

AUTOMATIC WEATHER STATION

An Automated weather systems for measuring weather parameters with highest accuracy and reliability even at extreme weather conditions, which are in great need to make accurate prediction of weather, thus serving the society from weather calamities.

AUTOMATIC WEATHER STATION (AWS)



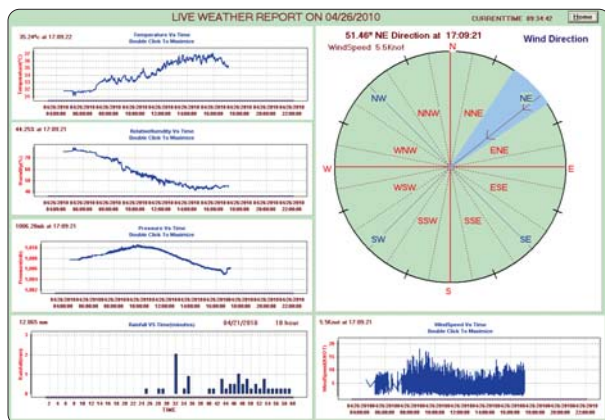
FEATURES

- ❖ Weather parameters are measured using sensors.
- ❖ Sensor data is logged & stored in data logger.
- ❖ Parameters can be measured & logged even for every second.
- ❖ System transmits data to central place via GSM/GPRS, and wired communication.
- ❖ Network of systems can be monitored from central place via GIS software.
- ❖ System is powered by solar panel for remote locations. And supported by battery backup during non-sunny days.
- ❖ Continuous monitoring of system power and sensors conditions.
- ❖ Data logger has expandability to facilitate more number of sensors.
- ❖ Alarms during extreme weather conditions, like low or high temperature, high wind speeds, low pressures, snowfall, heavy rains...etc.
- ❖ Software support for analyzing weather data.
- ❖ Weather data can be monitored on Internet on every second basis.
- ❖ Capable of displaying weather data in display boards, via GSM / GPRS or wired communication.
- ❖ All Sensors are calibrated at IMD, Pune.

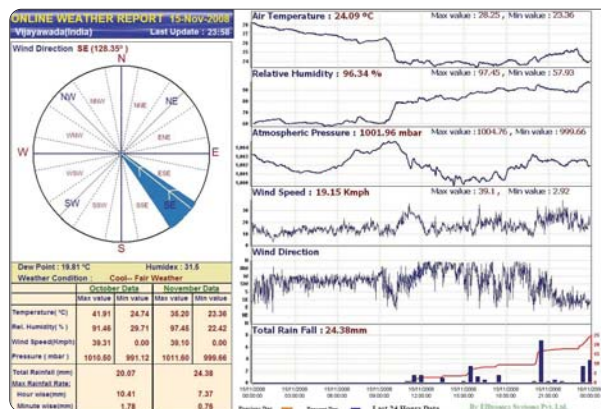
AUTOMATIC WEATHER STATION

DATA REPRESENTATION

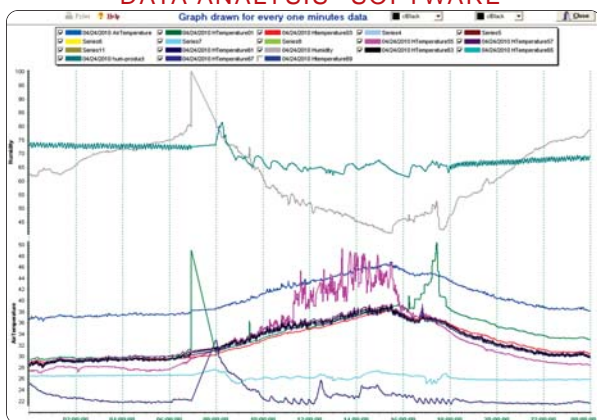
LIVE WEATHER REPORT



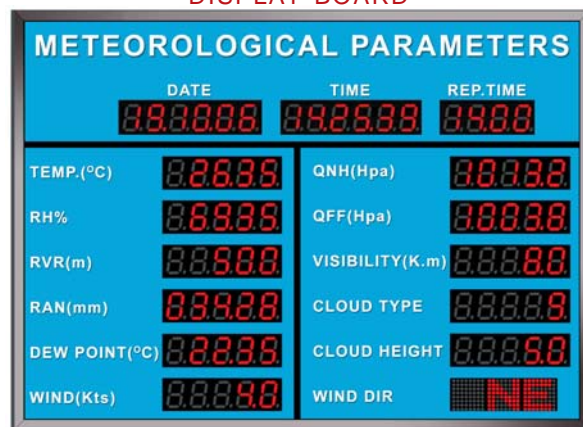
WEATHER REPORT ON INTERNET



DATA ANALYSIS SOFTWARE



DISPLAY BOARD



SENSORS SPECIFICATIONS

Parameter	Sensor type	Units	Working Range	Resolution	Response time	Accuracy
Air temperature	RTD- Pt100	Celcius	- 40 to + 60	0.01	< 10sec	0.1
Relative Humidity	Capacitive	%	0 to 100	0.2	<10 sec	0.8
Atmospheric Pressure	Capacitive	mb / hPa	500 to 1100	0.01	<10sec	0.1
Wind Speed	Ultra Sonic	m/s	0 to 60	0.01	<10sec	0.02
Wind direction	Ultra Sonic	Degrees	0 to 359	1	<10sec	3
Rain	Tipping bucket	mm	Unlimited	0.254	<10sec	0.254
Solar Radiation	Pyranometer	Watt / m2	10 to 1750	0.1	<10sec	5
Soil Temperature	Pt100	°C	-40 to +60	0.01	<10sec	0.1
Soil Moisture	TDR	%	0 to 100	1	<10sec	2

DATA LOGGER SPECIFICATIONS

Processor	68K
Data Backup	1 GB
Internal Memory	4 MB
Operating Temperature	-10 to 70°C
Input Voltage	24V
Power Consumption	6 watt
GPS	Yes
Real-Time Clock	1 PPM

Watchdog Timer	Yes
Communication	GSM / GPRS / Satellite
Sample Intervals	Every Second (Can be adjusted as per user requirement)
Visual display	7 x 21 OLED
RS 232 ports	4
Rs 485 ports	1

Ethernet	1
Digital Inputs	8 (Expandable)
Analog Inputs	16 (Expandable)
Digital Outputs	8
ADC resolution	16 bit
Conversion Accuracy	1 LSB
Tower Height	10 mts / 3 mts