एक्रिप आन एग्रोमेट्रोलाजी
सस्य विज्ञान विभाग
च0शे0 आ0कृषि एवं प्रौद्योगिकी विश्वविद्यालय कानपुर

नोटिस

पत्रांकः एजीआर/एम–298/2021 दिनांकः19 मार्च, 2021

एक्रीपाम योजना (आई.सी.ए.आर) में आटोमेटिक वेदर स्टेशन (AWS) स्थापित करने हेतु कार्यालय द्वारा कोटेशन आमंत्रित किये जाते हैं।

क्र0 सं0	सामग्री का नाम	मानक	मात्रा
1.	आटोमेटिक वेदर स्टेशन (AWS)	Specification Attached	01

नियम एवं शर्ते

1. दरें शुद्ध होंगी तथा जीएसटी की दर का स्पष्ट उल्लेख करें।
2. सामग्री की आपूर्ति क्रयादेश जारी होने की तिथि से 07 दिन के अन्दर करना होगा।
3. वस्तु का निरीक्षण मॉग अधिकारी द्वारा किये जाने के पश्चात् तथा संतोषजनक प्राप्त होने पर भुगतान किया जायेगा।
4. फर्म का व्यापार कर कार्यालय में रजिस्ट्रेशन जीएसटी होना अनिवार्य है।
5. भावपत्र डाक/स्पीड पोस्ट/कोरियर से ही प्राप्त किये जायेंगे।

(एस. एन. सिंह)
कृषि मौसम वैज्ञानिक

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S.No	Item	Specification
1	Temperature Sensor	Resolution is +/- 0.04 (min) to max +/- 0.01. Typical accuracy is +/- 0.3 (maximal is +/- 1.5) . Repeatability is (+/-) 0.1 celsius. Operating Range -40 to 123 Celsius. Long term drift is < 0.04 Celsius/year.
2	Humidity Sensor	Resolution is 0.4 (min), 0.05 (typical) and 0.05 (max) in percentage. Accuracy is (+/-) 2% (typical) to maximal +/- 4%. Repeatability is +/- 0.1%. Response time is 8 seconds. Operating Range 0-100% RH. Long term drift is < 0.5 RH%/year.
3	Presssure Sensor	Range is 300-1100 hPa, Resolution is 0.06 hPa to 0.02hPa. Operating range is -40C to 85C. Best results in 0C to 65C range. Long term stability is +/- 1 hPa/year.
4	Rainfall sensor	Tipping Bucket mechanism with Magnetic reed switch. Output is contact closure on 4-conductor 26 AWG cable. Collection area is 214 square cm. Accuracy: +/- 4% of total or one tip of the bucket (whichever is greater) for rain rates upto 2 inch/hour. For rain rates from 2 inch/hour to 4 inch/hour , +/- 5% of total or one tip of the bucket. Resolution: of 0.01 inch or 0.1 mm (adjustable).
5	Wind Speed	Range: 1 to 200 mph, 1 to 173 knots ,0.5 to 89m/s, 1 to 322 km/h. Accuracy: ±2mph (3km/h, 1m/s) or ±5 %,whichever is greater. Resolution is 1mph (1knot, 0.1m/s, 1km/hr)
6	Wind Direction	Range: 0°to 360°or 16 compass points. Accuracy: +/- 7 degrees. Resolution: 1 degree. 22.5 degrees between compass points.

7	Local Storage	4GB SD card which can store data for 1 year as back-up
8	Local RTC	Local I2C based RTC with low drift withrespect to time
9	GPRS loggger	8 bit Micro-controller with GPRS uplink for pushing real time weather data to Cloud. GPRS logger should have atleast 10 bit ADC resolution, I2C, UART and SPI bus interface.
10	Data protocol	Bnecode based data protocol should be used to tranfer data from weather station to Web-server in real time.
11	Power	It should run either from 12V DC power supply or Solar power.
12	Battery Back-up	4.4 Ah LIPO battert which should atleast give back-up of 7 days without recharge.
13	Enclosure	IP 65 based weather proof enbclosure with MX connectors to connect the sensor so that the loggger is totally insulated from the sorrounding environmental conditions
14	Web-server	Data pushed from the weather station should be received by a web-server, where it should be stored in a time-series database.
15	Device Dashboard	Data pushed from the weather station should be accessible using login Id and password combination. Admin shoud be able to create multiple users. Later on, if more weather station are procured, they all should be added to the same account.
16	Visualisation	Data collected from the weather station should be available in real time over the web-application. Different visualtion should be provided in order to see the variation of data with respect to time. choropleth map should also be used in the visualisation. Y vs Y visualisation should also be a part of offering.
17	API access	Rest api's should be made available using which different kind of mobile applications can be made.
18	Public access	Same data should be made available to public either using API's or web-application
19	Daily reports	Daily reports should be generated fullfilling the IMD format
20	Real time updates	Data should be updated on the server in real time.
21	Alerts and Notifications	Admin should be allowed to set the range of different sensors, so that when ever any sensor report readings beyond the specified one, he / she should get notification via SMS or email.
22	Advisory to Group of farmers	A provision should be made to send fortnigh advisories to group of farmers - **Separate cost.**