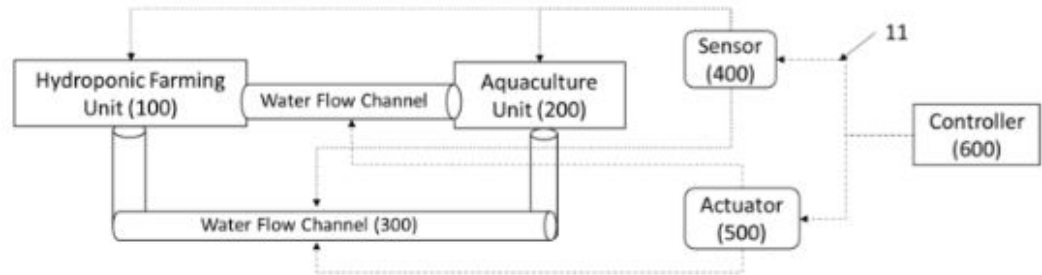


PENDING

(IN202311038716)

## Secure domestic IoT aquaponic system



## NEED

Traditional farming methods are resource-intensive and rely on chemical fertilizers. A more sustainable solution is needed to optimize water usage, reduce chemicals, and enable year-round production of organic crops and fish.

## MARKET ANALYSIS

The global smart farming market is projected to grow at a CAGR of 12.4%, reaching \$40 billion by 2033. The demand for sustainable, resource-efficient farming systems drives growth in this sector.

## TECHNOLOGY OVERVIEW

This automated IoT-based aquaponics system integrates vertical hydroponic farming with aquaculture. It uses sensors and actuators to monitor water and air quality, ensuring optimal water circulation between plants and fish tanks for sustainable organic farming.

## Target Industries

Sustainable Agriculture, Biotechnology, IoT and Automation. , Organic farming solution providers, aquaculture businesses, agricultural equipment manufacturers, and IoT platform integrators for smart farming.

## TECHNOLOGY KEY FEATURES

An automated IoT-based aquaponics system with vertical farming, water flow control, and integrated fish tanks. Features include sensors for water quality, actuators for efficient water circulation, and a controller for optimal management.

## AT A GLANCE

- SDG 2 (Zero Hunger), SDG 6 (Clean Water and Sanitation), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action)

[Read more here](#)

Technology is available for licensing/ co-development.

Reach out to Prof. Deepak Chitkara, Coordinator, BITS Technology Enabling Centre,

BITS Pilani Contact Details: [tec.bits@pilani.bits-pilani.ac.in](mailto:tec.bits@pilani.bits-pilani.ac.in), 91 1596-255913