











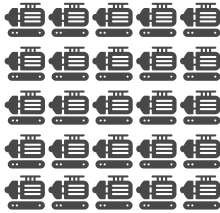


# ezeio<sup>®</sup> - The unique Industrial IoT System

Just **one** powerful hardware & cloud-based system



for almost **any**

industrial device & equipment	application & industry	deployment volumes
    	    	  

## ezeio® - The world's only true multi-disciplinary Industrial IoT system

Monitor, control, automate & consolidate any type of remote industrial devices, equipment & systems. From connecting sensors to automating entire applications. Future-proof throughout.



### Hassle-free

Despite its complexity the ezeio® System is highly user-friendly throughout all aspects of the system and its use in real world applications.

#### Secure-by-design

- built on best-in-class & secure remote connectivity
- applies industrial hardened security from the 1st second of use without burden to the user

#### End-to-end system

- requires no additional hard- or software components for the remote monitoring, control and automation of ind. equipment
- combines I/O units, edge computing architecture, data logging, communication & system features in one SKU

#### Future-proof architecture

- utilizes newest hard- & software architecture
- broad and powerful features
- multi-disciplinary support for equipment and applications integration

#### Highly scalable

- capable of seamlessly handling hundred thousands of sensors and industrial equipment
- the system was designed with scalability, redundancy and ease-of-use in mind
- everything is managed remotely through a centralized hub and automatically synchronized



### Multi-disciplinary

The single ezeio® System gives multi-disciplinary support on the equipment and application level. It handles multi-purpose challenges for remote industrial equipment, application zones and systems. It's the only standard IIoT which can handle non-standardized industrial applications.

#### Equipment integration

- equipment and unit agnostic through normalizing all inputs and outputs
- allows to standardize the integration and handling of all connected devices
- first proven standard IIoT system for non-standardized industrial applications

#### System functionality

- standalone remote devices and industrial equipment can be monitored, controlled and automated
- various types of equipment can be freely consolidated to application zones
- designed to handle multi-purpose applications with the same system

#### Deployment consolidation

- equipment & applications are getting virtually consolidated
- user has the full flexibility to change or modify the setup
- allows a unique, seamless and automated bottom up aggregation of equipment to application
- adding additional devices and equipment do not add more complexity to the applications



### Added value

Count on eze System for maintaining compliance, increasing productivity and quality as well for creating growth and expansion. The ezeio® System helps to make a real difference to your business by taking an innovative and sustainable approach.

#### Security & compliance

Sustaining the status quo by i.e.

- managing the environmental & legal compliance
- controlling access to assets

#### Productivity & quality improvements

Cost Reduction by i.e.

- improving operational efficiency
- managing the Asset Performance (APM)
- Increasing the uptime, cash flow & asset utilization

#### Growth & Expansion

Revenue generation by i.e.

- upgrading existing products
- changing business models of existing products
- Creating new business & service models, such as
  - selling a "Products" as a service (PaaS)
  - selling power vs. renting generator
  - selling indoor climate

## The ezeio<sup>®</sup> mkII System overview

Monitor, control, automate & consolidate any type of remote industrial devices, equipment & systems. From connecting sensors to automating applications. Future-proof throughout.

### ezeio<sup>®</sup> mkII Hardware

Combining all hardware & firmware components needed for making IIoT work. 100% remotely managed, configured & synchronized. The 5-in-1 hardware controller:

- Input/Output Unit
- Data Logger
- Modem (LTE Cat M1) & Gateway
- PLC (edge processing)
- System Functionality



### ezeio<sup>®</sup> mkII Cloud Software & eze.io User Interface

The ezeio<sup>®</sup> Cloud is a highly optimized solution for the automated synchronization of the entire deployed ezeio<sup>®</sup> Hardware units. It's the core architecture which make the system highly secure, fully redundant and greatly scalable from one user with a single ezeio<sup>®</sup> to enterprise level deployments with thousands of field devices and users.

The eze.io User Interface is the single hub for all of the users technical and managerial needs. Any number of ezeio<sup>®</sup> Hardware units can be accessed by as many users as needed.

- Account Management
- Configuration Management
- Scripting Editor
- Live status
- Dashboards
- Alarms & Notifications
- Timers & Schedules
- Mapping & Geofencing



## The ezeio® mkll Cloud Software (eze.io)

ezeio® System is 100% remotely managed  
with total control for the user from a single hub

### 1. The powerful eze.io User Interface

One single "hub" for all technical & managerial user needs.

Through the eze.io User Interface any number of users can access any number of ezeio® Hardware units based on their individual privileges. 100% of the system features and functionalities are managed through the web portal. This is a significant security feature as there is no other way to interact with the system ... not remotely, not locally on the hardware level.

- Account Management
- Configuration Management
- Scripting Editor
- Live status
- Dashboards
- Alarms & Notifications
- Timers & Schedules
- Mapping & Geofencing



### 2. Dashboard & widgets

Customized data visualization for sensors to whole applications and systems.

The dashboards can be freely created based on predefined widgets. There are no limits set in term of the size of the dashboards or the number of used widgets. Widgets can be simple such as dials and graphs but also very powerful applications in itself with control and automation functionality ("Super Widgets"). Here some examples of the available widget types:

- Field value/text widgets
- Dials/gauge widgets
- Graphs widgets
- Tables widgets
- Push/sliding button widgets
- Clock/date widgets
- Map widgets with geofencing details
- Aggregation "Super Widgets" (in table or map form) for the consolidation of deployments
- Scheduling "Super Widget"



Above widget types can be combined into newly created widgets for customization purposes by the eze System development team. This will give full flexibility for creating new custom applications.

### 3. Group & account management

Create any numbers of accounts & groups.

The group & account tree functionality is a very powerful managerial tool for the entire deployed systems. It allows to structure the deployments in an form or way, i.e. by location, by type of equipment, by business unit or it allows you to map your own and your customers commercial ecosystem. There are no upper limits for creating groups and accounts as well as levels within the tree structure.



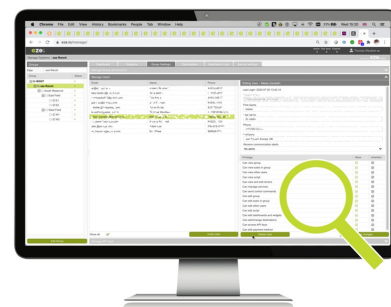
## The ezeio® mkII Cloud Software (eze.io)

ezeio® System is 100% remotely managed  
with total control for the user from a single hub

### 4. User management & privileges

A very unique system for managing the access rights for every single user.

- The user management and privileges system within the eze.io environment is another extraordinary functionality which allows inviting users into any specific group and account with very specific access rights.
- Users can be invited various groups and accounts individually and this within the up- and downstream tree structure.
- The privilege system gives the option to assign very specific access rights and privileges for each invited user which will ensure that users only have the privileges they need for their specific needs and assignments. A single user can have different privileges for different groups and accounts.
- The privileges span in small increments from very limited "view only" to full administrator rights.



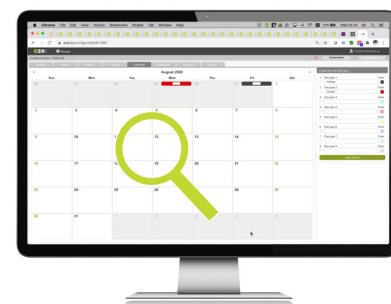
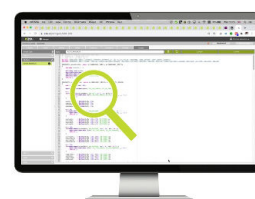
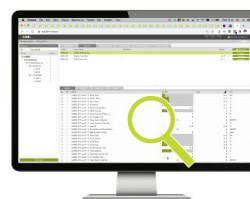
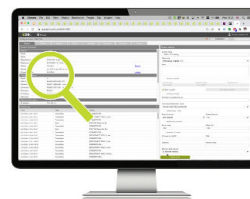
### 5. The unique ezeio® configuration management system

Total control of every single ezeio® deployment.

The configuration management system is the "heart" of the ezeio® mkII System. It gives 100% control of the configurations for every deployed ezeio® mkII Hardware and this from simple settings to complex scripting. The current configuration management components are:

- System status overview
- Fields overview & management
- Alarms & notification configuration
- Timers configuration
- Schedule configuration
- Calendar configuration
- Device/driver overview & management
- User scripting management

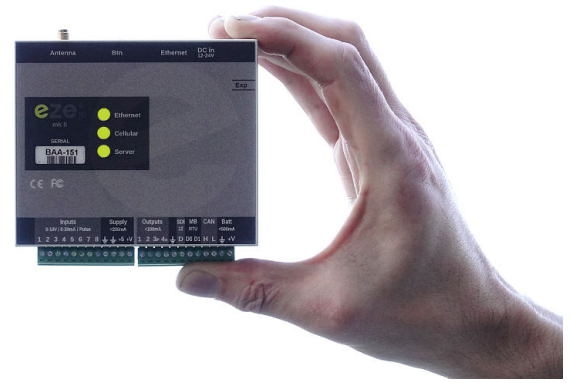
All configuration updates within the system are fully automated and synchronised. Even offline ezeio® mkII hardware units are managed automatically. They will be updated with the latest configuration whenever they are again online. This takes every burden of the user so that she/he can focus on its core work.





## The ezeio<sup>®</sup> mkII hardware specification

Combining all hardware & firmware components needed for making IIoT work. 100% remotely managed, configured & synchronized.



### Hardware models

- LTE-CAT-M1 (5G IoT) + Ethernet
- 2G/3G + Ethernet

### Security

- Secure OTA sync & updates
- Fully encrypted, PKI & 128bit encryption,

### Inputs/outputs

- 8 general purpose inputs (discrete, on pluggable terminal, fully configurable)
  - 0-10VDC (2.5mV resolution, >65kΩ input impedance)
  - 0-30mA (12.5uA resolution, 200Ω internal shunt)
  - 0-1MΩ resistance (<2% accuracy in the range 2k – 700kΩ)
  - Thermistor (100kΩ/10kΩ/2Ω types, internal excitation)
  - Dry switch (on/off, optional internal excitation)
  - Pulse (S0 or KYZ, max. 400Hz, optional internal excitation, monitor pulse rate and/or pulse count/frequency/interval)
  - Electronic configuration of pull-up / shunt
  - Protected with PTC
  - Internal 0.5% reference
- 4 general purpose outputs (discrete, on pluggable terminal, fully configurable)
  - Output 1/2 - digital (on/off), sourcing max. 200mA each
  - Output 3 - PWM output or on/off output (sourcing max. 200mA)
  - Output 4 - analogue, 0-10V, 0.1V resolution (sourcing up to 10mA)

**Supports plug-in sidecar ezeio I/O expansion** (third-party I/O can be added via the communication ports)

### Supports up to 90 individual fields

#### Modbus/RTU Master port (RS485)

- Up to 32 devices
- 1200 to 115200 bps

### Modbus/TCP server & client (TP

- 10/100 Ethernet)
- Configurable port numbers (standard 502)

### CANbus

- Supports J1939
- Optionally used for I/O expansion

### SDI-12 port

- Supports v1.4
- Optional support for serial NMEA 0183 (GPS)

### Other hardware features

- SMA antenna connector (cellular)
- +5V DC regulated output, max. 200mA
- PTC fused DC output, max. 200mA for sensors
- On-board RTC (24h supercap backup)
- 3 dual-color indicator LEDs
- Pushbutton for controlled start-up/reset

### Power supply

- 12-24V DC
- Standard 5.5/2.1mm plug in barrel connector
- Optionally powered through screw terminal
- 0.8W self-draw (average), 3W peak (short sub-second bursts)
- Hibernation mode, <0.06W (average)

### Dimension & weight

- W: 108mm (4.3in), H: 90mm (3.6in) (excl. connectors), D: 33mm (1.3in)
- Allow 50mm (2in) top & bottom for connectors & wiring
- 35mm DIN rail or screw mounted
- Weight: 0.150kg (5.3oz)

### On-board log buffer memory (non-volatile)

- Full system log data (>50 days @ 10 minutes logging & 90 fields)
- Large dynamic log data buffer, i.e.
  - 10 fields, >30 days @ 10 seconds
  - 50 fields, >30 days @ 1 minute
- >6,000 events/alarms/transactions
- All logs auto-uploaded to eze.io backend

### Capabilities

- Up to 90 monitored fields
- Up to 300 alarms for local events, SMS, email, voice calls etc.
- Geo-fence features with GPS support
- Up to 2000 card/PIN codes

### Schedules & Calendar

- 10-year calendar
- 30 daily schedules

### Additional features

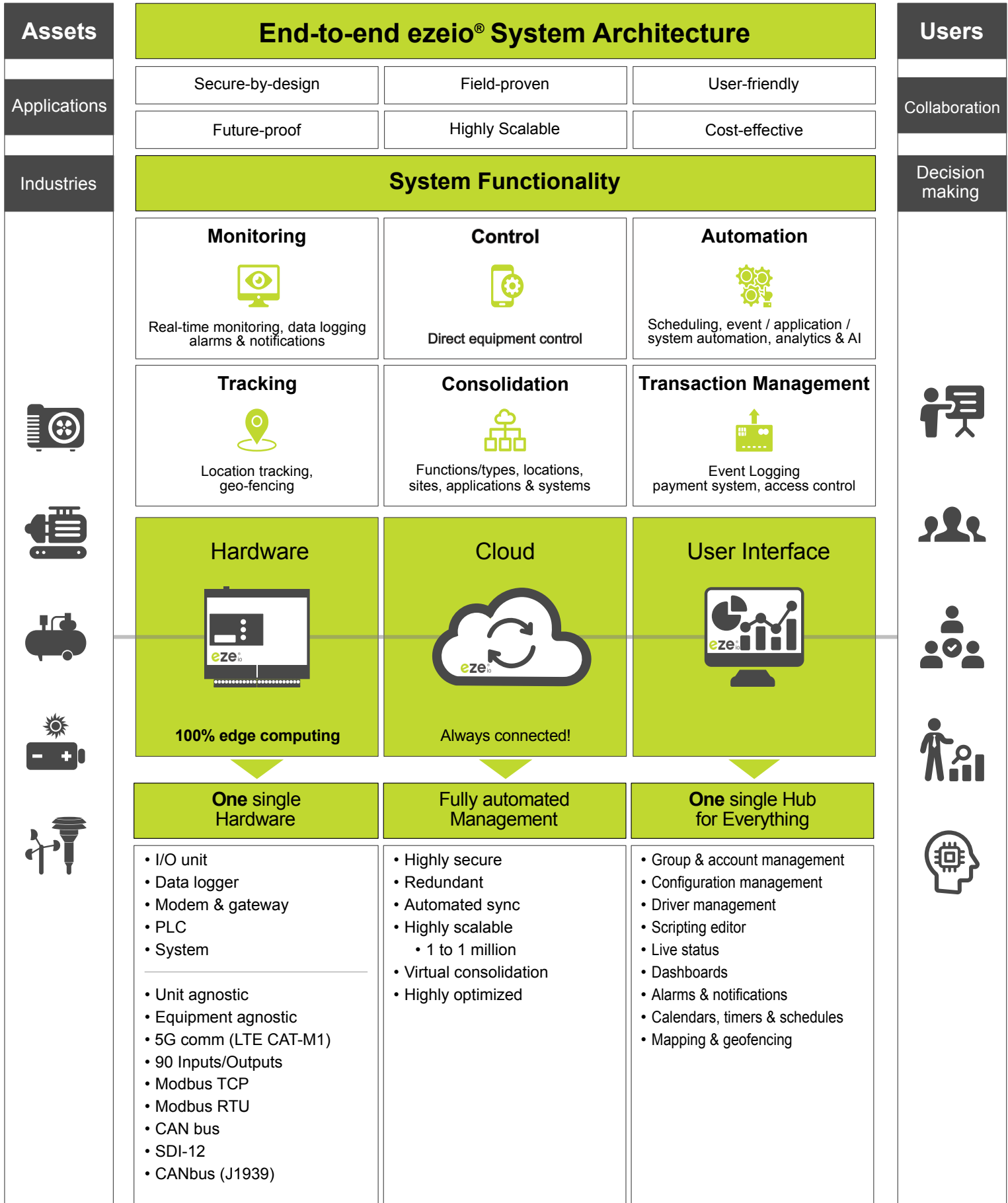
- Full remote configuration & management
- Live data access
- Automatic data synchronization with eze.io cloud
- Expression engine for field math & alarms
- Remote firmware upgrade
- Standard & custom driver support for industrial devices
- Powerful scripting support

### Others

- Operating Temperature
  - -20 to 65°C
- Operating Humidity
  - 5 to 95% (non-condensing)
- IP40 (use indoors/in electrical enclosure)

### Certifications

- FCC Part 15 B 15.017 & 15.109
- AS/NZS CISPR 32 (2015)
- EN 55032 (2012) +AC1
- EN 61000-3-2 (2014)
- EN 61000-3-3 (2013)
- EN 55024 (2019) +A1
- VCCI-CISPR 32:2016 Class B
- Verizon OD
- CE
- RoHS 3



## eze System - IIoT pioneers since 2009

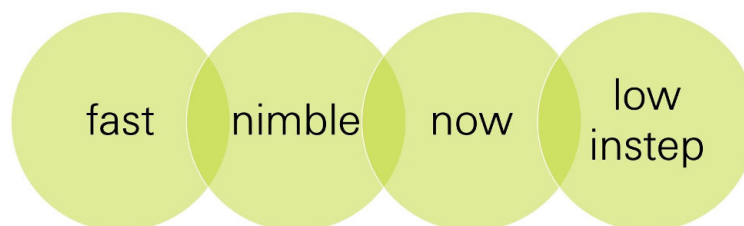
Converting customer industrial domain expertise into automation



eze System is a privately held US Corporation with its head office in Sacramento, CA. All hardware, software service and system designs has been fully developed in-house. The combined hardware/SaaS model is designed for ease of use, scalability and fast deployments in a global marketplace. More than 5,000 systems have been deployed to date in various parts of the world.

Solving complex controls & automation challenges pain-free & future-proof is eze System's absolute passion. Their proven end-to-end ezeio® System allows to remotely connect any type of industrial equipment, process or system. No other IIoT Solution has the wealth of features and functionality which include core components such as Location Tracking, Monitoring, Control, Automation, Consolidation, Transaction Management and Analytics/AI Integration.

Creating customer value by improving productivity and quality as well as enabling business growth and expansion is their commercial focus. The innovative ezeio® approach is streamlining & accelerating their customer's knowhow and this without the need for expensive consultancy & complex engineering. Converting domain expertise into automated applications is now possible in a scalable, practical and cost-effective way.



Anything the eze System does is checked against below principles:

- Fast - Ensuring a fast execution with their solution implementation
- Nimble - Having a nimble approach when helping their customers
- Now - Now is the time for making an immediate impact when working with their customers
- Low instep - Allowing their customers to have a financially and timely low instep into their technology

**Intech**<sup>®</sup>  
Instruments