



राष्ट्रीय प्रौद्योगिकी संस्थान रायपुर
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NITRR/S&P/IT/2019/1906

Dated: 06/11/2019

//Corrigendum//

With reference to Open tender no NITRR/S&P/IT/OT/2019/1717 Dt: 15/10/2019 which was due on 08/11/2019 for Department of Information Technology, the specification given in tender document will incorporate specification as per addendum as enclosed. Also the dates are revised as follows:-

Last date & time for submission of bids :13/11/2019 Upto 18:00Hrs

Date & time for opening of bid :15/11/2019 At 16:00 Hrs.

All other details remain unchanged. All bidders are requested to quote as per the amendments.

**Registrar
NIT Raipur**

Addendum

SI	Particular	Detailed Specification	Qty	Technical Specification
1	Internet of Things Lab Setup	Arduino	50	The Arduino Uno Wi-Fi, ATmega328P with an ESP8266 Wi-Fi Module integrated, 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz ceramic resonator, a USB connection, a power jack, an ICSP header, and a reset button.
		Node MCU	25	ESP32 development board: board used with 2.4 GHz dual-mode Wi-Fi and Bluetooth chips , power and RF properties , with support LWIP protocol, Supporting three modes: AP, STA, and AP+STA Supporting Lua program, easily to develop
		Wimos Kit	10	WeMo's d1 mini development board, which includes the esp8266 soc, usb-to-serial (ch340g) ic, this kit should includes 4 expansion boards (shields). Features: :- 1xd1 mini v2 esp8266 development board (with onboard usb-to-serial) - 1xd1 mini dht11 shield - 1xd1 mini micro SD card shield - 1xd1 mini relay shield - 1xd1 mini protoboard shield - 1x4in USB micro-b cable note
		Bluetooth Sensor Node	25	Buetooth protocol: Bluetooth Specification v2.0+EDR Frequency: 2.4GHz ISM band Modulation: GFSK(Gaussian Frequency Shift Keying) Emission power: ≤4dBm, Class 2 or better Sensitivity: ≤-84dBm at 0.1% BERCSR Bluetooth Chip Solution Enhanced Data Rate (EDR) compliant with V2.0.E.2 of the specification for both 2Mbps and 3Mbps modulation modes Full Speed Bluetooth Operation with Full Piconet Support and Scatternet Support, and RoHS Compliant UART interface and with baud rate setup function
		Zigbee Sensor Node	30	Integrated, Wire Antenna Interoperable with other ZigBee-compliant devices, Programmable versions with onboard microprocessor Data Rate: RF 250 Kbps, Serial up to 1 Mbps Range: Indoor 200 ft (60 m), Outdoor (LOS) 4000 ft (1200 m) Transmit Power: 3.1 mW (+5 dBm) Channels: 16 channels
		Wifi Sensor Node	25	Motion Sensor:MPU6050 Magnetometer:MAG3110 Sensor (Humidity and Temperature):HTS221 Sensor (Light):BH1750FVI MCU:ESP32 chip Barometer:FBM320 OLED Display:0.96" blue and yellow OLED display Power Supply:USB power and lithium battery
		Bluetooth/ Zigbee/ WiFi Sensor Tag	10	802.11 b or g or n protocol Wi-Fi 2.4 GHz, support WPA or WPA2 Super small module size (11.5mm x 11.5mm) Deep sleep power <10uA Power down leakage current < 5uA

				Integrated low power 32-bit MCU Wake up and transmit packets in < 2ms Standby power consumption of < 1.0mW (DTIM3)
		GSM Module	25	Compatible with arduino, raspberry pi, arm, avr, pic, 8051, etc. Option for connecting mic and speaker directly to gsm modem for calls (line in also available) Supports communication through rs232 with db9 connector, ttl pins and i2c pins call sms gprs facility - mic input, line input and speaker output pins
		Wifi Router	5	300Mbps wireless speed , Two antennas, wireless security encryption at a push of WPS button, IP based bandwidth control , Compatible with IPv6 -the more recent Internet Protocol version,Compatible with input type RJ-45(Ethernet Cable) .
		Ethernet Module	5	Based on the W5100Based on the Wiznet W5100 allows an Arduino board to connect to the internet, IC Chip Wiznet W5100, Connection speed 10/100Mb, Operating Voltage(VDC) 5
		IoT Gateway with WiFi	15	AnalogInputs -8 (0-5v),Digital Input -8 (5v/12v). Digital Output -8 (5v/12v). ZigBee Interface – upto 150 or moreZigBee sensors can be connected , Range → 700 mts or above line of sight , Server Connectivity through – Wifi. Additional Interfaces – CAN OBD Rs485. Power Supply – 9v to 36v
		Temperature Sensor	25	Can be Calibrated directly in Degree Celsius (Centigrade) Linear at 10.0 mV/°C scale factor 0.5°C accuracy guarantee-able (at a25°C) Rated for full -55°C to a 150°C range Operating range from 4 to 30 volts Less than 60 mA current drain Low self-heating, 0.08°C in still air Non-linearity only 0.25°C typical
		Light Sensor	25	Operating voltage (VCC): 3 V to 5V Operating current: 120µA (typical) 190µA (max) Operating Temperature: -40°C ~ +85°C Photodiode sensitive to UV-A and UV-B Embedded operational amplifier Analog voltage output
		Smoke Sensor	25	Sensitivity to Ammonia, Sulphide and Benzene steam Sensitive for benzene, alcohol, smoke Adjustable sensitivity Signal output indicator Output voltage boosts along with the concentration of the measured gases increase.
		Humidity Sensor	15	Power Supply : 3.3~5.5V DC Output : 4 pin single row Measurement Range : Humidity 20-90%RH, Temperature 0~50°C Accuracy : Humidity +-5%RH, Temperature +-2°C Resolution : Humidity 1%RH, Temperature 1°C

				Interchangeability : Fully Interchangeable Long-Term Stability : <±1%RH/year Pin 1: Power +Ve (3.3VDC to 5.5VDC Max wrt. GND) Pin 2: Serial Data Output Pin 3: Power Ground or Power –Ve
		Force Sensor	10	Sensing Area diameter (mm) 14 or more Min Pressure 100 gm Max Pressure 10 Kg Diameter (mm) 18 Length (mm) 60 Weight (gm) Shipment Weight 0.105 kg Shipment Dimensions 10 x 5 x 2 cm
		Pressure Sensor	25	Pressure: 300 to 1100 hpa; Temperature: 0 to 65°C Supply Voltage: 1.2 to 3.6V Average Current Consumption: 2.74 Microampere Average measurement time: 5.5 milisecond
		Motion Sensor	25	Wide Working Voltage Range: DC 4.5V- 20V Current Drain: <60uA Detection Angle: <140° Detection Distance: 3 to 7m (can be adjusted) Blockade time: 2.5s (Default) Work temperature: -20~+80°C
		Speed Sensor	25	Using optical coupling sensor, width 5mm. Good signal and waveform, with a strong driving ability for more than 15mA. Use wide voltage comparer.
		Vibration Sensor	10	closed type vibration sensor Comparator output, clean signal, good waveform, strong driving ability, >15mA Operating voltage 3.3V ~ 5V Output format: digital switching output (0 and 1) Using a wide voltage LM393 comparator With bolt holes for easy installation
		pH sensor	5	PH range: 0-14 PH Temperature range: 0-60°C Zero-point: 7 ± 0.5PH Alkali Error: 0.2PH Theoretical Percentage Slope: ≥98.5% Internal Resistance: ≤250MΩ Response Time: ≤1min
		Camera Sensor Module	5	Support VGA, CIF and from CIF to 40 x 30 format; Vario Pixel method for sub-sampling; Auto Image Control: AEC, AGC, AWB, ABF, ABL;C; Image Quality Control: Color saturation, hue, gamma, sharpness and anti-blooming; ISP includes noise reduction and defect correction; Support image

				scaling; Lens shading correction; Flicker 50/60Hz auto detection; Color saturation level auto adjust; Edge enhancement level auto adjust; De-noise level auto adjust High sensitivity for low light applications
		Dust Sensor Module	5	Sensitivity : 0.5V/(100µg/m ³) Measurement range : 500µg/m ³ Power : 2.5V~5.5V Operating current : 20mA(max) Operating temperature : -10°C~65°C Storage temperature : -20°C~80°C Life time : 5 years Mounting holes size : 2.0mm Air hole size : 9.0mm
		Alcohol Sensor	10	Input voltage: 5 +/- 0.2V; DOUT: Digital signal output LED lights on when detected gas; AOUT: analog signal output; GND: Power supply negative pole; Dimensions: 1.22 in x 0.71 in x 1.06 in (3.1 cm x 1.8 cm x 2.7 cm); The main chip: LM393, MQ-3 gas sensor Current consumption = 150mA
		Heartbeat Sensor	10	Pulse amplification and noise cancellation circuitry to the hardware. Pulse Sensor works with either a 3V or 5V Arduino.
		Tilt Sensor	10	Sensor can sense changes in body angle Adjustable sensitivity Operating voltage 3.3v-5v Output format: Digital switching outputs (0 and 1)
		Air Quality Sensor	15	Sensitivity to Ammonia, Sulphide and Benzene steam Sensitive for benzene, alcohol, smoke Fast response and recovery Adjustable sensitivity Signal output indicator Output voltage boosts along with the concentration of the measured gases increases.
		Water Quality Sensor	10	Working voltage: 5V Working Current: <20ma Interface: Analog Width of detection: 40mm×16mm Working Temperature: 10°C~30°C Arduino compatible interface Low power consumption Output voltage signal: 0~4.2V

		DC Motor	10	motor should gives 500 RPM at 12V, motor should run smoothly from 4V to 12V and gives the wide range of RPM, and torque. The shaft should have a hole for better coupling. Operating Voltage(V): 12 Rated Torque(kg-cm): 0.7 Stall Torque(kg-cm): 3
		LED Set Assorted	5	Size: 5 mm Color: White yellow red green blue,each 100pcs
		Relay Board	25	Channel - 4, Operating Voltage(VDC)- 5, Current Capacity at AC250V - 10A, Current Capacity at DC30V- 10A, VCC-connect 5V power positive, GND- connect 5 V power negative, IN1- IN4- signal trigger, low active
		IR Module Set + Remote	10	Transmission Distance: 8m or above (specific and surroundings, the receiver sensitivity and other factors) Effective angle: 60 degrees Sticking Material: 0.125mmPET, the effective life of 20,000 times. Stable quality, cost-effective Quiescent current 3-5uA, dynamic current 3-5mA
		Breadboard Jumper Wire	1000	Jumper wires Male to male 75 Pcs(1 Pack) Breadboard jumper wires
		LoRa Gateway & Sensor Module set	5	LoRa Starter Kit 868, LoRa IoT Development Kit: Include LoRa Node and LoRa Gateway Wireless 433/868/915/920Mhz, LoRaWAN Temperature & Humidity sensor
		IoT Board Kit	5	Global LTE IoT Connectivity Development kit:Synergy S5D9 MCU baseboard Quectel ultra-low power BG96 cellular module supports 4G/LTE Cat-M1, Cat-NB1, and 2G/EGPRS Sensors for sampling and sending measurement data to the cloud: digital light sensor for ambient/infrared light measurement MEMS sensor for acceleration and gyroscopic measurement MEMS three-axis geomagnetic sensor for compass navigation MEMS sensor for gas, temperature, humidity, and pressure measurements analog microphone for sound and voice capture
		OBLU Footprint Navigation System with Software	5	Development Board/:Four 6-axis IMUs (3-axis Accelerometer + 3-axis Gyroscope) IMUs' placement in 2x2 array form loading point controller AT32UC3C with 512 Kb internal flash luetooth Low Energy (BLE) 4.1 And USB 2.0 Interfaces SB (Bootloader) , Access to 3.3 V, 5 V, GND and RESET Powering with Li-ion battery and USB; 500mAH battery Max current: 100 mA nboard LED indicators; Reset button oard dimensions: 35.0 X 25.9 X 11.8 Mm, Casing/:LS printed snap-fit casing for oblu penings to access USB connector, berg-connectors and switches ouses oblu PCB and a 500 mAH Li-poly battery , Casing dimensions: 40 x 29.7 X 21.6 Mm^3
		Bread Board	50	Solder less Breadboard 830 Tie Points

				Adhesive backing
		Power Supplies	50	12 V, 1 amp adapter (AC to DC) Qty-30 12V 2 amp adapter (AC to DC) Qty-15 12 V 5 ampere adapter (AC to DC) Qty-05 Total-50