

SMART POND

DETERMINES THE LEVEL OF O₂, PH AND TEMPERATURE IN THE POND

SMART POND

Data Sheet



Teknovate Smart Pond supports both GSM and Low Power long-range wireless radio frequency technology (LoRaWAN). This highly secured data transmission technology required for the Internet of Things (IoT) applications enables real-time communication of data and analytics that can be utilized to enhance efficiency and productivity.

The device is designed with rugged and high accuracy dissolved oxygen, temperature and PH sensors. These sensors measures/monitors Dissolved Oxygen, temperature and pH values in the water.

The device communicates with the GSM network or LoRa Gateway using the standard LoRaWAN protocol and the measured/monitored data is transmitted to the network server. The web application processes this data and takes appropriate action like sending SMS, E-Mail, and alerts to the registered users.

Device Features

- Industrial make up waters
- Real time monitoring of water parameters
 - ✓ Dissolved Oxygen (0-20 mg/L or PPM)
 - ✓ pH (0-14)
 - ✓ Temperature (0°C-50° C)
- Helps in analyzing the pond dynamics and take preventive actions
- Rugged Sensors with High accuracy
- Solar powered device
- Historical analysis & Data management
- SMS & Email Alert is configured to the registered mobile number.
- Map of sensors
- Responsive user interface
- User control profiles
- Live data monitor on web

Applications

- Pond Monitoring
- River Monitoring
- Aquaculture
- Environmental Testing and research lab
- Industrial make up waters
- Corrosion control
- Waste water treatment plant

Technical Specifications

Wireless Frequency Band	EU 863~870 MHz / US 902~928 MHz / India 865~867 MHz / AS 923 MHz
Modulation	Based on IEEE 802.15.4g
LoRa Solution	Semtech SX-1276
Receive Sensitivity:	Typ. -136dBm @BW=125KHz with SF=10
Transmit Power	20dBm
Number of Channels	Configurable 64 channels (SKU-US) Configurable 8 channels (SKU-EU) Configurable 3 channels (SKU-IND)
Security	AES128
Network	GSM / GPRS
Operating Voltage	2.2 V DC ~ 3.7 V DC
Operation	Solar Powered / AC Powered
Antenna Type	Internal / External
Sensors	<ul style="list-style-type: none"> • Dissolved Oxygen • Temperature • pH
Operation Temperature	-20° C to 70° C
Protection Requirements	IP65

Conclusion:

Fish farming is one of the significant business in India. One should pay high attention to the growth of fishes in the pond because inappropriate maintenance of ponds would result in heavy capital losses. Our smart pond monitoring device ensures optimized profits and less manual efforts. As, it continuously monitors various hydrobiological parameters like DO, pH, BOD, Temperature, and Feed etc... it supports the growth of fishes by balancing the parameters. Thus, the installation of our smart sensor system will surely enable you the right way of fish farming and assist you to achieve high profitability.

About Teknovate

Today's dynamic world demands businesses to respond quickly through realizing automation in the end-to-end procedure. IoT technology is transforming the way we connect to the devices automatically. Service providers must adopt scalable, flexible and agile models to tap the client's requirements and expectations. Teknovate Technologies Pvt Ltd has responded to this market trend and developing robust and innovative smart city products for its customers.

Driven by over decade of industry experience, highly skilled technicians and wide geographical presence, we are continuously expanding our business worldwide and giving stiff competition to other IoT product manufacturers. We supply our products for various business verticals.

For more information about the KernelSphere solution email us at iot@teknovateinc.com