Fabless Chip, Sensor and System Provider
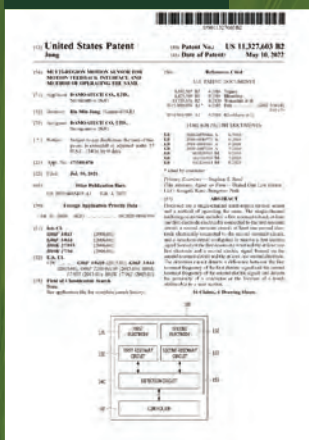
DamoaTech Co.,Ltd
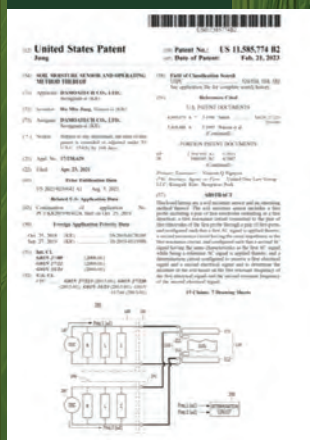
DamoaTech

DamoaTech

Fabless Chip, Sensor and System Provider

Damoatech's products are eco-friendly and make
our world smarter, safer, healthier, and sustainable.

US 11,327,603 B2

US 11,585,774 B2

Soil Sensor

Impedance ROIC

Wireless communication

Differential
measurement method

Patent No. 10-2224169

Patent No. 10-2290987

Patent No. 10-2370216

Ensures high reliability through proprietary patented technology
(US patent registered)

DamoaTech: Your Innovation Partner

We lead in semiconductor chips and sensors, driving smart agriculture and smart cities with our proprietary impedance signal processing ROIC. Our products bridge the natural world and humanity, promoting eco-friendly solutions for a smarter, safer, and healthier world.
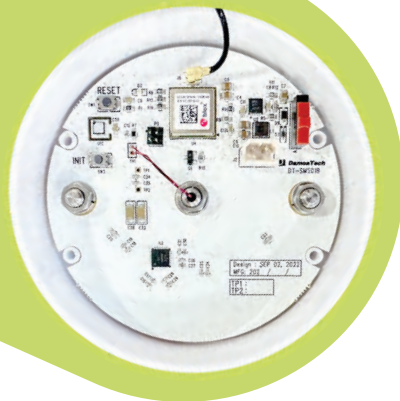
Website

DT-IMAO9 : Impedance ROIC

DamoaTech's DT-IMA series are ROIC for inductive and capacitive sensors. Capacitive sensors use a non-contact technology that measures impedance, a measure that impedes the flow of current when an AC signal is applied. In reality, it analyzes the external environment by interpreting the changes in frequency, amplitude, and phase that occur when passing through a specific circuit network.

Applications

Location Sensor / Nearness Sensor / Rotational Sensor / Gear Counting Sensor / Gear Movement Sensor / Compression, Elongation, and Warping Sensor, LBD (Live Body Detection) / Electrostatic Capacity Sensor / Inductive Sensor

01 DamoaTech's Products

· Simplify the board with a one-chip solution
· Minimize power consumption
· Wireless communication
· Use battery as power source
· No need for separate communication or storage equipment
· Low voltage enables battery use
· Extend usage time with increased battery capacity
· Supply history in Korea and worldwide
· Easy installation and operation
· Easy battery replacement and charging
· Real-time technical support
· Made in KOREA

Minimize power consumption

Wireless communication

Real-time technical support

Patented technology

Product

: Smart Agriculture

Soil Sensor : DT-SMS01B/L

KC FCC CE K-Innovative Product

Soil Sensor Features : KC, FCC, CE certifications
Utilizes patented technology from Korea and abroad
Check sensing data anytime, anywhere with smart devices

Reliability

- Using differential measurement method to Minimize error
- Measure differences between sensing and reference to filter environmental changes.

Wireless

- See real-time data
- No data logger or transmission equipment required

Battery Usage

- Ease to install & move
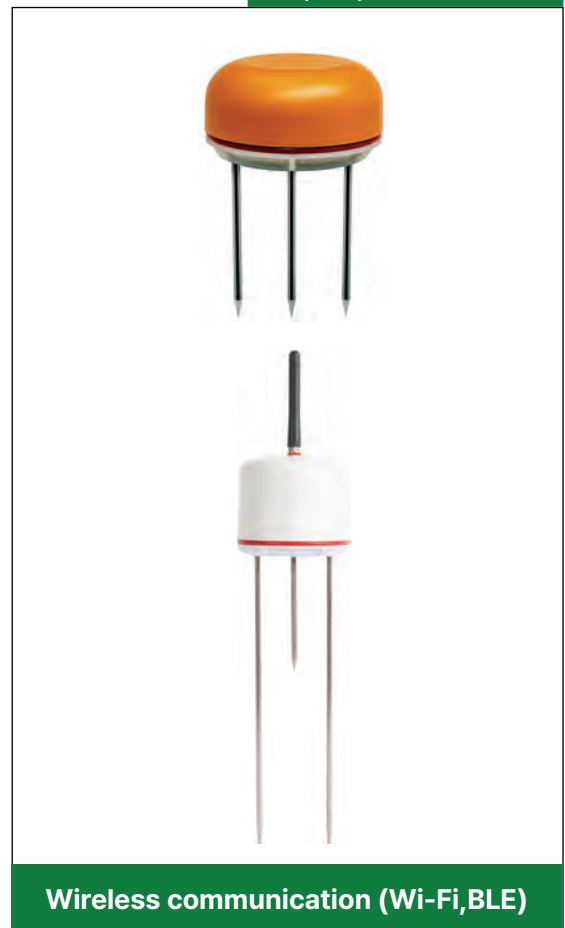- Easy battery replacement
- Plug & Play

Durability

- Stainless steel probe
- Nylon 66+ glass fiber composite
- IP67 grade waterproof

KC,FCC,CE CERTIFICATE

Wireless communication (Wi-Fi,BLE)

Input Voltage	BAT(3.6V) / DC 5V(USB)
Power Consumption	0.5W
Communication	Wi-Fi 802.11b/g/n,BLE5.0
Frequency	2.4Ghz
Wi-Fi Encryption	WEP/WPA/WPA2
Measurement Parameter	Soil Moisture : 0% ~ 60%(VWC)
	Soil Temperature : -20°C ~ 50°C
Quality Warranty	1year
Operating Temperature Range	-20°C~50°C
Material	ASA + SUS 304

Product
: Smart Agriculture

Atmospheric Sensor DT-ATS03

▶ Temperature, humidity, CO₂ concentration, atmospheric pressure, light intensity

Specification

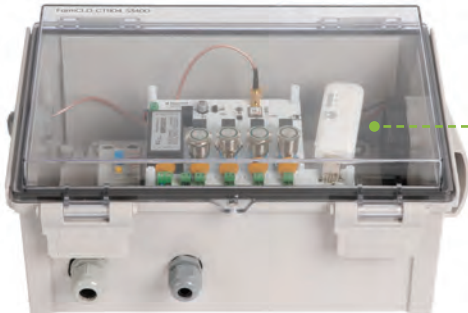|	
Input Voltage	BAT(3.6V) / DC 5V(USB)
Power Consumption	0.5W
Communication	Wi-Fi 802.11b/g/n, BLE5.0
Frequency	2.4Ghz
Wi-Fi Encryption	WEB/WPA/WPA2
Measurement Parameter	CO_2 : 400ppm ~ 4000ppm
	Air temperature : -20°C ~ 60°C
	Atmospheric humidity : 0%RH ~ 100% RH
	Atmospheric pressure : 900hPa ~ 1100hPa
	Light intensity : 300mW/m2 ~ 1600mW/m2
Quality Warranty	1 year
Operating Temperature Range	Temperature : -20°C ~ 70°C
Material	ASA + SUS304

Data Hub : DT-HUB01

Specification

Input Voltage	DC 12V(Solar Cell), AC 110 ~ 220V
Power Consumption	1W
Communication	Wi-Fi 802.11b/g/n,BLE5.0
Frequency	2.4Ghz
Wi-Fi Encryption	WEB/WPA/WPA2
Quality Warranty	1year
Operating Temperature Range	-40°C ~ 70°C
Material	ABS, PC

Product
: Smart Agriculture

Controller : DT-CON04
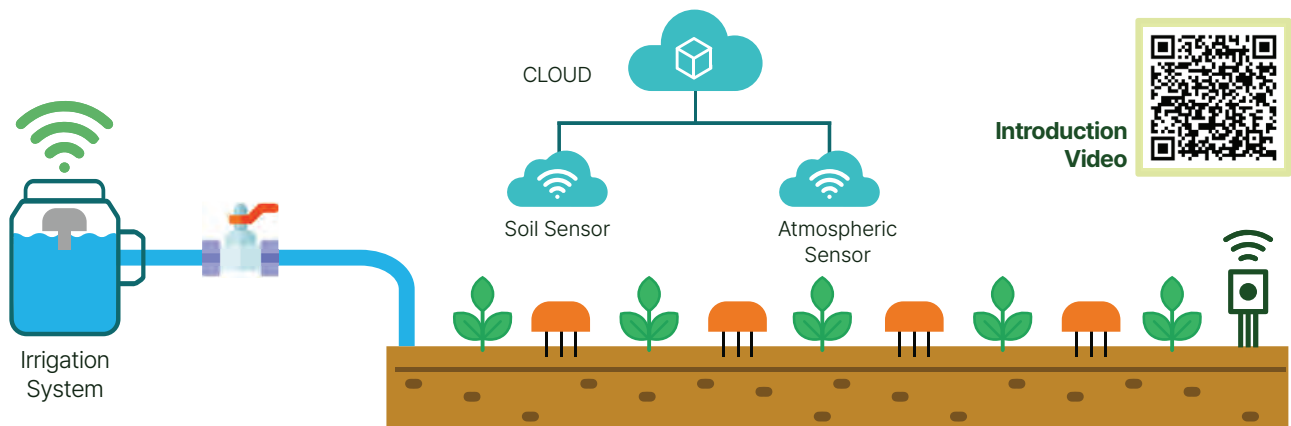

* Internal circuit of controller

Specification

Input Voltage	AC 24V
Power Consumption	24W
Communication	Wi-Fi 802.11b/g/n, LTE
Frequency	2.4Ghz
Wi-Fi Encryption	WEB/WPA/WPA2
Number of Control Channels	4 Channel
Quality Warranty	1year
Operating Temperature Range	-40°C ~ 70°C
Material	ABS, PC

Precision Irrigation Control System

Experience DamoaTech's precision irrigation for efficient water management and eco-friendly farming. Optimize growing conditions, enhance crop yield, and cut cost.

CLOUD

Introduction Video

Soil Sensor   Atmospheric Sensor

Irrigation System

Monitoring and Control System :

Analysis of soil moisture, soil temperature, and weather conditions data

Q. What challenges is the customer facing

▶ Wastage of water for irrigation

▶ Challenging to Determine the Frequency and Timing for Watering

Impacts of Implementing Intelligent Soil Sensors System
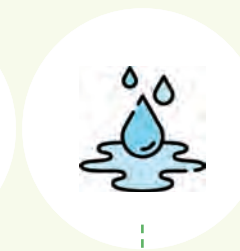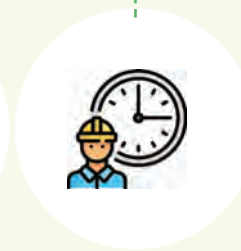
Higher Crop Yield, Better Quality

Labor & Time Saved on Installation

20% Less Water Usage

Carbon Reduction

Solving Water Over-Supply

Q. Who Experiences These Issues?

Farmers

Gardeners

Parks

Estrus/Parturition Prediction Sensor : DT-FMS02

· Precise differentiation between the fertile and weaning periods
· Enhanced accuracy achieved by measuring body moisture, activity level, body temperature and discharge status
· Accurate notification of delivery status

*Actual Use Case

Estimated date of delivery

The cattle calving prediction has a ±14-day margin of error

Reduction in Labor for Calving Monitoring

Prevention of Calving Accidents

Specification

Input Voltage	DC 3.6V(Battery)
Power Consumption	50mW ~ 500mW
Communication	WIFI 802.11b/g/n BLE 5.0
Frequency	2.4Ghz
Wi-Fi Encryption	WEP/WPA/WPA2
Measurement Parameter	Body temperature : -20°C ~ 50°C
	Activity level
	Air pressure
	Light intensity
	Body hydration level : 0 ~ 100 %
Quality Warranty	1 year
Operating Temperature Range	-40°C ~ 70°C
Material	Bio-compatible polymer, SUS304

· Breeding cattle

Intravaginal sensor

Birth Prediction: Monitoring for Several Days
Accurate birth prediction reduces labor and prevents birth incidents

Experience Innovation in Agriculture with DamoaTech

Damoatech Empowers Smart Agriculture with a Variety of Sensor Products, Enabling Intelligent Sensing, Monitoring, Control, and Advanced Analysis and Planning.

Google play

Make it easy to check and manage the sensing data from DamoaTech's various sensors through the FarmCLO App. Anywhere, anytime, you can optimize your farm with accessible real-time information

DamoaTech

Farm smarter with Damoatech's smart sensors.
Damoatech provides smart sensors and smart solutions.
Use our systems for more precise farming.
Reduce labor and water consumption.

Why DamoaTech?

Company	Nation	System	Control	Component	Wireless	Distributed Data Processing	PC Processing	Note
O*Farm	USA	Embedded	X	X	O	O	X (Cloud)	3G-based monitoring
F****tsu, A**SI	Japan	Embedded	O	O	O	O	X (Cloud)	distributed network
P**VA	Netherlands	PLC	O	X	X	X	O (Cloud)	
Smart F**m	NewZealand	Embedded	O	X	O	O	X (Cloud)	
DamoaTech	Korea	Embedded	O	O	O	O	X (Cloud)	Wi-Fi/BLE/LTE based monitoring and control

Smart City

School	Garden	Orchard	Golf course, Playground	Park	Rooftop garden

Smart lawn management system

Advanced Grass Management with Smart Sensors and Wireless Networks

▶ **Smart lawn management system**

·Real-time diagnosis of grass condition
·Fast mobile notification transmission

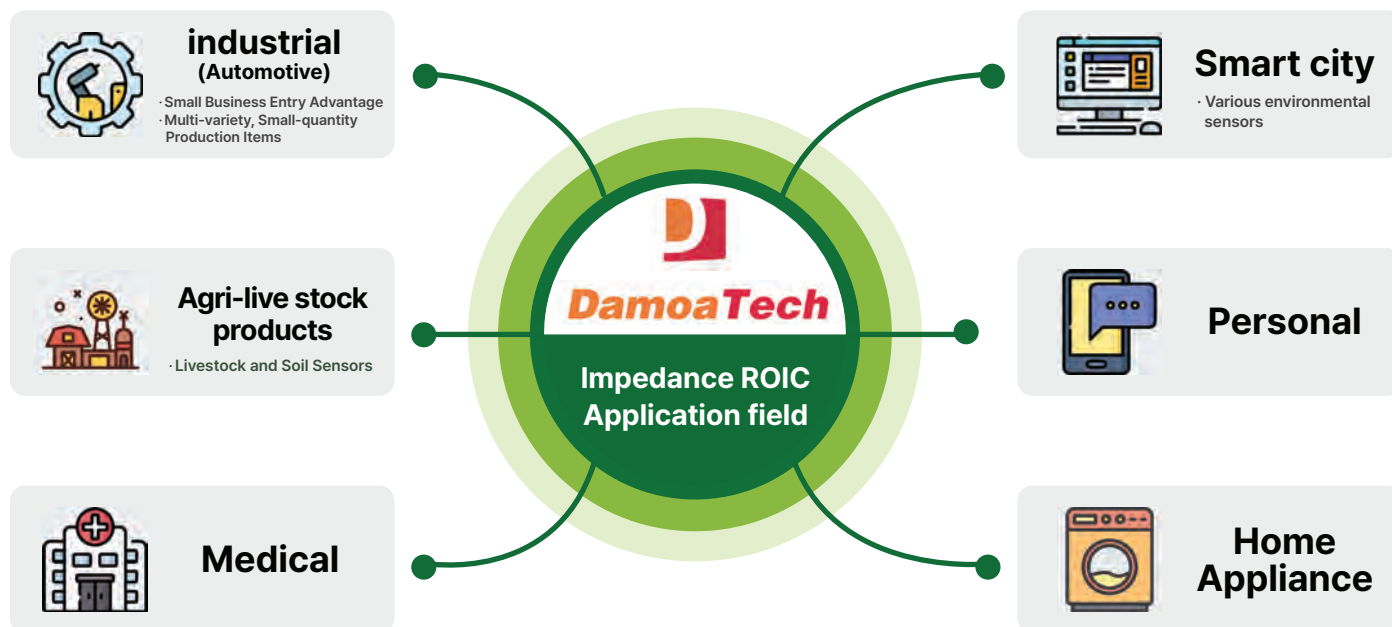·Prediction of abnormal signs
·Cost reduction and quality control

·Reduce labor and management costs
·Optimization of grass growth
·Optimization of green state maintenance
·Reduce water treatment costs

▶ **Service concept**
(mobile device notification, control)

Ray
No.12 hole

30   35

01 Grass condition measurement

02 Field manager inspects lawn condition

03 Notifications and Actions

Damoa Tech's Sensors

industrial (Automotive)
· Small Business Entry Advantage
· Multi-variety, Small-quantity Production Items

Agri-live stock products
· Livestock and Soil Sensors

Medical

Smart city
· Various environmental sensors

Personal

Home Appliance

DamoaTech

Impedance ROIC Application field

Industrial (Automotive)	Touch, vibration, detection, pressure, displacement sensor, etc.	Home Appliance	Pressure, position, vibration sensor
Smart city	Environmental, Water Level, Leak and Quality Sensors	Medical	Biomicrofluidic sensor
Personal	Pollen, Indoor Environmental Sensors	Agri-live stock products	Livestock, Soil, and Atmospheric Sensors

Installation Example

KONEPS
Korea ON-Line
E-Procurement System

DamoaTech

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