

International Institute of Information Technology Hyderabad



**TENDER DOCUMENT FOR THE SUPPLY OF EQUIPMENT FOR PROJECT RESIDE
TENDER No. IIITH-TENDER/RESIDE/001 dated 23rd September 2019**

Registrar

International Institute of Information Technology

Gachibowli

Hyderabad - 500 032 India

Phone: (91) (40) 6653 1000

NOTICE INVITING REQUEST FOR BIDS

TENDER NO: IIITH - TENDER/RESIDE/001

Date: September 23, 2019

International Institute of Information Technology, Hyderabad (IIITH) is an autonomous university, founded as a not-for-profit public private partnership (N-PPP) in 1998, and is the first IIIT in India under this model. Over the years, the institute has evolved strong research programs in various areas, with an emphasis on technology and applied research for industry and society. The institute facilitates interdisciplinary research and a seamless flow of knowledge. Several world-renowned centers of excellence are part of IIITH's research portfolio.

IIITH is structured around research centers and labs as opposed to schools and departments. Each research center focuses on a broad problem area and brings together experts possibly with varied background to conduct research and development on specific aspects of that problem area, constantly pushing the science to the next level. Center for IT in Building Science (CBS) focuses on effectively using Information Technology (IT) for sustainable buildings. This Tender is released by Registrar, IIIT Hyderabad for CBS, IIIT-Hyderabad, Gachibowli towards the project RESIDE (<https://www.reside-energy.org/>).

Interested firms, who are willing to supply the **equipment for Project RESIDE** are requested to submit their bids along with all supporting documents/credentials.

Please refer to the following documents for further details-

- | | |
|--|--------------|
| a) Tender Important Details | Annexure '1' |
| b) Checklist for Enclosures | Annexure '2' |
| c) Eligibility Criteria | Annexure '3' |
| d) Bid Preparation and Submission | Annexure '4' |
| e) Terms and Conditions | Annexure '5' |
| f) Schedule of Requirements | Annexure '6' |
| g) Technical Bid format | Annexure '7' |
| h) Commercial Bid format | Annexure '8' |
| i) Bill of Material, Schematics of equipment to be manufactured as per IIIT specifications | |
- Appendix

Note:

1. Any downloading from the website is at the sole risk and responsibility of the user. IIITH will not be responsible for delay/difficulty/inaccessibility of downloading facility for any reason whatsoever.
2. IIITH reserves the right to reject any or all the BIDs, in part or full without assigning any reason thereof.

Tender Important Details: Annexure ‘1’

TENDER DOCUMENT TOWARDS THE SUPPLY OF EQUIPMENT FOR RESIDE PROJECT		
1.	Tender Inviting Authority Designation and Address	Registrar, IIIT-H, Gachibowli, Hyderabad - 500032
	A) Name of the Work	Supply of Equipment for RESIDE project.
	B) Tender reference	TENDER NO: IIITH - TENDER/RESIDE/001
	C) Place of execution	Vindhya – C2, 1 st floor, CBS - B2-207, IIIT Hyderabad Campus, Gachibowli.
3.	Tender Documents available on	On all working days between 10.00 A. M to 4.30 P.M @ Vindhya – C2, 1st Floor, CBS, IIIT-H Campus, Gachibowli. Alternatively, Tender documents can be downloaded at free of cost from cbs.iiit.ac.in in News and Announcements section.
4.	Earnest Money Deposit (EMD)	1) INR: 2,00,000/- (Rupees Two Lakh Only) The EMD should be in the form of Demand Draft/Banker’s Cheque in favor of: “IIIT, Hyderabad “
5.	Date, Time and place of pre-bid meeting	On 30.09.2019 at 11.00 A.M Vindhya – C2, 1 st floor, CBS - B2-207, IIIT Hyderabad Campus, Gachibowli, Hyderabad.
6.	Due Date, Time and place of submission of tender	On or before 09.10.2019 at 1.00 P.M Vindhya – C2, 1 st floor, CBS - B2-207, IIIT Hyderabad Campus, Gachibowli, Hyderabad.
7.	Date, Time and Place of Tender Opening of the Technical Bids	On 15.10.2019 at 4.00 P.M at Vindhya – C2, 1 st floor, CBS - B2-207, IIIT-H, Gachibowli, Hyderabad.

8.	Date, Time and Place for opening of the Price Bids	Will be intimated to the Technically Qualified Bidders only.
9.	<ol style="list-style-type: none"> 1. Eligibility Criteria: Please refer the Eligibility Criteria - Annexure '3' of the Tender Document. 2. Two Bid System (i.e.) Stage-1 Technical bid; Stage-2 Price Bid opening. 3. Tenders received after the due Date and Time will be summarily rejected. 4. Contact details for any enquiry related to this tender during office hours 	
	<p>A) For technical queries: +91 40 66531141, E-Mail : rishika.agarwal@research.iiith.ac.in</p> <p>B) For bid process queries: +91 40 66531116, E mail: mbprasad@iiit.ac.in</p>	
10	<p>Bid Processing Fee: All bids must be accompanied by a non-refundable bid processing fee of INR 5,000 (Rupees five thousand only) in the form of a demand draft drawn on any nationalized / scheduled bank payable at par in Hyderabad, in favor of "International Institute of Information Technology, Hyderabad". This should be included separately from the technical and financial proposals.</p>	

Checklist for Enclosures

Annexure '2'

(Bidder should fill up YES or NO without fail) and submit the checklist in the outer cover.

Sl. No:	Bid Enclosures	YES or NO
1.	Whether Technical Bid (Envelope-A) and Price Bid (Envelope-B) prepared and signed and stamped in all pages by the Authorized Signatory?	
2.	Whether EMD is put in the Technical Bid (Envelope-A)?	
3.	Whether the Tender is submitted in Two covers namely Technical Bid (Envelope-A) and Price Bid (Envelope-B) ?	

4.	Whether Two covers are put into an outer cover sealed properly?	
5.	Whether Technical Bid (Envelope-A) contains the following	
5.1	Bidder's covering letter in the Letterhead signed and stamped by the Authorized Signatory.	
5.2	Whether Document proof for Annual Turn Over Enclosed?	
5.3	Whether list of Technical Staff Details Enclosed?	
5.4	Proof regarding the firm is involved in the supply and installation of Wireless IoT devices for Environment Monitoring, Energy Management and Home Automation (copies of Purchase Orders) Enclosed?	
5.5	Whether proof that the firm has at least one service center in Hyderabad Enclosed?	
5.6	Whether Document relating to GST Enclosed?	
5.7	Whether OEM Certification is Enclosed?	
5.8	Whether related Technical Data Sheets for all the devices that are to be supplied towards this project are enclosed?	
6.	Whether Price Bid (Envelope-B) contains the following	
6.1	Duly filled Price Bid which is signed and stamped by the Authorized Signatory put inside the Envelope - B?	

Eligibility Criteria

Annexure '3'

The Bidders should meet the following Eligibility Criteria to participate in the Tender and should enclose supporting documents for fulfilling the Eligibility in the Technical Bid. It is the responsibility of the company to satisfy the norms of IIIT Hyderabad regarding genuineness and validity of the document furnished. Bids accompanied by the documents not fulfilling the requirements outlined in this section will be subject to rejection.

Sl. No:	Minimum Eligibility Criteria	Supporting documents to be submitted for fulfilling the Eligibility Criteria	Yes or No
1.1	Bidder should be a Registered company in India or Abroad and existing for the past Three years. Bidder should also have its presence (in the form of Service/support Centers) in India for the last 3 years.	a. Registration Certificate should be submitted.	
1.2	Bidder should have proven track record of Designing, Manufacturing & Supply (or) Trading of IoT devices. The Bidder should be	a. Copy of the Single Purchase Order to the Value of INR 100 lakhs or above during the last two years in one of the following areas: Environment Monitoring,	

	specialized in Environment Monitoring, Energy Management and Home Automation related solutions since the past 3 years.	Energy Management, Home Automation and b. Copy of the purchase orders totaling to the value of INR 200 lakhs or above during the last two years put together in any of the following areas: Environment Monitoring, Energy Management, Home Automation.	
1.3	Bidder should—have an average Annual Turnover of at least 2 Crores in the previous two audited years.	Annual Report including Balance Sheet and Profit & Loss accounts for the last two audited years shall be submitted.	

1.4	The company or tenderer should have Good Strength of Service Engineers in the relevant field of Quoted item. However, the firm should provide Service in each of the following cities: Hyderabad, Jaipur, New Delhi, Chennai, Vizag, Ahmedabad, Pune and Darjeeling once the project is assigned.	a. List of technical staff shall be submitted (Name, Designation, Salary Details and Date of joining the Firm).	
1.8	Bidder should have valid GST Registration Number in case of India registered companies. Bidder should have valid Export license and permission to Export to India in case the bidder is not from India.	a. Valid Documents for GST Registration Number shall be submitted if the Bidder is an Indian company (or) b. Declaration about the ability to Export goods to India in case of a nonIndian company.	
1.9	OEM Certification	a. If the products quoted in the document are not manufactured by the Bidder, a Copy of the OEM's Certification authorizing the Bidder as local partner/representative in India for the supply and installation of items indicated in the Tender Documents. b. Further the OEM should give an undertaking for product support for 3 years	
		on completion of warranty period directly / through their authorized dealers/vendors.	

Bid Preparation and Submission

Annexure '4'

- The Bid should be submitted in two parts viz. a.
 Technical Bid (Envelope-A) and
 b. Price Bid (Envelope-B)

as explained below.

Each bid will be treated and evaluated separately.

A. Technical Bid (Envelope – A)

The Technical Bid format as given in the Tender shall be filled, signed and stamped on all pages. Corrections if any shall be attested by the Bidder. The Bid will be summarily rejected, if there is any mention of price in the Technical Bid. Any alterations, deletions or overwriting shall be attested with full signature of the authorized signatory.

The Technical Bid with supporting documents and the EMD covers should then be put in a separate cover and sealed appropriately. The Technical Bid cover should be super-scribed as “Technical Bid (Envelope-A) towards **Supply of Equipment for project RESIDE**” **TENDER NO: IIITH - TENDER/RESIDE/001**”. The “FROM address (Bidder’s Full Address)” and “TO” Address” should be clearly written in the cover otherwise the Bid is liable for rejection.

B. Price Bid (Envelope – B)

All the Price items as asked in the Tender should be filled in the Commercial Bid Format-Annexure 8 as given in the Tender. The Bid is liable for rejection if Price Bid contains conditional offers / partial offers.

The Price Bid shall be typed, signed and stamped in all pages by the authorized signatory of the Bidder. Any alterations, deletions or overwriting shall be attested with full signature of the authorized signatory.

The Price Bid shall be put in a separate cover (**Envelope-B**) and sealed appropriately. The Price Bid cover (Envelope – B) shall be super scribed as “Tender (Envelope-B) towards **Supply of Equipment for project RESIDE**” **TENDER NO: IIITH - TENDER/RESIDE/001**”. The “FROM address (Bidder’s Full Address)” and “TO” Address” shall be written without fail, otherwise the Price Bid is liable for rejection.

C. Outer Cover

The Technical Bid cover including EMD Cover (Envelope-A) and Price Bid cover (Envelope-B) shall then be put in a single outer cover and sealed appropriately. The outer cover shall be super scribed as “Tender towards **Supply of Equipment for project RESIDE**” **TENDER NO: IIITH - TENDER/RESIDE/001**”. The “FROM address (Bidder’s Full Address)” and “TO” Address” shall be written without fail, otherwise the Price Bid is liable for rejection.

D. Mode of Submission of Bids:

a. The Bid should be submitted strictly as specified in the Tender document. The Bids should be submitted in the Office of the Vindhya – C2, 1st floor, CBS - B2-207, IIIT Hyderabad Campus, Gachibowli, Hyderabad on or before the due date and time.

b. If the Bidder prefers to submit the Bid by post, the Bidder should ensure that the Bid reaches the Office of the Vindhya – C2, 1st floor, CBS - B2-207, IIIT Hyderabad Campus, Gachibowli, Hyderabad on or before the due date and time. IIIT Hyderabad will not be liable or responsible for any postal delay or any other delay whatsoever.

c. If any Bid is received after the due date and time or unsealed or disorderly submitted or received by Facsimiles (FAX), the Bid will be rejected.

E. Modifications and withdrawal of Bids:

a. The Bids once submitted cannot be modified or amended. No documents would be supplemented after submission of Bids.

F. Technical Bid Opening:

The Tender outer cover and Technical Bid cover including EMD cover will be opened at the Office of the Vindhya – C2, 1st floor, CBS - B2-207, IIIT Hyderabad Campus, Gachibowli, Hyderabad on the date and time as specified in the Tender Data sheet or any other date published in the IIITH website. The Tender will be opened in the presence of the Bidders who choose to be present. The representative of the Bidder who prefers to attend Tender opening shall bring an Authorization letter from the Bidder.

G. EMD:

a. The EMD amount INR: 2,00,000/- (Rupees Two Lakh Only) as specified in the Tender Data Sheet should be paid **along with Technical Bid** by way of Demand Draft/Banker's cheque drawn from any Nationalized Bank or Scheduled Bank in India and in favor of IIIT, Hyderabad payable at Hyderabad. **No Bid shall be entertained without EMD.**

b. The EMD amount of the unsuccessful Bidders will be refunded after finalization of the Tender within a reasonable time. The EMD amount held by IIIT Hyderabad till it is refunded to the unsuccessful Bidders will not earn any interest thereon.

c. The EMD of the successful bidder will be treated as performance guarantee and will be returned after one-year warranty period. **H. Scrutiny During Tender Opening:**

a. Scrutiny during the Tender opening will be held for the following:

i. Whether Tender is submitted in two cover system viz. Technical Bid Cover (Envelope – A) and Price Bid cover (Envelope – B).

ii. Whether required EMD amount is furnished and submitted along with Envelope - A.

b. All Bids fulfilling the above conditions alone will be considered for further evaluation otherwise, the Bids will be treated as rejected. The decision of IIIT Hyderabad will be final in this regard.

I. Technical Bid Evaluation

a. The Technical Evaluation will be held on the compliance of the Bid with respect to the Tender conditions.

b. The Bids will be held non-responsive and rejected if the Bids do not comply with the Tender conditions, if the Bids do not conform to the Technical Specifications and if the Bids do not establish the eligibility, capability and experience of the Bidders.

- c. The Bidders who have duly fulfilled the Technical requirements in the Technical Bid evaluation as above will be considered as Technically Qualified Bidders and they only will be eligible to participate in the opening of Price Bid.
- d. The Bids of the Bidders who have failed to meet the Technical requirements in the Technical Bid evaluation as indicated above will be rejected.
- e. **The eligible Bidders will be asked to submit 2 units of each off-the-shelf item for technical evaluation. These samples should be submitted within 2 weeks from the date of opening of Technical Bid. These samples submitted will not be returned by IIIT Hyderabad.**

J. Price Bid Evaluation

- a. The Price Bids (Envelope-B) of the Technically Qualified Bidders whose products are found to be meeting all the specifications and acceptance test alone will be opened and evaluated. The Price Bids will be opened in the presence of the Bidders at Office of the Vindhya – C2, 1st floor, CBS - B2-207, IIIT Hyderabad Campus, Gachibowli, Hyderabad. The Bidders or their authorized representatives will be allowed to take part in the Price Bid opening.
- b. The lowest evaluated total price for given Products as per the above evaluation will be adjudged as L1 price.
- c. The quoted price shall be corrected for arithmetical errors. In cases of discrepancy between the prices quoted in words and in figures, the lowest of the two shall be considered.

Terms and Conditions

Annexure '5'

- a) **Delivery Period:** The delivery should be made within **12 weeks** from the date of receipt of purchase order.
- b) **Payment Terms:** The payment will be made 10 % after approving the functionality of the off-the-shelf samples supplied to IIITH 90 % at the time of delivery of the equipment.
- c) **Warranty:** The items supplied by the vendor shall be guaranteed against any manufacturing defects for 12 months and the vendor should provide time-to-time operational maintenance support (On Site comprehensive Warranty). The said warranty should cover all the Hardware & Software Products. The warranty and service shall be provided directly from the Bidder / OEM. The vendor shall be liable to rectify any defects that may be found in the equipment supplied at free of cost.
- d) **Installation:** The installation of the equipment will be done by designated teams selected by IIIT Hyderabad. Vendor should support onsite, over the phone and via email always during the installation period at no extra cost.
- e) **Response Time:** The response time of the vendor to attend to any complaint upon receipt of the complaint/information from the user/installer should not be more than 24 hours.
- f) The vendor must submit their tender document in the given format. Deviations from this format will automatically disqualify the vendor from this tender process.
- g) **IIIT Hyderabad reserves the right to increase or reduce the quantity or even withdraw the tender without assigning any reasons thereof.**
- h) **IIIT Hyderabad reserves the right to cancel the contract under repeated violations of the specified and mutually agreed QoS parameters.**
- i) IIIT Hyderabad is not responsible for any delay in the delivery of equipment.
- j) Price quoted should be inclusive of delivery charges at IIIT, Hyderabad.
- k) The Successful vendor must provide training for installation and configuration for the items supplied by them to the staff involved in the project and the designated installers.

- l) **Validity: The bid shall be valid for 90 days from Last Date for Submission of bid i.e. January 1st, 2020**
- m) **Support:** Onsite-support within 24 hours in seven cities (Hyderabad, Jaipur, Darjeeling, New Delhi, Pune, Ahmedabad, Visakhapatnam)
- n) **Bid Processing Fee:** All bids must be accompanied by a non-refundable bid processing fee of INR 5,000 (Rupees five thousand only) in the form of a demand draft drawn on any nationalized / scheduled bank payable at par in Hyderabad, in favor of “International Institute of Information Technology, Hyderabad”. This should be included separately from the technical and financial proposals.

Schedule of Requirements: Annexure ‘6’

Items Manufactured as per IITB Specification

S. No	Item Name and Technical Specifications	Quantity
1.	<p>Wi-fi Energy Manager</p> <p>Technical Specifications: Should Support Wi-fi network: 802.11 b/g/n (2.4GHz) Operating Relative Humidity:5~95% Operating Temperature: 0 to 60°C Power Supply: AC 240V, 50Hz No. of CTs to be supplied: 3 units with cable length of 40 cms for each. Rating of the split core CTs to be supplied: 60 Amp Input for measurement configuration: 3 phase 4 wire Data storage on board: 4 MB Flash Measurement Accuracy: Class 1, according IEC 62053 - 21 Mounting arrangement: DIN Rail / Suitable for mounting on most types of power distribution boxes used in Indian homes. Ability to Push data from local storage into cloud in real time. Other capabilities: a. Ability to read Voltage, Current, Active and Reactive power, frequency, power factor, harmonics for 3 phases. b. Ability to read high frequency samples of Voltage and Current. Example: Should be capable of reading Current value every 50 milliseconds.</p>	220
	Device firm ware should be capable of pushing data to our servers as per our specification.	

<p>2.</p>	<p>Meter Level Energy Monitoring Device</p> <p>Technical Specifications:</p> <p>Device should have BLE as wireless technology. Operating Relative Humidity:5~95% Operating Temperature: -10-60°C Power supply: <u>2x</u>AA size Duracell Lithium Data Storage: Ability to store last 12000 samples of Current data. Current measurement frequency: Every 5 seconds (or) user defined time period via the mobile app. No. of CTs to be supplied: 2 units with cable length of 40 cms for each. Rating of the CTs to be supplied: 60 Amp Input for measurement: 3 phase current only Current Measurement Accuracy: +/- 1% Mounting arrangement: DIN Rail suitable for mounting on most types of power distribution boxes used in Indian homes, magnet arrangement to stick to a metal enclosure</p> <p>Should have intuitive mobile APPs compatible with Latest ios and Android mobile phones. (Mobile app must support ios version 12.0 and above, Android version 9.0 and above).</p> <p>Device firm ware should be capable of pushing data to our servers as per our specification.</p>	<p>2000</p>
<p>3.</p>	<p>AC powered Wi-Fi based RH & Temp Sensor</p> <p>Technical Specifications:</p> <p>Should Support Wi-fi network: 802.11 b/g/n (2.4GHz) Operating Relative Humidity: 5~95% Operating Temperature: -10-60°C Humidity and temperature Range: Mounting Box: Dongle type, should fit into existing 5V adapter Power Supply: AC100~240V,50/60Hz Power Input: DC 5V1A (USB) Built in high sensitivity temperature and humidity alarm Equipment supplied should have intuitive mobile APPs compatible with Latest ios and Android mobile phones. (Mobile app must support ios version 12.0 and above, Android version 9.0 and above).</p> <p>Device firm ware should be capable of pushing data to our servers as per our specification.</p>	<p>220</p>

Items to be supplied off-the-shelf

S. No	Item Name and Technical Specifications	Quantity
1.	<p>Plug Load Monitoring Device</p> <p>Technical Specifications: Should Support Wi-fi network: 802.11 b/g/n (2.4GHz) Operating Relative Humidity:5~95% Operating Temperature: -10-60°C Power Supply: AC100~240V,50/60Hz Voltage Measurement Accuracy: +/- 1% Current Measurement Accuracy: +/- 1% Ability to Measure Power and Energy of the Load Connected. Maximum Load: 16 Ampere. Ability to Create custom Schedules to Turn ON and OFF as desired. Equipment supplied should have intuitive mobile APPs compatible with Latest ios and Android mobile phones. (Mobile app must support ios version 12.0 and above, Android version 9.0 and above). Mounting: Should be able to fit into Indian power sockets</p> <p>Mandatory to supply Royalty free perpetual license of device Application Programming Interface (API), to interface the device with our project specific Applications (both Mobile phone based and online server based). Free ongoing support to be provided for this integration for the duration of project.</p>	880
2.	<p>Window Opening / Closing sensor</p> <p>Technical Specifications: Should Support Wi-fi network: 802.11 b/g/n (2.4GHz) Operating Relative Humidity:5~95% Operating Temperature: -10-60°C Power Supply: Battery Only Sensing Technology: Magnetic reed switch type Mounting Kit: Has to be supplied along with the product. Suitable enclosure that can be attached using adhesive tape Equipment supplied should have intuitive mobile APPs compatible with Latest ios and Android mobile phones. (Mobile app must support ios version 12.0 and above, Android version 9.0 and above).</p> <p>Mandatory to supply Royalty free perpetual license of device Application Programming Interface (API), to interface the device with our project specific Applications (both Mobile phone based and online server based). Free ongoing support to be provided for this integration for the duration of project.</p>	440

3.	<p>IR Devices Control</p> <p>Technical Specifications:</p>	440
	<p>Power Supply: Input AC 100-240V 50 Hz Protocols Supported: Wi Fi (2.4 GHz) IR Blaster Frequency: 20KHz - 60 KHz Infrared Range: Up to 10 meters IR Coverage angle: 360 degree Operating Relative Humidity:5~95% Operating Temperature: -10-60°C Ability to create Scenes or Rules is a must. Equipment should have Infrared Signal learning capability. Equipment should have the ability to download most IR Remotes available in the India market. Especially the remotes of ACs, Televisions and Media players is a mist. Equipment supplied should have intuitive mobile APPs compatible with Latest ios and <u>Android</u> mobile phones. (Mobile app must support ios version 12.0 and above, Android version 9.0 and above).</p> <p>Mandatory to supply Royalty free perpetual license of device Application Programming Interface (API), to interface the device with our project specific Applications (both Mobile phone based and online server based). Free ongoing support to be provided for this integration for the duration of project.</p>	
4.	<p>Temperature and Humidity Monitoring Device</p> <p>Technical Specifications:</p> <p>Operating Relative Humidity:5~95% Operating Temperature: -10-60°C Power Supply: Built-in battery capable of lasting for up to 6 months. Ability to log data of RH and Temperature up to 12000 samples. Equipment supplied should have intuitive mobile APPs compatible with Latest ios and Android mobile phones. (Mobile app must support ios version 12.0 and above, Android version 9.0 and above).</p> <p>Mandatory to supply Royalty free perpetual license of device Application Programming Interface (API), to interface the device with our project specific Applications (both Mobile phone based and online server based). Free ongoing support to be provided for this integration for the duration of project.</p>	2000

It is highly recommended to provide a single mobile App that can be used for Installation, Data extraction and Real Time Monitoring of all the above devices.

Technical Bid format:

Annexure '7'

Items Manufactured as per IITH Specification

S. No	Item Name and Technical Specifications	Mention any specifications improved/better than defined
1.	Wi-fi Energy Manager Technical Specifications:	
2.	Meter Level Energy Monitoring Device Technical Specifications:	
3	AC powered Wi-Fi based RH & Temp Sensor Technical Specifications:	

Items to be supplied off-the-shelf

S. No	Item Name and Technical Specifications	Proposed Equipment make and Model Number	Mention any specifications improved/better than defined
1.	Plug Load Monitoring Device Technical Specifications:		
2.	Window Opening/Closing sensor Technical Specifications:		
3.	IR Devices Control Technical Specifications:		
4.	Temperature and Humidity Monitoring Device Technical Specifications:		

Items Manufactured as per IITH Specification

S. No	Item Name and Technical Specifications	Quantity	Manufacturing Cost per unit			Total Price	
			Component Cost in INR / USD	Fabrication Cost in INR / USD	Consumable Cost in INR / USD	USD Component	INR Component
1.	Wi-fi Energy Manager	220					
2.	Meter Level Energy Monitoring Device	2000 —					
3	AC powered Wi-Fi based RH & Temp Sensor	220					

Items to be supplied off the shelf

S. No	Item Name and Technical Specifications	Quantity	Unit Price		Total Price	
			Component Cost in INR / UDS	Consumable Cost in INR/ USD	USD Component	INR Component

1.	Temperature and Humidity Monitoring Device	2000				
2.	Window Opening / Closing sensor	440				
3.	Plug Load Monitoring Device	880				
4.	IR Control Devices	440				

Grand Total:

USD Component (in figures and in words):

INR Component (in figures and in words):

Important Instructions to Bidders

1 IIITH reserves the right to accept or reject any bid and to finalize the pre-qualification process and reject all bids at any time, without assigning any reason or incurring any liability to the bidder. 2 The **pre bid meeting** will be held on **September 30, 2019** at Vindhya – C2, 1st floor, CBS - B2-207, IIIT Hyderabad Campus, Gachibowli, Hyderabad.

3 **Submission of Bids:** Bids are to be submitted with subject as **TENDER NO: IIITH -**

TENDER/RESIDE/001 as date of receiving of Bids is **Oct 9, 2019 at 13:00 hrs (IST)**.

4 **The following must be submitted as a part of your bid:**

- a. Price bid on company's letter head as per format given at **Annexure '8'**.
- b. Duly filled format for submission of vendor data as given at **Annexure '5'**.
- c. Proposal/purchase order with technical details of at least two previous orders executed by the firm.

5 The bidders should have supplied similar Engineering design and prototyping Services to reputed companies/corporates, copy of purchase order/rate contracts should accompany the technical bid document. Provide details of similar products developed and manufactured previously 6 **Validity of**

bid: The bid shall be valid for 90 days from the last Date for Submission of bid i.e. **January 9th, 2020 at 13.00 hrs (IST).**

- 7 Put technical and commercial proposals in two separate sealed envelopes. Technical proposal should contain un-priced detailed BoM.
- 8 Proposed schematics and Bill of Materials of the devices to be manufactured as per IIIT H specifications have been attached along with the Tender, bidder can suggest superior version to this design.
- 9 Bids needs to be submitted on or before the due date & time. We may not consider late submissions.
- 10 The bidder needs to provide operational training for IIIT staff on the supplied equipment. 11 Our Institute is eligible for a concession on Customs Duty against customs notification 51/96, dated 23/07/1996. Quoted price should be CIF Hyderabad.
- 12 Our Institute is eligible for a concessional GST OF 5%.
14. Part numbers for all the quoted products should be specified.
15. Detailed Technical specification sheet should be enclosed.
16. A letter of intent must be submitted along with the bid document
17. The bidder must be Original Equipment Manufacturer (OEM) or authorized distributor of the systems. A copy of the authorization letter issued by the OEM should be enclosed.
18. Bidder must specify the exact make/model of parts quoted.
19. **Bid Security:** Tenderer should submit an EMD of value INR 2,00,000/- (two Lakh) along with bid by way of Demand Draft drawn in favor of ***International Institute of Information Technology, Hyderabad***. The bid without EMD will be treated as unresponsive and will be rejected. EMD of the

successful bidder will be treated as performance guarantee deposit and the same will be returned after successful completion of one year after installation.

20. Specified number of samples must be provided prior to issuing of work order. The samples will be tested and if found satisfactory, work order will be issued to the selected bidder.
21. All disputes arising shall be subject to the jurisdiction of Hyderabad.

Format for submission of Vendor Data

1	Name of vendor	
----------	-----------------------	--

2	Registered Address	
	Phone No	
	Fax No	
	Name of Proprietor/	
	CEO/Chairman	
	Phone/Mobile No	
	Email id	
3	Website	
4	GST related information	
	GST No	
5	Income Tax related information	
	PAN No	
	PAN reference no (in case PAN applied for) —	
6	Bank related information —	
	Bank name	

Branch name	
Bank address	
Bank phone no	
Bank fax no	
Bank MICR Code (9 digit)	
RTGS-IFSC Code	
Account type	
Account no	

I certify that the information given herein is correct to the best of my knowledge and belief.

Signature of the authorized Signatory of the Company along with Seal

APPENDIX

Wi Fi based Temp RH Sensor BoM

Item	Quantity	Reference	Part	PCB Footprint	PART_NUMBER	DIGI_PART NUMBER
1	2	C2, C1	10uF	CC-0402	GRM155C81C225ME15D	490-10444-1-ND
2	1	C3	10uF	CC-0402	GRJ155R60J106ME11D	490-13211-1-ND
3	3	C4,C6,C7	100nF	CC-0402	CC0402KRX5R9BB104	311-3342-1-ND
4	1	C5	1nF	CC-0402	CC0402KRX7R7BB102	311-1352-1-ND
5	1	D1	DIODE TS BIDIR	SOD323	DESD5V0U1BA-7	DESD5V0U1BA-7DICTND
6	1	D2	LED	CC-0805	LOCAL	LOCAL
7	1	J1	CON4	USB A	480372200	WM3983CT-ND
8	2	J2,J4	CON4	2MM /WIRE	LOCAL	LOCAL
9	1	J3	CON3	SMD	NC	NC
10	1	L1	2.2uH	CC-0805	LQM21PN2R2MCHD	490-15992-1-ND
11	1	L2	BEAD	CC-0402	MMZ1005S601CT000	445-2162-1-ND
12	1	RT1	PTC	CC-1206	1206L075THYR	F3370CT-ND
13	2	R1,R6	10K	CC-0402	RCA040210K0FKEDHP	541-3241-1-ND
14	4	R2,R3,R4,R5	4.7K	CC-0402	RT0402DRD074K7L	311-2191-1-ND
15	1	R7	1K	CC-0402	AT0402DRD071KL	311-2102-1-ND
16	2	SW1,SW2	SPST	SMD-RA	PTS810 SJM 250 SMTR LFS	CKN10502CT-ND
18	1	U1	TPS6229X	WDFN 6	TPS62291DRVR	296-41859-1-ND

19	1	U2	ESP32-WROOM-32	QFN-38	ESP32-WROOM-32	1904-1010-1-ND
20	1	U3	SHT21	UTDFN	SHT21	1649-1005-1-ND
21	1	BOX	BOX	BOX	1551USB2CLR	HM1462-ND

Wi Fi based Energy Manager BoM

item	quantity	reference	part	pcb footprint	part_number	digi_part number
1	1	C1	10uF/35V	CC-0805	C2012X5R1V106M085AC	445-14419-1-ND
2	6	C2,C7,C20,C24, C3(ESP), C5(ESP)	100nF	CC-0402	UMK105B7104KV-FR	587-3498-1-ND
3	1	C3	0.047uF	CC-2220	GA355ER7GB473KW01L	490-11146-1-ND
4	2	C4,C5	4.7uF/400V	DIP-2PIN	475CKE450MLN	1572-1732-ND
5	1	C6	100uF/35V	DIP-2PIN	107CKE025MEM	1572-1039-ND
6	1	C8	10uF	CC-0805	C2012X5R1V106M125AC	445-14420-1-ND
7	1	C9	1nF	CC-0402	GCM155R71H102KA37D	490-4761-1-ND
8	2	C21,C10	10uF	CC-0402	ZRB15XR60J106ME12D	490-13251-1-ND
9	4	C12,C11,C1(ESP),C2(ESP)	2.2uF	CC-0402	GRM155C81E225KE11D	490-13234-1-ND
10	2	C13,C14	18pF	CC-0402	CC0402FRNPO9BN180	311-1643-1-ND
11	13	C15,C22,C25,C26,C27,C28,C29,C30,C31,C32,C33,C34,C35	2.2nF	CC-0402	GCM155R71H222JA37D	490-14353-1-ND

12	3	C16,C18,C23	4.7uF	CC-0402	GRM155R60J475ME 87D	490-5408-1-ND
13	2	C17,C19	220nF	CC-0402	GRT155R61E224ME0 1D	490-12266-1-ND
14	3	D1,D2,D3	ES1JFL	SOD- 123F	ES1JFL	ES1JFLCT-ND

15	1	D4	DIODE SCHOTT KY	SOD- 123F	SS24FL	SS24FLCT-ND
16	3	D5,D6,D7	DIODE TVS	SOD-923	ESD9X5.0ST5G	ESD9X5.0ST5GOS CT-ND
17	1	J1	JUMPER 3PIN	SMD		
18	2	J2,J3	CON6	5.08MM		
19	1	J4	JUMPER	SMD		
20	1	J5	CON10	10POS 1MM R/A	522071033	WM10942CT-ND
21	1	L1	1mH/130 mA	DIP- 2PIN	B78108S1105J009	495-76030-1-ND
22	1	L2	1mH/250 mA	DIP- 2PIN	7447462102	732-2576-ND
23	1	L3	22uH	CC-1210	CBC3225T220MR	587-1626-1-ND
24	2	L4,L1(ESP)	BEAD	CC-0402	MMZ1005S601CT000	445-2162-1-ND
25	10	L5,L6,L7,L8,L9,L10,L11,L12,L13,L14	BEAD	CC-0805	BLM21BD152SN1D	490-1048-1-ND

26	1	RV1	MOV 14MM/275 V	DIP- 2PIN	B72214P2271K101	495-4291-ND
27	1	R1	26.7K	CC-0402	ERJ-2RKF2672X	P26.7KLCT-ND
28	1	R2	11.8K	CC-0402	ERJ-6ENF1182V	P11.8KCDKR-ND
29	1	R3	2.49K	CC-0402	RC0402FR-072K49L	311-2.49KLRCT-ND
30	1	R4	8.2R/1W	DIP- 2PIN	FKN1WSJR-52-10R	10DLCT-ND
31	1	R5	3.9K	CC-0402	ERJ-2GEJ392X	P3.9KJCT-ND
32	1	R6	100K	CC-0402	ERJ-2RKF1003X	P100KLCT-ND
33	1	R7	200K	CC-0402		
34	1	R8	59.2K	CC-0402		
35	13	R9,R13,R14,R17,R18,R21,R22,R25,R26,R27,R30, R33,R36	1K	CC-0402	AT0402DRD071KL	311-2102-1-ND
36	1	R10	5M	CC-0402	HVC0402T5004JET	HVC0402T5004JET CT-ND
37	5	R11,R12, R1(ESP),R4(ESP),R5(ESP)	10K	CC-0402	RCA040210K0FKED HP	541-3241-1-ND
38	6	R15,R16,R19,R20,R23,R24	6.81R	CC-0805	CRCW08056R81FKE A	541-6.81CCCT-ND
39	6	R28,R29,R31,R32,R34,R35	499K	CC-0805	RCV0805499KFKEA	BC2808CT-ND
40	1	U4	LNK320X	SO-8C	LNK3204D-TL	596-1540-1-ND
41	1	U2	AOZ1282 CI	SOT-23- 6	AOZ1282CI	785-1613-1-ND
42	2	— U3,U1(ESP)	AP2112	SOT-25	AP2112K-3.3TRG1	AP2112K- 3.3TRG1DICT-ND
43	1	U4	ADE7880	WFQFN-	ADE7880ACPZ	ADE7880ACPZ-ND

				40		
44	1	Y1	16.384MH z	SMD-4	ABM8G- 16.384MHZ4Y-T3	535-10908-1-ND
45	1	BOX			DMB-4770	377-1807-ND
46	1	CABLE FFC 10POS			0152670251	WM10543-ND
47	1	U1(ESP)	ESP CHIP	Module	ESP32- WROVER-B (16 MB flash)	
48	1	C4(ESP)	22UF		ZRB18AR61A226ME0 1L	

Meter Level Energy Monitoring Device BoM

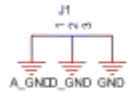
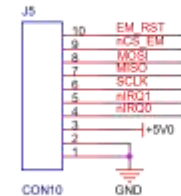
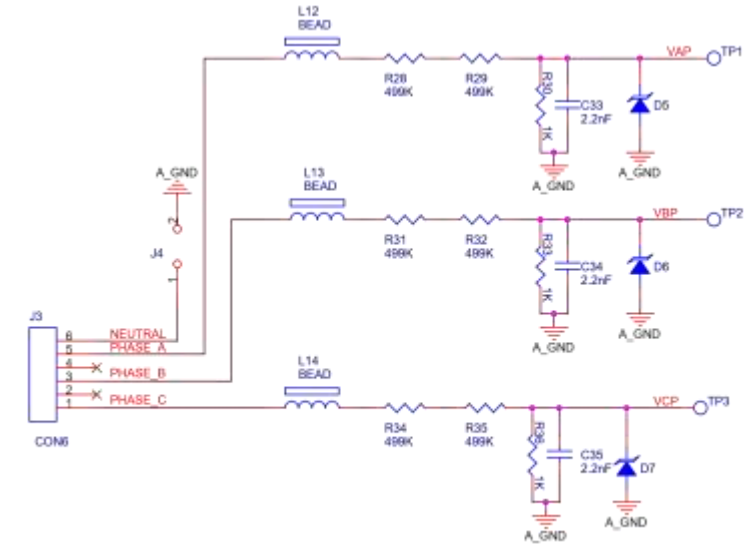
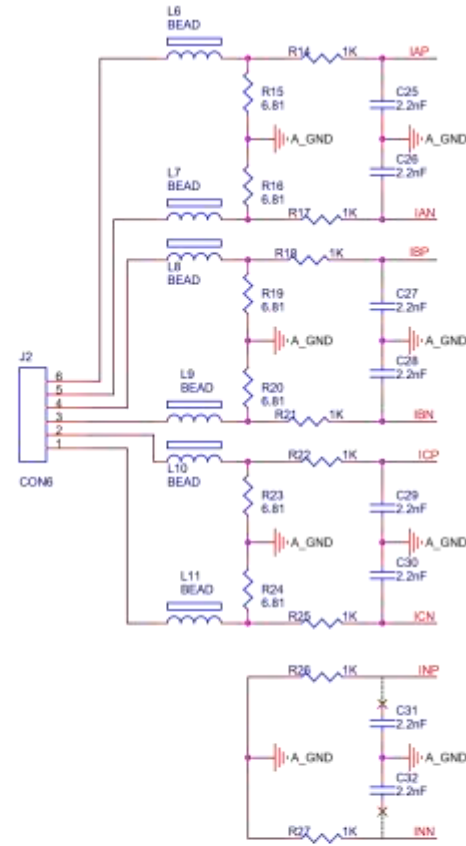
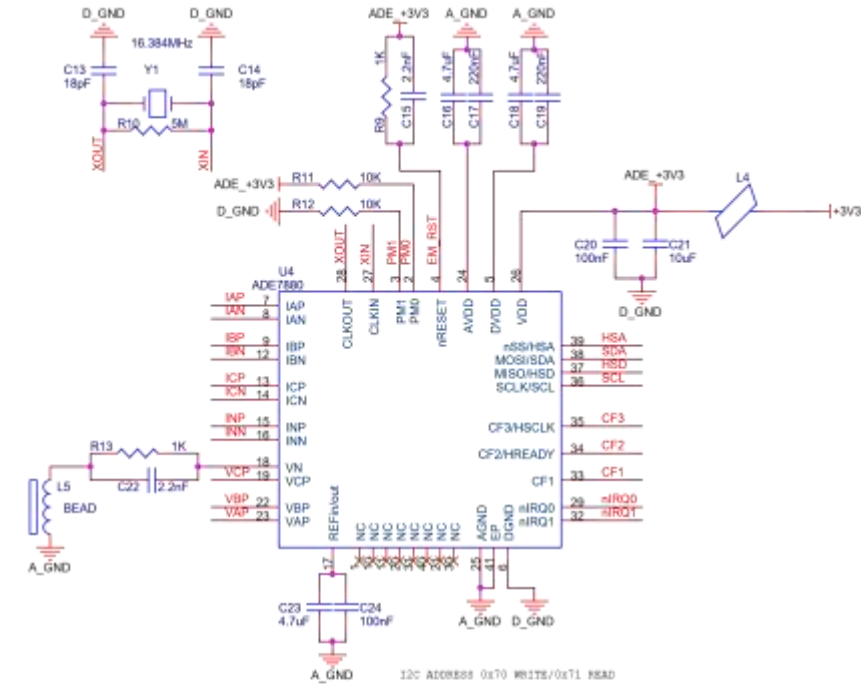
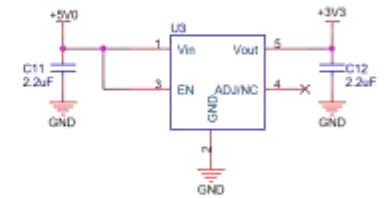
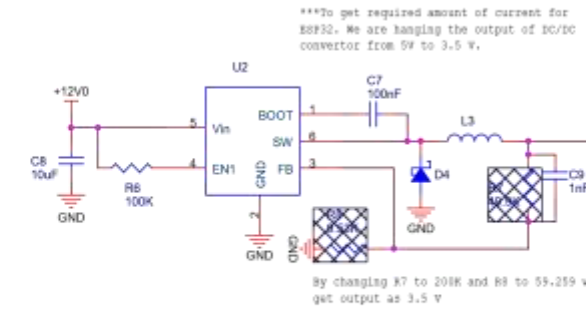
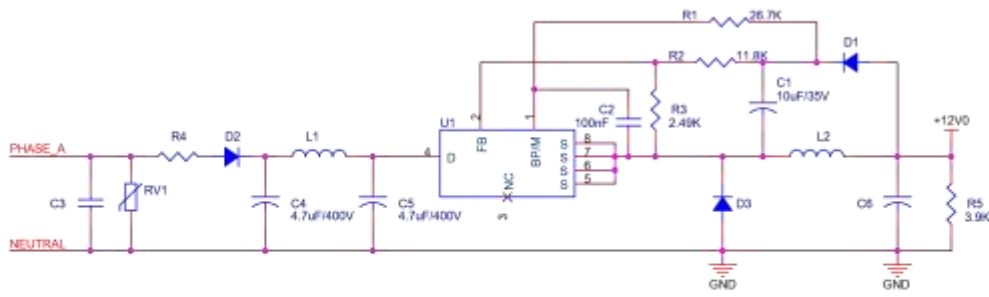
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1	1	BT1	3V0	BC2AAW	BC2AAW-ND
2	1	BT2	3V0	1069	36-1069-ND
3	2	C1,C2	10uF	JMK107BJ106MA-T	587-1256-1-ND
4	2	C5,C6	12pF	GJM1555C1H120JB01D	490-3115-1-ND
5	2	C13,C7	1uF	CL05A105MP5NNNC	1276-1448-1-ND
6	1	C8	4.7uF	CL05A475MQ5NQNC	1276-1483-1-ND
7	17	C9,C10,C11,C16,C17,C18,C22,C23,C24,C27,C29, C32, C33,C34,C35,C36,C37	100nF	CGA2B1X7R1C104K050 BC	445-5613-1-ND
8	2	C21,C12	100pF	GRM1555C2A101JA01D	490-7311-1-ND
9	1	C14	0.8pF	CC0402BRNPO9BNR80	311-3711-1-ND
10	1	C15	1.2pF	GRM1555C1H1R2BA01D	490-6209-1-ND
11	2	C19,C20	13pF	CL05C130JB5NNNC	1276-1642-1-ND
12	3	C25,C26,C28	10uF	293D106X0016A2TE3	718-1956-1-ND
13	2	C31,C30	18pF	CL05C180JB5NNNC	1276-1140-1-ND
14	2	D2,D3	LED	599-0110-007F	350-4353-1-ND
15	6	D5,D6,D7,D8,D9,D10	DIODE TVS	DESD5V0U1BA-7	DESD5V0U1BA7DICT- ND
16	1	E1	ANTENNA	2450AT18A100E	712-1005-1-ND
17	3	J4,J5,J6	CON2 male	691321300002	732-2082-ND
18	3	J4,J5,J6	CON2 female	6.91361E+11	732-2076-ND
19	1	LX1	1uH	DFE201612E-1R0M=P2	490-16593-1-ND
20	1	LX2	10uH	LQM18FN100M00D	490-4025-1-ND
21	1	LX3	15nH	L-07C15NJV6T	712-1408-1-ND
22	3	L1,L3,L10	BEAD	MPZ1608S601ATA00	445-2205-1-ND

23	1	L2	3.9nH	MLG1005S3N9BTD25	445-16303-1-ND
24	6	L4,L5,L6,L7,L8,L9	BEAD	BLM21BD152SN1D	490-1048-1-ND

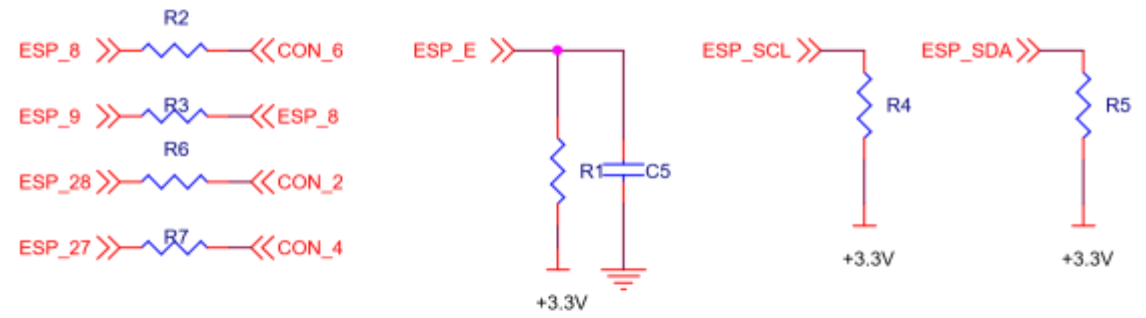
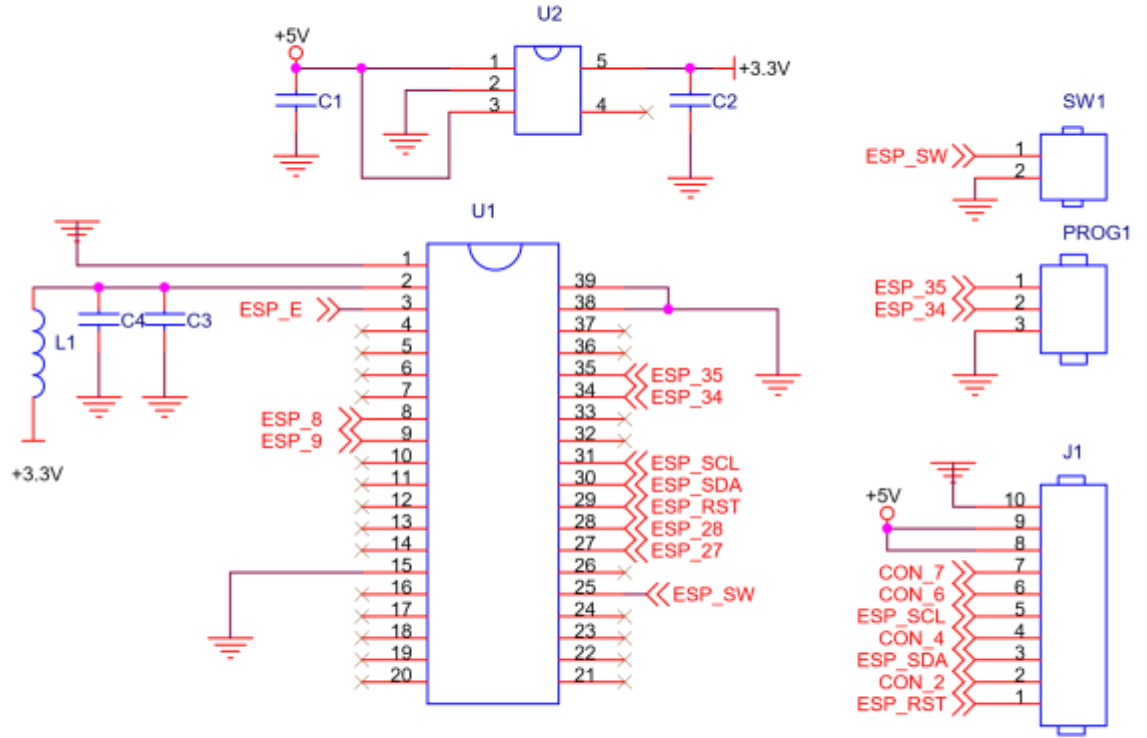
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26	1	Q2	MOSFET N	AO3420	785-1014-1-ND
27	1	R1	33M	HMC0402JT33M0	HMC0402JT33M0CTND
28	2	R23,R2	1M	RMCF0402FT1M00	RMCF0402FT1M00C T-ND
29	1	R3	220K	CRGCQ0402F220K	A129655CT-ND
30	6	R4,R8,R9,R10,R13,R14	10K	RC1005F103CS	1276-3431-1-ND
31	1	R5	133K	RC0402FR-07133KL	YAG2970CT-ND
32	4	R6,R7,R11,R12	4.7K	RC0402JR-074K7L	311-4.7KJRCT-ND
33	9	R15,R16,R17,R18,R19,R20,R21,R22,R36	22R	RC0402FR-0722RL	311-22.0LRCT-ND
34	6	R24,R27,R28,R31,R32,R35	1K	AT0402DRD071KL	311-2102-1-ND
35	1	SW1	SPST	PTS645SM43SMTR92 LFS	CKN9112CT-ND
36	1	U1	MAX17222	MAX17222ELT+T	MAX17222ELT+TCTND
37	1	U2	NRF52832	NRF52832-QFAA-R	1490-1052-1-ND
38	1	U3	MCP7940M	MCP7940NT-I/MNY	MCP7940NT-I/MNYCT-ND
39	1	U4	W25Q32JVSSI Q	W25Q32JVSSIQ	W25Q32JVSSIQ-ND
40	1	U5	MCP3919	MCP3919A1-E/SS	MCP3919A1-E/SSND
41	1	Y3	32.768KHz	ABS05-32.768KHZ-9-T	535-11897-1-ND

42	1	Y2	32MHz	ECS-320-8-36Q-CWY-TR	XC2729CT-ND
43	1	Y4	3.579545MHZ	ABLS2-3.579545MHZD4Y-T	535-9855-2-ND
44	2	CT	CT's	Split core current transformer SCT013	60A AC:0.333V AC 0.6m cable without audio plug
45	1	PCB	PCB		
46	2	AA Batteries	AA Batteries	AA battery (Duracell)	
47	1	CR1620, 3V	CR1620, 3V	maxcell 3V CR1620 battery	
48	1	Enclosure	Enclosure	Top+Bottom +Accessories (Magnet dia 10mm * 3mm-Hight)	
49	1	Product label	Product label		
50	1	Manual	Manual		
51	1	Packing Boz	Packing Box		

WiFi Energy Manager

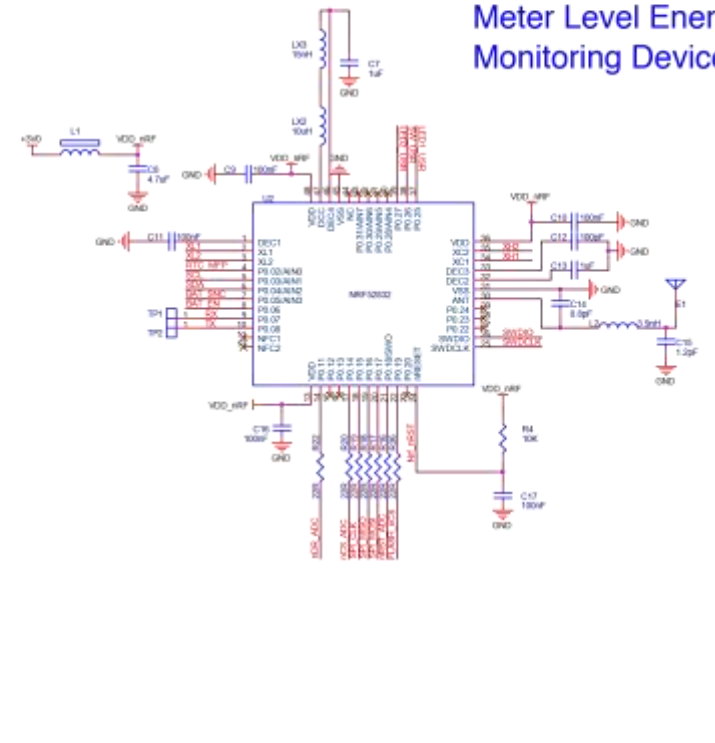


WiFi Energy Manager



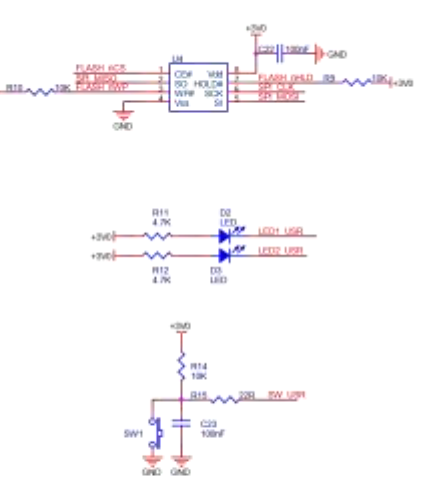
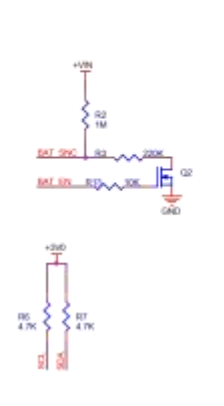
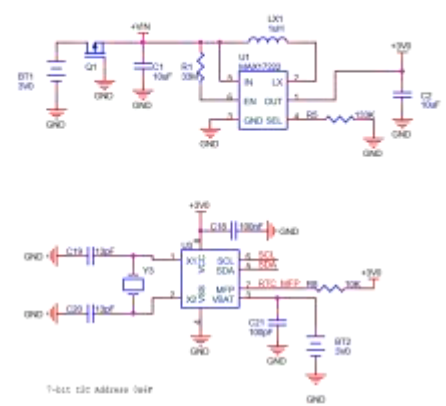
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Meter Level Energy Monitoring Device



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- >>> SP_MISO
- >>> SP_MOSI
- >>> HCE_ADC
- >>> HSI1_ADC
- >>> HSI2_ADC
- >>> ADC_CLKIN

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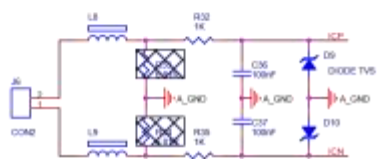
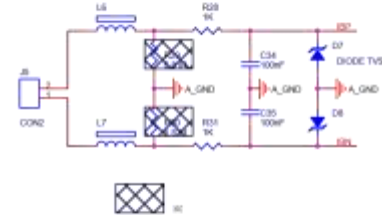
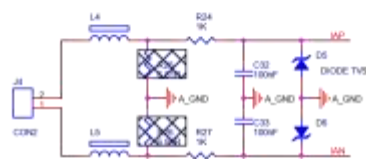
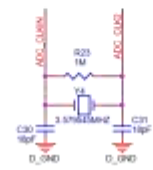
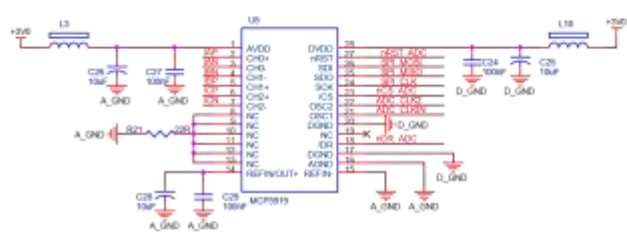
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Meter level Energy Monitoring Device



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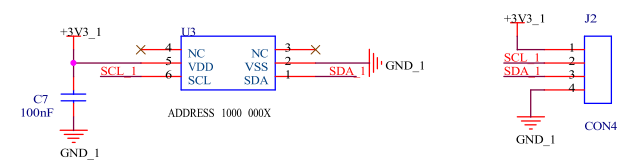
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WiFi based RH & Temp Sensor

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WiFi based RH & Temp Sensor

