Applications . . .

Key Features . . .

- Wireless Transmission • Battery-Powered • Low Power Consumption
- Easy to install • High sensitivity • Reliable Detection, Real-Time Transmission

About EcoXplore . . .

As a leading IoT technology and solution provider, we offer complete end-to-end IoT solutions to industrial customers and their network.

We have developed three categories of solutions including smart city, smart lighting and smart community for serving the vertical market.

We provide integrated data management solutions by combining our unique ZETA network, ZETA Server and Artificial Intelligence technologies into a single platform which effectively provide data analytics for customers to optimise energy efficiency, cost effectiveness, ROI, management process and facility safety.

EcoXplore® Integrative ECO Solutions

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Registered ISO 14001:2015 · ISO 9001:2015 Cert No. Q5025 · SAC Accredited Certification Body Cert No: QS-2015-26 · ISO 45001:2018 Cert No. HS017 · SAC Accredited Certification Body OSH-2015-10 · bizSAFE STAR · CULTURESAFE · BCA REGISTERED · SINGAPORE GREEN BUILDING COUNCIL MEMBER

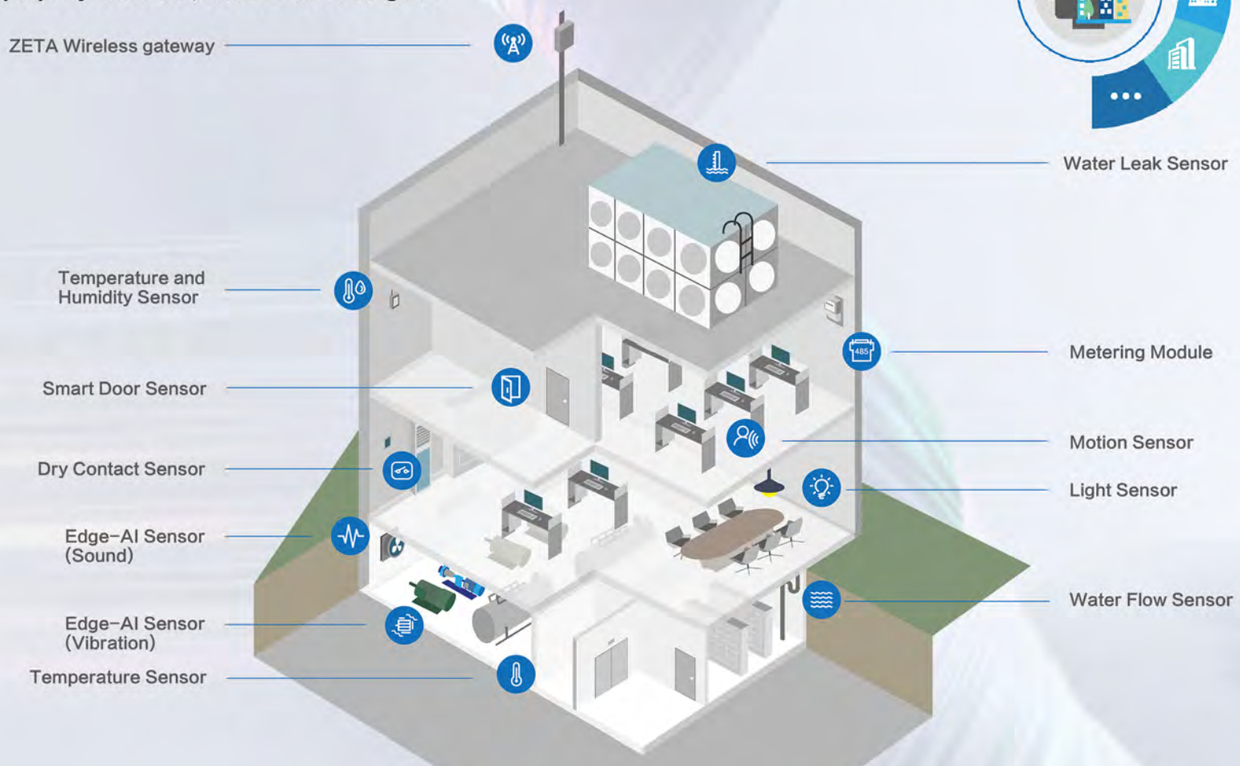
MAKE BUILDINGS

THINK LIKE HUMANS . . .

EcoXplore® Integrative ECO Solutions

Create an Interconnected World of Wisdom . . .

Based on our years of experience on sensor, networking and artificial intelligence (AI), we provide the world's first end-to-end smart building management system "LAPUTA" to enable low-cost and rapid-scaling distributed sensing network and operational analytics using AI for property residents, owners and managers.



Smart Parking . . .

Using geomagnetic sensor to detect if parking place is occupied by a car.

Remote Power Controller . . .

Remote power controller is based on ZETA and remote switch technology.

ZETA Sensors . . .

A range of sensing solutions to cover all aspects of building maintenance data. These sensors can be applied to a variety of user scenarios, depending on their application.

Wireless Magnetic Contact Sensor . . .

Based on ZETA technology, it uses hall sensor to sense status of the gate.

Manhole Cover Sensor . . .

Consists of a gyroscope sensor and a ZETA wireless module.

Selected ZETA Sensors and Controllers (20+ Types)

AP . . .

The AP is a bridge relaying data between end-devices and ZETA Server in the backend. AP connects to end-devices via ZETA protocol while connects to ZETA Server via standard IP connections. All connections support bi-directional transmission, and support unicast, multicast and broadcast to target devices.

Mote . . .

Low power mesh mote supports maximum 4 hops that remarkably expands coverage of AP, which also can be used to cover blind area and relieve congestion of data.

Sewage Water Level Sensor . . .

Sewage water level sensor consists of a ZETA transmission module and a industrial grade submersible pressure sensor.

Smart Irrigator . . .

Built-in ZETA wireless module, control four valves at the same time. Accurate irrigation, high water use efficiency. Provide a more accurate growth environment for plant.

Smart Water Meter . . .

Using the unique thick film technology to meter water consumption accurately.

Wireless Temperature, Humidity & PM 2.5 Sensor . . .

Battery powered sensor to monitor temperature and relative humidity periodically.

Work Space Occupancy Sensor . . .

Using ZETA based wireless PIR sensor to detect if work space is occupied.

Soil Moisture Sensor . . .

Battery powered sensor to monitor moisture in soil. Can be intergrated with a water supply controller (ZD-A-WSC02).

Supersonic Parking Sensor . . .

Using ZETA based wireless supersonic sensor to detect if a parking place is occupied by vehicles

Smart IoT Lighting . . .

We built a smart lighting network that is able to perform intelligent control of the dimming as well as switching on/off of lights wirelessly as well as to use lighting infrastructure as LPWAN wireless portal for surrounding environment. Lighting subsequently became a smart IoT gateway which computes all information collected from sensors and uses highly efficient distributed machine learning algorithms to perform self-training on the IoT data for deep-learning analytics, making predications and improving sustainability in the smart city, smart building and smart industry applications.

ZETA LPWAN . . .

Ultra-low power

Connections in large volumes

Very low cost

Wide-area coverage

ZETA, originated from the many years of R&D effort by ZiFiSense, is being promoted by the ZETA Alliance as a global LPWAN standard that works in the ISM (sub-G and 2.4 GHz) bands. The standard deploy multiple Ultra-Narrow bands (UNB) channels for wide area coverage and deep signal penetration. It also goes one-step further to incorporate distributed access to sensors through a low power multi-hop topology and support of Edge-AI through a special algorithm-upgrade framework over-the-air.

IoT Platform . . .

CMP

DMP

AEP

Our IoT platform, ZETA Server, combines CMP (Connection Management Platform), DMP (Device Management Platform) and AEP (Application Enabling Platform) into a generic PAAS (Platform As A Service) that covers most LPWAN applications.

EDGE-AI . . .

Deep/Machine Learning

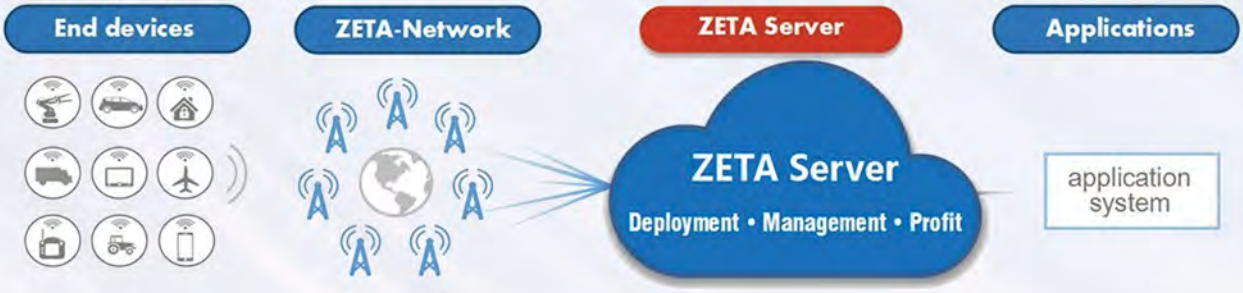
Embedded Inference

Prior Knowledge based Learning

With Edge AI, sensor devices in the ZETA network are equipped with “Intelligence” – they are capable of processing of captured signals or volume data at the very edge using embedded algorithms or neural networks that can be continuously updated by the Cloud on-demand through a narrowband connection, so as to ensure data security while benefiting from the low power and deep coverage merits of LPWAN.

OSS Platform . . .

ZETA server offers professional network management and maintenance functionalities. It can support ZETA/LoRa/NB-IoT connectivity simultaneously and is able to help customers with fast network deployment, improving operation efficiency, supporting powerful suite of APIs and accelerating time to market.



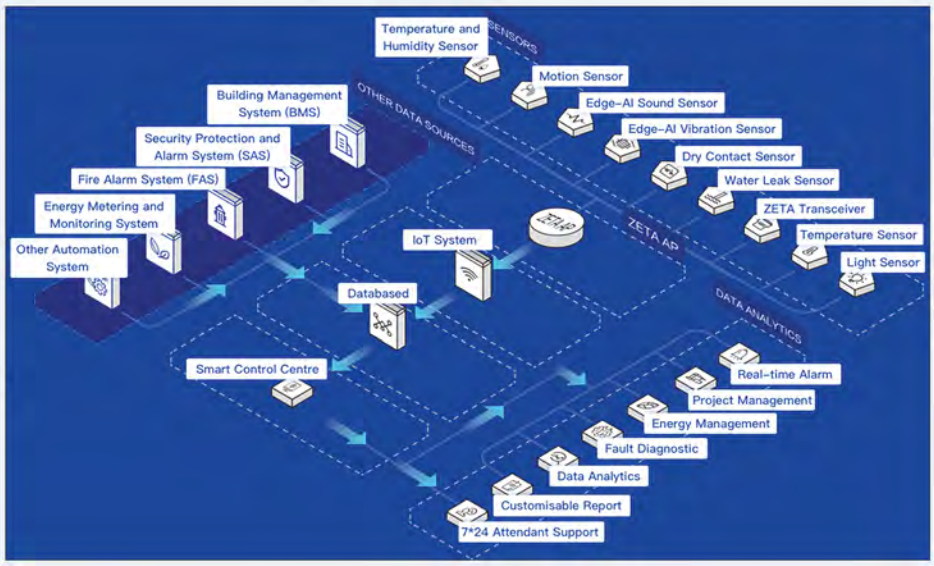
Use Cases . . .

Environment Monitoring
water leak, temperature & Humidly, light, door open/close, intrusion detection.

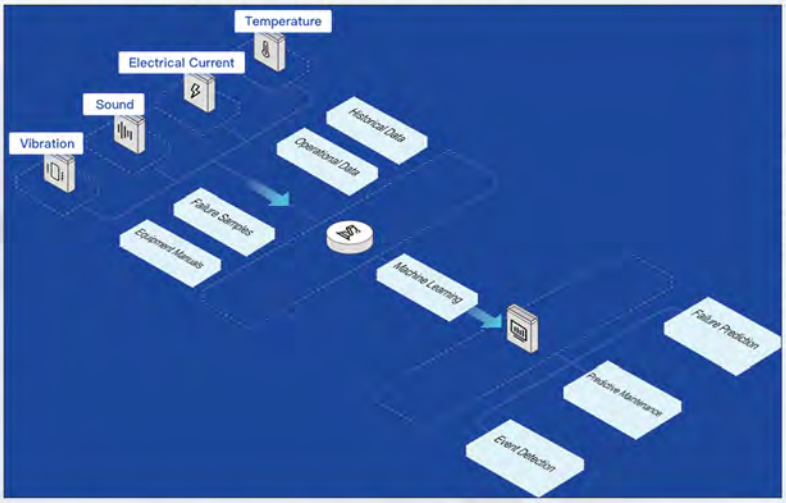
Facility fault detection
water pump, boiler, Elevator, Fan, motor

Water-level monitoring
water tank, water collection pit, sewage pit

Remote meter reading
Electricity and water-supply meters



AIoT for Machine Maintenance . . .



Condition monitoring and fault/life-time prediction for machines and equipment with mechanical parts based on the time-series data of their vibration signals. Our ZETA AIoT solution deploy compressive sensing and embedded machine learning to make sense of the collected data at the edge, so as to allow fast deployment of a durable system that can be added onto existing industrial operations at a very low cost.

ZETAG - Wide Area Sensing Label . . .

Key Features of ZETag

Ultra-low cost and compact LPWAN 2.0 ZETA module Ultra-low power consumption Powered by button cell or low-cost disposable printed battery Easy to install Support for wide-area localisation Optional: flexible printed circuit board and battery.

Applications . . .

Industry :
Asset Management

Logistics :
Item localisation

Healthcare :
Wearable Medical devices

Pharmaceuticals :
Special medicine monitoring