (6 slots).
- Wifi and Ethernet connection, with optional Bluetooth connectivity.
- Channels for analog and digital industrial sensors, communication protocols, and relays.
- Supports LiPo battery, MicroSD card, and Micro USB (Type C).
- zBUS for connection with Zerynth Expansion Boards.
- RGB status LED.
- Reset and user configuration buttons.
- Supports the Zerynth OS (a Python-enabled OS) for IoT applications.
- Easy integration with BI tools, ERP, and MES.
- Ready for Zerynth's SIM card and Zerynth Cloud Core.

Key Functionalities



GET INSIGHTS

Acquire valuable data from your machinery.



IMPROVE PRODUCTION

Make informed decisions based on gathered data.



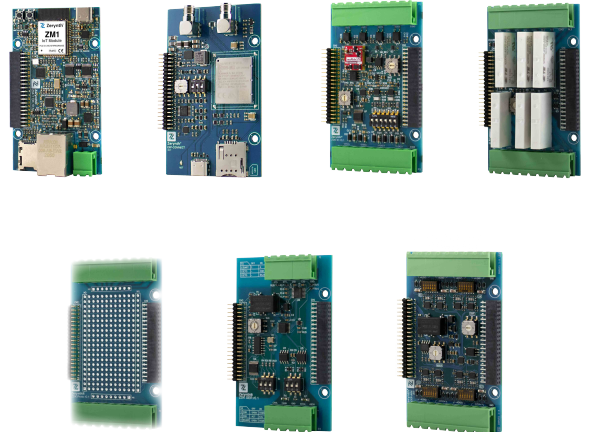
CUT COSTS

Enable predictive maintenance and remove unnecessary expenses.

Zerynth Expansion Boards

Connect Zerynth Expansion boards with the 4ZeroBox mobile and add additional functionality of your IoT application, including:

- Relays.
- Additional analog and digital IO channels.
- Industrial analog sensor channels.
- CAN and 232/485 Serial interfaces.
- Prototyping Board for connecting sensors and modules.



Zerynth Cloud Core

This platform, designed for IoT applications, is natively integrated on every Zerynth Edge Device. It's composed of:

- Efficient device management for monitoring and controlling fleets of devices.
- Fail-safe OTA capabilities that enable firmware updating, and remote feature addition.
- Cross-platform dashboard for end-users.
- Guaranteed security with cutting-edge data encryption and secure hardware design.
- Easy integration into systems by using webhooks and REST open APIs.



**Zerynth Cloud is also available as
SaaS or On-premise.**

Technical Features – comparison table

Feature	Zerynth Edge Devices			Zerynth Expansions				
	4ZeroBox Lite	4ZeroBox	4ZeroBox Mobile	EXP-IO	EXP-AIN	EXP-Relay	EXP-SER	EXP-Connect
Processor	ZM1	ZM1	ZM1	NO, slave device	NO, slave device	NO, slave device	NO, slave device	NO, slave device
Power supply	9-36V DC	9-36V DC	9-36V DC	from zBUS	from zBUS	from zBUS	from zBUS	from zBUS
DIN Spaces	6	9	6	3	3	3	3	3
Analog Sensors Channels	2 generic	4x resistive 4x 0-10V/4-20mA 3x current coil	6 generic	2 generic	8 generic			
Opto Isolated Input	2	2		2				
Relay (220V)		2				6		
Solid State Relay (max 36V)	4	2	2	2				
CAN, RS232, RS485		✓	✓				✓	
RGB Status LED		✓	✓					
USB Type	C	Micro USB	C					
User Button	✓		✓					
WiFi + BLE	✓	✓	✓					
Ethernet ports	1	1						
Cellular Connection			NB-IOT+2G					NB-IOT+2G
zBUS	✓		✓	✓ daisy chain	✓ daisy chain	✓ daisy chain	✓ daisy chain	✓ daisy chain



About us

Zerynth helps companies easily get their industrial processes digitized and bring innovative connected products to the world. The Zerynth IoT Platform is a full set of hardware-software tools designed by IoT experts to enable digital transformation in a fast, flexible, and secure way.

Founded in 2015, Zerynth has grown steadily. Today Zerynth has 35+ team members with deep IoT expertise and industry knowledge with over 100 customers across many industries. Headquartered in Italy, Zerynth provides support globally thanks to an extensive network of partners in Europe and pan-global locations.

Request your demo today!

Scan the QR Code or visit this page
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