

# WEATHER MONITORING SYSTEM FOR SMART AGRICULTURE

---



# ABOUT AERON

---

- A pioneer in the Inertial Navigation technology, Aeron Systems was founded by Mr. Ashvani Shukla (B. Tech., IIT Kanpur) Mr. Abhijeet Bokil (B.E., MIT Pune) in the summer of 2008.
- Building deep-tech products in the field of Inertial Sensing and Internet of Things.
- Serving global customers in Aerospace, Automotive, Renewable Energy, Environment and Manufacturing sectors.



# PRODUCTS & SOLUTIONS



In over a decade's journey, Aeron with its innovative research, reliable products and diligent support, has become preferred choice of its customers. The products offered by Aeron are categorised in **two divisions**.

## Inertial Systems & Sensors

Navigate, control and stabilize your platform in aerospace, defense and automotive applications.

MEMS Inertial Navigation Systems and IMUs

FOG Inertial Navigation System

Airborne qualified AHRS

Digital magnetic compass

Tilt sensor and inclinometers

## Internet of Things

High reliability rugged data loggers and full package environment monitoring solutions

Wireless Data Logger and Gateway

Weather monitoring system for solar power plants, wind farm and agri

Air quality monitoring system

Water quality monitoring system

# WEATHER MONITORING SYSTEM FOR AGRICULTURE



Accurate measurement of wind speed, wind direction, rainfall, temperature, humidity, barometric pressure, soil moisture, soil temperature, leaf wetness and other parameters

High reliability low power consumption data logger for precise and uninterrupted weather data 24x7, 365 days

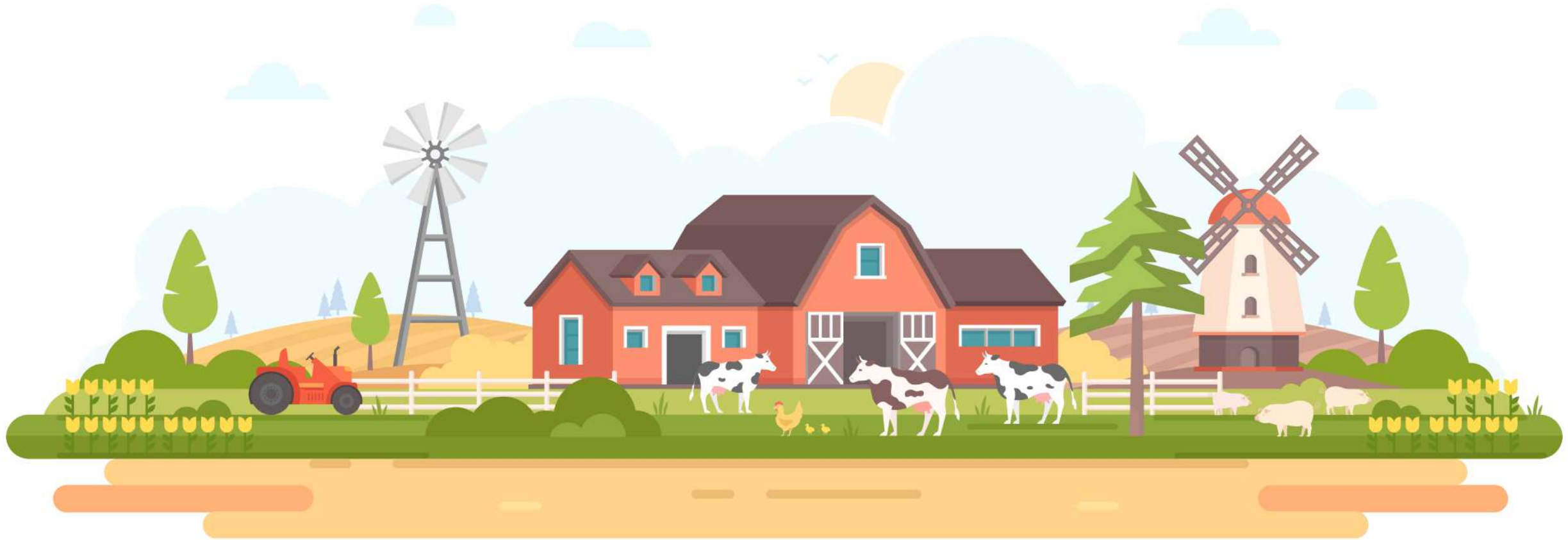
Operating on solar panel, can work for over 20 days without charging

Installed at over 1,500 locations worldwide in variety of applications including crop and weather research





# WHY DO WE NEED SMART AGRICULTURE?



Food security is one of the most pressing issues in the world given the increasing population.

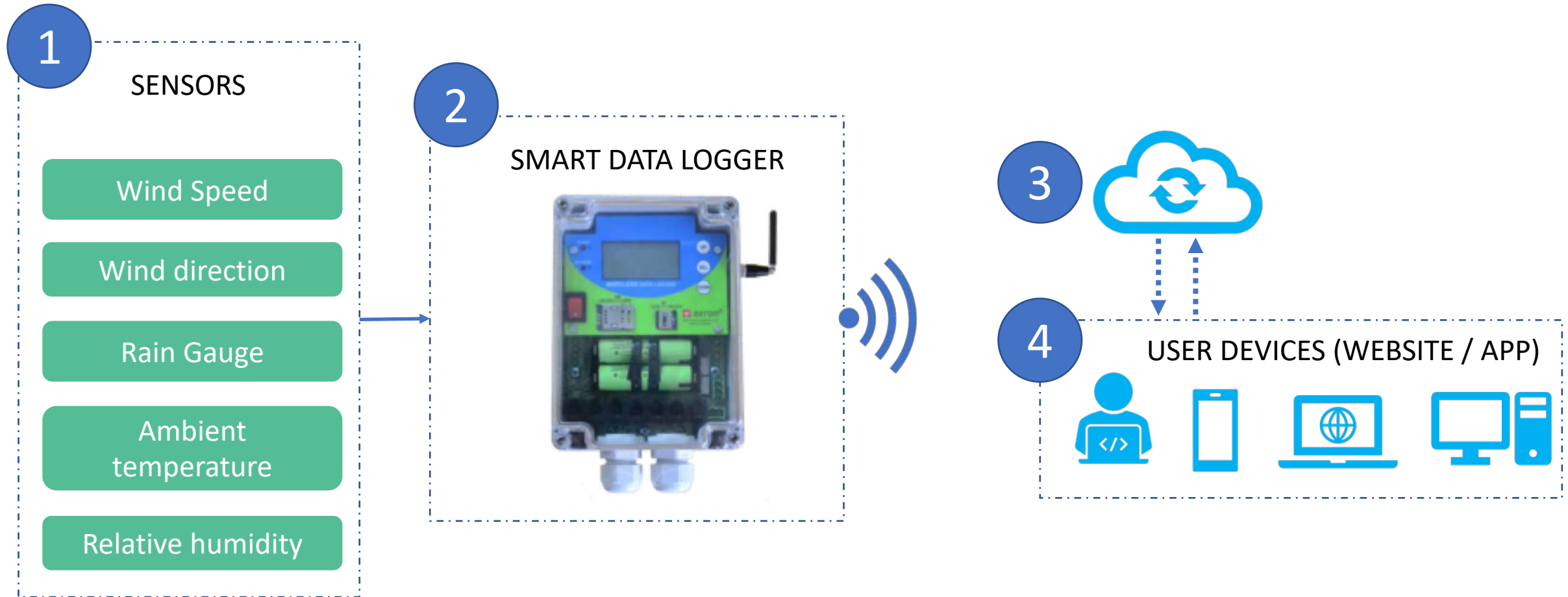


Technology intervention to improve the farm level productivity is crucial



The agriculture is largely dependent on the weather, knowing it in advance is significantly beneficial

# ARCHITECTURE OF WEATHER MONITORING SYSTEM



# KEY SPECIFICATIONS OF DATA LOGGER



## Data Capturing Frequency

1 minute

## Data Transmission Frequency

5 minutes, 10 minutes, 15 minutes, 30 minutes, 1 hour

## Wired

RS232, SDI-12

## Data Backup

2 GB flash memory

## Display

Graphic LCD, 128x64 resolution

## Safety

Weather protection

## Internal Power

Li-ion batteries (rechargeable)

## Wireless

Quad Band GSM / GPRS

## Time Synchronization

RTC with backup battery, sync with server time

## Power Source

9-30 VDC from solar power pack or AC power source using AC-DC converter

## Resolution

12 bit ADC resolution

## Software Upgrade

Firmware Over The Air update (FOTA)

# KEY SPECIFICATIONS OF SENSORS



Wind Direction

0 - 360 deg

Wind Speed

0 - 79 m/s

Atm. Pressure

15 - 115 kPa

Rain Gauge

0 - 399 mm

Soil Moisture

0 - 200 cb

Air Temperature

-40 - +65 °C

Rel. Humidity

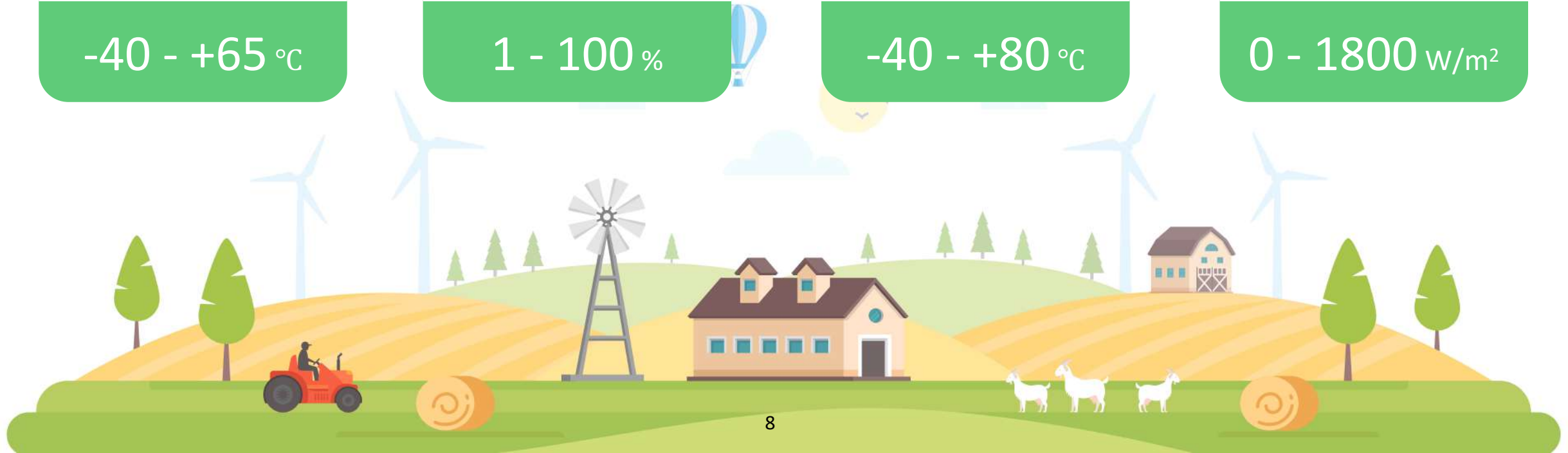
1 - 100 %

Soil Temperature

-40 - +80 °C

Solar Radiation

0 - 1800 W/m<sup>2</sup>





# PROJECTS USING AERON'S WEATHER MONITORING SYSTEM

---



*Aeron's Weather Monitoring Systems are installed at over 1500 locations for variety of projects in the smart agriculture, weather research. Following are the details of few major projects.*



# ENVIRONMENT MONITORING PRODUCTS



Aeron offers complete range of environment monitoring products as listed below.



## AIR

Real-time monitoring of air quality parameters for Smart City, Factory and Commercial Buildings.



## WATER

Online real-time monitoring of water quality parameters for Industries, Rivers & Commercial Buildings.



## SOLAR

Real-time performance monitoring of Solar plants by measuring weather parameters.



## WEATHER

Measurement of weather parameters for research, forecast, and smart agriculture



## SOIL

Monitoring of soil temperature and moisture for higher farm output and reduced irrigation cost.



## WIND

Performance monitoring of Wind power plants to ensure highest energy generation.



# ADVANTAGE AERON

---



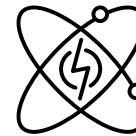
## QUALITY YOU CAN TRUST

Inherited from defense electronics, Aeron offers highest quality product. With key systems made in India and certified to international standards, you can trust on Aeron for the quality product.



## SERVICE YOU CAN RELY ON

Serving customers for over a decade with exceptional service standards you can rely on for your critical requirements.



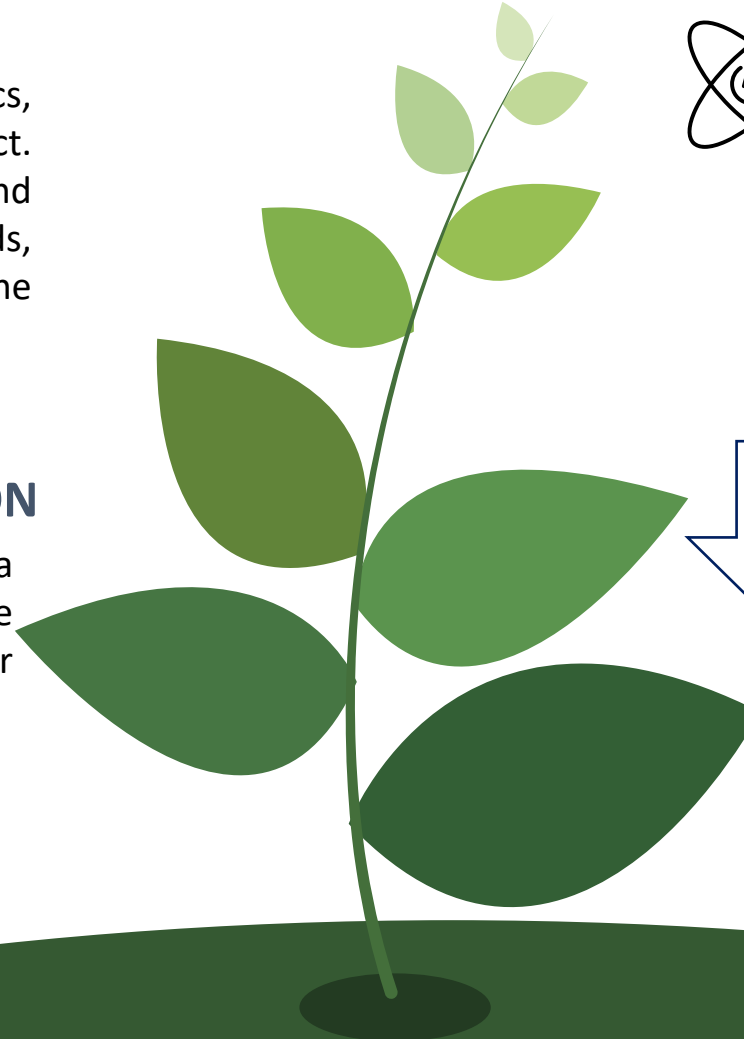
## TECHNOLOGY YOU ASPIRE FOR

The latest IoT and sensor technology is the next big trend in the world, and Aeron is at the forefront of technology development.



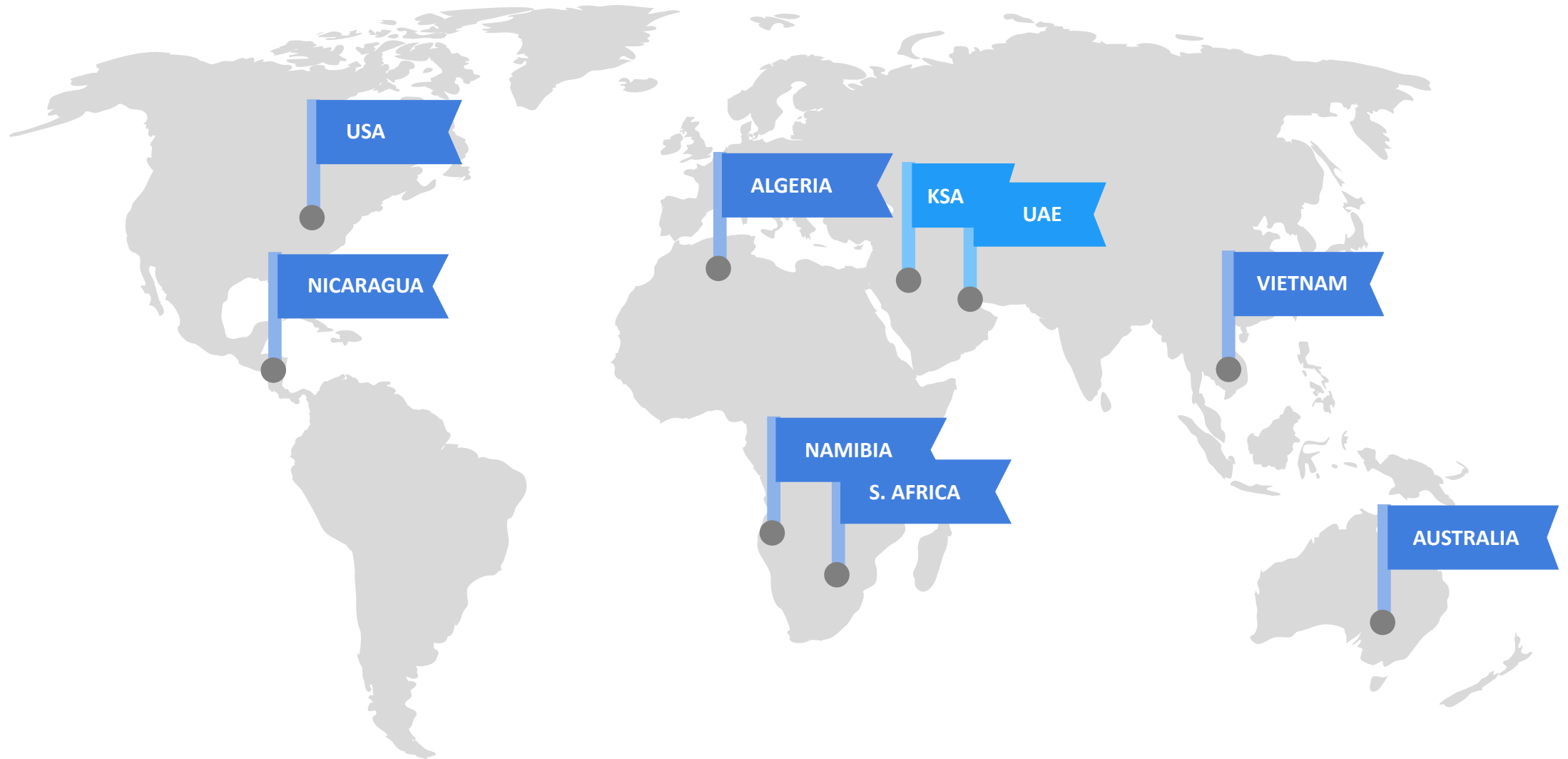
## PRICE WITHIN YOUR BUDGET

The value optimization is the key mantra for low prices with high quality. Our product prices remain within your budget.



# GLOBAL DISTRIBUTOR PARTNERS

---

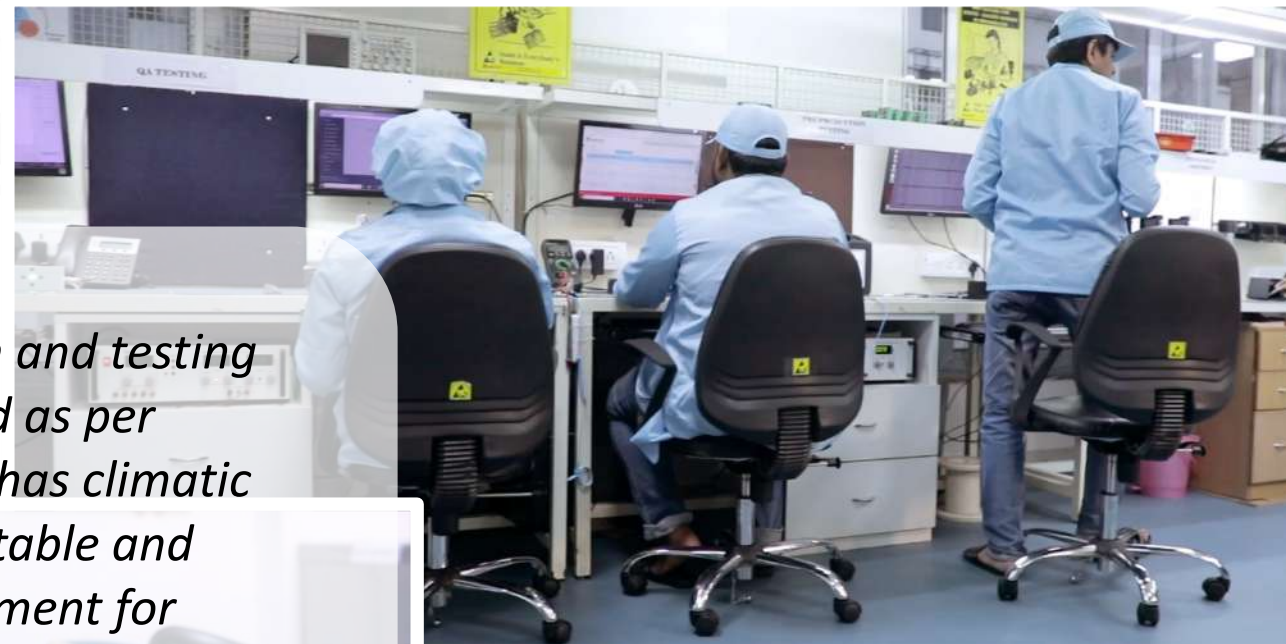




# PRODUCTION & TESTING FACILITY



*The production and testing facility certified as per ISO9001-2015 has climatic chamber, rate table and advance equipment for product assembly and testing.*

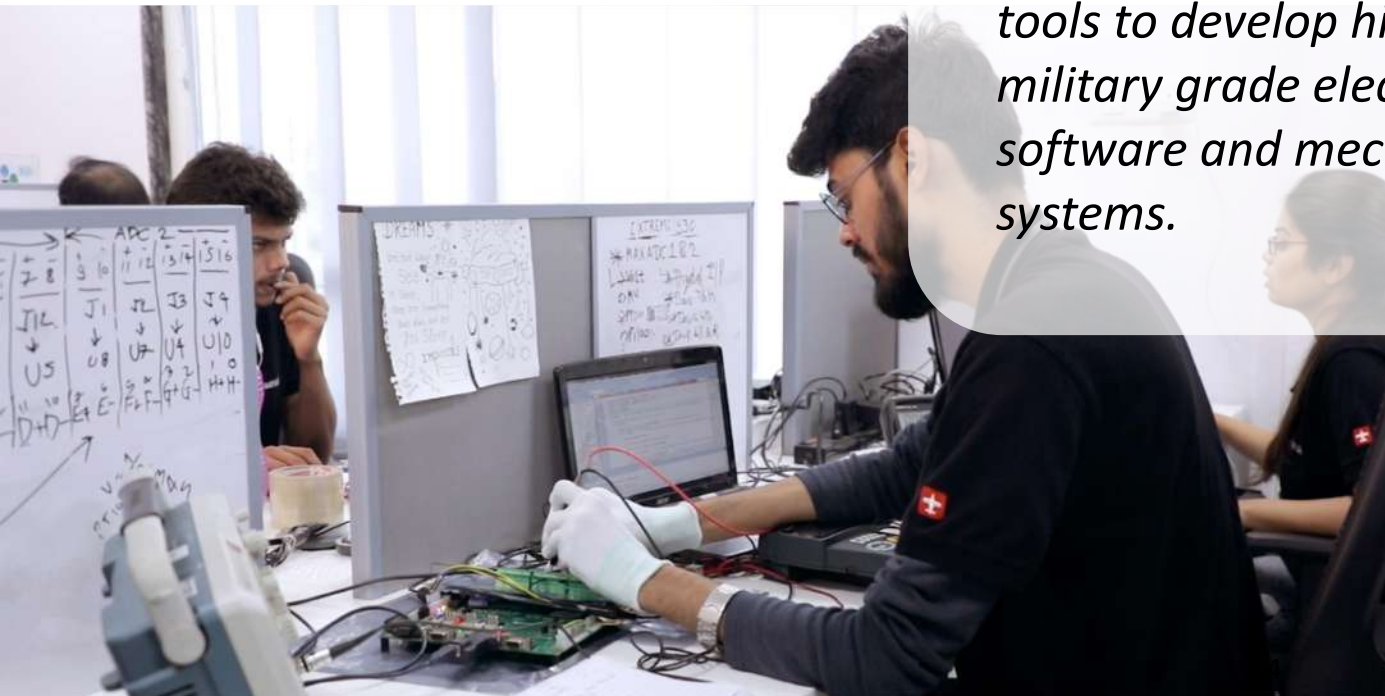




# DESIGN & DEVELOPMENT FACILITY



*Well equipped design and development facility with tools to develop high speed military grade electronics, software and mechanical systems.*





# WORK CULTURE AT AERON



# THANK YOU!

Looking forward to hearing from you!

Aeron Systems Private Limited  
Plot No.7, Lane Number 5,  
Laxman Nagar, Balewadi,  
Pune, Maharashtra 411045  
M: +91 95884 95306  
E: [sales@aeronsystems.com](mailto:sales@aeronsystems.com)

