TESCA AUTOMATIC AND INTELLIGENT WEATHER MONITORING SYSTEM incorporates one of the latest IoT applications in real-time weather monitoring. It provides users to have real-time access of weather data from different locations in areas covered by mobile network.

Weather information like temperature, humidity, wind speed and direction, rainfall, UV index and solar radiation is gathered simultaneously from TESCA WEATHER MONITORING SYSTEM. All the data can be centralized, organized and sent to the observatory through THINKSPEAK/ BLYNK platform. Through cloud management software, the data from weather stations is displayed in the form of dashboard & charts. Since the data transmission is instantaneous, alert is triggered in cloud management software once abnormal weather data is received. The observatory can issue warning signal to the public immediately after poor weather condition is recognized.

Overall TESCA is a very versatile system, allowing users to examine data that is essential to their operations.

Applications:

01 Agriculture
02 Conservation Engineering
03 Environmental Education
04 Weather Services
05 Fire Station
06 Alternative Energy
07 Meteorology
08 Solar Power Project
09 Wastewater Treatment
10 Construction
11 Data Centers
12 Waste Management
13 Disaster Mitigation

Features:

01 High Accuracy Reliability
02 Communication over cloud
03 Battery Charging from Solar Panel
04 Real time Data Access on Web
05 Low Maintenance

Technical Specification
Sensors Specification
01 Air Temperature Sensor (DS18B20):

Operating Range	: -55°C to +125°C
Accuracy	: ±0.5°C

02 Tmospheric Pressure / Relative Humidity Sensor (BME 280)

Operating Range	: 20-80%
Accuracy	: 1%

03 Wind Speed / Direction Sensor (Provision)

Speed	: 0 to 20,/s
Resolution	: 1m/s
Direction	: North, East, West, South, North-East, East-South, North-West, South-West

04 Rainfall Sensor (Provision)
: Tipping bucket in mm

05 UV Index Sensor (GY-1145)

Response wavelength	: 200nm-370nm
Response time	: 5sec.

06 Solar Radiation Sensor (BH1750)

Output	: 0-2VDC
Range	: 0 to 2000W/m^2
Spectral Response	: 400 to 1100nm

07 Power Supply

Battery	: 5V
Solar Panel	: 1.2W

Wireless Transmission: Thinkspeak / Blynk

08. Dimension : 200 x 300 x 73mm

09. Weight : 1Kg (Approx)

Note: Specifications are subject to change.