Tender Document
For
Supply Of Various Equipment For Electronics Cum Instrumentation Laboratory

जुलाई/July- 2023

भारतसरकार/**Government of India**
अंतरिक्षविभाग/**Department of Space**
उत्तर/पूर्वीअंतरिक्षउपयोगकेंद्र-**North Eastern Space Applications Centre**
उमियम/**Umiam-793103,** मेघालय/**Meghalaya**

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निविदा आमंत्रण सूचना / NOTICE INVITING TENDER

निदेशक एनईसैक-, उमियम, मेघालय, प्रतिष्ठित ठेकेदारोंफर्मो सेवा प्रदाताओं से निम्नलिखित के लिए दो बोली में मोहरबंद , प्रस्तावों को आमंत्रित करते हैं / Director, NESAC, Umiam, Meghalaya, India invites sealed offers in two bids from reputed Service Providers, Firms, Contractors etc for the following:

एनआईटी सं. / NIT No.	कार्य का नाम / NAME OF THE WORK	इएमडी(₹) डीडी के रुप में/ EMD (₹) IN THE FORM OF DD	निविदा शुल्क/ TENDER FEE (₹)
NESAC/1577/2023	SUPPLY OF VARIOUS EQUIPMENT FOR ELECTRONICS CUM INSTRUMENTATION LABORATORY	₹ 46,000/-	₹ 500/-

निविदा दस्तावेजो के विक्रय का दिनांक/ Dates for selling of tender documents : 25.07.2023 to 14.08.2023

निविदा दस्तावेजो को जमा करने की अन्तिम तिथि व समय/ Last date & Time for submission of tender documents : 14.08.2023 upto 13:00 Hrs.

निविदा खोलने की तिथि,समय व स्थान/ Date, Time & Venue of Bid Opening : 14.08.2023. at 15:00 Hrs at एनईसैक, उमियम/ NESAC, Umiam

Instructions to Tenderers:

1. **The Tender is invited for 'Contract for hiring of buses at NESAC, Umiam'.**
2. For full details and terms and conditions etc., please see the enclosed Annexures.
3. Tender documents can be obtained from the Purchase Officer, NESAC, Umiam.
4. Tender Fee shall be paid in form of CROSSED Demand Draft only. The Demand Draft should be in favor of Director, NESAC drawn on State Bank of India, Umiam (branch Code 2010). The Tender Fee is NON-REFUNDABLE. Your request letter along with Tender Fee may be addressed to the Administrative Officer as indicated above.
5. Interested tenderers may, at their option, download the tender documents from the NESAC website www.nesac.gov.in and submit the Tender Document along with the prescribed tender fee as per details given in the tender notification.
6. While requesting for Tender Documents, please superscribe on the cover as "Request for Tender document against Tender Notice No **NESAC/1577/2023.**
7. Tender Document received after the due date/time will not be considered.
8. While sending sealed quotation/offer superscribed respective Tender Number and Due Date on the envelope.
9. NESAC, UMIAM is not responsible for any postal delays/loss of documents in transit.
10. If the date specified for submission/opening of tenders is declared as a holiday abruptly, the due date for submission/opening of the tenders in such cases shall be postponed automatically to the next working day.
11. Director, NESAC reserves the right to accept or reject any/or all the quotations/Expression of Interest in part or full.
12. **All pages forming part of the tender documents should be duly signed, stamped and submitted to NESAC. Pages not signed and stamped will be considered invalid and rejected.**

Sd/-
निदेशक, एनईसैक / Director NESAC

Dated: 24.07.2023

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1. **Scope of the work:**North Eastern Space Applications Centre (NESAC) under Department of Space, Government of India-793103 is looking for supply of items as per the list of items and technical specification mentioned in Sl No 2 and 3 of Annexure 1 at NESAC.

2. **List of the items**

Sl No.	Items	Quantity
i	**IoT & General Lab Items**	
A. General Electronics Items		
1	9x15-cm-universal-pcb-prototype-board-double-sided	50 nos.
2	830-points solderless breadboard + Power Supply+ 140 Jumper Wires set	10 nos.
3	500pcs 5mm LEDs Set	05 sets
4	22AWG 600V 6 Colour Tinned Hook Up Wire Kit – Multicore	10 Sets
5	Dupont Connector Kit	05 sets
6	230m insulated PVC Coated 30AWG Wire Wrapping Wire-Black	20 rolls
7	230m P/N B-30-1000 Insulated PVC Coated 30AWG Wire Wrapping Wire-RED	20 rolls
8	230m P/N B-30-1000 Insulated PVC Coated 30AWG Wire Wrapping Wire-GREEN	20 rolls
9	230m P/N B-30-1000 Insulated PVC Coated 30AWG Wire Wrapping Wire-BLUE	20 rolls
10	10 cm 40 Pin Dupont Cable Male/Male, Male/Female, Female/Female Cable Combo	10 sets
11	65pcs Flexible Breadboard Jumper Wires	20 sets
12	Metal Gear Servo Motor (180° Rotation)with CNC Aluminum Steering Servo Horn Arm	05 nos.
13	Stepper Motor and Stepper Motor Driver	05 nos.
14	ESD S-160 Anti Static Magnetic Heat Insulation Workbench Mat.	05 nos.
15	6A 250V AC SPST ON-OFF Rocker Switch	10 nos.

16	12x12x7.3mm Tactile Push Button Switch-10Pcs.	10 nos.
17	DC 3-6 V Mini Micro Submersible Water Pump	05 nos.
18	1.8V - 12V/2A DC Motor PWM Speed Regulator	05 nos.
19	Advance Electronics Component Package kit	10 nos.
20	Resistor Assortment Kit – 10 Ω To 1 MΩ (600pcs)	10 nos.
21	BJT Transistors Assortment Kit with Bonus Resistor Pack	03 nos.
22	Ceramic Capacitor Assortment Kit	05 nos.
23	Crystal Oscillator Assorted kit – 9 Kinds	10 nos.
24	1W Zener Diode Assortment Kit	05 nos.
25	16-in-one sensor kit for Raspberry Pi 3	05 nos.
26	37 in 1 Sensors Kit compatible with Arduino	03 nos.
27	40 in 1 Sensor Kit for Arduino & R Pi	01 nos.
28	31 in 1 Universal Multifunction Portable Screwdriver Set	02 nos.
29	Anti-Static Tweezers 6pcs Set Vetus ESD	02 nos.
30	Tools Kits Box Set Screwdriver Pliers Hex Repair	01 set
31	Pliers Set	01 Set
32	Compact Weighing Scale	01 no.
33	Digital Electronic Microscope with LCD Display	01 no.
34	All Purpose Hot Melt Glue Sticks for Glue Gun – 5pcs	10 pcs.
35	DC-DC Step UP LED Voltmeter 3-34 to 4-35V Adjustable Boost Converter module	05 nos.
36	Helping Hand for PCB with Multifunctional Magnifier (Magnifying Glass) and Soldering Iron Stand with LED Light	01 no
37	Professional Balance Charger/Discharger	01 Nos.

38	Mini Professional Balance Charger/Discharger	02 Nos.
39	Hi-Speed Battery Charger with 2AA 1300mAh and 2AAA 750mAh Batteries	02 sets
40	(Orange) 9V 2A Power Supply with 5.5mm DC Plug Adapter	05 nos.
41	(Orange) 12V 2A Power Supply with 5.5mm DC Plug Adapter	05 nos.
42	5V 4 Channel SSR Solid State Relay Module 240V 2A Output with Resistive Fuse	05 nos.
43	10uF (10000nF) 50V Capacitor – 1206 SMD Package – (pack of 5)	50 nos.
44	1uF Capacitor SMD:C 0402 (pack of 50)	20 nos.
45	0.1uF Capacitor SMD:C 0402 (pack of 50)	20 nos.
46	4.7uF 50V Capacitor – 603 SMD Package -(pack of 10)	20 nos.
47	22 pF 50V 0603 SMD Multi-Layer Ceramic Capacitor - 0603N220J500CT Walsin	1000 nos.
48	100k Ohm 1/4W 1206 Surface Mount Chip Resistor (Pack of 50)	20 nos.
49	10k Resistor SMD:R 0402 (pack of 50)	20 nos.
50	1K Resistor SMD:R 0402 (pack of 50)	20 nos.
51	47 Ohm 1/4W 0805 Surface Mount Chip Resistor (Pack of 10)	20 nos.
52	2.2k Ohm 1/4W 0805 Surface Mount Resistor (Pack of 50)	20 nos.
53	680uF 16V SMD Capacitor (Pack of 20)	20 nos.
54	330uF 16V DC Polymer Aluminium SMD Capacitor (Pack of 20)	20 nos.
55	22uF 25V SMD Multilayer Ceramic Capacitor (Pack of 50)	20 nos.
56	18650 x 2 battery holder with cover and On/Off Switch	20 nos.
57	18650 SMD/SMT High-Quality Single Battery Holder	20 nos.
58	CR2032 CR2025 Coin Battery Socket Holder-5Pcs.	20 nos.
59	2 x 1.5V AA battery holder with cover and On/Off Switch	20 nos.

60	Fireproof 4X 5 18650 Battery Holder with 18.4MM Bore Diameter	10 nos.
61	ICR 18650 7.4V 4000Mah 3C 2S2P Li-Ion Battery Pack	10 nos.
62	ISR 18650 7.4V 1500mAh 15C 2S1P Li-Ion Battery Pack	10 nos.
63	10Mhz (SMD) Crystal Oscillator HC49/US Package(Pack of 5)	40 nos.
64	14.318Mhz (SMD) Crystal Oscillator HC49/US Package – (Pack of 5)	40 nos.
65	YXC – YSX530GA 16MHZ 20PF 10PPM 2Pad SMD/SMT Crystal	50 nos.
66	25Mhz (SMD) Crystal Oscillator HC49/US Package	50 nos.
67	460Pcs. Tactile Push Button Switch Kit	01 pkt.
68	Automatically Solder Wire Feeding Soldering Iron	01 no.
69	25 Piece Mini Plier Set with Ergonomic Handles	02 nos.
70	100PCS 6mm Light Push Button Switch Kit	04 pkts.
71	Multipurpose PCB Ruler Engineering Measuring Tool-1Pcs.	10 nos.
72	18in1 RC Tools Kits Box	02 nos.
73	Long Nose Pliers, 160mm, Drop Forged &Heat Treated Steel	05 nos.
74	DURATOOL Screwdriver Kit, Phillips, Torx, Hex, Slotted, Assorted Accessories, 42 Pieces	02 nos.
75	DURATOOL Wire Gauge, Stainless Steel, 37 Hole, 0 – 36 SWG, Etched	05 nos.
76	DYKB 3IN1 Wire Wrap Strip Unwrap Tool Hand Manual Winding Rods For WSU-30M AWG 30	02 nos.
77	Multifunction tool holder	03 nos.
78	Screwdriver Storage Rack	02 nos.
79	Tool Holder	02 nos.
80	Aluminium Screw Tray with Magnetic Plate for RC Model	10 nos.
81	Adafruit Monochrome 1.12″ 128×128 OLED Graphic Display – STEMMA QT / Qwiic	05 nos.

82	Waveshare 1.3inch OLED (A)	20 nos.
83	3MM Single Hole LED Light Holder with Red led Light (Pack of 10)	20 nos.
84	0805 Surface Mount LED Green – 50 Pcs	20 nos.
85	0805 Surface Mount LED Red – 50 Pcs	20 nos.
86	0805 Surface Mount LED Blue – 50 Pcs	20 nos.
87	0805 Surface Mount LED Yellow – 50 Pcs	20 nos.
88	QFP/TQFP/LQFP/FQFP/SOP/SSOP32 to DIP Adapter/ Breakout Board	20 nos.
89	12x12x7.3mm Tactile Push Button Switch-10Pcs.XR105 F3L	20 nos.
90	3*6*2.5 mm SMD Tactile Switch (Pack of 20)	20 nos.
91	12x12x7.3 mm Round Cap for Square tactile Switch – Black (10 Pcs.)	20 nos.
92	ORANGE 100PCS 6mm Light Push Button Switch Kit	03 nos.
93	MF-A05 Potentiometer Knob Cap 6 mm – 5 Pcs.	10 nos.
94	ORANGE 50PCS 3296W Adjustable Potentiometer Kit	03 nos.
95	ORANGE 140PCS 2A-40A Medium Car Blade Fuse Piece Kit	03 no.
96	CR2032 Coin Cell Battery Holder SMD Button Contact	100 nos.
97	RF Transceiver LR1121 LoRa Connect Dual-band Wireless Transceiver	20 nos.
98	RF Amplifier SMT Low Noise Amplifier, 2 - 30 GHz, 50 Ohm	05 nos.
99	RF Microcontrollers - MCU Automotive qualified SimpleLink wireless MCU for use in wireless battery management systems	05 nos.
100	RF Front End 2.4GHz 802.11n PA+SW+LNA FEM in 2.5mmx2.	20 nos.
101	RF Transceiver LoRa Smart Home low pwr 150-960MHz ISM	10 nos.
102	DFRobot 5V Solar Power Manager	05 nos.
103	3.7V Lithium Battery Protection Board for Polymer 18650 Bonding Pad (can Spot/Weld) 3A Overcurrent Value	100 nos.

104	MCU-Micro USB Breadboard 5V Power Supply Module	100 nos.
105	USB Female to 2.54mm Breakout Board with Direct 4P Adapter Board- 2Pcs	20 nos.
106	PCF8563 RTC Board For Raspberry Pi Real Time Clock Module-Blue	20 nos.
107	DS3231 RTC Module Precise Real Time Clock I2C AT24C32	20 nos.
108	DS1302 Real Time Clock Module (with Battery)	25 nos.

(B) ICs, SMD Components, Sensors, Modules

109	3.3V Fixed output voltage regulator LDO	100 nos.
110	3.3V Fixed Output Voltage Regulator	100 nos.
111	5.0 5V Fixed Output Voltage Regulator	50 nos.
112	1.2-5V Adjustable Output LDO RF-Linear Voltage Regulator 5-Pin SOT-23	50 nos.
113	4.2V 1A Standalone Linear Li-ion Battery Charger with Thermal Regulation SOP8	50 nos.
114	5.5V USB-Friendly Li-Ion Battery Charger Power-Path Management IC 16pin VQFN	50 nos.
115	4.2V 500mA Single Cell Li-Ion/Li-Polymer Battery Charge Management Controller 5-Pin SOT-23	50 nos.
116	8-Bit A/D Converter with 8-Channel Multiplexer IC DIP-28 Package	20 nos.
117	8-Bit Digital to Analog D/A Converter IC DIP-16 Package	20 nos.
118	24V/12V to 5V 5A Power Module DC-DC XY-3606 Power Converter	20 nos.
119	DC-DC 1.8V-5V to 3.3V, Booster and Buck Power, Modules	20 nos.
120	3.7V to 12V Mini DC-DC Boost Step Up Converter Board Module 5V/ 8V/ 9V 12V Output	20 nos.
121	Air Quality Sensor Breakout – VOC and eCO2 – STEMMA QT / QwiicRoHS Compliant	05 nos.
122	Air Quality Sensor Breakout – VOC Index – STEMMA QT/Qwiic	05 nos.
123	infrared carbon dioxide sensor	05 nos.
124	Carbon Monoxide Sensor	05 nos.

125	Gas Detection Sensor, Ammonia, Carbon Monoxide, Ethanol, Hydrogen, Methane, 10-1000 ppm	05 nos.
126	4 in 1 Soil PH Meter Soil Tester PH Moisture Meter Temperature Sunlight Measurement Analysis Acidity Alkali（Without Battery）	05 nos.
127	Environmental Sensor (Breakout)	05 nos.
128	Environmental Sensor, Supports Temperature / Humidity / Barometric Pressure / Gas Detection With AI function	05 nos.
129	Mini Cellular GSM + GPS Breakout	02 nos.
130	AHT20 Integrated temperature and humidity Sensor -40 ~ + 85 ℃	20 nos.
131	AHT21 Integrated temperature and humidity sensor -40 ~ + 120 ℃	20 nos.
132	Bluetooth Low Energy 2.4GHz SoC 48-Pin QFN	20 nos.
133	Single-Chip 2.4GHz Transceiver Enhanced ShockBurst 3.6V 20-pin QFN	20 nos.
134	Multiprotocol Bluetooth 5 ANT/ANT+ 2.4GHz SoC 48-Pin QFN	20 nos.
135	Bluetooth low energy Connectivity 32-Pin QFN	20 nos.
136	5V 2A 8-Channel SSR G3MB-202P Solid State Relay Module	05 nos.
137	Based Motor Driver Module	05 nos.
138	Digital Relative Humidity and Temperature Sensor Module	20 nos.
139	LDR 5mm	10 pkts
140	BME688 - Temperature, Humidity, Pressure and Gas Sensor Breakout	05 nos.
141	AHT20 Temperature & Humidity Sensor Breakout Board - STEMMA QT / Qwiic	20 nos.
142	Weather Click Board BME280 SPI / I2C - MikroE	02 nos.
143	MAX7219 – 8-Digit LED Display Driver IC SMD-24 Package	50 nos.
144	Transmitter chipset CMT2119AW-ESR.	100 nos.
145	Receiver chipset CMT2210LH-ESR.	100 nos.
146	CC2500RGPR Texas Instruments (TI)	20 nos.

147	NRF52832-QFAA-R – Multiprotocol Bluetooth 5 ANT/ANT+ 2.4GHz SoC 48-Pin QFN	50 nos.
148	ESP32-S0WD Single-core 32-bit MCU 2.4GHz Wi-Fi BT/BLE SoC 48-Pin QFN	50 nos.
149	ORANGE 66PCS 2.54mm Pitch IC Chip Plug-in Base Kit	05 nos.
150	Figaro TGS2610 - Liquefied Petroleum Gas (LPG) Sensor	10 nos.
151	RF Transceiver 1.9-3.6V 433/868/ 915MHz TRNSCVR	20 nos.
152	RF Transceiver Dual Band IEEE 802.15.4 TRX, 48QFN, T&R	20 nos.
153	RF Front End BLE FEM Common T&R PA/Rx bypass HD	40 nos.
154	RF Front End 2.4 GHz 256 QAM WLAN/BT FEM	40 nos.
155	Distance Sensor Modules 24GHz mmWave Sensor - Human Static Presence Module Lite - human presence, FMCW, Configurable Underlying Parameter, Arduino support, Home Assistant, ESP Home	20 nos.
156	Power Management Modules 3.6-V to 36-V input, 1-V to 12-V output, 2-A, step-down module in 4-mm x 6-mm x 1.8-mm package	10 nos.
157	ADXL345 LGA-14 3-axis Accelerometer	50 nos.
158	MPU 6050 QFN-24 3-Axis Gyro/Accelerometer IC	50 nos.
159	MAX98357AETE+T Audio Amplifiers Digital Input Class D Amplifier IC TQFN-16 Package	50 nos.
160	AT24C128N 128K bit Serial I2C Bus EEPROM IC DIP-8 Package	50 nos.
161	LM741N PDIP-8 Operational Amplifier (Pack of 3 ICs)	50 nos.
162	SMA Jack Straight PCB Mount(V1.0)	50 nos.
163	SMA(F) to SMA(F) Adapter	50 nos.
164	SMA Female Connector Right Angled Through-Hole for PCB Mount	50 nos.
165	RF Nano Integrated NRF24L01, Wireless Module with, Soldering	10 nos.
166	AT-09 Bluetooth 4.0 UART Transceiver Module CC2541 Compatible with HM-10	10 nos.
167	NRF52810-QFAA-R7 – Bluetooth 5 BLE ANT 2.4GHz 2Mbps 3V SoC 48-Pin QFN	10 nos.

168	nRF8001-R2Q32-T – Bluetooth low energy Connectivity 32-Pin QFN	10 nos.
169	CH340G SOIC16 USB to Serial TTL-RS232 converter IC	100 nos.
170	MAX485ESA SO-8 Transceiver Interface IC	100 nos.
171	FT232HL- Single Channel Hi-Speed USB to Multipurpose UART/FIFO-IC	20 nos.
172	Arduino Portenta Vision Shield – LORA	02 nos.
173	Arduino MKR GPS Shield	02 nos.
174	Arduino Nano 33 IOT with Header	02 nos.
175	Original ARDUINO NANO 33 BLE Board (Without Header)	02 nos.
176	Original Arduino Nano 33 BLE Sense Rev2	02 nos.
177	Arduino Nano RP2040 Connect without Header	02 nos.
178	Arduino Leonardo without Headers	01 no.
(C) Microcontrollers & Other Development Boards		
179	ATmega328P U-TH Microcontroller	20 Nos.
180	ATmega328P-U PDIP-28 Microcontroller	20 Nos.
181	STM32F030F4P6 TSSOP-20 ARM Microcontroller-MCU	20 Nos.
182	ATmega8A AU TQFP-32 Microcontroller	10 Nos.
183	ATmega2560-16AUR Microcontroller	5 Nos.
184	RP2040 Microcontroller IC by Raspberry PI	20 Nos.
185	STM32F030F4P6 TSSOP-20 ARM Microcontroller-MCU	20 Nos.
186	ESP32-D0WD Dual-core 32-bit MCU 2.4GHz Wi-Fi BT/BLE SoC IC QFN-48 Package	20 Nos.
187	ESP WROOM 32 MCU Module	10 nos.
188	TCS3200 Color Recognition Sensor Module for MCU Arduino	05 nos.

189	Pixy 2.1 Smart Vision Sensor-Object Tracking Camera	02 nos.
190	DS18B20 Water Proof Temperature Probe – Black (1m)	10 nos.
191	LCD1602 Parallel LCD Display with IIC/I2C interface	05 nos.
192	Pro Mini ATMEGA328P 5V/16M Black- Standard version	04 nos.
193	Pro Mini ATMEGA328P 3.3V/8M (Official Version)	05 Nos.
194	Raspberry Pi Sense HAT with integrated Sensors	04 nos.
195	ESP WROOM 32 MCU Module	10 nos
196	Particle Boron IoT Development Board	02 nos.
197	ESP32-D0WD Dual-core 32-bit MCU 2.4GHz Wi-Fi BT/BLE SoC IC QFN-48 Package	20 nos.
198	NRF51822-CFAC-R – Bluetooth 3.1+EDR BLE 2Mbps 3V Medical 2.4GHz SoC ULP 48-Pin QFN	20 nos.
199	NRF51822-QFAB-R7 – Multiprotocol Bluetooth Low Energy ANT 2.4GHz SoC ULP IC QFN-48 Package	20 nos.
200	NRF51422-QFAA-R7 Nordic Multi-protocol Bluetooth Smart SoC 48-Pin QFN	04 nos.
(D)IOT Equipment & Communication Modules		
201	Pi Camera	03 nos.
202	5MP 1080P IR-Cut Camera for Raspberry Pi 3/4 with Automatic Day Night Mode	03 nos.
203	LoRa Radio 868MHz	05 nos.
204	LoRa 868MHZ SX1276 Wireless Transmitter and Receiver RF Module	02 nos.
205	LoRa Shield for Arduino	02 nos.
206	XBee3 2.4GHz ZB3.0 RP-SMA Female Antenna	05 nos.
207	BLE Bluetooth 4.0 CC2541 Wireless Module	10 nos.
208	Bluetooth 4.0 UART Transceiver Module CC2541 Compatible with HM-10	10 Nos.
209	RF Transmitter Receiver Module 315MHz Wireless Link Kit For Arduino	50 nos.

210	NRF 51822 BLE 4.0 Bluetooth Module Wireless Low-power Development Board	10 nos.
211	87-108Mhz Stereo FM Transmitter Module Digital LCD Display Wireless Microphone Board Multi-function Frequency Modulation	05 nos.
212	SX1262 LoRa HAT for Raspberry Pi 868MHz Frequency Band	02 nos.
213	SX1268 LoRa HAT for Raspberry Pi 433MHz Frequency Band	02 nos.
214	GSM/GPRS/GNSS/Bluetooth HAT for Raspberry Pi	02 nos.
215	ESP-32S Wifi Bluetooth Combo Module	05 nos.
216	LoRa Series Ra-02 Spread Spectrum Wireless Module	05 nos.
217	ESP32-Audio-Kit	02 nos.
218	0.1-2000mhz RF Wideband Gain 30db Low-Noise Amplifier LNA Board Module	05 nos.
219	2.4GHz 3.2dBi RP-SMA Male Omni Antenna for WiFi	10 nos.
220	SMA Female Connector Right Angled Through-Hole for PCB Mount	50 nos.
221	SMA Female Straight Connector Solder Type for Cable & Panel Mount	50 nos.
222	GNSS Antenna for Raspberry Pi HAT and Arduino Shield with 3 Meter Cable	03 nos.
223	GPS HAT for Raspberry Pi	02 nos.
224	8MP Pan Tilt Zoom PTZ Camera for Raspberry Pi 4/3B+/3 and Jetson Nano / Xavier NX	02 nos.
225	Pivariety 21MP IMX230 Color Camera Module	02 no.
226	OpenMV Cam H7 Plus	02 nos.
227	Speech Recognizer	02 nos.
228	Sound Sensor	10 nos.
229	Soil Temperature and Humidity Sensor Module	05 nos.
230	Ultrasonic Range Finder	20 nos.
231	LoRaST IoT Module	02 nos.

232	ESP32 LoRa SX1278 0.96 Inch Blue OLED Display BT WiFi Module for Arduino (Type C- Connector)	02 nos.
233	LoRaE5 mini (STM32WLE5JC)	02 nos.
234	LoRaWAN Gateway Module (SPI) – US915, based on LoRa Concentrator Semtech SX1302	02 nos.
235	FeatherS2 – ESP32-S2 Feather Development Board	02 nos.
ii	**GNSS Modules**	
236	L80 GPS Module	05 nos.
237	L86 GPS + GLONASS module	05 nos.
238	MC60E dual SIM Quad-band GSM/GPRS/GNSS BT4.0 Module	05 nos.
239	L89 Compact GNSS Module IRNSS-Enabled	05 nos.
240	L89HA Breakout Multi-GNSS engines for GPS, IRNSS, GLONASS, BeiDou, Galileo and QZSS	05 nos.
241	EC200U-CN LTE 4G GNSS Ultra-compact Nano Modem	05 nos.
242	Industrial IoT Wireless Expansion Hat for Raspberry Pi Compute Module 4 (Base Board)	05 nos.
243	Ultimate GPS GLONASS with USB Type-C 66 Channel 10Hz Updates	05 nos.
244	L86-M33 GPS GNSS Arduino Shield and Data Logger	05 nos.
245	GNSS 5 Click Board NEO-M8N GNSS Receiver - MikroE	05 nos.
246	ZED-F9P-02B Chip	02 nos.
247	NEO-M9N-00B Chip	10 nos.
248	LC86GLAMD chip	10 nos.
249	LC79HALMD chip	10 nos.
250	Neo-D9S-00B module	10 nos.
251	SKY85329-11 RF Front End	100 nos.
252	Analog Devices / Maxim IntegratedMAX2678GTB/V+T GPS/GNSS RF Front End Module	100 nos.
253	Sky65728-11 RF Front End GPS LNA Pre-Filter & LNA	100 nos.
254	SKY65723-81 RF Front End GPS/GNSS/BDS Pre-Filter	100 nos.
255	LLCC68IMLTRT RF Transceiver LoRa Smart Home low pwr 150-960MHz ISM	25 nos.
256	SX1302IMLTRTRF Transceiver LoRa Gateway Baseband Transceiver	10 nos.
257	RF Transceiver Ultra-Wide-Band (UWB) transceiver	25 nos.
258	Antenna Development Tools SparkFun Satellite Transceiver Kit - Swarm M138(KIT-21287)	02no.
259	Antennas Antenna, Remote Active Ceramic Patch GNSS GPS Galileo GLONASS Beidou L1/L2, RHCP, 5m cable, SMA Connector, ANT-GNRM-L15A-3	05 nos

260	Antennas GNSS L1 Linear PCB Chip Antenna, Internal/Embedded Solder Mount, Solder Pin, GPS, GLONASS, Galileo, Beidou, QZSS	100 nos.
261	Antennas Antenna, Remote Active Ceramic Patch GNSS GPS Galileo GLONASS Beidou L1/L2/L5, RHCP, 5m cable, SMA Connector,ANT-GNRM-L125A-3	05 nos
262	Antennas GPS L1/L2 Dual Feed Double Stacked Patch (Tuned for 35x35 GP)	05 nos.
263	Antennas Ceramic ant., SMD, L1+G1 & L2+L5	05 nos.
264	STM32F401CCU6 Minimum System Board Microcomputer STM32 ARM Core Board	10 nos.
265	Black ABS Protective Box Case for Arduino Mega2560 R3 Controller Enclosure with Switch	20 nos.
266	Phase Locked Loops - PLL XTAL-HCSL CLK GNRTR	20 nos.
267	Phase Locked Loops - PLL Ultra-low noise PLLatinum frequency synthesizer with integrated VCO 36-WQFN -40 to 85	20 nos.
268	Modulator/Demodulator Sat mod	20 nos.
269	Modulator/Demodulator 300MHz to 4GHz Quad- rature Modulator	20 nos.
270	Audio Jack – 3.5mm TRRS (SMD)- 4Pcs	20 nos.
271	RJ45 (8P-8C) Female Plug (Pack of 5)	20 nos.
272	USB A-type Plug Male PCB R/A Connector (Pack of 5)	20 nos.
273	Micro USB 2.0 B type 5 Pin Connector-5Pcs.	20 nos.
274	2 Pins 3.96mm Pitch JST-VH Connector With Housing (Pack of 10)	40 nos.
275	Micro USB Type-B Female 5 Pin Through Hole Connector (Pack of 5)	40 nos.
276	3 Pins 3.96mm JST-VH Connector With Housing (Pack of 10)	20 nos.
277	RJ45 (8P-8C) Male Plug (Pack of 10)	20 nos.
278	Double USB Type A Female Solder Jacks Connector PCB Socket (Pack of 5)	20 nos.
279	Seeed Studio XIAO ESP32S3 Sense – 2.4GHz Wi-Fi, BLE 5.0, OV2640 camera sensor, digital microphone, battery charge supported, rich Interface, IoT, embedded ML	05 nos.
280	USB TO UART TTL 5V 3.3V FT232RL Download Cable To Serial Adapter Module For Arduino	100 nos.
281	CP2102(6-pin) USB 2.0 to TTL UART serial converter	100 nos.
282	ENC28J60 Ethernet Module(10 Pin Package: SSOP)	10 nos.
283	USB to UART/ESP8266 Adapter Programmer for ESP-01 WiFi Modules with CH340G Chip	100 nos.
284	SD Card Reading Writing Module for Arduino	40 nos.
285	CJMCU-2551 MCP2551 CAN Protocol Controller High-speed Interface Module	20 nos.
286	CAT6 RJ45 Female-to-Female LAN Cable Extension Adapter	20 nos.

287	W5500 TCP / IP SPI to LAN Ethernet Interface SPI to LAN / Ethernet Converter	10 nos.
288	MiNi ENC28J60 Ethernet LAN Network Module For Arduino SPI AVR PIC LPC	10 nos.
289	Waveshare Industrial USB TO TTL Converter Original FT232RL	10 nos.
290	Waveshare RS485 CAN HAT for Raspberry Pi	10 nos.
291	CJMCU-MINI USB 5V/3.3V Socket USB DC Power Socket AMS1117 Module	10 nos.
292	Waveshare RP2040-Zero Without Header	20 nos.
293	Waveshare FT232 USB UART Board (Type C), USB To UART (TTL) Communication Module, USB-C Connector	20 nos.
294	DFRobot Gravity I2C HUB	20 nos.
295	HDMI to AV Adapter HD 1080P Video Converter	10 nos.
296	Waveshare Industrial Grade USB HUB, Extending 4x USB 2.0 Ports, Switchable Dual Hosts (Without Power Adapter)	02 nos.
297	Adafruit ISO1540 Bidirectional I2C Isolator – STEMMA QT / Qwiic	03 nos.
298	Waveshare RP2040-One, 4MB Flash MCU Board Based On Raspberry Pi RP2040	20 nos.
299	Waveshare Binocular Camera Base Board Designed for Raspberry Pi Compute Module 4, Interface Expander included	02 nos.
300	SeeedStudio Grove Differential Amplifier	02 nos.
301	LoRa Antenna 915 MHz	20 nos.
302	Unsoldered Lora 915MHz Shield for TTGO T-SIM7000G Module	02 nos.
303	Lora Antenna 433mhz	10 nos.
304	Lora Antenna 868mhz	10 nos.

3. <u>Minimum Technical Specifications of the proposed items:</u>

I. <u>IoT & General Lab Items</u>

A. <u>General Electronic Items</u>:

1. 9x15-cm-universal-pcb-prototype-board-double-sided

Base Material	FR4
Copper Thickness (mm)	1-4 oz
Length (mm)	15
Width (mm)	9
Board Thickness	1.6
Min. Hole Size (mm)	0.3
Weight (gm)	40
Shipment Weight	0.043 kg
Shipment Dimensions	15 × 9 × 1 cm

2. 830 Points solderless Breadboard+Power Supply+140 Jumper Wires Kit

Features :
1. Breadboard 830:

   i. Distribution strip, Tie-point 200
  ii. Terminal Strip, Tie-point 630
 iii. Completely reusable
  iv. Colored coordinates for easy component placement
   v. Model: MB-102
  vi. Phosphor bronze nickel plated spring clips
 vii. Accepts a variety of wire sizes (29-20 AWG)
viii. Dimensions:165 x 54 x 8.5mm

2. Breadboard Power Supply Module:

   i. Brand new & high quality
  ii. Breadboard power supply module, compatible with 5 V, 3.3 V
 iii. Apply to MB102 breadboard
  iv. Input voltage: 6.5-12 V (DC) or USB power supply
   v. Output voltage: 3.3V/5V can switch over
  vi. Maximum output current:<700 ma
 vii. The fluctuation of two road independent control can switch over to 0 V, 3.3 V, 5 V
viii. On-board two groups of 3.3V, 5V DC output plug pin, convenient external lead use.
  ix. Please notice: this item only a Power Supply Module

3. 140 Jumper Wires:

   i. 100% brand new and high quality
  ii. 140pcs Solderless Breadboard Jumper Cable Lead Kit
 iii. Hard Wire with Angled shape
  iv. Comes with 14 kinds of different length jumper lead, each kind of jumper lead has 10 pcs with different colors, that is to say, there has 140 pcs jumper lead with a different length
   v. A transparent plastic box for convenient to carry and not easy to lost
  vi. Color: Assorted color

Quantity: 140 pcs.

3. 500pcs 5mm LEDs Set

Package Includes:
100 x 5mm Red LEDs with Diffused Lens – 100pcs.

100 x 5mm Blue LEDs with Diffused Lens – 100pcs.

100 x 5mm Green LEDs with Diffused Lens – 100pcs.

100 x 5mm Yellow LEDs with Diffused Lens – 100pcs.

100 x 5mm White LEDs with Clear Lens – 100pcs.

100 x 220 Ω Resistors – 100pcs.

1 x 2x8cm Prototyping PCB – 1pc.

4. 22AWG 600V 6 Colour Tinned Hook Up Wire Kit – Multicore

Features:

1. Colors: Black, Red, Yellow, Green, Blue, White
2. 60 Strands x 0.08 mm Tinned Copper
3. Soft and Flexible Silicone Insulation
4. 600 V Voltage Rating
5. 200°C Rating

Package Includes:
1 x Plusivo 22AWG 600V 6 Colour Tinned Hook-Up Wire Kit – Multicore

Kit Includes:
1 x Black AWG 22 Tinned Copper Silicone Wire (23 ft)
1 x Yellow AWG 22 Tinned Copper Silicone Wire (23 ft)
1 x Green AWG 22 Tinned Copper Silicone Wire (23 ft)
1 x Blue AWG 22 Tinned Copper Silicone Wire (23 ft)
1 x white AWG 22 Tinned Copper Silicone Wire (23 ft)
1 x Heatshrink Tubes set-6 colour
1 x Colored Wire Ties set-6 colour
1 x Mini Wire Stripper Tool

5. Dupont Connector Kit

Package Includes:
335pcs Crimp Pin Connector Housing

100 x (1×1) Pin – 100pcs.
80 x (1×2) Pin – 80pcs
20 x (1×3) Pin – 20pcs
20 x (1×4) Pin – 20pcs
20 x (1×5) Pin – 20pcs
20 x(1×6) Pin – 20pcs
20 x (1×7) Pin – 20pcs
20 x (1×8) Pin – 20pcs
15 x (1×9) Pin – 15pcs
20 (1×10) Pin – 20pcs
320 x Female Crimp Pins – 320pcs
320 x Male Crimp Pins – 320pcs
10 x 40P Straight Pin Header (Black) – 10pcs
15 x 40P Bent Pin Header (Black) – 15pcs
4 x Colored Straight Pin Header(Yellow, Blue, White, Red) – 4pcs
1 x Ribbon Cable

6. 230m insulated PVC Coated 30AWG Wire Wrapping Wire-Black

Wrapping Wire ModelP/N B-30-1000

ColorBlack
Line Number30AWG.
Cable Length230 M
Temperature Rating105º Celsius
Reel Size7 x 3.3 cm
MaterialPlastic, PVC, Tin Plated Copper
Diameter of Copper core0.25mm
Outer diameter of single core wire0.55mm
Gross Weight(gm)172
Shipment Weight0.2 kg
Shipment Dimensions10 × 6 × 3 cm

7.230m P/N B-30-1000 Insulated PVC Coated 30AWG Wire Wrapping Wire-RED

Wrapping Wire Model	P/N B-30-300
Color	RED
Line Number	30AWG.
Cable Length	230 M
Temperature Rating	105º Celsius
Reel Size	7 x 3.3 cm
Material	Plastic, PVC, Tin Plated Copper
Diameter of Copper core	0.25mm
Outer diameter of single core wire	0.55mm
Gross Weight(gm)	172
Shipment Weight	0.2 kg
Shipment Dimensions	10 6 × 3 cm

8. 230m P/N B-30-1000 Insulated PVC Coated 30AWG Wire Wrapping Wire-GREEN

Wrapping WireModel	P/N B-30-1000
Color	GREEN
Line Number	30AWG.
Cable Length	230 M
Temperature Rating	105º Celsius
Reel Size	7 x 3.3 cm
Material	Plastic, PVC, Tin Plated Copper
Diameter of Copper core	0.25mm
Outer diameter of single core wire	0.55mm
Gross Weight(gm)	172
Shipment Weight	0.2 kg
Shipment Dimensions	10 × 6 × 3 cm

9.230m P/N B-30-1000 Insulated PVC Coated 30AWG Wire Wrapping Wire-BLUE

Wrapping Wire Model	P/N B-30-1000
Color	BLUE
Line Number	30AWG.
Cable Length	230 M
Temperature Rating	105º Celsius
Reel Size	7 x 3.3 cm
Material	Plastic, PVC, Tin Plated Copper
Diameter of Copper core	0.25mm
Outer diameter of single core wire	0.55mm
Gross Weight(gm)	172
Shipment Weight	0.2 kg
Shipment Dimensions	10 × 6 × 3 cm

10 cm 40 Pin Dupont Cable Male/Male, Male/Female, Female/Female Cable Combo

Features :

1. Compatible with 2.54mm spacing pin headers
2. 40pcs chromatic color jump wire
3. High quality and in good working condition
4. Durable and reusable
5. Easy to install and use
6. A popular choice for construction or repair
7. Be used for the electronic project and Genuine Arduino product
8. Flexible Breadboard Jumper Cable Wire allows you to plug and unplug easily for prototyping.

Package includes :
1 x 10CM Dupont Wire Color Jumper Cable, 2.54mm 1P-1P Male to Male 40PCS
1x 10CM Dupont Wire Color Jumper Cable, 2.54mm 1P-1P Male to Female 40PCS
1 x 10CM Dupont Wire Color Jumper Cable, 2.54mm 1P-1P Female to
Female 40PCS

11. 65pcs Flexible Breadboard Jumper Wires

No. of Wires65
Weight (gm)37
Shipment Weight0.039 kg
Shipment Dimensions8 × 8 × 3 cm

12.Metal Gear Servo Motor (180° Rotation)with CNC Aluminum Steering Servo Horn Arm

Model	MG995
Weight(gm)	55
Operating Voltage (VDC)	4.8 ~ 7.2

Operating Speed @4.8V	20sec/60°
Operating Speed @6.6V	16sec/60°
Stall Torque @ 4.8V (Kg-Cm)	10
Stall Torque @6.6V (Kg-Cm)	12
Operating Temperature (°C)	-30 to 60
Dead Band Width (µs)	1
Gear Type	Plastic
Rotational Degree	180º
Servo Plug	JR
Length (mm)	40.5
Width (mm)	20
Height (mm)	44
Shipment Weight	0.07 kg
Shipment Dimensions	10 × 8 × 6 cm

13. 28BYJ-48 Stepper Motor and ULN2003 Stepper Motor Driver

Model	**28BYJ-48**
Rated Voltage(V)	**5**
Rated Current (mA)	**500 mA**
Step Angle	**5.625°/64**
Reduction ratio	**64:1**
Resistance (Ω)	**50**
In-Traction Frequency(Hz)	**>600 Hz**
Out-Traction Frequency(Hz)	**>1000 Hz**
In-traction Torque(mN-m)	**34.3**
Self-positioning Torque(mN-m)	**34.3**
Friction Torque(gf-cm)	**600-1200**
Pull in Torque(gf-cm)	**300**
Insulation Grade	**A**
Shaft Type	**Double D-Type**
Motor Weight(gm)	**34**
Length (mm)	**34**
Width (mm)	**18**
Height (mm)	**10**
Weight (gm)	**34**
Shipment Weight	**0.037 kg**
Shipment Dimensions	**14 × 8 × 4 cm**

14.ESD S-160 Anti Static Magnetic Heat Insulation Workbench Mat.

Material	Silicon
Color	Light Blue
Temperature Resistance	500ºC max
Length (mm)	450
Width (mm)	300
Height (mm)	3
Weight (gm)	630
Shipment Weight	0.75 kg
Shipment Dimensions	12 × 30 × 5 cm

15. 6A 250V AC SPST ON-OFF Rocker Switch

Rating	Max 6A up to 250V AC
Switching Mode	ON-OFF
Structure	SPST
Mounting Type	Panel Mount
Panel Cut-Out (LxWxH)	18.5 x 13 x 13 mm
Actuator Colour	Black
Withstand Voltage	1500Vac
Contact Resistance	100mΩ
Insulation Resistance	≥100mΩ
Operating Temperature Range	-20 to +85°C
Switching Life	50000-100000 Cycles
Material	Nylon 66 & Silver Tin Oxide
Length (mm)	21
Width (mm)	15
Height (mm)	15
Weight (gm)	5 (Each)
Shipment Weight	0.01 kg
Shipment Dimensions	4 × 3 × 2 cm

16. 12x12x7.3mm Tactile Push Button Switch-10Pcs.

Operating Voltage	12 V DC
Operating Current	50mA
On/Off Function	Push to ON
Switch Type	Momentary
Mounting Type	Through-hole
Contact Material	Aluminium alloy
Contact Resistance	50mΩ
Insulation Resistance	100MΩ
Operating Temperature Range	-20°C to +70°C
Operation Force	About 3-5N
Operation Stroke	1.05mm
Body Material	Plastic
Mech. & Electrical Life	300,000 Cycles
Protection Grade	IP65
Length (mm)	12
Width (mm)	12
Height (mm)	7.3
Weight (gm)	1 (approx) (each)
Shipment Weight	0.01 kg
Shipment Dimensions	5 x 5 x 1 cm

17. DC 3-6 V Mini Micro Submersible Water Pump

Operating Voltage (VDC)	3.3 ~ 5.5
Wire length	50cm
Operating Current (mA)	130 to 220

Flow Rate (L/H)	80 to 120
Colour	Black
Maximum Lift (mm)	40 to 110
Continuous Working Life (hours)	500
Driving Mode	DC, Magnetic Driving
Outlet Outside Diameter (mm)	7.5
Outlet Inside Diameter (mm)	5
Shipment Weight	0.08 kg
Shipment Dimensions	5 × 4 × 3 cm

18. 1.8V - 12V/2A DC Motor PWM Speed Regulator

Input Voltage Range	1.8V- 15V DC
The maximum output power	30W
Output current	2A(Max).
Output current : 2A(Max).	2A(Max).
Duty Cycle adjustable	5%-100%
Diameter of PCB holes	3mm
Pitch of screw terminal block	5.08mm
Weight (gm)	16
Shipment Weight	0.02 kg
Shipment Dimensions	6 × 4 × 1 cm

19. Advanced Electronics Component Package kit

Package includes:

1pcs High-Quality Retail Box
1pcs 830pts breadboard(MB-102)
50pcs Jumper wires
10pcs of each 5mm LED(Yellow, Red, Blue, Green)
1pcs 5mm RGB LED
1pcs Resistor card
10pcs of each resistor (220R, 1K, 10K)
10pcs 10ηF Ceramic capacitor
10pcs 100ηF Ceramic capacitor
5pcs 100UF Aluminum capacitor
2pcs Ball Switch
2pcs 103 Thermistor
2pcs 5mm LDR
2pcs Diode 1N4007
1pcs Active buzzer
1pcs Passive buzzer
1pcs flame sensor
1pcs 4 Digital tube Display
1pcs 1 Digital tube Display
1pcs 8 x 8 Matrix dot digital tube
1pcs LM35DZ
1pcs 74hc595N
4pcs Button switch
1pcs SG90
1pcs 10K Potentiometer
1pcs 1*40 Pin header
1pcs Acrylic board (120 x 85 x 2 mm)

20. Plusivo Resistor Assortment Kit – 10 Ω To 1 MΩ (600pcs)

The Plusivo Resistor Assortment Kit includes **30 commonly used resistance values 20 pieces each value**
20 x 10 Ω – 20pcs
20 x 22 Ω – 20pcs
20 x 47 Ω – 20pcs
20 x 100 Ω – 20pcs
20 x 15 Ω – 20pcs
20 x 200 Ω – 20pcs
20 x 220 Ω – 20pcs
20 x 270 Ω – 20pcs
20 x 330 Ω – 20pcs
20 x 470 Ω – 20pcs
20 x 510 Ω – 20pcs
20 x 680 Ω – 20pcs
20 x 1 kΩ – 20pcs
20 x 2 kΩ – 20pcs
20 x 2.2 kΩ – 20pcs
20 x 3.3 kΩ – 20pcs
20 x 4.7 kΩ – 20pcs
20 x 5.1 kΩ – 20pcs
20 x 6.8 kΩ – 20pcs
20 x 10 kΩ – 20pcs
20 x 20 kΩ – 20pcs
20 x 47 kΩ – 20pcs
20 x 51 kΩ – 20pcs
20 x 68 kΩ – 20pcs
20 x 100 kΩ – 20pcs
20 x 220 kΩ – 20pcs
20 x 300 kΩ – 20pcs
20 x 470 kΩ – 20pcs
20 x 680 kΩ – 20pcs
20 x 1 MΩ – 20pcs

21. Plusivo BJT Transistors Assortment Kit with Bonus Resistor Pack

10 compartments plastic box
21 x Transistor 2N3904 -21pcs
21 x Transistor 2N3906 -21pcs
21 x Transistor S8050-21pcs
21 x Transistor 2N2907-21pcs
21 x Transistor S8550-21pcs
21 x Transistor 2N2222-21pcs
21 x Transistor BC337-21pcs
21 x Transistor C1815-21pcs
21 x Transistor BC327-21pcs
21 x Transistor A1015-21pcs
Bonus Pack: (in paper box)
10 x Resistor 47 Ω-10pcs
10 x Resistor 100 Ω-10pcs
10 x Resistor 220 Ω-10pcs
10 x Resistor 330 Ω-10pcs
10 x Resistor 470 Ω-10pcs
10 x Resistor 680 Ω-10pcs
10 x Resistor 1 kΩ-10pcs
10 x Resistor 2.2 kΩ-10pcs
10 x Resistor 3.3 kΩ-10pcs
10 x Resistor 4.7 kΩ-10pcs
10 x Resistor 6.8 kΩ-10pcs
10 x Resistor 10 kΩ-10pcs
10 x Resistor 22 kΩ-10pcs
10 x Resistor 33 kΩ-10pcs
10 x Resistor 47 kΩ-10pcs

10 x Resistor 68 kΩ-10pcs
10 x Resistor 100 kΩ-10pcs
10 x Resistor 330 kΩ-10pcs
10 x Resistor 470 kΩ-10pcs
10 x Resistor 680 kΩ-10pcs
10 x Resistor 1 MΩ-10pcs

22.Plusivo Ceramic Capacitor Assortment Kit

It includes the following values, 60 pcs each

60 x 0.1 uF – 60pcs

60 x 0.15 uF – 60pcs

60 x 0.22 uF – 60pcs

60 x 0.33 uF – 60pcs

60 x 0.47 uF – 60pcs

60 x 0.68 uF – 60pcs

60 x 1 uF – 60pcs

60 x 2.2 uF – 60pcs

60 x 4.7 uF – 60pcs

60 x 10 uF – 60pcs

23. Crystal Oscillator Assorted kit – 9 Kinds

Kit Includes:
3 x 32KHZ 2*6
3 x 32.768KHZ 3*8
3 x 49S DIP 6M
3 x 49S DIP 8M
3 x 49S DIP 11.0592M
3 x 49S DIP 12M
3 x 49S DIP 24M
3 x 49S DIP 24.576MHZ
3 x 49S DIP 22.1184MHZ

24.1W Zener Diode (Pack of 40)

1 x 1N4728/3V3 Zener Diode-10 pcs

1 x 1N4729/3V6 Zener Diode-10 pcs

1 x 1N4730/3V9 Zener Diode-10 pcs

1 x 1N4731/4V3 Zener Diode-10 pcs

1 x 1N4732/4V7 Zener Diode-10 pcs

1 x 1N4733/5V1 Zener Diode-10 pcs

1 x 1N4734/5V6 Zener Diode-10 pcs

1 x 1N4735/6V2 Zener Diode-10 pcs

1 x 1N4736/6V8 Zener Diode-10 pcs

1 x 1N4737/7V5 Zener Diode-10 pcs

1 x 1N4738/8V2 Zener Diode-10 pcs

1 x 1N4739/9V1 Zener Diode-10 pcs

1 x 1N4740/10V Zener Diode-10 pcs

1 x 1N4741/11V Zener Diode-10 pcs

1 x 1N4742/12V Zener Diode-10 pcs
1 x 1N4743/13V Zener Diode-10 pcs
1 x 1N4744/15V Zener Diode-10 pcs
1 x 1N4745/16V Zener Diode-10 pcs
1 x 1N4746/18V Zener Diode-10 pcs
1 x 1N4747/20V Zener Diode-10 pcs
1 x 1N4749/24V Zener Diode-10 pcs
1 x 1N4750/27V Zener Diode-10 pcs
1 x 1N4751/30V Zener Diode-10 pcs
1 x 1N4752/33V Zener Diode-10 pcs
1 x 1N4753/36V Zener Diode-10 pcs
1 x 1N4754/39V Zener Diode-10 pcs
1 x 1N4755/43V Zener Diode-10 pcs
1 x 1N4756/47 V Zener Diode-10 pcs

25.16-in-one sensor kit for Raspberry Pi 3

Package Includes:
1 x DS1302 RTC Real Time Clock Module (No Battery)
1 x SW-420 Normally Closed Vibration Sensor Module
1 x SW1801P 3pin Normally open vibration sensor module
1 x 315Mhz RF Wireless Transmitter and Receiver Kit
1 x Sound Sensor Module
1 x TCRT5000 Tracking Module
1 x KY-008 650nm Laser sensor Module 6mm 5V
1 x DHT11 Temperature and Humidity Sensor Module
1 x HC-SR501 PIR Motion Sensor Module Green
1 x HC-SR04 Ultrasonic Sensor 4pin
1 x MQ-2 Smoke Gas LPG Butane Hydrogen Sensor Module
1 x Soil Moisture Detection Humidity Sensor Module
1 x Raindrops Detection Sensor Module Snow RainWeather
1 x IR Infrared Flame Detection Sensor Module
1 x 3pin Photosensitive Sensor Module Light-Dependent Control
1 x Infrared Obstacle Avoidance Tracking Sensor Module

26. 37 in 1 Sensors Kit compatible with Arduino

Package Includes :

1. Module Introduction Paper- 1pc.
2. Tutorial CD- 1pc.
3. PS2 Game Joystick Module- 1pc.
4. Infrared Sensor Receiving Module- 1pc.
5. Laser Sensor Module- 1pc.
6. Temperature and Humidity Sensor Module- 1pc.
7. Infrared Sensor Module- 1pc.
8. 5v Relay Module- 1pc.
9. Obstacle Avoidance Sensor Module- 1pc.
10. Finger Detecting Heartbeat Module- 1pc.
11. Sound Sensor Module- 1pc.
12. Metal Touch Sensor Module- 1pc.
13. Flame Sensor Module- 1pc.
14. 3 Color LED Module- 1pc.
15. Line Sensor Module- 1pc.
16. Linear Magnetic Hall Sensor- 1pc.
17. Rotary Encoder Module- 1pc.

18. Active Buzzer Module- 1pc.
19. Magic Cup Light Module- 1pc.
20. Small Passive Buzzer Module- 1pc.
21. Digital Temperature Sensor Module- 1pc.
22. Broken Light Module- 1pc.
23. The Temperature Sensor Module- 1pc.
24. Double Color LED Module- 1pc.
25. Mercury Medallion Module- 1pc.
26. Hall Magnetic Sensor Module- 1pc.
27. 3 color LED Module- 1pc.
28. Mini Reed Module- 1pc.
29. Tilt Switch Module- 1pc.
30. 7 color flashing LED module- 1pc.
31. Button switch module- 1pc.
32. Photosensitive resistance module- 1pc.
33. Vibration switch module- 1pc.
34. The knock sensor module- 1pc.
35. The temperature sensor module- 1pc.
36. Analogy hall magnetic sensors- 1pc.
37. The microphone sound sensor module- 1pc.
38. Big reed module Double color LED module- 1pc.

27. (Grove Creator Kit – Gamma)40 in 1 Sensor Kit for Arduino & R Pi

Parts List:
1 x Plastic Box
1 x Grove Creator Kit Manual (Color Printed Book)
1 x Grove – Tilt Switch
1 x Grove – Temperature Sensor
1 x Grove – Water Sensor
1 x Grove – Rotary Angle Sensor
1 x Grove – Sound Sensor
1 x Grove – Light Sensor v1.2
1 x Grove – Green LED
1 x Grove – Buzzer
1 x Grove – Magnetic Switch
1 x Grove – Line Finder v1.1
1 x Grove – Relay
1 x Grove – Vibration Sensor (SW-420)
1 x Grove – Temperature & Humidity Sensor (DHT11)
1 x Grove – Thumb Joystick
1 x Grove – Chainable RGB Led V2.0
1 x Grove – Multi Color Flash LED (5mm)
1 x Grove – Switch (P)
1 x Grove – Red LED
1 x Grove – Blue LED
1 x Grove – Button
1 x Grove – Infrared Emitter
1 x Grove – Red LED Button
1 x Grove – Yellow LED Button
1 x Grove – Blue LED Button
1 x Grove – Moisture Sensor
1 x Grove – Mini PIR Motion Sensor
1 x Grove – Loudness Sensor
1 x Grove – Infrared Receiver
1 x Grove – 16 x 2 LCD (White on Blue)
1 x Grove – Ultrasonic Ranger
1 x Grove – Hall Sensor
1 x Grove – Flame Sensor
1 x Grove – Touch Sensor
1 x Grove – 3-Axis Digital Accelerometer(±1.5g)
1 x Grove – Vibration Motor
1 x Grove – 4-Digit Display

1 x Grove – Speaker
1 x Grove – RTC
1 x Grove LED Bar v2.0
1 x Grove – RGB LED Stick (10 – WS2813 Mini)
15 x Grove – Universal 4 Pin 20cm Unbuckled Cable – 15 pcs.
2 x Grove – Branch Cable – 2 pcs.
5 x Grove – 4 pin Male Jumper to Grove 4 pin Conversion Cable – 5 pcs.
3 x Grove – 4 pin Female Jumper to Grove 4 pin Conversion Cable – 3 pcs.

28. 31 in 1 Universal Multifunction Portable Screwdriver Set

Specifications and Features:

1. Compact and Portable pocket toolkit
2. 30 different head style
3. Rubber Shockproof gripped handle
4. Strong and durable plastic Case
5. Colour: Yellow-Red
6. Interchangeable Precise Manual Tool Kit.
7. High Strength Chrome Alloy is used to manufacture this tool.
8. Magnetic bits are easy to fit into the handle.
9. Heat resistant.

29. Anti-Static Tweezers 6pcs Set Vetus ESD

Features :

1. Made by the high-quality stainless steel
2. Antistatic, Anti-magnetic and anti-acid
3. Cutting-edge parts of pure manual polishing, fine workmanship
4. Processed in high temperature and planting antistatic material
5. Tips after a long time use are still super straight.
6. 6 pcs suitable for all kinds of electronic components, convenient, improve the work efficiency.
7. Use Swiss technology, precision machining, professionally used for SMD, chip, jewelry, eyelash extension, electronic repairing, leather work etc.

Package Includes :
1 x ESD-10
1 x ESD-11
1 x ESD-12
1 x ESD-13
1 x ESD-14
1 x ESD-15

30. 10IN1 RC Tools Kits Box Set Screwdriver Pliers Hex Repair

Features:

1. Made of high-quality steel which is durable and can ensure long term service life.
2. This complete RC Helicopter repair kit makes the perfect gift for any helicopter enthusiast and contains all the basic tools for helicopter repair, maintenance and setup.
3. Ball link screwdriver and plier for RC helicopter rotor head tools.
4. Excellent quality curved tip ball link screwdriver/plier with an anti-rust feature for long-lasting.

Package Includes:

1. 1 * 5.5mm hexagonal socket driver

2. 1 * 4.0mm hexagonal socket driver
3. 1 * 1.5mm Allen head screwdriver
4. 1 * 2.0mm Allen head screwdriver
5. 1 * 2.5mm Allen head screwdriver
6. 1 * 0# cross head screwdriver
7. 1 * 1# flat head screwdriver
8. 1 * long nose pliers
9. 1 * wire cutters pliers
10. 1 * bent ball link pliers

31. Pliers Set

Features:

1. Mini plier and cutter set
Ergonomic handles for extra comfort
Two tone anti-slip handles
2. Supplied in a handy zipped wallet

Specifications:

1. Round nose pliers – (5″) 120mm

2. Top cutter pliers – (4″) 100mm

3. Flat nose pliers – (5″) 120mm

4. Bent nose pliers – (4 1/2″) 110mm

5. Diagonal cutters – (4 1/2″) 110mm

32. Compact Weighing Scale

Features:

1. Digital pocket scales with transparent, hinged cover.
2. Display 5 digits, illuminated
3. Overload protection
4. Tare and counting functions
5. Auto shutdown

Specifications:

1. Graduation from 0.01gr
2. Measurement of up to 2000gr
3. Dimensions 62mm(W) x 120mm (L) x 17mm (H)
4. Measuring PAN size: 98 x 98 mm
5. Choice of setting between grams /GN/CT/DWT/OZT.
6. Weight 220gr
7. Works with 2 AAA batteries (not included)

Package Includes:
1 x DURATOOL 0.1g to 2Kg Compact Weighing Scale

1 x User Manual

33. Digital Electronic Microscope with LCD Display

Features:

1. Super easy to assemble and de-assemble without any tool
2. Micro-USB 5V@2A Power Supply Operated
3. SD card slot (supported up to 128 GB Class 10) to Record Video under lense.
4. Lense LED light brightness adjustable with a dimmer button to adjust
5. Adjustable stand see wide range of dimensions and angles.
6. Supports 1080P video recording
7. HDR high dynamic range on/off
8. Many more inbuilt modes and useful functions

Specification:

1. Type: power supplies type, built-in lithium cell type (optional)
2. Pixel: HD 12-megapixel
3. Display Screen: 7-inch HD LCD display
4. Magnification: 1-1200 * continuous amplification system.
5. Distance Between Object: 10MM to infinity (different distances correspond to different multiples)
6. Sixteen Language Systems
7. Cell Package Size: 205 x 160 x 80mm
8. Package Weight: 1200g / 2.

34. All Purpose Hot Melt Glue Sticks for Glue Gun – 5pcs

Diameter (mm)	11
Length (mm)	190
Shipment Weight	0.2 kg
Shipment Dimensions	4 x 4 x 4 cm

35. LM2577 DC-DC Step UP LED Voltmeter 3-34 to 4-35V Adjustable Boost Converter module

Input Voltage (V)	3 to 34
Output Voltage(V)	4 ~ 35
Max. Output Current (A)	3
Voltmeter Range(V)	0 to 40
Switching Frequency(KHz)	52
Operating Temperature (°C)	-40 to 90
Length (mm)	60
Width (mm)	35
Height (mm)	13.5
Weight (gm)	24
Shipment Weight	0.027 kg
Shipment Dimensions	7 x 4.5 x 2 cm

36. Helping Hand for PCB with Multifunctional Magnifier (Magnifying Glass) and Soldering Iron Stand with LED Light

Lens Material	Glass
Lens Diameter	65mm (35X)
Batteries Needed for light	3 x AAA
Weld Holder Size	3cm x 9cm
Base Size	10cm x 6.5cm x 2cm

Weight (gm)	380
Shipment Weight	0.475 kg
Shipment Dimensions	30 x 15 x 6 cm

37. SkyRC IMAX B6AC V2 Professional Balance Charger/Discharger

Features :

1. PC connectivity
2. Microprocessor controlled
3. Delta-peak sensitivity
4. Individual cell balancing
5. Li-ion, LiPo, and LiFe capable
6. Ni-Cd and NiMH capable
7. Large range of charge currents and automatic charge current limit
8. Store function allows safe storage current
9. Time limit function
10. Input voltage monitoring (Protects car batteries at the field)
11. Data storage (5 pack memory)
12. Battery break in and cycling.
13. Terminal voltage adjustment for heavy-duty batteries
14. It can be controlled using smartphones and PCs.
15. Balance charging and discharging options
16. It's easy to upgrade

Package Includes:
1 x SkyRC IMAX B6AC V2 Professional Balance Charger.
1 x AC 100-240V 50/60 Hz 16A power Cord with Eu Plug.
1 x DC Jack plug to crocodile clips.
1 x male T connector charge lead to 4mm banana plugs
1 x XT60 charge lead
1 x JST charge lead
1 x Crocodile clip charge lead
1 x Futaba style charge lead.
1 x English manual.

38.SkyRC iMAX B6 Mini Professional Balance Charger/Discharger

DC Input Voltage Range (V)	11 ~ 18
Output Power(Watt)	60
Charge Current Range (A)	0.1 ~ 6
Maximum Discharge Power (W)	5
Dischage Current Range (A)	0.1 ~ 2.0
Drain Current for Balancing Li-Po's (mA/Cell)	300
Li-ion/Po cell count	1 ~ 6
NiCd/NiMH cell count	1 ~ 15 Cells
Pb battery voltage	2 ~ 20
Dimensions (mm) LxWxH	102 x 84 x 29
Weight (gm)	234
Shipment Weight	0.27 kg
Shipment Dimensions	11 9 x 3 cm

39. Duracell Hi-Speed Battery Charger with 2AA 1300mAh and 2AAA 750mAh Batteries

Features:

1. Charges batteries in pairs.
2. Charge time 0.75 up to 4 hours.
3. Charging indicators.
4. Bad cell detection.
5. Automatic timer cut-off.
6. Over-charge protection.
7. Short circuit protection.

40. (Orange) 9V 2A Power Supply with 5.5mm DC Plug Adapter

Features:

1. 3-Pin adapter with GND terminal and more convenient to plug.
2. It comes with a 1 meter long 24 AWG cable
3. Wide input AC voltage range (100VAC-240VAC).
4. Very low ripple & noise output for device safety.
5. High operating ambient temperature up to 80°C.
6. Highly efficient, compact, durable, and long life.
7. RoHS compliance Approved.
8. Protections against- under-over voltage/ overload/ short circuit with auto-restart on fault removal.

41. (Orange) 12V 2A Power Supply with 5.5mm DC Plug Adapter

Features:

1. 3-Pin adapter with GND terminal and more convenient to plug.
2. It comes with a 1 meter long 24 AWG cable
3. Wide input AC voltage range (100VAC-240VAC).
4. Very low ripple & noise output for device safety.
5. High operating ambient temperature up to 80°C.
6. Highly efficient, compact, durable, and long life.
7. RoHS compliance Approved.
8. Protections against- under-over voltage/ overload/ short circuit with auto-restart on fault removal.

42.5V 4 Channel SSR Solid State Relay Module 240V 2A Output with Resistive Fuse

Part Number	G3MB-202P
Working current(mA)	12.5
Trigger Current (mA)	2
Trigger Voltage (VDC)	5
Switching Voltage (VAC)	240@2A
Max. Load	2A @240V AC
Length (mm)	57
Width (mm)	55
Height (mm)	25
Weight (gm)	38

Shipment Weight	0.039 kg
Shipment Dimensions	a. × 8 × 4 cm

43. 10uF (10000nF) 50V Capacitor – 1206 SMD Package – (pack of 5)

Capacitance	10uF
Operating Voltage (VDC)	50V
Tolerance(%)	±10
Operating Temperature Range (?C)	-55℃ to 85℃
Mounting Type	SMD
Package/Size	1206
Shipment Weight	0.01 kg
Shipment Dimensions	4 × 4 × 1 cm

44. 1uF Capacitor SMD:C 0402 (pack of 50)

Capacitance	1uF
Rated Voltage (V)	50
Tolerance(%)	5%
Operating Temperature (°C)	55 ~ 85°C
Mounting Type	Surface Mount
Package/Case	0402
Shipment Weight	0.005 kg
Shipment Dimensions	9 × 7 × 1 cm

45. 0.1uF Capacitor SMD:C 0402 (pack of 50)

Maximum Voltage(V)	50
Capacitance	0.1uF
Package/Case	1206
Tolerance(%)	10%
Shipment Weight	0.005 kg
Shipment Dimensions	9 × 7 × 1 cm

46.4.7uF 50V Capacitor – 603 SMD Package -(pack of 10)

Capacitance	4.7uF
Operating Voltage (VDC)	50V
Tolerance(%)	±10
Operating Temperature Range (?C)	-55℃ to 85℃
Mounting Type	SMD
Package/Size	0603
Shipment Weight	0.01 kg
Shipment Dimensions	4 × 4 × 1 cm

47. 100nF 0805 Surface Mount Multilayer Ceramic Capacitor (Pack of 40)

Capacitance	100nF
Tolerance(%)	10
Operating Temperature Range (°C)	-55 to 125
Mounting Type	SMD/SMT
Capacitance Tolerance	±1%, ±2%, ±5%, ±10%
Voltage(V)	50
Dissipation Factor (%)	≤ 0.1 %
Length (mm)	2
Width (mm)	1.25
Height (mm)	0.6
Weight (gm)	0.1 (approx) (each)
Shipment Weight	0.015 kg
Shipment Dimensions	5 x 7 x 2 cm

48. 100k Ohm 1/4W 1206 Surface Mount Chip Resistor (Pack of 50)

Resistance (Ω)	100k
Tolerance(%)	1
Maximum Working Voltage (V)	200
Maximum Overload Voltage (V)	400
Temperature Co-efficient	±100ppm/℃
Operating Temperature Range (°C)	−55 to 155
Mounting Type	SMD/SMT
Length (mm)	3.1
Width (mm)	1.55
Height (mm)	0.55
Weight (gm)	0.1 (approx) (each)
Shipment Weight	0.003 kg
Shipment Dimensions	9 x 7 x 1 cm

49. 10k Resistor SMD:R 0402 (pack of 50)

Resistance (Ω)	10kΩ
Tolerance(%)	1
Rated Power (W)	1/6
Mounting Type	SMD
Package/Case	0402
Shipment Weight	0.003 kg
Shipment Dimensions	8 x 7 x 1 cm

50.1K Resistor SMD:R 0402 (pack of 50)

Resistance (Ω)	1K
Tolerance(%)	1
Rated Power (W)	1/6
Mounting Type	SMD
Package/Case	0402
Shipment Weight	0.003 kg

Shipment Dimensions	8 × 7 × 1 cm

51. 47 Ohm 1/4W 0805 Surface Mount Chip Resistor (Pack of 10)

Resistance (Ω)	47
Maximum Power (W)	0.25
Tolerance(%)	5
Mounting Type	SMD/SMT
Temperature Co-efficient	±100 ppm/°C
Operating Temperature Range (°C)	-55 to 125
Shipment Weight	0.001 kg
Shipment Dimensions	4 × 1 × 1 cm

52.2.2k Ohm 1/4W 0805 Surface Mount Resistor (Pack of 50)

Resistance (Ω)	2.2K
Maximum Power (W)	0.25
Tolerance(%)	5
Mounting Type	SMD/SMT
Temperature Co-efficient	±100ppm/°C
Operating Temperature Range (°C)	-55 to 125
Shipment Weight	0.01 kg
Shipment Dimensions	4 × 2 × 1 cm

53 680uF 16V SMD Capacitor (Pack of 20)

Capacitance	680 uF
Voltage(V)	16
Mounting Type	SMD
Length (mm)	11
Width (mm)	10
Height (mm)	10.5
Weight (gm)	1 each
Shipment Weight	0.03 kg
Shipment Dimensions	11.5 × 9.5 × 3 cm

54.330uF 16V DC Polymer Aluminium SMD Capacitor (Pack of 20)

Capacitance	330uF
Voltage(V)	16
Mounting Type	SMD
Tolerance(%)	10
Length (mm)	11
Width (mm)	10
Height (mm)	10.5
Weight (gm)	1 each
Shipment Weight	0.01 kg
Shipment Dimensions	8 × 8 × 2 cm

55. 22uF 25V SMD Multilayer Ceramic Capacitor (Pack of 50)

Capacitance	22uF
Operating Voltage (VDC)	25
Tolerance(%)	10
Mounting Type	SMD/SMT
Length (mm)	2
Width (mm)	1.25
Height (mm)	1.25
Weight (gm)	0.005 each
Shipment Weight	0.015 kg
Shipment Dimensions	5 × 4 × 1 cm

56.18650 x 2 battery holder with cover and On/Off Switch

Features:

1. Holds 2 18650 batteries
2. With a cover and Locking
3. Comes with an ON/OFF switch
4. Easy install, convenient to use
5. High-quality plastic material.
6. Pre-soldered wire tips

57. 18650 SMD/SMT High-Quality Single Battery Holder

Contact Material	Stainless Steel
Plating	Gold
Material	ABS
Mounting Type	SMD
Number of Cells	1
Operating Temperature Range (°C)	-40 to 180
Dimensions in mm (LxWxH)	77 x 21 x 15
Weight (gm)	8
Color	Black
Shipment Weight	0.012 kg
Shipment Dimensions	8 × 3 × 2 cm

58.CR2032 CR2025 Coin Battery Socket Holder-5Pcs.

Battery Type	CR2025 160mAh Button Battery
Material	Metal and plastic
Color	Black
Body Diameter (mm)	25
Height (mm)	8.5
Weight (gm)	1 (approx) (each)
Shipment Weight	0.03 kg
Shipment Dimensions	4 × 3 × 2 cm

59. 2 x 1.5V AA battery holder with cover and On/Off Switch

Compatible for Battery Size	2 x 1.5V AA Cell
Case Material	Plastic
Internal Connections	Series
Output Voltage(V)	3
ON/OFF Switch	Yes
Cable Length	15 cm
Color	Black
Dimensions in mm (LxWxH)	70 x 35 x 20
Weight (gm)	19
Shipment Weight	0.022 kg
Shipment Dimensions	10 × 4 × 2 cm

60. Fireproof 4X 5 18650 Battery Holder with 18.4MM Bore Diameter

Features :

1. There are slots on the edge of the holder to combine them into many different sizes and shapes of the battery pack.
2. Application: Design for Radiating Complex Battery Packs. Safe and Stable, Perfect Build for eBike!

61. ICR 18650 7.4V 4000Mah 3C 2S2P Li-Ion Battery Pack

Model No.	Orange 4000mah-7.4v (2s2p)
Nominal Capacity (mAh)	4000
Nominal Voltage (V)	7.4
Max. Charging Voltage (V)	8.4
Charging Cut-off Voltage (v)	6.4
Max. Charging Current	1C A (4000ma)
Nominal Charge Current	0.5C A (2000ma)
Maximum Discharge Current (A)	3C A (12000ma)
Nominal Discharge Current	1C A (4000ma)
Nominal Energy (wh)	29.6
Cycle Life /80%	≥500
Discharge Plug	T-Connector
Length (mm)	70
Width (mm)	44
Height (mm)	42
Weight (gm)	230
Shipment Weight	0.23 kg
Shipment Dimensions	8 × 8 × 6 cm

62. Orange ISR 18650 7.4V 1500mAh 15C 2S1P Li-Ion Battery Pack

Model No.	Orange ISR 18650 Li-Ion 1500mAh 7.4V 2S1P
Product Type	Orange Li-ion battery pack
Capacity (mAh)	1500mAh
Nominal Voltage (V)	7.4V
No. of Cells	2S1P

Discharge connector	Nylon Female T Connector
Balance Plug	JST-XH
Life Cycle	500 Charge cycle.
Discharge Rate	15c
Length (mm)	70
Width (mm)	40
Height (mm)	25
Weight (gm)	130
Shipment Weight	0.133 kg
Shipment Dimensions	10 × 6 × 4 cm

63.10Mhz (SMD) Crystal Oscillator HC49/US Package(Pack of 5)

1. Part No.: 10Mhz Crystal Oscillator
2. Package/Mounting Type : SMD/SMT

64.14.318Mhz (SMD) Crystal Oscillator HC49/US Package – (Pack of 5)

1. Part No.: 14.318Mhz Crystal Oscillator
2. Package/Mounting Type : SMD/SMT

65. 18.432Mhz (SMD) Crystal Oscillator HC49/US Package

1. Part No.: 18.432Mhz Crystal Oscillator
2. Package/Mounting Type : SMD/SMT

66.25Mhz (SMD) Crystal Oscillator HC49/US Package

1. Part No.: 25Mhz Crystal Oscillator
2. Package/Mounting Type : SMD/SMT

67. 460Pcs. Tactile Push Button Switch Kit

Features :

1. The long life of 300,000 cycles realized despite the high operating force
2. Used in the fields of electronic products, household appliances, and more.
3. High precision mechanism design offers acute operation and long service life.
4. Compact and lightweight, easy to carry and dismantle.
5. Good electrical conductivity.

Package Includes :
1 x 460Pcs. Tactile Push Button Switch Kit (24 types)

Kit Includes:
3x4x2-20 Pcs.

3x4x2-20 Pcs.

3x4x2.5-20 Pcs.

3x4x2.5-20 Pcs.

3x6x4.3-20 Pcs.

3x6x5-20 Pcs.

4x4x1.5-20 Pcs.

4x4x0.8-20 Pcs.

3x6x2.5-20 Pcs.

6x6x3.1-20 Pcs.

6x6x4.3-20 Pcs.

6x6x5-20 Pcs.

6x6x6-20 Pcs.

6x6x7-20 Pcs.

6x6x8-20 Pcs.

6x6x9-20 Pcs.

6x6x4.3-20 Pcs.

6x6x11-20 Pcs.

6x6x12-20 Pcs.

6x6x13-20 Pcs.

6x6x14-20 Pcs.

6x6x16-20 Pcs.

7×7-10 Pcs.

12x12x7.3-5 Pcs.

Tactile button head:5 Pcs

68. Automatically Solder Wire Feeding Soldering Iron

Voltage	220V~240V/AC,50Hz
Maximum power	130W
Rated power	18W
Temperature range	90~480°C/194~896°F
Pluggable type heating element, easy to replace.	Yes
Adjustable and constant temperature	Yes
To replace the solder tin wire.	Yes
With a power switch, which can be turned off when not in use, safe and energy efficient.	Yes
Shipment Weight	0.8 kg
Shipment Dimensions	31 × 16 × 15 cm

69.25 Piece Mini Plier Set with Ergonomic Handles

Features:
1. Mini plier and cutter set
   Ergonomic handles for extra comfort
   Two tone anti-slip handles
2. Supplied in a handy zipped wallet

Specifications:
1. Round nose pliers – (5″) 120mm
   Top cutter pliers – (4″) 100mm
   Flat nose pliers – (5″) 120mm
   Bent nose pliers – (4 1/2″) 110mm
   Diagonal cutters – (4 1/2″) 110mm

70. 100PCS 6mm Light Push Button Switch Kit

Features:

1. Through-hole design.
2. Shaft Shape: Round
3. Used in the fields of electronic products, household appliances, and more.
4. High precision mechanism design offers acute operation and long service life.
5. Compact and lightweight, easy to carry and dismantle.
6. Good electrical conductivity.

Package Includes:
1 x ORANGE 100PCS 6mm Light Push Button Switch Kit

Kit Includes:
1 x 6x6x4.3-10 PCS
1 x 6x6x5-10 PCS
1 x 6x6x6-10 PCS
1 x 6x6x7-10 PCS
1 x 6x6x7.3-10 PCS
1 x 6x6x9-10 PCS
1 x 6x6x10-10 PCS
1 x 6x6x12- 10 PCS
1 x 6x6x13-10 PCS
1 x 6x6x14-10 PCS
1 x 6x6x15-10 PCS

71. Multipurpose PCB Ruler Engineering Measuring Tool-1Pcs.

Length (mm)	155
Width (mm)	25
Height (mm)	1.5
Weight (gm)	12
Shipment Weight	0.016 kg
Shipment Dimensions	17 x 3 x 1 cm

72. 18in1 RC Tools Kits Box

Features:

1. High Quality tools
2. Organized in Bag
3. Compatible with: Scale RC Cars Trucks (1:24 1:18 1:16 1:8 1:10 1:12 1:5 Scale), Drone, FPV Racing, Airplane, Helicopter, Boat, Models,etc.
4. Made of high quality metal which is durable and can ensure long term service life.
5. Comes with a bag,easy to carry, 19pcs In Total– Bag Size: 10.43″ x 9.65″ x 1.38″(LxWxH) / 26.5 x 24.5cm x 3.5cm
6. 100% New,GenuineHobbyPark RC Products,Exquisite workmanship & Durable

Package Includes:
1 x 1.5mm Hex Screwdriver
1 x 2.0mm Hex Screwdriver
1 x 2.5mm Hex Screwdriver
1 x 3.0mm Hex Screwdriver
1 x 4.0mm Box Spanner
1 x 5.5mm Box Spanner

1 x 7.0mm Box Spanner
1 x 8.0mm Box Spanner
1 x 3.0mm + Screwdriver
1 x 4.0mm + Screwdriver
1 x 3.0mm – Slot Screwdriver
1 x 4.0mm – Slot Screwdriver
1 x Diagonal Pliers
1 x Hole Puncher Reamer
1 x RC Bearing Disassembly Tool
1 x Screws Pallet with Magnetic Pad
1 x Hexagon Sleeve Wrench (4mm/5.5mm/7mm/8mm)

73. Long Nose Pliers, 160mm, Drop Forged &Heat Treated Steel

Features:

1. Drop forged
2. Heat treated fully polished steel
3. Light weight & durable
4. Easy to use

Specifications:

1. Handle Type: Matted
   Jaw Type: Serrated
   Length: 150mm
   Material: Drop forged heat treated polished steel
2. Plier Style: Long Nose

74. DURATOOL Screwdriver Kit, Phillips, Torx, Hex, Slotted, Assorted Accessories, 42 Pieces

Specifications:
1. 150mm flexible shaft
2. High torque screwdriver bit holder
3. Insulated chrome vanadium screwdrivers: Slotted 5 x 75mm & Phillips 1 x 75mm Chrome vanadium screwdrivers:
4. Slotted 6 x 100mm, 8 x 150mm, 6 x 38mm, Phillips: PH2
5. 100mm, PH3 x 150mm, PH2 x 38mm
6. Chrome vanadium precision screwdrivers
7. 25 x 25mm/1″ Chrome vanadium screwdriver bits with holder: Slotted 3mm, 4mm, 5mm,6mm, 7mm Phillips PH0, PH1, PH2, PH3, Torx T10, T15, T20, T25, T30, T40, Hex 2,,m 3mm, 4mm, 5mm, 5.5mm, 6mm

Package Includes:
1 x 150mm flexible shaft

1 x High torque screwdriver bit holder

2 x Insulated screwdrivers: Slotted 5 x 75mm & Phillips 1 x 75mm

6 x Screwdrivers:

Slotted 6 x 100mm, 8 x 150mm, 6 x 38mm, Phillips: PH2 x 100mm, PH3 x 150mm, PH2 x 38mm

7 x Precision screwdrivers

25 x 25mm/1″ Screwdriver bits with holder:

Slotted: 3mm, 4mm, 5mm, 6mm, 7mm

Phillips: PH0, PH1, PH2, PH3

Torx: T10, T15, T20, T25, T30, T40

Hex: 2mm 3mm, 4mm, 5mm, 5.5mm, 6mm

75. DURATOOL Wire Gauge, Stainless Steel, 37 Hole, 0 – 36 SWG, Etched

Features:

1. Stainless Steel sheet and wire gauge
2. Etched Markings Metric 0-36 SWG
3. Measures standard wire and sheet sizes
4. 37 Holes

Package Includes:
1 X DURATOOL Wire Gauge, Stainless Steel

76. DYKB 3IN1 Wire Wrap Strip Unwrap Tool Hand Manual Winding Rods For WSU-30M AWG 30

Features:

1. Widely used for bench, tool kit, and repair applications
2. Tool is simpler
3. The operator acquires quickly a good feel of the force to apply to obtain a good wrap.
4. Smoother operation

Package Includes:

1 x DYKB 3IN1 Wire Wrap Strip Unwrap Tool Hand Manual Winding Rods For WSU-30M AWG 30

77. Multifunction tool holder

Material	Aluminum alloy
Color	Black
Holes(18 mm)	12PCS
Holes(22 mm)	Holes(22 mm) :4PCS
Holes(14 mm)	12PCS
Length	212 mm
Width	52mm
Shipment Weight	0.182 kg
Shipment Dimensions	27 × 9 × 3 cm

78. Screwdriver Storage Rack

MaterialPS, PP Plastic
ColorBlack
Hole Specification6 x 200*200, 4 x 150*150, 12 x 100*100, 2 x 550*150, 6 x 100*5, 4 x 250*250, 4 x 150*100, 2 x 100*5, 8 x 5 Diameter, 3 x 150 Diameter, 6 x 10 Diameter
Shipment Weight0.182 kg
Shipment Dimensions20 × 16 × 3 cm

79. Tool Holder

Material	PS, PP
Holes	45
Length	30cm/11.81"
Width	10cm/3.94"
Height	6cm/2.36"
Shipment Weight	0.235 kg
Shipment Dimensions	38 × 15 × 1 cm

80. Aluminium Screw Tray with Magnetic Plate for RC Model

Material	Aluminum Alloy
Length (mm)	102
Width (mm)	90
Height (mm)	10
Weight (gm)	37
Shipment Weight	0.05 kg
Shipment Dimensions	11 × 10 × 2 cm

81. Adafruit Monochrome 1.12″ 128×128 OLED Graphic Display – STEMMA QT / Qwiic

Specification:

1. Diagonal Screen Size：1.12″
2. Number of Pixels：128 × 128
3. Colour Depth： Monochrome (White)
4. Module Construction: COG
5. Active Area (mm)：20mm x 20mm
6. Pixel Size (mm)：0.15 x 0.15 mm
7. Duty：1/64
8. Brightness (cd/m2): 100 (Typ) @ 12V
9. Display current draw is completely dependent on your usage: each OLED LED draws current when on so the more pixels you have lit, the more current is used. They tend to draw ~35mA or so in practice but for precise numbers, you must measure the current in your usage circuit.

Package Includes:
1 x Monochrome 1.12″ 128×128 I2C/SPI OLED Display
1 x 2.54 chip-mounting pin-6P

82. Waveshare 1.3inch OLED (A)

Driver Chip	SH1106
Interface	3-wire SPI, 4-wire SPI, I2C
Resolution	128 x 64
Display Size	1.3 Inch
Colors	1/4 yellow section, 3/4 blue section
Visible Angle	>160°
Operating Temperature (℃)	-20℃~70℃
Storage Temperature(℃)	-30℃~80℃
Operating Voltage	3.3V / 5V

Length (mm)	33
Width (mm)	33
Height (mm)	3
Weight (gm)	5
Shipment Weight	0.008 kg
Shipment Dimensions	4 × 4 × 1 cm

83.3MM Single Hole LED Light Holder with Red led Light (Pack of 10)

Size	3MM
Led Color	Red
Quantity	10 pcs
Forward Current	20 mA
Voltage	2 V
Shipment Weight	0.005 kg
Shipment Dimensions	6 × 3 × 1 cm

84.0805 Surface Mount LED Green – 50 Pcs

Package	0805
Mounting Type	SMD
Color	Green
Lens Appearance	Transparent
Forward Voltage(V)	2.7
Forward Current (mA)	20
Length (mm)	2
Width (mm)	1.25
Height (mm)	0.8
Shipment Weight	0.02 kg
Shipment Dimensions	7 × 5 × 1 cm

85.0805 Surface Mount LED Red – 50 Pcs

Package	0805
Mounting Type	SMD
Color	red
Lens Appearance	Transparent
Forward Voltage(V)	2.7
Forward Current (mA)	20
Length (mm)	2
Width (mm)	1.25
Height (mm)	0.8
Shipment Weight	0.02 kg
Shipment Dimensions	7 × 5 × 1 cm

86.0805 Surface Mount LED Blue – 50 Pcs

Package	0805
Mounting Type	SMD
Color	Blue

Lens Appearance	Transparent
Forward Voltage(V)	2.7
Forward Current (mA)	20
Length (mm)	2
Width (mm)	1.25
Height (mm)	0.8
Shipment Weight	0.02 kg
Shipment Dimensions	7 × 5 × 1 cm

87.0805 Surface Mount LED Yellow – 50 Pcs

Package	0805
Mounting Type	SMD
Color	Yellow
Lens Appearance	Transparent
Forward Voltage(V)	2.7
Forward Current (mA)	20
Length (mm)	2
Width (mm)	1.25
Height (mm)	0.8
Shipment Weight	0.02 kg
Shipment Dimensions	7 × 5 × 1 cm

88.QFP/TQFP/LQFP/FQFP/SOP/SSOP32 to DIP Adapter/ Breakout Board

Pitch Patch (mm)	0.8
Pin Header (mm)	2.54
Length (mm)	25.5
Width (mm)	1.6
Height (mm)	25.5
Weight (gm)	3
Shipment Weight	0.005 kg
Shipment Dimensions	7 × 7 × 5 cm

89.12x12x7.3mm Tactile Push Button Switch-10Pcs.XR105 F3L

Operating Voltage (VDC)	12
Max. Operating Current (mA)	50mA
On/Off Function	Push to ON
Switch Type	Momentary
Contact Type	Through-hole
Contact Material	Brass
Contact Resistance	50mΩ
Insulation Resistance (MΩ)	100
Operating Temperature Range (°C)	-20 to 70
Operation Force	About 3-5N
Operation Stroke	1.05mm
Body Material	Plastic
Mech. & Electrical Lifecycle	≈ 300,000
Protection Standard	IP65
Length (mm)	12
Width (mm)	12

Height (mm)	7
Weight (gm)	1 (approx) (each)
Shipment Weight	0.01 kg
Shipment Dimensions	8 × 6 × 5 cm

90.3*6*2.5 mm SMD Tactile Switch (Pack of 20)

Switch Type	Momentary
Contact Type	Solder Type
Mounting Type	SMD/SMT
Voltage(V)	12
Operating Current (A)	0.05
Contact Resistance	100mΩ (Max.)
Insulation Resistance (MΩ)	100
Operation Force	1.56 +/- 0.5 N
Operation Stroke	0.25+0.2/-0.1mm
Operating Temperature Range (℃)	-25 to 70
Storage condition (℃)	-30 to 80
Length (mm)	6.4
Width (mm)	3
Height (mm)	2.5
Shipment Weight	0.01 kg
Shipment Dimensions	8 × 4 × 1 cm

91. 12x12x7.3 mm Round Cap for Square tactile Switch – Black/Yellow (10 Pcs.)

Color	Black/Yellow
Contact Resistance	50mΩ
Compatible for	3.4 x 3.8 mm button shaft
Width (mm)	13 (Body Diameter)
Height (mm)	8
Weight (gm)	1 (approx)
Shipment Weight	0.01 kg
Shipment Dimensions	4 × 3 × 1 cm

92.ORANGE 100PCS 6mm Light Push Button Switch Kit

Operating Voltage (VDC)	12
Contact Resistance	100M Ohm
Contact Type	Momentary Contact
Material	Metal Plastic
Shipment Weight	0.053 kg
Shipment Dimensions	12.5 × 6.5 × 2 cm

93.MF-A05 Potentiometer Knob Cap 6 mm – 5 Pcs.

Material	Bakelite
Inner Diameter (ID) (mm)	6
Weight (gm)	15
Shipment Weight	0.015 kg
Shipment Dimensions	10 × 6 × 3 cm

94. ORANGE 50PCS 3296W Adjustable Potentiometer Kit

Resistance (Ω)	100/200/500/1k/2k/5k/10k/20k/50k/100k
Tolerance(%)	10
Mounting Type	Through Hole
Operating Temperature Range (°C)	-55 to 125
Length (mm)	125
Width (mm)	65
Height (mm)	22
Weight (gm)	60
Shipment Weight	0.064 kg
Shipment Dimensions	12.5 × 6.5 × 2.2 cm

95. ORANGE 140PCS 2A-40A Medium Car Blade Fuse Piece Kit

Current Rating (A)	2-40
Shipment Weight	0.244 kg
Shipment Dimensions	17 x 10 x 3 cm

96. CR2032 Coin Cell Battery Holder SMD Button Contact

Length (mm)	30
Width (mm)	30
Height (mm)	6
Color	Purple
Weight (gm)	3
Shipment Weight	0.005 kg
Shipment Dimensions	4 × 4 × 2 cm

97. RF Transceiver LR1121 LoRa Connect Dual-band Wireless Transceiver

Module Model	LoRa-Ra-01
Package/Case	SMD-16
Spectrum range	410-525MHz
Programmable bit Rate	UP to 300Kbps
Frequency Range	410-525 MHz
Input Supply Range (VDC)	2.5 ~ 3.7
Transmit Power (dBm)	18±1 dBm (Max)
Operating Temperature (°C)	-10 to 85
Length (mm)	18
Width (mm)	16
Height (mm)	3.3
Weight (gm)	6
Shipment Weight	0.01 kg
Shipment Dimensions	4 × 4 × 1 cm

98. RF Amplifier SMT Low Noise Amplifier, 2 - 30 GHz, 50 Ohm

Manufacturer:	Mini-Circuits
Product Category:	RF Amplifier
RoHS:	Yes

Mounting Style:	SMD/SMT
Package/Case:	DG1677-4-32
Type:	Low Noise Amplifiers
Technology:	Si
Operating Frequency:	2 GHz to 30 GHz
P1dB - Compression Point:	11.5 dBm
Gain:	17.5 dB
Operating Supply Voltage:	4.75 V to 5.25 V
NF - Noise Figure:	4.8 dB

99. RF Microcontrollers - MCU Automotive qualified SimpleLink wireless MCU for use in wireless battery management systems

Manufacturer:	Texas Instruments
Product Category:	RF Microcontrollers - MCU
RoHS:	Yes
Core:	ARM Cortex M4
Operating Frequency:	2402 MHz to 2480 MHz
Data Bus Width:	16 bit, 32 bit
Program Memory Size:	352 kB
Data RAM Size:	80 kB
Maximum Clock Frequency:	1 MHz
ADC Resolution:	12 bit
Supply Voltage - Min:	1.8 V
Supply Voltage - Max:	3.63 V
Maximum Operating Temperature:	+ 105 C
Package/Case:	VQFN-48
Mounting Style:	SMD/SMT
Packaging:	Reel
Packaging:	Cut Tape
Brand:	Texas Instruments
Data RAM Type:	RAM
Interface Type:	I2C, I2S, SSi, UART
Minimum Operating Temperature:	- 40 C
Moisture Sensitive:	Yes
Number of ADC Channels:	8 Channel
Number of I/Os:	31 I/O
Number of Timers:	4
Operating Supply Voltage:	1.8 V to 3.63 V
Product Type:	RF Microcontrollers - MCU
Program Memory Type:	Flash
Series:	CC2662R-Q1
Factory Pack Quantity:	4000
Subcategory:	Wireless & RF Integrated Circuits
Technology:	Si

100. RF Front End 2.4GHz 802.11n PA+SW+LNA FEM in 2.5mmx2.

Manufacturer:	Skyworks
Product Category:	RF Front End

RoHS:	Yes
Packaging:	Reel
Packaging:	Cut Tape
Brand:	Skyworks Solutions, Inc.
Product Type:	RF Front End
Factory Pack Quantity:	3000
Subcategory:	Wireless & RF Integrated Circuits

101.RF Transceiver LoRa Smart Home low pwr 150-960MHz ISM

Manufacturer:	Semtech
Product Category:	RF Transceiver
RoHS:	Yes
Type:	Sub-GHz
Frequency Range:	150 MHz to 960 MHz
Maximum Data Rate:	300 kbps
Supply Voltage - Min:	1.8 V
Supply Voltage - Max:	3.7 V
Supply Current Receiving:	10.1 mA
Supply Current Transmitting:	118 mA
Output Power:	22 dBm
Minimum Operating Temperature:	- 40 C
Maximum Operating Temperature:	+ 85 C
Interface Type:	SPI
Package/Case:	QFN-24
Packaging:	Reel
Packaging:	Cut Tape
Packaging:	MouseReel
Brand:	Semtech
Mounting Style:	SMD/SMT
Operating Supply Voltage:	1.8 V to 3.7 V
Product Type:	RF Transceiver
Series:	LLCC68
Factory Pack Quantity:	3000
Subcategory:	Wireless & RF Integrated Circuits
Technology:	Si
Tradename:	LoRa Smart Home

102.DFRobot 5V Solar Power Manager

Chipset	CN3065
Input Voltage (V)	4.5~6
Battery Input	3.7V Single-cell Li-polymer
Charging Cutoff Voltage(V)	4.2±1%
Quiescent Current(mA)	<1
Operating Temperature Range (°C)	-40 to 85
Length (mm)	63
Width (mm)	33
Shipment Weight	0.03 kg
Shipment Dimensions	7 × 5 × 2 cm

103.3.7V Lithium Battery Protection Board for Polymer 18650 Bonding Pad (can Spot/Weld) 3A Overcurrent Value

Over charge voltage	4.25±0.05V
Overcharge release voltage	4.23±0.05V
Over-discharge voltage	2.54±0.1V
Maximal continuous charging current	2A
Maximal continuous Discharging current	2A
Over-current protection	3A
Dimensions (MM)	40 x 4 x 3
Weight(gm)	1
Shipment Weight	0.001 kg
Shipment Dimensions	6 × 5 × 1 cm

104. MCU-Micro USB Breadboard 5V Power Supply Module

Interface Type	USB OTG
Connector Type	USB Micro Female
PCB Size (L x W) mm	15 x 13
Mounting Hole(mm)	M3
Shipment Weight	0.04 kg
Shipment Dimensions	8 × 6 × 3 cm

105.USB Female to 2.54mm Breakout Board with Direct 4P Adapter Board- 2Pcs

Specifications and Features:

1. Input Type: USB- Female
2. Board Sze: 17 mm x 17 mm
3. Weight: 3gm

Package Includes:
1 x USB Female to 2.54mm Breakout Board with Direct 4P Adapter Board

106.PCF8563 RTC Board For Raspberry Pi Real Time Clock Module-Blue

IC Chip	PCF8563
Battery	3.3V(button)
PCB Size (L x W) mm	55 x 16
Weight (gm)	5
Shipment Weight	0.01 kg
Shipment Dimensions	9 × 7 × 2 cm

107. DS3231 RTC Module Precise Real Time Clock I2C AT24C32

Operating Voltage (VDC)	2.7 ~ 5.5
Voltage Supply for RTC	2.2 V ~ 5.5 V
Accuracy	±2ppm from 0°C to +40°C. ±3.5ppm from -40°C to +85°C.

Battery Holder	2032 Coin Battery.
I2C interface	Fast (400kHz) I2C Interface.
EEPROM	AT24C32 32Kbit Serial I2C.
Time and Date Format	Time: HH: MM: SS (12/24 hr). Date Format: YY-MM-DD-dd.
Operating Temperature Range (°C)	-40 to 85
Digital Temp Sensor Output	10 bit, ±3°C Accuracy and 0.25C resolution.
Dimensions in mm (LxWxH)	38 x 22 x 14
Weight(gm)	8
Shipment Weight	0.012 kg
Shipment Dimensions	12 x 8 x 5 cm

108.DS1302 Real Time Clock Module (with Battery)

IC Chip	DS1302
Battery	CR1220
Crystal	32.768KHz
Operating Temperature (°C)	0 to 80
PCB Size (L x W) mm	26 x 16
Weight (gm)	3
Shipment Weight	0.005 kg
Shipment Dimensions	8 x 6 x 3 cm

(B). ICs, SMD Components, sensors, Modules etc.

109. 3.3V Fixed output voltage regulator

Brand:
HTC Korea
Number of Pins:
4
Max Input Voltage:
20 V
Case/Package:
SOT-223
Max Operating Temperature:
125 C
RoHS:
Compliant
Min Operating Temperature:
-40 C
Output Voltage:
3.3 V
Output Current:
1 A

110. 3.3V Fixed output voltage regulator

Brand:
Advanced Monolithic Systems
RoHS:
Compliant
Number of Pins:
4

Max Input Voltage:	
15 V	
Case/Package:	
SOT-223	
Max Operating Temperature:	
125 C	
Min Operating Temperature:	
-40 C	
Output Voltage:	
3.3 V	
Output Current:	
1 A	

111.5.0 5V Fixed Output Voltage Regulator

Brand:	
HTC Korea	
Number of Pins:	
4	
Max Input Voltage:	
20 V	
Case/Package:	
SOT-223	
Max Operating Temperature:	
125 C	
RoHS:	
Compliant	
Min Operating Temperature:	
-40 C	
Output Voltage:	
5.0 V	
Output Current:	
1 A	

112. 1.2-5V Adjustable Output LDO RF-Linear Voltage Regulator 5-Pin SOT-23

Brand:SGMICRO
Mount: Surface Mount
Case/Package:SOT-23
Number of Pins:5
Output Configuration: Positive
Output Type: Fixed
Voltage - Output (Min):1.2 V
Number of Regulator:1
Voltage - Input (Max):5.5 V
Voltage - Output (Max):5 V
PSRR / Ripple Rejection:77dB ~ 74dB(217Hz ~ 1kHz)
Voltage Dropout (Max):400mV @ 300mA
Operating Temperature:-40 ~ 85 C
Output Current:300 mA

113. 4.2V 1A Standalone Linear Li-ion Battery Charger with Thermal Regulation SOP8

Brand: Top Power ASIC
PROG:-0.3V to V +0.3V
Stdby:-0.3V ~ 10V
Input supply voltage:-0.3V to 8V
Chrg:-0.3V to 10V
TEMP:-0.3V to 10V
BAT:-0.3V to 7V
CE:-0.3V to 10V
BAT pin current:1200mA
PROG pin current:1200uA
Temperature range:-40 C~85 C
BAT short circuit duration:continuous

114. 5.5V USB-Friendly Li-Ion Battery Charger Power-Path Management IC 16pin VQFN

Brand: Texas Instruments
Case/Package:VQFN EP
Contact Plating: Gold
Number of Pins:16
Weight:0.000808 oz
Battery Pack Voltage:4.2 V
Fault Protection: Over Voltage , Over Temperature , Short Circuit , Reverse Current
Interface:USB
Max Charge Current:1.5 A
Max Operating Temperature:125 C
Max Supply Voltage:6.4 V
Min Input Voltage:4.3 V
Min Operating Temperature:-40 C
Min Supply Voltage:4.35 V
Number of Cells:1
Output Current:1.5 A
Output Voltage:4.2 V
Lead Free: Lead Free
Radiation Hardening: No
RoHS: Compliant

115. 4.2V 500mA Single Cell Li-Ion/Li-Polymer Battery Charge Management Controller 5-Pin SOT-23

Brand: Microchip Technology
Case/Package:SOT-23
Contact Plating: Tin
Mount: Surface Mount
Number of Pins:5
Weight:0.00709 oz
Drain to Source Resistance:350 mohm
Max Charge Current:500 mA
Max Input Voltage:6 V
Max Operating Temperature:85 C
Max Output Voltage:4.5 V
Max Power Dissipation:1.54 W
Max Supply Voltage:6 V
Min Operating Temperature:-40 C
Min Output Voltage:4.168 V
Min Supply Voltage:3.75 V
Number of Cells:1
Number of Channels:1
Number of Outputs:1

Output Current:500 mA	
Output Voltage:4.2 V	
Termination:SMD/SMT	
Voltage Rating:4.534 V	
Height:0.051 inch	
Length:0.122 inch	
Width:0.071 inch	
Lead Free: Lead Free	
REACH SVHC: No SVHC	
Radiation Hardening: No	
RoHS: Compliant	

116. 8-Bit A/D Converter with 8-Channel Multiplexer IC DIP-28 Package

ADC0809 8-Bit A/D Converter with 8-Channel Multiplexer IC

117. 8-Bit Digital to Analog D/A Converter IC DIP-16 Package

DAC0800LCN/NOPB 8-Bit Digital to Analog D/A Converter IC

118. 24V/12V to 5V 5A Power Module DC-DC XY-3606 Power Converter

Maximum Working Voltage (V)	9–36
Output Voltage(V)	5.2
Length (mm)	63
Width (mm)	27
Height (mm)	10
Weight (gm)	22
Shipment Weight	0.025 kg
Shipment Dimensions	7 x 3 x 1 cm

119.DC-DC 1.8V-5V to 3.3V, Booster and Buck Power, Modules

Features and Specifications:

1. Input Voltage: 1.5V to 5V DC
2. Output Voltage: 3.3V DC
3. Dimensions (L x W)mm: 11 x 7

Package Includes:
1 x DC-DC 1.8V-5V to 3.3V Boost and Buck Power Module

120. 3.7V to 12V Mini DC-DC Boost Step Up Converter Board Module 5V/ 8V/ 9V 12V Output

Product Type	DC-DC Boost Step Up Converter
Input Voltage (V)	2.5V~VOUT-0.5V
Operating Current (A)	1A
Color	Black
Shipment Weight	0.02 kg
Shipment Dimensions	6 x 5 x 1 cm

121. Air Quality Sensor Breakout – VOC and eCO2 – STEMMA QT / QwiicRoHS Compliant

Brand	Adafruit
Model No.	SGP30 Air Quality Sensor
Interface	I2C
Accuracy	15%
Element	metal-oxide sensing
Voltage (V)	3.3V or 5V
Power Pins	Vin: this is the power pin. Since the sensor chip uses 3 VDC for logic, we have included a voltage regulator on board that will take 3-5VDC and safely convert it down. To power the board, give it the same power as the logic level of your microcontroller – e.g. for a 5V micro like Arduino, use 5V 1V8: this is the 1.8V output from the voltage regulator, you can grab up to 50mA from this if you like GND: common ground for power and logic
Data Pins	SCL – I2C clock pin SDA – I2C data pin
Length (mm)	2.5
Width (mm)	1.5
Height (mm)	0.5
Weight (g)	2 g
Shipment Weight	0.003 kg
Shipment Dimensions	8 x 3 x 1 cm

122. Air Quality Sensor Breakout – VOC Index – STEMMA QT/Qwiic

Circuit	SGP40
I2C Communication Interface Address	0x59
VOC Measuring Range	0 ppm to 1000 ppm
VOC Index Value Measuring Range	0 to 500
Input Supply Voltage (VDC)	3 ~ 5
Communication Interface	I2C
Connector	STEMMA QT/Qwiic
Shipment Weight	0.01 kg
Shipment Dimensions	3 x 2 x 1 cm

123. infrared carbon dioxide sensor

Features:

1. Small and compact, simple design
2. Fully calibrated
3. Standard digital output
4. Excellent long-term stability
5. Quick response, fast recovery time, strong anti-interference ability

Package Includes:
1 x CO2 Sensor Model ACD10

124. ACM2000 Carbon Monoxide Sensor

Features:

1. Long life
2. Stable output
3. Fast response
4. Low power

Specifications:

1. Measurement range: 0~500 ppm
2. Maximum overload: 1000 ppm
3. Sensitivity: > 15 nA/ppm
4. Response time: T90 ≤ 45 s (0 to 50 ppm)
5. Zero drift: (-10~50°C) ≤ 10 ppm
6. Repeatability: ≤ 5%
7. Output drift: < 10%/annum
8. Operating life: 5 years in normal use
9. Storage life: 6 months in original packaging
ELECTRICAL:

1. Resolution 1 ppm
2. Recommended load resistor 10 Ω
3. MECHANICAL
4. Housing material NORYL
5. Weight <6 g
6. Orientation Any

ENVIRONMENTAL:

1. Temperature range -10 ~ 50℃
2. Pressure range 0.9 ~ 1.1 Bar
3. Humidity range 15 ~ 90% RH (non-condensing)

125. Gas Detection Sensor, Ammonia, Carbon Monoxide, Ethanol, Hydrogen, Methane, 10-1000 ppm

Features:

1. Maximum heater power dissipation: 88mW
2. Carbon monoxide CO 1 – 1000ppm
3. Ethanol C2H5OH 10 – 500ppm
4. Hydrogen H2 1 – 1000ppm
5. Ammonia NH3 1 – 500ppm
6. Methane CH4 >1000ppm
7. Smallest footprint for compact designs (5 x 7 x 1.55 mm)
8. Robust MEMS sensor for harsh environments
9. High-volume manufacturing for low-cost applications
10. Short lead-times

126.4 in 1 Soil PH Meter Soil Tester PH Moisture Meter Temperature Sunlight Measurement Analysis Acidity Alkali（Without Battery）

Features:

1. Four different soil test meters in one device; Measures moisture, pH/Acidity, Temperature, and light.
2. 100% Accuracy; Easy to read moisture, pH, and light levels; Perfect monitor for growing healthy plants.
3. Takes the guesswork out of gardening; Know exactly when to water, amend your soil or adjust the lighting.
4. Compact, portable & easy to use, just plug and use; Compact soil meter works indoor/outdoors.
5. Save water, energy and keep your plants, lawn, flower in top condition.
6. Measures moisture at the root level.
7. Power Saving function to keep battery long-lasting
8. With a 200 mm Single probe easy to rotate the display side for convenient sight

127. Environmental Sensor (Breakout)

Features:

1. MEMS sensor, small size, low power consumption, high reliability
2. Wide voltage input, compatible with 3.3V and 5V controller
3. Highly integrated environmental sensor: temperature, humidity, barometer and VOC, four-in-one environmental parameter monitoring
4. I2C connector, plug, and play
5. Small size and easy to install

Specifications:

1. Input Voltage: 3.3V~5.5V
2. Operating Current: 5mA (25mA in VOC Measurement)
3. Communication Interface: I2C(Support 3.3V/5V) or SPI(other non-I2C ports only support 3.3V)
4. Default I2C Address: 0x76
5. Temperature Measurement Range: -40℃~+85℃
6. Temperature Measurement Precision: ±1.0℃(0~65℃)
7. Humidity Measurement Range: 0-100%r.H.
8. Humidity Measurement Precision: ±3%r.H.(20-80% r.H.,25℃)
9. Atmospheric Pressure Measurement Range: 300-1100hPa
10. Atmospheric Pressure Measurement Precision: ±0.6hPa(300-1100hPa,0~65℃)
11. IAQ (Indoor Air Quality) Range: 0~500 (the larger, the worse)
12. Dimension: 18×15.6(mm) /0.71×0.61(inches)

128. Environmental Sensor, Supports Temperature / Humidity / Barometric Pressure / Gas Detection With AI function

Communication Interface	I2C and SPI
Temperature Measuring Range	-40~85℃
Temperature Measuring Accuracy	±1.0℃ (0~65℃)
Humidity Measuring Range	0~100% r.H.
Humidity Measuring Accuracy	±3% r.H.
Barometric Pressure Measurement Range	300~1100 hPa
Barometric Pressure Measurement Accuracy	±1.0hPa (0~65℃)
Shipment Weight	0.007 kg
Shipment Dimensions	12 x 7 x 1 cm

129. Mini Cellular GSM + GPS Breakout

> ### *Specifications:*
>
> 1. Quad-band 850/900/1800/1900MHz – connect onto any global GSM network with any 2G SI
> 2. Fully-integrated GPS (MT 3337 chipset with -165 dBm tracking sensitivity) that can be controlled and query over the same serial port
> 3. Make and receive voice calls using a headset or an external 32Ω speaker + electret microphone
> 4. Send and receive SMS messages
> 5. Send and receive GPRS data (TCP/IP, HTTP, etc.)
> 6. PWM/Buzzer vibrational motor control
> 7. AT command interface with "auto baud" detection
> 8. Accuracy: approx 2.5 meters
> 9. Tracking : 22
> 10. Acquisition channels: 66

130. AHT20 Integrated temperature and humidity Sensor -40 ~ + 85 ℃

Operating Voltage(V)	2.0-5.5VDC
Interface	Grove I2C Interface
Measuring Range (humidity)	0% to 100% RH
Temperature Range	-40°C to +85°C
I2C address	0x38
Resolution Temperature	0.01℃, Humidity: 0.024% RH
Shipment Weight	0.001 kg
Shipment Dimensions	7 × 6 × 1 cm

131. AHT21 Integrated temperature and humidity sensor -40 ~ + 120 ℃

Input Voltage Range(VDC)	2.2 – 5.5V
Measuring range (humidity)	0 ~ 100% RH
Measuring range (temperature)	-40 ~ + 120 ℃
Humidity accuracy	± 2 % RH (25℃)
Temperature accuracy	± 0.3 ℃
Resolution temperature	0.01℃ Humidity: 0.024%RH
Signal Output	I2C signal
Shipment Weight	0.001 kg
Shipment Dimensions	7 × 6 × 1 cm

132. Bluetooth Low Energy 2.4GHz SoC 48-Pin QFN

> **Brand:**Nordic
> **Current - Transmitting:**16 mA
> **Current - Receiving:**13.4 mA
> **Number of Pins:**48
> **Frequency:**2.483 GHz
> **Data Rate:**2 Mbps
> **Max Operating Temperature:**75 °C
> **Interface:**I2C, SPI, UART
> **Memory Size:**32 kB

Min Operating Temperature:-25 °C
Packaging: Tape and Reel
Sensitivity (dBm):-96 dBm
Number of GPIO:32
RoHS: Compliant
Operating Supply Voltage:3.6 V
RAM Size:32 kB

133. Single-Chip 2.4GHz Transceiver Enhanced ShockBurst 3.6V 20-pin QFN

Brand: Nordic
Frequency:2.4 GHz
Current - Receiving:13.5 mA
RoHS: Compliant
Max Supply Voltage:3.6 V
Interface:SPI
Data Rate:2 Mbps
Case/Package:QFN
Sensitivity (dBm):-94 dBm
Current - Transmitting:11.3 mA
Min Operating Temperature:-40 C
Max Operating Temperature:85 C
Mount: Surface Mount
Number of Pins:20

134. Multiprotocol Bluetooth 5 ANT/ANT+ 2.4GHz SoC 48-Pin QFN

Brand: Nordic
Case/Package:QFN
Mount: Surface Mount
Core Architecture:ARM
Data Bus Width:32 b
Number of Pins:48
Current - Receiving:10.4 mA
Data Rate:2 Mbps
Interface:I2C, SPI, UART
Current - Transmitting:15.2 mA
Frequency:2.4 GHz
Max Frequency:2.4 GHz
Memory Type:FLASH
Max Operating Temperature:85 C
Memory Size:64 kB
Sensitivity (dBm):-96 dBm
Number of GPIO:32
Min Operating Temperature:-40 C
RoHS: Compliant
RAM Size:8 kB

135. Bluetooth low energy Connectivity 32-Pin QFN

Brand:
Nordic
Sensitivity (dBm):

-87 dBm	
Packaging:	
Bulk	
Tolerance:	
20 %	
Current - Transmitting:	
12.7 mA	
Case/Package:	
Radial	
Mount:	
Through Hole	
Radiation Hardening:	
No	
Lead Pitch:	
2 mm	
Min Operating Temperature:	
-40 °C	
Interface:	
I2C, SPI, UART	
Height:	
11 mm	
Length:	
11 mm	
Max Operating Temperature:	
85 °C	
Weight:	
188.609377 mg	
Voltage Rating (DC):	
50 V	
Number of Pins:	
32	
REACH SVHC:	
No SVHC	
Min Supply Voltage:	
1.9 V	
Contact Plating:	
Tin	
Capacitance:	
22 µF	
Frequency:	
2.4 GHz	
Data Rate:	
1 Mbps	
Current - Receiving:	
14.6 mA	
Max Supply Voltage:	
3.6 V	
Diameter:	
5 mm	
RoHS:	
Compliant	
Voltage Rating:	
50 V	

136. 5V 2A 8-Channel SSR G3MB-202P Solid State Relay Module

Trigger type	Low Level Trigger
Part Number	G3MB-202P
Working Current(mA)	16
Trigger Current (mA)	2
Trigger Voltage (VDC)	5

Switching Voltage (VAC)	240@2A
Isolation	Phototriac
Zero Cross	Yes
Length (mm)	130
Width (mm)	60
Height (mm)	15
Weight (gm)	70
Shipment Weight	0.075 kg
Shipment Dimensions	10 × 6 × 3 cm

137. Based Motor Driver Module

Driver Model	L298N 2A
Operating Voltage (VDC)	5 ~ 35
Peak Current (A)	2
Continuous Current (A)	0-36mA
No. of Channels	2
Over-Current Protection (A)	Yes
Thermal Protection	Yes
LED Indicator	Yes
Cooling Fan	No
Arduino Sheild	No- can be used with Wire connection
Dimensions in mm (LxWxH)	44 x 44 x 28
Weight (gm)	25
Max power	Â 25W.
Shipment Weight	0.03 kg
Shipment Dimensions	7 × 7 × 3 cm

138. Digital Relative Humidity and Temperature Sensor Module

Humidity Measuring Range(%)	20 to 90
Temperature Measuring Range(Â°C)	0 to +50
Humidity Measurement Accuracy(%)	Â±5.0
Temperature Measurement Accuracy(Â°C)	Â±2.0
Response Time(s)	<5
Input Supply Voltage (VDC)	5
Breadboard Size(mm)	19×17 (LxW)
Weight (gm)	0.6
Shipment Weight	0.095 kg
Shipment Dimensions	4 × 4 × 1 cm

139.LDR 5mm

Diameter (mm)	5
No. of Pins	2
Dark resistance	1-20M ohm
Shipment Weight	0.04 kg
Shipment Dimensions	4 × 3 × 2 cm

140. BME688 - Temperature, Humidity, Pressure and Gas Sensor Breakout

Brand:	
Adafruit Industries	

Dimensions:	
25.5mm x 17.6mm x 4.6mm	
Weight:	
1.7g	

141. AHT20 Temperature & Humidity Sensor Breakout Board - STEMMA QT / Qwiic

- Use with 3.3V or 5V power/logic
- I2C address 0x38
- Operational Temperature range: -40 to 85 C (+-1 C typical accuracy over entire range)
- Operational Relative Humidity range: 0 to 100 RH% (+-3 % typical accuracy over entire range)

142. Weather Click Board BME280 SPI / I2C - MikroE

Brand:
MikroElektronika
Type:
Environmental
Applications:
Context awareness, home automation control, personalized weather stations, sport and fitness tools and so on
On-board Modules:
Bosch BME280
Interface:
I2C, SPI
Compatibility:
mikroBUS
Size:
28.6 x 25.4 mm
Input Voltage:
3.3V

143. MAX7219 – 8-Digit LED Display Driver IC SMD-24 Package

Package Includes:
1 x MAX7219 – 8-Digit LED Display Driver IC SMD-24 Package

144. Transmitter chipset CMT2119AW-ESR.

Specifications:

1. Output Power: -10 to +13 dBm.
2. Supply Voltage: 1.8 to 3.6 V.
3. Sleep Current: < 20 nA.
4. Frequency Range: 240 to 960 MHz.
5. FSK, GFSK and OOK Modulation.
6. Symbol Rate: 0.5 to 100 ksps (FSK/GFSK) 0.5 to 30 ksps (OOK).

Packages Includes:
1 x Transmitter chipset CMT2119AW-ESR.

145. Receiver chipset CMT2210LH-ESR.

Specifications:
1. Supply voltage options: 3.0 – 5.5 V (High voltage mode). 2.0 – 3.6 V (Low voltage mode).
2. Operating frequency: 300 – 480 MHz for.
3. CMT2210LH and 300 – 960 MHz for.
4. Data rate: 0.5 – 40 kbps.
5. Sensitivity: -109 dBm (3.0 kbps), 0.1%BER.
6. Receiver bandwidth: 330 kHz.
7. Image rejection ratio: 30 dBm.

Packages Includes:
1 x Receiver chipset CMT2210LH-ESR.

146. CC2500RGPR Texas Instruments (TI)

Package Includes:
1 x CC2500RGPR Low Cost, Low-Power 2.4 GHz RF Transceiver IC QFN-20 Package

147. NRF52832-QFAA-R – Multiprotocol Bluetooth 5 ANT/ANT+ 2.4GHz SoC 48-Pin QFN

1 x NRF52832-QFAA-R – Multiprotocol Bluetooth 5 ANT/ANT+ 2.4GHz SoC IC QFN-48 Package

148. ESP32-S0WD Single-core 32-bit MCU 2.4GHz Wi-Fi BT/BLE SoC 48-Pin QFN

1x ESP32-S0WD Single-core 32-bit MCU 2.4GHz Wi-Fi BT/BLE SoC IC QFN-48 Package

149. ORANGE 66PCS 2.54mm Pitch IC Chip Plug-in Base Kit

Package Includes:
1 x ORANGE 66PCS 2.54mm Pitch IC Chip Plug-in Base Kit

Kit Includes:
18 x 6 pin IC Chip Plug-in

6 x 14 pin IC Chip Plug-in

6 x 18 pin IC Chip Plug-in

6 x 24 pin IC Chip Plug-in

12 x 8 in IC Chip Plug-in

6 x 16 pin IC Chip Plug-in

6 x 20 pin IC Chip Plug-in

6 x 28 pin IC Chip Plug-in

150. Figaro TGS2610 - Liquefied Petroleum Gas (LPG) Sensor

Model No.TGS2610-C00
Heater Current56±5mA
Heater Resistanceapprox 59Ω at room temp.
Heater Voltage5.0±0.2V DC
Load Resistancevariable 0.45kΩ min
Sensing PrincipleMOS type
Circuit Voltage5.0±0.2V DC
Sensor Resistance1.0~10.0kΩ in 1800ppm iso-butane

Standard PackageTO-5 metal can
Target GasesButane, LP gas
Test Gas Conditionsiso-butane in air at 20±2˚C, 65±5%RH
Heater power consumption280mW VH = 5.0V DC
Shipment Weight0.001 kg
Shipment Dimensions9 × 7 × 2 cm

151. RF Transceiver 1.9-3.6V 433/868/ 915MHz TRNSCVR

Manufacturer:	Nordic Semiconductor
Product Category:	RF Transceiver
RoHS:	Details
Type:	FSK
Frequency Range:	430 MHz to 928 MHz
Maximum Data Rate:	50 kbps
Modulation Format:	GFSK
Supply Voltage - Min:	1.9 V
Supply Voltage - Max:	3.6 V
Supply Current Receiving:	12.5 mA
Supply Current Transmitting:	30 mA
Output Power:	10 dBm
Minimum Operating Temperature:	- 40 C
Maximum Operating Temperature:	+ 85 C
Interface Type:	SPI
Package/Case:	QFN-32
Packaging:	Tray
Brand:	Nordic Semiconductor
Development Kit:	nRF905-EVKIT 433, nRF905-EVKIT 868/915
Moisture Sensitive:	Yes
Mounting Style:	SMD/SMT
Operating Supply Voltage:	3 V
Product Type:	RF Transceiver
Sensitivity:	- 100 dBm
Series:	nRF9
Factory Pack Quantity:	2450
Subcategory:	Wireless & RF Integrated Circuits
Supply Current - Max:	12.5 mA
Technology:	Si
Unit Weight:	188.600 mg

152. RF Transceiver Dual Band IEEE 802.15.4 TRX, 48QFN, T&R

Manufacturer:	Microchip
Product Category:	RF Transceiver
RoHS:	Details
Type:	Zigbee
Packaging:	Reel
Packaging:	Cut Tape
Packaging:	MouseReel
Brand:	Microchip Technology
Moisture Sensitive:	Yes
Product Type:	RF Transceiver

Factory Pack Quantity:	4000
Subcategory:	Wireless & RF Integrated Circuits
Technology:	Si
Unit Weight:	1.724 g

153. RF Front End BLE FEM Common T&R PA/Rx bypass HD

Manufacturer:	Skyworks
Product Category:	RF Front End
RoHS:	Yes
Type:	Bluetooth
Operating Frequency:	2.4 GHz
Operating Supply Voltage:	5 V
Operating Supply Current:	11 mA
Maximum Operating Temperature:	+ 85 C
Mounting Style:	SMD/SMT
Package/Case:	MCM-20
Packaging:	Reel
Packaging:	Cut Tape
Packaging:	MouseReel
Brand:	Skyworks Solutions, Inc.
Gain:	11 dB
Moisture Sensitive:	Yes
Product Type:	RF Front End
Series:	SKY66110
Factory Pack Quantity:	4500
Subcategory:	Wireless & RF Integrated Circuits
Technology:	Si
Unit Weight:	68.608 mg

154. RF Front End 2.4 GHz 256 QAM WLAN/BT FEM

Manufacturer:	Skyworks
Product Category:	RF Front End
RoHS:	Yes
Type:	Bluetooth
Operating Frequency:	2.4 GHz
Operating Supply Voltage:	3.6 V
Mounting Style:	SMD/SMT
Package/Case:	QFN-16
Packaging:	Reel
Packaging:	Cut Tape
Packaging:	MouseReel
Brand:	Skyworks Solutions, Inc.
Product Type:	RF Front End
Series:	SKY85302
Factory Pack Quantity:	3000
Subcategory:	Wireless & RF Integrated Circuits
Technology:	Si

155. Distance Sensor Modules 24GHz mmWave Sensor - Human Static Presence Module Lite - human presence, FMCW, Configurable Underlying Parameter, Arduino support, Home Assistant, ESP Home

Manufacturer:	Seeed Studio
Product Category:	Distance Sensor Modules
Type:	24GHz mmWave Sensor
Beam Angle:	80 Deg, 100 Deg
Operating Supply Voltage:	5 V
Operating Supply Current:	110 mA
Minimum Operating Temperature:	- 20 C
Maximum Operating Temperature:	+ 85 C
Mounting Style:	PCB Mount
Brand:	Seeed Studio
Product Type:	Distance Sensor Modules

156. Power Management Modules 3.6-V to 36-V input, 1-V to 12-V output, 2-A, step-down module in 4-mm x 6-mm x 1.8-mm package

Manufacturer:	Texas Instruments
Product Category:	Power Management Modules
RoHS:	Details
Product:	Power Modules
Input Voltage, Max:	36 V
Output Voltage:	1 V to 16 V
Output Current:	2 A
Switching Frequency:	200 kHz to 2.2 MHz
Brand:	Texas Instruments
Input Voltage, Min:	3 V
Load Regulation:	0.1 %
Maximum Operating Temperature:	+ 125 C
Minimum Operating Temperature:	- 40 C
Moisture Sensitive:	Yes
Packaging:	Reel
Packaging:	Cut Tape
Product Type:	Power Management Modules
Series:	TPSM63602
Factory Pack Quantity:	3000
Subcategory:	Embedded Solutions

157. ADXL345 LGA-14 3-axis Accelerometer

Package/Case LGA-14 Mounting Type SMD/SMT Sensor Type 3-axis Sensing Axis X, Y, Z Acceleration (g) 2 ~ 16

Resolution	
13 bit	
Interface Type	
I2C, SPI	
Output Type	
Digital	
Maximum Supply Voltage (V)	3.6
Minimum Supply Voltage (V)	2
Max. Operating Current (mA)	0.14
Operating Temperature Range (°C)	-45 to 105
Dimensions (mm) LxWxH	5 x 3 x 0.98
Shipment Weight	0.008 kg
Shipment Dimensions	$8 \times 4 \times 2$ cm

158. MPU 6050 QFN-24 3-Axis Gyro/Accelerometer IC

Package/Case	QFN-24
Mounting Type	SMD/SMT
Sensitivity	340 LSB/C
Sensor Type	6-axis
Sensing Axis	X, Y, Z
Acceleration (g)	10000
Interface Type	I2C
Output Type	Digital
Maximum Supply Voltage (V)	3.46
Minimum Supply Voltage (V)	2.375
Max. Operating Current (mA)	3.9
Operating Temperature Range (°C)	-40 to 105
Dimensions (mm) LxWxH	4x4x0.9
Shipment Weight	0.008 kg
Shipment Dimensions	8 × 6 × 3 cm

159. MAX98357AETE+T Audio Amplifiers Digital Input Class D Amplifier IC TQFN-16 Package

Package Includes:
1 x MAX98357AETE+T Audio Amplifiers Digital Input Class D Amplifier IC TQFN-16 Package

160. AT24C128N 128K bit Serial I2C Bus EEPROM IC DIP-8 Package

Package Includes:
1 x AT24C128N 128K bit Serial I2C Bus EEPROM IC DIP-8 Package

161 LM741N PDIP-8 Operational Amplifier (Pack of 3 ICs)

Amplifier Type
General Purpose Amplifier
Number of Channel
1
Output Current Per Channel
25 mA

Input Bias Current (Ib)	
0.5 uA	
Gain Bandwidth Product (GBP)	
1 MHz	
Input Offset Voltage (Vos)	
6 mV	
Slew Rate (SR)	
0.5 V/us	
CMRR (dB)	
70	
Voltage Gain (dB)	
106.02	
Technology	
Bipolar	
Max Dual Supply Voltage	
±18 V	
Min Dual Supply Voltage (V)	
± 5	
Max. Operating Current (mA)	
2.8	
Operating Temperature Range (°C)	
0 to 70	
Dimensions (mm) LxWxH	
9.27 x 6.35 x 3.3	
Shipment Weight	
0.005 kg	
Shipment Dimensions	
8 × 7 × 4 cm	

162. SMA Jack Straight PCB Mount(V1.0)

Gender	Female
Mounting Type	PCB Mount
Mounting Feature	Plate Edge Mount
Function	Other
Polarity	Standard
Body Material	Copper
Body Plating	Gold Plating
Impedance (Ω)	50
Shield Termination	NA
Shipment Weight	0.01 kg
Shipment Dimensions	6 × 5 × 1 cm

163. SMA(F) to SMA(F) Adapter

Gender	Female
Impedance	50 Ohm
Max Frequency	18 GHz
VSWR	1.23:1
Body Material	Gold
Shipment Weight	0.009 kg
Shipment Dimensions	7 × 4 × 1 cm

164. SMA Female Connector Right Angled Through-Hole for PCB Mount

rand	Lambdoid
Orientation	Right Angle
Gender	Female
Mounting Type	PCB Mount
Termination Style	Solder Type
Mounting Feature	Through Hole
Function	Other
Polarity	Standard
Body Material	Copper
Body Plating	Gold Plating
Impedance (Ω)	50
Shield Termination	NA
Shipment Weight	0.01 kg
Shipment Dimensions	6 × 5 × 1 cm

165. RF Nano Integrated NRF24L01, Wireless Module with, Soldering

Specification:

1. Microcontroller: ATmega328P
2. Nrf24L01+ 2.4G wireless
3. Architecture AVR
4. Operating Voltage 5 V
5. Flash Memory 32 KB of which 2 KB used by bootloader
6. SRAM: 2 KB
7. Clock Speed: 16 MHz
8. Analog I/O: 8 Pins
9. EEPROM 1 KB
10. DC Current per I/O Pins: 40 mA (I/O Pins)
11. Input Voltage: 7-12 V
12. Digital I/O: 22 Pins
13. PWM Output: 6
14. Power Consumption: 19 m

166. AT-09 Bluetooth 4.0 UART Transceiver Module CC2541 Compatible with HM-10

Input Supply voltage (V)	3.6 ~ 6
BLE Chip	CC2540/CC2541
Input Current (µA)	90 ~ 400
Maximum Operating Range (m)	60 ~ 100
Operating Temperature (°C)	-20 ~ +75
Length (mm)	43
Width (mm)	17
Height (mm)	8
Weight (gm)	5
Shipment Weight	0.01 kg
Shipment Dimensions	7 × 5 × 3 cm

167. NRF52810-QFAA-R7 – Bluetooth 5 BLE ANT 2.4GHz 2Mbps 3V SoC 48-Pin QFN

Package Includes:
1 x NRF52810-QFAA-R7 – Bluetooth 5 BLE ANT 2.4GHz 2Mbps 3V SoC IC QFN-48 Package

168. nRF8001-R2Q32-T – Bluetooth low energy Connectivity 32-Pin QFN

Package Includes:
1 x nRF8001-R2Q32-T – Bluetooth low energy Connectivity IC QFN-32 Package

169.CH340G SOIC16 USB to Serial TTL-RS232 converter IC

Package/Case	SOIC-16
Product Type	Logic ICs
Product Series	CH340
Operating Temperature Range (°C)	-40 to 85
Dimensions (mm) LxWxH	10 x 4 x 1.6
Mounting Type	SMD/SMT
Supply Voltage Range	-0.5-6V
Application	USB to serial IC Computer
Shipment Weight	0.008 kg
Shipment Dimensions	8 × 5 × 2 cm

170. MAX485ESA SO-8 Transceiver Interface IC

Input Supply Voltage (VDC)	12
Input Current	±2 µA
Maximum Data Rate	2.5Mbps
Length (mm)	4.5
Width (mm)	3.9
Height (mm)	1.7
Weight (gm)	1 (approx)
Shipment Weight	0.01 kg
Shipment Dimensions	8 × 7 × 4 cm

171. FT232HL- Single Channel Hi-Speed USB to Multipurpose UART/FIFO-IC

Data Rates	12Mbaud (UART) up to 40MB/s (Sync FIFO)
USB Transfer Modes	Bulk
Interfaces	UART, FIFO, 1 x MPSSE, Fast serial, 8051 MCU emulation, FT1248
Packages	48-pin LQFP
Channels	1
I/O Voltage	3.3V
Operating Temperature	-40°C to +85°C
Shipment Weight	0.001 kg
Shipment Dimensions	9 × 7 × 1 cm

172. Arduino Portenta Vision Shield – LORA

Camera	Himax HM-01B0
Resolution	320P x 320P with support for QVGA
Image Sensor	High sensitivity 3.6µ BrightSense
Microphone	2 x MP34DT05
Connectivity	868/915MHz ABZ-093 LoRa Module with ARM Cortex-M0+
Length (mm)	66
Width (mm)	25
Height (mm)	4
Weight (gm)	8
Shipment Weight	0.015 kg
Shipment Dimensions	7 x 3 x 2 cm

173. Arduino MKR GPS Shield

Specifications:

1. GNSS RECEIVER u-blox module SAM-M8Q (datasheet)
2. CONNECTORS MKR headers / Eslov
3. INPUT VOLTAGE 3.3V
4. OPERATING VOLTAGE 3.3V
5. BACKUP BATTERY CR1216
6. COMMUNICATION Serial / I2C / DCC
7. LENGTH 45 mm
8. WIDTH 25 mm
9. WEIGHT 14 gr.

174. Arduino Nano 33 IOT with Header

Model Type	Arduino Nano 33 IOT with Header
Microcontroller	SAMD21 Cortex-M0+ 32bit low power ARM
Radio module	u-blox NINA-W102
Secure Element	ATECC608A
IMU	LSM6DS3
Operating Voltage (VDC)	3.3
Analog I/O Pins	Input Pins 8 : (ADC 8/10/12 bit) Output Pins : 1 (DAC 10 bit)
Digital I/O Pins	14
PWM Output Pins	11 (2, 3, 5, 6, 9, 10, 11, 12, 16 / A2, 17 / A3, 19 / A5)
Clock Speed	48MHz
DC Current per I/O Pin (mA)	7
Flash Memory	256 KB
EEPROM	None
SRAM	32
Length (mm)	45
Width (mm)	18
Height (mm)	5
Weight (gm)	5

Shipment Weight	0.015 kg
Shipment Dimensions	8 × 6 × 2 cm

175. Original ARDUINO NANO 33 BLE Board (Without Header)

Model Type	ARDUINO NANO 33 BLE
Microcontroller Chip	SAMD21 Cortex-M0+ 32bit low power ARM MCU
Operating Voltage (VDC)	3.3
Analog I/O Pins	Input Pins 8 : (ADC 8/10/12 bit) Output Pins : 1 (DAC 10 bit)
Digital I/O Pins	14
PWM Digital I/O Pins	11
Clock Speed	48MHz
Flash Memory	256 KB
SRAM	32
EEPROM	None
DC Current for 3.3V Pin (mA)	7
Power Supply Option	Micro USB
On Board LEDs	On/Off, L (PIN 13), TX, RX
Operating Temperature (°C)	-10 to 55
Weight (gm)	5
Shipment Weight	0.01 kg
Shipment Dimensions	5 × 1 × 1 cm

176. Original Arduino Nano 33 BLE Sense Rev2

Microcontroller	nRF52840
Operating Voltage	3.3V
Input Voltage (Limit)	21V
DC Current per I/O Pin	15mA
Clock Speed	64MHz
CPU Flash Memory	1MB
SRAM	256KB
EEPROM	none
Digital Input / Output Pins	14
PWM pins	All Digital Pins
UART	1
SPI	1
I2C	1
Analog Input Pins	8 (ADC 12 bit 200 ksamples)
Analog Output Pins	Only through PWM (no DAC)
USB	Native in the nRF52840 Processor
IMU	9 axis IMU Its a Combination of two (BMI270 – 6 axis IMU and BMM150 – 3 axis IMU).
Microphone	MP34DT05
Gesture, light, proximity	APDS9960
Barometric pressure	LPS22HB
Temperature, humidity	HTS221
Length (mm)	45

Width (mm)	18
Weight (gm)	5
Shipment Weight	0.03 kg
Shipment Dimensions	8 × 6 × 2 cm

177. Arduino Nano RP2040 Connect without Header

Features and Specifications:

Raspberry Pi RP2040 Microcontroller:
1. 133MHz 32bit Dual Core Arm Cortex-M0+
2. 264kB on-chip SRAM
3. Direct Memory Access (DMA) controller
4. Support for up to 16MB of off-chip Flash memory via dedicated QSPI bus
5. USB 1.1 controller and PHY, with host and device support
6. 8 PIO state machines
7. Programmable IO (PIO) for extended peripheral support
8. 4 channel ADC with internal temperature sensor, 0.5 MSa/s, 12-bit conversion
9. SWD Debugging
10. 2 on-chip PLLs to generate USB and core clock
11. 40nm process node
12. Multiple low power mode support
13. USB 1.1 Host/Device
14. Internal Voltage Regulator to supply the core voltage
15. Advanced High-performance Bus (AHB)/Advanced Peripheral Bus (APB)
U-blox® Nina W102 WiFi/Bluetooth Module:

1. **240MHz 32bit Dual Core Xtensa LX6**
2. 520kB on-chip SRAM
3. 448 Kbyte ROM for booting and core functions
4. 16 Mbit FLASH for code storage including hardware encryption to protect programs and data
5. 1 kbit EFUSE (non-erasable memory) for MAC addresses, module configuration,
6. Flash-Encryption, and Chip-ID
7. **IEEE 802.11b/g/n single-band 2.4 GHz WiFi operation**
8. **Bluetooth 4.2**
9. Integrated Planar Inverted-F Antenna (PIFA)
10. 4x 12-bit ADC
11. 3x I2C, SDIO, CAN, QSPI
Memory:
1. AT25SF128A 16MB NOR Flash
2. QSPI data transfer rate up to 532Mbps
3. 100K program/erase cycles

178. Arduino Leonardo without Headers

Model Type	Leonardo
Microcontroller Chip	ATmega32u4
Operating Voltage (VDC)	5
Input Voltage(Recommended)	7V to 12V
Input Voltage (limit)	6V-20V
Analog I/O Pins	12
Digital I/O Pins	20
PWM Digital I/O Pins	7
Clock Speed	16 MHz
Flash Memory	32 KB (ATmega32u4) of which 4 KB used by bootloader
SRAM	2.5 KB (ATmega32u4)
EEPROM	1 KB (ATmega328)
Weight (gm)	20

Length (mm)	68.6
Width (mm)	53.3
Shipment Weight	0.04 kg
Shipment Dimensions	7 × 5 × 3 cm

(C). Microcontrollers, Single Chip Computers, Development Boards etc.

179.ATmega328P U-TH Microcontroller

Package/Case	TQFP-32
Minimum Supply Voltage (V)	2.7
Maximum Supply Voltage (V)	5.5
Product Type	8-bit Microcontrollers – MCU
Product Series	ATmega328P
Mounting Type	SMD/SMT
Maximum Clock Frequency (MHz)	20
Data Bus Width	8 bit
No. of I/Os	23
Interface Type	I2C, SPI, USART
Program Memory Size (kB)	32
Data RAM size and Type	2kB SRAM
Data ROM Size and Type	1024 B EEPROM
No. of Timers/Counters	3 Timer
Operating Temperature Range (°C)	-24 to 84
Dimensions (mm) LxWxH	7 x 7 x 1
Shipment Weight	0.007 kg
Shipment Dimensions	8 × 6 × 4 cm

180. ATmega328P-U PDIP-28 Microcontroller

Package/CasePDIP-28 Minimum Supply Voltage (V)2.7 Maximum Supply Voltage (V)5.5 No. of I/Os23 No. of Timers/Counters3 Timer Product Type8-bit Microcontrollers – MCU Mounting TypeThrough Hole Product SeriesATmega328P Maximum Clock Frequency (MHz)20 Data Bus Width8 bit Interface TypeI2C, SPI, USART Program Memory Size (kB)32 Data RAM size and Type2kB SRAM Data ROM Size and Type1024 B EEPROM Operating Temperature Range (°C)-24 to 84 Dimensions (mm) LxWxH34.8 x 7.5 x 4.57

181. STM32F030F4P6 TSSOP-20 ARM Microcontroller-MCU

Package/Case	TSSOP-20
No. of I/Os	15

Mounting Type	SMD/SMT
Minimum Supply Voltage (V)	2.4
Maximum Supply Voltage (V)	3.6
Product Type	ARM Microcontrollers – MCU
ADC Resolution	12 bit
Product Series	STM32F030F4
Maximum Clock Frequency (MHz)	48
Data Bus Width	32 bit
Interface Type	I2C, SPI, USART
Program Memory Size (kB)	16
Data RAM size and Type	4 kB SRAM
No. of Timers/Counters	3 Timer
Operating Temperature Range (°C)	-40 to 85
Dimensions (mm) LxWxH	6.75 x 4.36 x 1.4
Shipment Weight	0.008 kg
Shipment Dimensions	8 x 5 x 3 cm

182. ATmega8A AU TQFP-32 Microcontroller

Package/Case	TQFP-32
Minimum Supply Voltage (V)	2.7
Maximum Supply Voltage (V)	5.5
Product Type	8-bit Microcontrollers – MCU
Product Series	megaAVR
Maximum Clock Frequency (MHz)	16
Data Bus Width	8 bit
No. of I/Os	23
Mounting Type	SMD/SMT
Interface Type	SPI, TWI, USART
Program Memory Size (kB)	8
Data RAM size and Type	1KB SRAM
Data ROM Size and Type	512-B EEPROM
No. of Timers/Counters	3 Timer
Operating Temperature Range (°C)	-24 to 84
Dimensions (mm) LxWxH	7 x 7 x 1.5
Shipment Weight	0.007 kg
Shipment Dimensions	7 x 5 x 4 cm

183. ATMEGA2560-16AUR Microcontroller

Package/Case	TQFP-100
Input Supply Voltage (VDC)	4.5 ~ 5.5
Product Series	AVR ATmega
Core Processor	8 Bit AVR
Speed	16MHz
Connectivity	EBI/EMI, I²C, SPI, UART/USART
Peripherals	Brown-out Detect/Reset, POR, PWM, WDT
Number of I/O	86
Data Converters	A/D 16x10b
Oscillator Type	Internal
Operating Temperature (°C)	-40 to 85
Shipment Weight	0.02 kg
Shipment Dimensions	4 x 4 x 1 cm

184. RP2040 Microcontroller IC by Raspberry PI

Processor	Dual ARM Cortex-M0+ cores
SPI Flash	2M on-board QSPI
Maximum Clock Frequency (MHz)	133
SRAM	264
GPIO	30
PWM	16 channels
ADC	3 available × 12-bit
UART	2
I2C	2 Buses
SPI	2 Buses
Length (mm)	25
Width (mm)	25
Height (mm)	8
Weight (gm)	8
Shipment Weight	0.01 kg
Shipment Dimensions	6 × 3 × 1 cm

185. STM32F030F4P6 TSSOP-20 ARM Microcontroller-MCU

Package/Case	TSSOP-20
No. of I/Os	15
Mounting Type	SMD/SMT
Minimum Supply Voltage (V)	2.4
Maximum Supply Voltage (V)	3.6
Product Type	ARM Microcontrollers – MCU
ADC Resolution	12 bit
Product Series	STM32F030F4
Maximum Clock Frequency (MHz)	48
Data Bus Width	32 bit
Interface Type	I2C, SPI, USART
Program Memory Size (kB)	16
Data RAM size and Type	4 kB SRAM
No. of Timers/Counters	3 Timer
Operating Temperature Range (°C)	-40 to 85
Dimensions (mm) LxWxH	6.75 x 4.36 x 1.4
Shipment Weight	0.008 kg
Shipment Dimensions	8 × 5 × 3 cm

186. ESP32-D0WD Dual-core 32-bit MCU 2.4GHz Wi-Fi BT/BLE SoC IC QFN-48 Package

IC Name: ESP32-D0WD
Package/Case: QFN-48

187. ESP WROOM 32 MCU Module

Specifications:

1. Model: ESP WROOM 32 MCU
2. Processor: Single or Dual core TensilicaXtensa 32-bit LX6

3. Operating voltage (v): 2.3 ~ 3.6
4. Operating current (mA): 80
5. Clock Frequency (MHz): 80 ~ 240
6. Flash memory (MB): 4
7. Data Rate (Mbps): 54
8. SRAM Memory (KB): 512
9. BLE (Bluetooth Low Energy): Without (BLE)
10. Operating temperature: -40 °C – 85 °C
11. Dimensions: 5 x 2.5 x 1.5mm
12. Weight: 9g

188. TCS3200 Color Recognition Sensor Module for MCU Arduino

Operating Voltage (VDC)	3 ~ 5
Best Detection Range(mm)	100
Length (mm)	32
Width (mm)	25
Height (mm)	11
Weight (gm)	4
Shipment Weight	0.005 kg
Shipment Dimensions	5 × 4 × 3 cm

189. Pixy 2.1 Smart Vision Sensor-Object Tracking Camera

Lens type	Standard M12
Processor	NXP LPC4330, 204 MHz, dual-core
Power Input	USB input (5V) or unregulated input (6V to 10V)
Lens field-of-view	80° horizontal, 40° vertical
RAM	264K bytes
Flash	2M bytes
Length (mm)	38
Width (mm)	42
Height (mm)	15.3
Weight (gm)	70
Shipment Weight	0.075 kg
Shipment Dimensions	6 × 6 × 4 cm

190. DS18B20 Water Proof Temperature Probe – Black (1m)

Supply voltage (V)	3.0 – 5.5V
Temperature range	-55 ~ +125 Â°C
Probe diameter	6mm
Probe length	50mm
Resolution	9 ~ 12 bit
Query time	750 msec
Cable Length (Meter)	1
Shipment Weight	0.08 kg
Shipment Dimensions	7 × 5 × 3 cm

191. LCD1602 Parallel LCD Display with IIC/I2C interface

Characters	16
Interface Type	I2C
I2C Address	0x27
Character Color	White
Backlight	Blue
Input Voltage (V)	5
Length (mm)	36
Width (mm)	80
Height (mm)	18
Weight (gm)	35
Shipment Weight	0.037 kg
Shipment Dimensions	8 × 5 × 3 cm

192. Pro Mini ATMEGA328P 5V/16M Black- Standard version

DC Input (V)	5 ~ 9
Clock Frequency (MHz)	16
Max Output Current (mA)	150
No. of Analog Pins	8
No. of Digital Pins	14
Length (mm)	33
Width (mm)	18
Height (mm)	6
Weight (gm)	5
Shipment Weight	0.01 kg
Shipment Dimensions	6 × 4 × 2 cm

193. Pro Mini ATMEGA328P 3.3V/8M (Official Version)

Microcontroller	ATmega328
Circuit Operating Voltage (V)	3.3
Input Voltage (V)	3.3 to 12
Clock Frequency (MHz)	8
Analog I/O Pins	8
Digital I/O Pins	14
PCB Size (L x W) mm	33 x 18
Shipment Weight	0.08 kg
Shipment Dimensions	8 × 5 × 5 cm

194. Raspberry Pi Sense HAT with integrated Sensors

Features:

1. Standard Raspberry Pi 40PIN GPIO extension header, supports Raspberry Pi series boards
2. Onboard ICM20948 (3-axis accelerometer, 3-axis gyroscope, and 3-axis magnetometer), detects movement, orientation, and magnetic
3. SHTC3 digital temperature and humidity sensor onboard allows monitoring the environment
4. LPS22HB barometric pressure sensor onboard allows monitoring the environment
5. TCS34725 color sensor onboard identifies the color of a nearby object

6. ADS1015 ADC, 4-ch 12-bit precision, AD expansion onboard to support more external sensors
7. Brings I2C control pins, for connecting other host boards like STM32
8. Comes with development resources and manual (examples for Raspberry Pi/STM32)

195. ESP WROOM 32 MCU Module

Specifications:

1. Model: ESP WROOM 32 MCU
2. Processor: Single or Dual core TensilicaXtensa 32-bit LX6
3. Operating voltage (v): 2.3 ~ 3.6
4. Operating current (mA): 80
5. Clock Frequency (MHz): 80 ~ 240
6. Flash memory (MB): 4
7. Data Rate (Mbps): 54
8. SRAM Memory (KB): 512
9. BLE (Bluetooth Low Energy): Without (BLE)
10. Operating temperature: -40 °C – 85 °C
11. Dimensions: 5 x 2.5 x 1.5mm
12. Weight: 9g

196. Particle Boron IoT Development Board

SoC	Nordic Semiconductor nRF52840
Processor	ARM Cortex-M4F 32-bit processor @ 64MHz
Flash Memory	1 MB
RAM	256 KB
Bluetooth	2Mbps, 1Mbps, 500Kbps, 125Kbps
Length(mm)	51
Width(mm)	23
Height(mm)	11
Weight(g)	18
Shipment Weight	0.02 kg
Shipment Dimensions	6 × 3 × 2 cm

197. ESP32-D0WD Dual-core 32-bit MCU 2.4GHz Wi-Fi BT/BLE SoC IC QFN-48 Package

IC Name: ESP32-D0WD
Package/Case: QFN-48

198. NRF51822-CFAC-R – Bluetooth 3.1+EDR BLE 2Mbps 3V Medical 2.4GHz SoC ULP 48-Pin QFN

IC Name: NRF51822-CFAC-R
Package/Case: QFN-48

199. NRF51822-QFAB-R7 – Multiprotocol Bluetooth Low Energy ANT 2.4GHz SoC ULP IC QFN-48 Package

1. IC Name: NRF51822-QFAB-R7

2. Package/Case: QFN-48

200. NRF51422-QFAA-R7 Nordic Multi-protocol Bluetooth Smart SoC 48-Pin QFN

1. Brand: Nordic
2. Case/Package: QFN
3. Number of Pins: 48
4. Current – Receiving: 13 mA
5. Current – Transmitting: 16 mA

(D). IOT Equipment, Communication Modules

201. Pi Camera

Model	Raspberry Pi Camera V2
Resolution	8 Megapixel
Image Sensor	Sony IMX219
Sensor Resolution	2592 x 1944 pixels
Video Modes	1080p30, 720p60 & 640x480p60/90
Focal Length	3.60 mm +/- 0.01
F Stop	2.9
Dimensions in mm (LxWxH)	25 x 23 x 9
Weight (gm)	3
Shipment Weight	0.005 kg
Shipment Dimensions	8 × 4 × 3 cm

202. 5MP 1080P IR-Cut Camera for Raspberry Pi 3/4 with Automatic Day Night Mode

Model	OV5647 5MP 1080P IR-Cut Camera
Resolution	1080p
Sensor	OV5647
Camera	5MP
CCD Size	1/4inch
Aperture (F)	1.8
Focal Length	3.6mm adjustable
Output Power for IR LED	3.3~5v
Diagonal angle	60 degree
Dimensions in mm (LxWxH)	32.12 x 30 x 25.5
Weight (gm)	11
Ribbon cable Length	14 cm
Shipment Weight	0.016 kg
Shipment Dimensions	12 × 5 × 5 cm

203. LoRa Radio 868MHz

Features:

1. Using RFM95 module based on SX1276 LoRa®
2. Communication Interface: UART
3. Simple wire antenna or MHF Connector for external high gain antenna
4. +20dBm – 100 mW Power Output Capability

204. LoRa 868MHZ SX1276 Wireless Transmitter and Receiver RF Module

Model No.E32-868T30D
Port Number1
Interface TypeCDMA
Working Frequency868 MHz
Operating Distance Range (Meter)8000
RF ICSX1276
RF ConnectorPluginInterfaceUART
Length (mm)24
Width (mm)43
Height (mm)3
Weight (gm)40
Shipment Weight0.03 kg
Shipment Dimensions6 × 4 × 2 cm

205. LoRa Shield for Arduino

Features :

1. Compatible with 3.3v or 5v I/O Arduino Board.
2. Frequency Band: 915MHz/868 MHZ/433 MHZ (Pre-configure in a factory)
3. Low power consumption
4. Compatible with Arduino Leonardo, Uno, Mega, DUE
5. External Antenna via I-Pex connector
6. Excellent blocking immunity.
7. Built-in bit synchronizer for clock recovery.
8. Preamble detection.
9. 127 dB Dynamic Range RSSI.
10. Automatic RF Sense and CAD with ultra-fast AFC.
11. Packet engine up to 256 bytes with CRC.
12. Built-in temperature sensor and low battery indicator.

206. XBee3 2.4GHz ZB3.0 RP-SMA Female Antenna

TRANSCEIVER CHIPSET	Silicon Labs EFR32MG SoC
DIGI XBEE PART NUMBER	XB3-24Z8ST
DATA RATE	RF 250 Kbps, Serial up to 1 Mbps
RATED INDOOR/URBAN RANGE	Up to 300 ft (90 m)
RATED OUTDOOR/RF LINE-OF-SIGHT RANGE	Up to 2 miles (3200 m)
RECEIVER SENSITIVITY (1% PER)	+19 dBm
TRANSMIT POWER	+8 dBm
SUPPLY VOLTAGE	2.1 to 3.6V
TRANSMIT CURRENT	40 mA @ 8 dBm 135 mA @ 19 dBm
RECEIVE CURRENT	15 mA
POWER-DOWN CURRENT	1.7 microAmp @ 25 degrees C
MEMORY	1 MB / 128 KB RAM
CPU/CLOCK SPEED	HCS08 / up to 50.33 MHz
PROTOCOL	ZigBee® 3.0

ENCRYPTION	128/256 bit AES
RELIABLE PACKET DELIVERY	Retries/Acknowledgements
IDS	PAN ID and Addresses, cluster IDs and endpoints (optional)
CHANNELS	16 channel
Shipment Weight	0.06 kg
Shipment Dimensions	8 x 5 x 3 cm

207. BLE Bluetooth 4.0 CC2541 Wireless Module

Features :

1. It's easy to use and completely encapsulated.
2. You can set it as a slave or master.
3. You can use the AT command set the baud rate.
4. Coverage up to 60 meters.
5. Built-in PCB antenna.
6. UART design.
7. Support bridge direct-driven mode simultaneously (no need for extra CPU).
8. 20ms connection interval (default), quick to connect; Support AT instruction, to modify the baud rate of the serial port, gain MAC address and modify module name.
9. Support AT instruction, to adjust the Bluetooth connection interval and control the forwarding rate (dynamic power consumption adjustment).
10. Support APP; IO expansion.
11. 2 channel ADC input (14 bit).
12. 4 channel PWM (120Hz) output.
13. The RSSI successive acquisition, auto read, and notification to APP (used in anti-lost alarm).
14. Power indicator/alert.
15. Support anti-hijack password setup, modification, and restoration.
16. Ultra-low power consumption standby mode.

208. Bluetooth 4.0 UART Transceiver Module CC2541 Compatible with HM-10

Input Supply voltage (V)	3.6 ~ 6
BLE Chip	CC2540/CC2541
Input Current (µA)	90 ~ 400
Maximum Operating Range (m)	60 ~ 100
Operating Temperature (°C)	-20 ~ +75
Length (mm)	43
Width (mm)	17
Height (mm)	8
Weight (gm)	5
Shipment Weight	0.01 kg
Shipment Dimensions	7 x 5 x 3 cm

209. RF Transmitter Receiver Module 315MHz Wireless Link Kit For Arduino

Features :
Receiver module parameters

1. Product Model: XY-MK-5V.
2. Operating voltage: DC5V.
3. Quiescent Current: 4mA.
4. Receiving frequency: 315MHz.
5. Receiver sensitivity: -105 dB.
6. Size: 30 x 14 x 7 mm.
   Transmitter module parameters

1. Launch Distance: 20-200 meters (different voltage, different results).
2. Operating voltage: 3.5-12V.
3. Dimensions: 19 x 19 mm.
4. Operating mode: AM.
5. Transfer rate: 4KB/S.
6. Transmitting power: 10mW.
7. Transmitting frequency: 315Mhz.
8. An external antenna: 25cm ordinary multi-core or single-core line.
9. Pinout from left a+ right: (DATA; VCC; GND).

210. NRF 51822 BLE 4.0 Bluetooth Module Wireless Low-power Development Board

Model	Waveshare Core 51822
Onboard Chip	nRF51822
Communication Distance	(Outdoor@1M data rate): 30m
Frequency Range	2.4GHz
Operating voltage	2.0V ~ 3.6V
Operating temperature	-40℃ ~ 85℃
Digital interfaces	SPI, I2C, UART
Expansion Pinheader	All the I/Os except P0.26 and P0.27
Pin Header Pitch	2 mm
Antenna Type	Onboard PCB Antenna
Length (mm)	33.2
Width (mm)	24.5
Height (mm)	8
Weight (gm)	4
Shipment Weight	0.005 kg
Shipment Dimensions	7 x 5 x 1 cm

211. 87-108Mhz Stereo FM Transmitter Module Digital LCD Display Wireless Microphone Board Multi-function Frequency Modulation

Output Power	500mW (drive headphones), 3W (drive speakers)
Frequency Range	50Hz-18KHz
Close Campus Radio	87.0MHz-108.0MHz
Open Campus Radio	76.0MHz-108.0MHz
Equivalent Noise	≥30dB
Input Supply Voltage (VDC)	3 ~ 5
Length (mm)	50
Width (mm)	30
Height (mm)	15
Weight (gm)	25

Shipment Weight	0.025 kg
Shipment Dimensions	5 × 3 × 2 cm

212. SX1262 LoRa HAT for Raspberry Pi 868MHz Frequency Band

Transmit Current	133mA (Transient current)
Receive Current	11mA
Sleep Current	2uA (LoRa module deep sleep)
Max. Transmit Power	22.0dBm(10, 13, 17, 22dBm Selectable)
Transmit Length	240 Bytes (32, 64, 128, 240 Bytes Selectable)
Buffer	1000 Bytes
Working bands	850.125 ~ 930.125MHz
Receive Sensitivity	147dBm@0.3Kbps (On-air)
Interface	UART
Range	5KM(Sunny day; open area; Antenna: AUX 5dBi, Height 2.5m; Air Speed: 2.4kbps)
Maximum Working Voltage (V)	5
Logic Input (V)	3.3
Working Temperature Range (°C)	40 to 85
Length (mm)	65
Width (mm)	30.5
Height (mm)	25
Weight (gm)	69
Shipment Weight	0.075 kg
Shipment Dimensions	7 × 4 × 3 cm

213. SX1268 LoRa HAT for Raspberry Pi 433MHz Frequency Band

Transmit Current	110mA (Transient current)
Receive Current	11mA
Sleep Current	2uA (LoRa module deep sleep)
Max. Transmit Power	22.0dBm(10, 13, 17, 22dBm Selectable)
Transmit Length	240 Bytes (32, 64, 128, 240 Bytes Selectable)
Buffer	1000 Bytes
Working bands	410.125 ~ 493.125MHz
Receive Sensitivity	147dBm@0.3Kbps (On-air)
Interface	UART
Range	5KM(Sunny day; open area; Antenna: AUX 5dBi, Height 2.5m; Air Speed: 2.4kbps)
Maximum Working Voltage (V)	5
Logic Input (V)	3.3
Working Temperature Range (°C)	40 to 85
Length (mm)	65
Width (mm)	30.5
Height (mm)	25
Weight (gm)	69
Shipment Weight	0.091 kg
Shipment Dimensions	7 × 4 × 3 cm

214. GSM/GPRS/GNSS/Bluetooth HAT for Raspberry Pi

Operating Voltage (VDC)	5
Operating Temperature Range (°C)	-40 to 85
Storage condition (℃)	-45~90

Cable Length (Meter)	3
Length (mm)	65
Width (mm)	30.2
Height (mm)	15
Weight (gm)	20
Shipment Weight	0.022 kg
Shipment Dimensions	6 × 5 × 2 cm

215. ESP-32S Wifi Bluetooth Combo Module

Specification and Features:
1. CPU and Memory: Xtensa® 32-bit LX6 Dual-core processor, up to 600 DMIPS.
2. 448 KByte ROM
3. 520 KByte SRAM
4. 16 KByte SRAM in RTC.
5. QSPI can connect up to 4* Flash/SRAM, each flash should be less than 16 Mbytes.
6. Supply Voltage: 3V~3.6V

216. LoRa Series Ra-02 Spread Spectrum Wireless Module

Features :

1. LoRa Spread Spectrum modulation technology
2. Constant RF power output at + 20dBm-100mW voltage change
3. High sensitivity: down to -148dBm
4. Half-duplex SPI communication
5. Programmable bit rates up to 300kbps
6. Supports FSK, GFSK, MSK, GMSK, LoRa and OOK modulation modes
7. 127dB RSSI dynamic range
8. Automatic RF signal detection, CAD model, and very high-speed AFC
9. Packet engine with CRC up to 256 bytes
10. Small footprint dual-row stamp-hole patch package
11. Shielded housing

217. ESP32-Audio-Kit

CPU	Xtensa 32-bit LX6 dual-core processor, Summary computing power up to 600 DMIPS
RAM	520KB SRAM+8M PSRAM
ROM	520KB SRAM RTC 16 KB SRAM
IO Port	10
SPI Flash	Default 32Mbit
Support Interface	URAT,SPI,I2C,PWM
UART Baudrate	Default 115200 bps
Audio Output	Support 1 channel headphone output and 1 channel left and right speaker output
Audio Input	Support LINEIN and 2-way MIC input
Spectrum Range	2412~2484MHz
Length (mm)	83
Width (mm)	68
Height (mm)	5
Weight (gm)	30
Shipment Weight	0.033 kg
Shipment Dimensions	18 × 14 × 2 cm

218. 0.1-2000mhz RF Wideband Gain 30db Low-Noise Amplifier LNA Board Module

Input supply voltage Range	6-12 VDC
Operating frequency	0.1-2000MHz
Maximum power output	+10dBm at 10mW
Amplifier gain	F=0.1MHz, gain=32dB F=500Mhz, gain=31dB F=1000MHz, gain=29dB F=1500Mhz, gain=25dB F=2000MHz, gain=20dB
Diameter of end Connector (mm)	6.20
System impedance	50Ω
End Connector gender	SMA-Female
PCB Colour	Green + Gold
Module Dimensions (LxWxH) (mm)	52 x 25 x 6
Weight (gm)	5
Shipment Weight	0.01 kg
Shipment Dimensions	14 × 10 × 8 cm

219. 2.4GHz 3.2dBi RP-SMA Male Omni Antenna for WiFi

Frequency (Center/Band)	2.4GHz
Frequency Range	2.4GHz ~ 2.5GHz
Antenna Type	Whip, Tilt
Number of Bands	1
Antenna Connector	RP SMA female
VSWR	1.9
Gain	3.2dBi
Applications	WLAN, Zigbee
Body Material	Plastic and Rubber
Color	Black
Height (Max)	19 cm.
Weight(g)	17
Shipment Weight	0.02 kg
Shipment Dimensions	9 × 8 × 6 cm

220. SMA Female Connector Right Angled Through-Hole for PCB Mount

Features and Specifications:
Features:

1. Through Hole, Pcb Mount, Jack/female, Angled/90°, 50Ω;
2. Excellent electrical performance up to 18GHz with low reflection;
3. Thread type coupling mechanism ensure small loss and high security in a compact design;
4. High Quality with 30 days 100% Money back;
5. From the OEM Original Factory, same quality with much better price.
   Specifications:
   Electrical Characteristics

1. Impedance : 50 ohm
2. Frequency Range: 0~6 GHz
3. VSWR: Straight type ≦ 1.3max / R/A type ≦ 1.5max
4. Dielectric Withstanding Voltage:1000 V rms min for RG142, RG405
   750 V rms min. for RG316, RG402
   500v rms min. for RG178

5. Working Voltage: 500 V rms max. for RG142, RG405
   375 V rms max. for RG316, RG402
   170 V rms max. for RG178
6. Center Contact Resistance ≦ 6.0 mΩ (Milliohms max.)
7. Outer Contact Resistance ≦ 2.0 mΩ (Milliohms max.)
8. Insulation Resistance ≧ 5 x 10³ mΩ (Megohms min.)
   Mechanical Characteristics

1. Coupling: 1/4-36 thread
2. Contact Retention: 15 in-lbs min.
3. Coupling nut torque: 30 in-lbs. min.
4. Durability(mating) ≧ 500 cycles (For Beryllium Copper Contact)
   Environmental Characteristics

1. Environmental Characteristics: -65°C ~ +165°C
2. Vibration: MIL-STD-202 Meth.204

Corrosion resistance: MIL-STD-202 Meth. 101

221. SMA Female Straight Connector Solder Type for Cable & Panel Mount

Features and Specifications:
Features:

1. SMA Connector,Jack,Straight,50ohm,solder,Bulkhead-front Mount,GoldPlating,Brass
2. Excellent electrical performance up to 18GHz with low reflection;
3. Thread type coupling mechanism ensure small loss and high security in compact design;
   Specifications:

1. Impedance : 50 ohm
2. Frequency Range: 0~6 GHz
3. VSWR: Straight type ≦ 1.3max / R/A type ≦ 1.5max
4. Dielectric Withstanding Voltage:1000 V rms min for RG142, RG405
5. 750 V rms min. for RG316, RG402
6. 500v rms min. for RG178
7. Working Voltage: 500 V rms max. for RG142, RG405
8. 375 V rms max. for RG316, RG402
9. 170 V rms max. for RG178
10. Center Contact Resistance ≦ 6.0 mΩ (Milliohms max.)
11. Outer Contact Resistance ≦ 2.0 mΩ (Milliohms max.)
12. Insulation Resistance ≧ 5 x 10³ mΩ (Megohms min.)
    Mechanical Characteristics

1. Coupling: 1/4-36 thread
2. Contact Retention: 15 in-lbs min.
3. Coupling nut torque: 30 in-lbs. min.
4. Durability(mating) ≧ 500 cycles (For Beryllium Copper Contact)
   Environmental Characteristics

1. Temprature Range: -55°C ~ +155°C
2. Vibration: MIL-STD-202 Meth.204
3. Corrosion resistance: MIL-STD-202 Meth. 10

222. GNSS Antenna for Raspberry Pi HAT and Arduino Shield with 3 Meter Cable

Features:

1. The antenna assembly consists of a patch antenna for receiving GNSS signals and a preamplifier for signal amplification.
2. Power supply to the antenna preamplifier must be provided by the application on the same RF signal trace as the GNSS RF signal is carried to the application.
3. The antenna has an internal magnet so that it can be fixed on a metallic surface.
4. Easy to use an antenna. Does not require RF or antenna knowledge.

223. GPS HAT for Raspberry Pi

Features:

1. High sensitivity: -167dBm @Tracking, -149dBm @Acquisition.
2. The multi-GNSS engine for GPS, GLONASS, Galileo, and QZSS
3. 99 acquisition channels, 33 tracking channels.
4. Balloon mode, for high altitude up to 80km.
5. Only 26mA current draw.
6. PPS VS. NMEA can be used for time served.
7. Support SDK command developed by Quectel.
8. Automatic antenna switching function.
9. Built-in Real Time Clock (RTC) – slot in a CR2031 backup battery for 7-years or more of timekeeping even if the Pi is off!.
10. PPS output on a fix.
11. Internal patch antenna which works quite well when used outdoors + uFL connector for an external active antenna for when used indoors or in locations without a clear sky view.
12. Fix status LED blinks to let you know when the GPS has determined the current coordinates.
13. Great anti-jamming performance due to multi-tone active interference canceller.
14. LOCUS, an embedded logger function without the need to host an external flash.

224. 8MP Pan Tilt Zoom PTZ Camera for Raspberry Pi 4/3B+/3 and Jetson Nano / Xavier NX

Features:

1. Real PTZ with servos for directional control and varifocal lens for optical zoom now comes to the Raspberry Pi and Jetson Nano / Xavier NX
2. Switchable IR Cut through software for your day/night vision
3. Make full use of the CSI connector now that a single camera can be used to monitor places that should be covered by multiple ones
4. Autofocus control, pan/tilt/zoom keyboard control supported in software
5. 8MP IMX219 Camera board
6. PTZ Controller Board Connector Part Number: S6B-XH-A-1

225. Pivariety 21MP IMX230 Color Camera Module

Features:

1. 21MP Sony IMX230 Exmor RS™ color sensor, up to 5344×4012@9 fps.
2. Auto Exposure Control, Auto White Balance.
3. Programmable focus control.
4. Gstreamer support.

5. Upcoming V4L2 support.
6. Compatible w/ all libcamera-based apps maintained by the RPi foundation.

226. OpenMV Cam H7 Plus

Features:

1. STM32H743II processor to realize machine vision applications
2. Compact size for easy deployment in robotics projects
3. Low power consumption for prolonged use
4. Micropython support with easy-to-use OpenMV IDE for quick and convenient project integration
5. High resolution OV5640 image sensor (2592×1944/ 5MP) for better image processing
6. Removable camera module system to realize advanced applications
7. Supports various shields for further expansion of projects
8. Full speed USB (12Mbs) interface with your computer
9. A μSD Card socket capable of 100Mbs read/write speeds
10. An SPI bus that can run up to 100Mbs
11. An I2C Bus, CAN Bus, and an Asynchronous Serial Bus (TX/RX) for interfacing with other microcontrollers and sensors.
12. Two I/O pins with support for servo control in robotics projects
13. Interrupts and PWM on all I/O pins with 10 I/O pins on the board for project expandability
14. An RGB LED for status indication and two high power 850nm IR LEDs

227. Speech Recognizer

Features:

1. Local Voice Recognition
2. Very low rate of false triggering
3. Speaker connector(JST2.0, the speaker is not included)
4. Built-in microphone
5. 3.3/5V working voltage
6. 22 recognition entry
7. Default Baudrate: 9600

228. Sound Sensor

Features:

1. Onboard audio power amplifier LM386
2. Audio signal gain up to 200
3. Adjustable accuracy
4. Signal output indicator

229. Soil Temperature and Humidity Sensor Module

Features:

1. Relative Humidity and Temperature Measurement
2. Excellent Long Term Stability
3. Waterproof Package, and Can be Used for Measurement of Soil
4. Low Energy Consumption

230.Ultrasonic Range Finder

Model	HC-SR04
Operating Voltage (VDC)	5
Average Current Consumption (mA)	2
Frequency(Hz)	40000
Sensing Angle	15Â°
Max. Sensing Distance (cm)	450
Weight (gm)	9
Sensor Cover Dia. (mm)	16
PCB Size (L x W) mm	45 x 20
Shipment Weight	0.014 kg
Shipment Dimensions	5 × 4 × 3 cm

231.LoRaST IoT Module

Features:
1. STM32L072CZT6 MCU
2. SX1276/78 LoRa Wireless Modem
3. Pre-load with ISP bootloader
4. I2S,I2C,LPUSART1,SPI2,USB
5. 22 x Digital I/Os
6. 3 x 12bit ADC; 1 x 12bit DAC
7. MCU wakes up by UART or Interrupt
8. Baud rate configurable
9. LoRaWAN 1.0.2 Specification
10. Software base on STM32Cube HAL drivers
11. External Antenna via I-Pex 4 connector

Package Includes:
1 x LoRaST module

1 x LoRa Antenna (unsolder)

232. ESP32 LoRa SX1278 0.96 Inch Blue OLED Display BT WiFi Module for Arduino (Type C- Connector)

Frequency	433Mhz
Computing Power	600DMIPS
SRAM	520 KB
Sensitivity	-148dBm, +20dBm
Flash	32MByte
OLED display	0.96-inch blue
CP2102 USB to serial port chip	Yes
Charging Interface: lithium battery charging circuit and interface	Yes
Shipment Weight	0.026 kg
Shipment Dimensions	7 x 7 x 2 cm

233.LoRaE5 mini (STM32WLE5JC)

Operating Voltage(V)	3.7V – 5V
Output Voltage(V)	+20.8 dBm at 3.3V
Working frequency	868/915MHz
Sensitivity (dBm)	-106 116.5 dBm ~ -136 dBm

Modulation Type	LoRa, (G)FSK, (G)MSK, BPSK
Working Temperature Range (°C)	-40℃ ~ 85℃
Interface	USB Type C / 2P-2.54mm Hole / 1*12P-2.54mm Header*2 / SMA-K / IPEX
Shipment Weight	0.01 kg
Shipment Dimensions	6 × 4 × 2 cm

234.LoRaWAN Gateway Module (SPI) – US915, based on LoRa Concentrator Semtech SX1302

Processor	STMicro STM3L412 Arm Cortex-M4 microcontroller @ 80 MHz with 40KB RAM, 64 or 128KB flash
Transceiver	Semtech SX1302 LoRa with 2x SX1250 Tx/Rx front-ends
Transmit Power (dBm)	Up to 26dBm @ 3.3V
Receiver Type	Down to -139dBm @ SF12, BW 125 kHz; -125dBm @ 125K/SF7
No. of Band	EU868, US915, AS923, AS920, AU915, KR920, and IN865. u.FL antenna connector
SPI version	Standby: 7.5 mA; Tx up to 415 mA; Rx: 40 mA
USB version	Standby: 20 mA; Tx up to 425 mA; Rx: 53 mA
Interface	SPI or USB interface on 52-pin mPCIe edge connector
Shipment Weight	0.007 kg
Shipment Dimensions	10 × 6 × 1 cm

235. FeatherS2 – ESP32-S2 Feather Development Board

SPI Flash	16 MB
Processor	32-bit 240 MHz single-core
Antenna Type	3D
Voltage Regulator	2x 700 mA 3.3 V LDO
PSRAM	8 MB
Shipment Weight	0.012 kg
Shipment Dimensions	15 × 10 × 1 cm

i. GNSS Equipment:

236. L80 GPS Module

Brand:	
Quectel	
Power Consumption:	
Acquisition: 25mA@VCC=V_BCKP=3.3V, Tracking: 20mA@VCC=V_BCKP=3.3V, Standby: 1.0mA@VCC=V_BCKP=3.3V, Backup: 7uA@V_BCKP=3.3V	
Receiver Type:	
GPS L1 1575.42MHz C/A Code, 66 search channels, 22 simultaneous tracking channels	
Sensitivity:	
Acquisition: -148dBm, Re-acquisition: -160dBm, Tracking: -165dBm	
Power Supply:	
2.8V~4.3V Typical voltage: 3.3V	
TTFF (EASY Disabled):	
Cold start (Autonomous):	
TTFF (EASY Enabled):	
Cold start:	
Update Rate:	
Up to 10Hz, 1Hz by default	
Accuracy of 1PPS Signal:	

Typical accuracy: +/-10ns, Time pulse width 100ms
Horizontal Position Accuracy (Autonomous):
< 2.5 m CEP @-130dBm
Acceleration Accuracy:
Without aid: 0.1m/s2
Dynamic Performance:
Maximum altitude: 18,000m, Maximum velocity: 515m/s, Acceleration: 4G
UART Port:
UART port: TXD1 and RXD1, Supports baud rate from 4800bps to 115200bps, 9600bps by default
Velocity Accuracy:
Without aid: 0.1m/s
Temperature Range:
-40~85 C

237.L86 GPS + GLONASS module

Brand: Quectel
=3.3V (GPS), Tracking: 22mA @VCC=V_BCKP=3.3V (GPS), Acquisition: 30mA @VCC=V_BCKP=3.3V (GPS+GLONASS), Tracking: 26mA@VCC=V_BCKP=3.3V (GPS+GLONASS), Standby: 1mA @VCC=V_BCKP=3.3V, Backup: 7uA @V_BCKP=3.3V
Power Supply:2.8V~4.3V Typical voltage: 3.3V
Sensitivity: Acquisition: -149dBm, Re-acquisition: -161dBm, Tracking: -167dBm
GNSS:GPS+GLONASS
TTFF (EASY Enabled): Cold start:
TTFF (EASY Disabled): Cold start (Autonomous):
Horizontal Position Accuracy (Autonomous):
Update Rate: Up to 10Hz, 1Hz by default
Acceleration Accuracy: Without aid: 0.1m/s2
Accuracy of 1PPS Signal: Typical accuracy: ±10ns, Time pulse width 100ms
Velocity Accuracy: Without aid: 0.1m/s
Dynamic Performance: Maximum altitude: 18,000m, Maximum velocity: 515m/s, Acceleration: 4G
Temperature Range:-40~85 C
Physical Characteristics: Size: 18.4 ×18.4 ×6.45 mm, Weight: Approx. 7.6g
UART Port:UART port: TXD1 and RXD1, Supports baud rate from 4800bps to 115200bps, 9600bps by default

238. MC60E dual SIM Quad-band GSM/GPRS/GNSS BT4.0 Module

Brand:
Quectel
Temperature Range:
-35~75 C
Power Supply:
3.3V~4.6V Typical supply voltage: 4.0V
Power Saving:
Sleep mode (GNSS is powered off): 1.2mA @DRX=5 0.8mA @DRX=9
GNSS:
GPS+GLONASS
Frequency Bands:
Quad-band: GSM850, EGSM900, DCS1800, PCS1900
SMS:
Text and PDU mode, SMS storage: SIM card
Phonebook Management:
SM, ME, ON, MC, RC, DC, LD, LA
(U)SIM Interfaces:
(U)SIM: 1.8V, 3.0V, DSSS (Dual SIM Single Standby)
Bluetooth:
Bluetooth specification 3.0
UART Interfaces:
Seven lines on main UART port interface
Audio Features:

Speech codec modes: Half Rate (ETS 06.20) Full Rate (ETS 06.10), Enhanced Full Rate (ETS 06.50/06.60/06.80) Adaptive Multi-Rate (AMR), Echo Suppression, Noise Reduction
Antenna Interface:
Connected to antenna pad with 50Ω impedance control
Physical Characteristics:
Size: (18.7)mm × (16)mm × (2.1)mm; Package: LCC+LGA; Weight: Approx. 1.3g
Firmware Upgrade:
via UART Port

239. L89 Compact GNSS Module IRNSS-Enabled

Brand: Quectel **Dimension:**25.0mm × 16.0mm × 6.8mm **Protocols:**NMEA 0183 **Weight:**Approx. 8.2g **Power Supply:**3.1V~4.3V, typical 3.3V **RoHS:**Compliant **Temperature Range:**-40~85 C L5 C/A: 1176.45MHz, GLONASS L1 C/A: 1602.5625MHz, BD2 B1 C/A: 1561.098MHz **Interfaces:**I2C, UART

240. L89HA Breakout Multi-GNSS engines for GPS, IRNSS, GLONASS, BeiDou, Galileo and QZSS

Key Features
• 3.3V power supply • I2C / UART interface • Support IRNSS L5 band • Embedded patch antenna and chip antenna • Multi-GNSS engines for GPS, IRNSS, GLONASS, BeiDou, Galileo and QZSS • Support DGPS, SBAS (WAAS/EGNOS/MSAS/GAGAN) • Integrated LNAs for better sensitivity • Great anti-jamming performance due to multi-tone active interference canceller

241. EC200U-CN LTE 4G GNSS Ultra-compact Nano Modem

Board Features
• Power Supply: 5V USB • Frequency Bands o LTE-FDD B1/B3/B5/B8 o LTE-TDD B34/B38/B39/B40/B41 o GSM 900 MHz/1800 MHz o GNSS1: GPS, GLONASS, BeiDou, Galileo, QZSS • Supports any Nano sim. • High-efficiency power regulation. • Compatible with worldwide LTE, UMTS/HSPA+ and GSM/GPRS/EDGE coverage with regional or global modules which work with different frequencies & carriers. • Delivers 10Mbps downlink and 5Mbps uplink data rates • Can be used standalone with PC/Laptop over micro-USB • Optional Send/Receive AT commands over Raspberry Pi UART port is available • Taking the module into the Airplane Mode, resetting the module or RI and DTR functions can be accessible over GPIO pins. • The power of the whole board electronics can be disabled for low-power consumption use cases • Working temperature range: -40C ~ 80C. **Antenna Features** • Frequency range: 700-2700Mhz • Gain: 8dBi internal antenna • VSWR: <=1.8

- Input impedance: 50 Ohm
- Material: Radiator FPC
- Antenna Size: 52x24mm
- Cable type: 1.13 coaxial cable
- Connector style: IPEX (u.FL equivalent)
- Polarization: Vertical
- Power: 30w
- Mounting: 3M sticker

242.Industrial IoT Wireless Expansion Hat for Raspberry Pi Compute Module 4 (Base Board)

Brand: Waveshare
CM4 SOCKET:
suitable for all variants of Compute Module 4
NETWORKING:
Gigabit Ethernet RJ45; M.2 B KEY / Mini-PCIe (via adapter), for connecting 5G / 4G / LoRa wireless module; Nano-SIM card slot, supports standard Nano-SIM card for 5G/4G/3G/2G communication
USB:
USB 2.0 x 3
PIN HEADER:
Non-isolated RS485 × 2, Non-isolated CAN × 1, Partial GPIO pins
CAMERA:
MIPI CSI-2 x 1 (15pin 1.0mm FPC connector)
VIDEO:
HDMI x 1, supports 4K 30fps output
RTC:
Real-time clock with battery socket and ability to wake Compute Module 4
STORAGE:
MicroSD card socket for Compute Module 4 Lite (without eMMC) variants
FAN HEADER:
5V/12V, allows speed adjustment and measurement
POWER INPUT:
5V or 7~36V
DIMENSIONS:
145 x 90 x 40mm

243. GPS GLONASS with USB Type-C 66 Channel 10Hz Updates

Features
- GPS + GLONASS supported
- Satellites: 33 tracking, 99 searching
- Patch Antenna Size: 15mm x 15mm x 4mm
- Update rate: 1 to 10 Hz
- Position Accuracy: < 3 meters (all GPS technology has about 3m accuracy)
- Velocity Accuracy: 0.1 meters/s
- Warm/cold start: 34 seconds
- Acquisition sensitivity: -145 dBm
- Tracking sensitivity: -165 dBm
- Maximum Velocity: 515m/s
- Vin range: 3.0-5.5VDC
- MTK3333 Operating current: 34mA acquision, 29 mA tracking
- Output: NMEA 0183, 9600 baud default, 3V logic level out, 5V-safe input
- DGPS/WAAS/EGNOS supported
- AGPS support (Offline mode : EPO valid up to 14 days)
- Up to 210 PRN channels
- Jammer detection and reduction
- Multi-path detection and compensation

244. L86-M33 GPS GNSS Arduino Shield and Data Logger

Key Features
- Support multiple satellite systems: GPS, GLONASS, Galileo and QZSS
- Internal patch antenna: 18.4mm x 18.4mm x 4.0mm
- Support internal and external antenna automatic switching
- Support short circuit protection and antenna detection
- Built-in low-noise amplifier to improve receiving high sensitivity
- Support self-assisted AGPS (EASY TM technology, no external memory required)
- Very low current consumption: 26mA @tracking mode
- Multiple power saving modes: standby Mode, Backup Mode, Periodic Mode, AlwaysLocate Mode
- LOCUS technology, support automatic log information recording and storage
- High sensitivity: -167dBm@tracking mode, -149dBm@acquisition mode
- Number of channels: 99 capture channels, 33 tracking channels
- Support Balloon mode, positioning altitude up to 80km
- Support DGPS, SBAS (WAAS/EGNOS/MSAS/GAGAN)
- Multi-frequency active interference cancellation technology to enhance anti-interference ability
- CR1220 GPS/GNSS Back-up Battery holder at the bottom side of the board
- External Active GNSS Antenna Connector
- LEDs: Power, Status, Netlight

245. GNSS 5 Click Board NEO-M8N GNSS Receiver - MikroE

Brand:
MikroElektronika
Type:
GPS/GNSS
Applications:
Asset tracking, for navigation devices based on GPS and GLONASS, road navigation devices, public transport, wearable devices, etc.
On-board Modules:
The NEO-M8N GNSS receiver module from u-blox with Active antena
Interface:
I2C, UART, USB
Compatibility:
mikroBUS
Size:
57.15 x 25.4 mm
Input Voltage:
3.3V

246.ZED-F9P-02B Chip

FEATURES
- Concurrent reception of GPS, GLONASS, Galileo, and BeiDou
- Multi-band RTK with fast convergence times and reliable performance
- High update rate for highly dynamic applications
- Centimeter accuracy in a small and energy-efficient module
- Easy integration of RTK for fast time-to-market

SPECIFICATIONS
- -0.5V to 3.6V power supply voltage range
- 100mA output current
- 10dBm input power
- -40°C to 85°C operating and storage temperature range

247. NEO-M9N-00B Chip

GNSS / GPS Modules GNSS module Flash, TCXO, SAW, LNA LCC

248. LC86GLAMD chip

FEATURES

- Multi-GNSS engine for GPS, GLONASS, BDS, Galileo and
- QZSS, ensuring fast and accurate fix in any environment
- Footprint compatible with L86 modules
- Industry-leading sensitivity -166dBm during tracking and -147dBm during acquisition
- Integrated LNA improves sensitivity
- Embedded multi-tone active interference canceller for anti-jamming
- Supported interface UART

249.LC79HALMD chip

FEATURES

- Supports dual GNSS bands (L1 and L5)
- Supports AGNSS
- Built-in LNA
- 28nm process technology
- Supports UART and I^{2}C interfaces
- Supports SDK commands developed by Quectel
- Supports UDR (untethered dead reckoning), using an external IMU

250. u-blox Neo-D9S-00B module

FEATURES

- Access to centimeter-level GNSS corrections globally
- Freedom to select GNSS correction data delivery
- High scalability for industrial and automotive applications
- Allows selection of any L-band GNSS correction service
- Easy hardware integration and configuration

251. SKY85329-11 RF Front End

FEATURES

- Integrated high-performance 2.4GHz PA, LNA with bypass and T/R switch
- Fully-matched input and output
- LNA with integrated bypass mode
- Integrated positive slope power detector
- Transmit gain: 32.5dB
- Receive gain: 16.5dB

Small QFN (16-pin, 2.5mm x 2.5mm) package (MSL1, 260°C per JEDEC J-STD-020)

252. Analog Devices / Maxim IntegratedMAX2678GTB/V+T GPS/GNSS RF Front End Module

FEATURES

- First Amplifier Noise Figure: 0.9dB
- High Gain: 35dB*
- 3.4dB Gain Step
- Shared V_{CC} and RFOUT2 Pin
- Integrated 50Ω Output Matching
- AMP 2 includes 50Ω Input Matching

- 3.0V to 5.25V Supply Voltage Range
- AEC-Q100 Qualified
- ESD Protected to ±2kV Human Body Model
- -40°C to +105°C Ambient Temperature Range
- Small (3mm x 3mm) Low-Cost Package
- RoHS Compliant

253. Sky65728-11 RF Front End GPS LNA Pre-Filter & LNA

FEATURES
- Small signal gain
- Low noise figure
- Low current consumption
- Input/output impedance internally matched to 50Ω
- Single DC supply
- Minimal number of external components required
- Excellent out-of-band rejection

254. SKY65723-81 RF Front End GPS/GNSS/BDS Pre-Filter

Features
⯀ Small signal gain: 16.5 dB typical
⯀ Low noise figure: 1.5 dB typical
⯀ Excellent out-of-band rejection
⯀ Low current consumption
⯀ Input/output impedance internally matched to 50 Ω
⯀ Single DC supply: 1.62 to 3.6 V
⯀ Minimal number of external components required
⯀ Small MCM (6-pin, 1.7 x 2.3 mm) package
    (MSL3, 260 ⯀C per JEDEC J-STD-020)

255. LLCC68IMLTRT RF Transceiver LoRa Smart Home low pwr 150-960MHz ISM

FEATURES

- Long Range (LoRa) and Frequency Shift Keying (FSK) modem
- 151dB maximum link budget
- +22dBm or +15dBm high efficiency PA
- Low RX current of 4.6mA
- Integrated DC-DC converter and Low Dropout (LDO)
- Programmable bit rate from 1.76kbps up to 62.5kbps LoRa and 300kbps FSK
- High sensitivity down to -129dBm
- 88dB blocking immunity at 1MHz offset
- Co-channel rejection of 19dB in LoRa mode
- FSK, Gaussian FSK (GFSK), Minimum Shift Keying (MSK), Gaussian MSK (GMSK), and LoRa modulation
- Built-in bit synchronizer for clock recovery
- Automatic Channel Activity Detection (CAD) with ultra-fast Antiferromagnetically Coupled (AFC)
- Data rates for LoRaWAN® include SF7 to SF9 @ 125kHz, SF7 to SF10 @ 250kHz, and SF7 to SF11 @ 500kHz
- 4.0mm x 4.0mm QFN-24 package
- Pb-free, Halogen-free, and RoHS/WEEE compliant

256. SX1302IMLTRTRF Transceiver LoRa Gateway Baseband Transceiver

FEATURES

- LoRaWAN, Class A/B/C, all regions
- 125kHz LoRa reception with
  - 8 x 8 channels LoRa® packet detectors
  - 8 x SF5-SF12 LoRa® demodulators
  - 8 x SF5-SF10 LoRa® demodulators

- 125/250/500kHz LoRa® demodulator
- (G)FSK demodulator
- Direct interface to Semtech transceivers
- SX1255, SX1257, and SX1250
- Single 32MHz clock

257. RF Transceiver Ultra-Wide-Band (UWB) transceiver

FEATURES

- Supports Frequency Ranges in the 6.2GHz to 7.8GHz Ultra-Wideband (UWB)
- Uses 3db ™ Low-Power Secure Ranging Technology
- Compliant to UWB Regulations of ETSI (EN 302 065-3 V2.1.0) and FCC (Title 47, Part 15)
- UWB Data Communication at 246Kbps
- Fast SPI Interface (20 Mbps) for Data Communication and Configuration between the ATA8350 and Host Microcontroller

- Time-of-Flight Distance Measurement with ±15cm Resolution
- Distance Measurement Method is Secured against Multiple-Attack Scenarios, for example, Cicada Attack, Early Detect/Late Commit, Preamble Injection
- Tailored for industrial applications requiring localization and secure distance bounding
- Low RX and TX Peak Power allows Coin Cell Battery Applications with an External DC-DC Converter

258. Antenna Development Tools SparkFun Satellite Transceiver Kit - Swarm M138(KIT-21287)

FEATURES

- PCB dimensions (with a modem attached)
- 3.5" x 1.4" x 0.37" (89mm x 36mm x 9.5mm)
- SMA connections
- Separate, robust connectors for VHF satellite communication and GPS / GNSS positioning
- Serial interface
- USB-C™ via a CH340E USB-serial converter
- 3.3V UART via 0.1" breakout pins
- Split pads allow the TX and RX breakout pins to be isolated from the CH340E
- TX and RX LEDs (configurable)
- Power supply
- 3.0V (Min)
- 5.0V (Max)
- Power can be provided by USB-C or via 0.1" breakout pins
- "Ideal diode" power mux circuit with ~0V voltage drop
- Current draw @ 3.3V
- Sleep modem 80μA (peak) power mux ~70μA
- Receive 26mA (Typ.) 40mA (peak)
- Transmit 850mA (Typ.) 1000mA (peak)
- Current draw @ 5.0V
- Sleep modem 110μA (Peak) power mux ~100μA
- Receive 25mA (Typ.) 45mA (peak)
- Transmit 550mA (Typ.) 600mA (peak)
- **Please note**
- When powering the board from USB, please use a USB-C or USB 3 port
- USB 2.0 is not supported
- 2x u.FL to u.FL cables
- 2x M2.5 screws

259. Antennas Antenna, Remote Active Ceramic Patch GNSS GPS Galileo GLONASS Beidou L1/L2, RHCP, 5m cable, SMA Connector, ANT-GNRM-L15A-3

SPECIFICATIONS

- Performance at 1575.42MHz
- VSWR
  - ≤1.2 (GNRM-L125A)
  - ≤1.5 (GNRM-L12A and GNRM-L1A)
  - ≤1.3 (GNRM-L15A)
- Peak gain
  - 31.7dBi (GNRM-L125A)
  - 32.4dBi (GNRM-L12A)
  - 30.5dBi (GNRM-L15A)
  - 33.5dBi (GNRM-L1A)
- Axial ratio
  - 1dB (GNRM-L125A)
  - 11.4dB (GNRM-L1A)
  - 18.4dB (GNRM-L12A)
  - 145dB (GNRM-L15A)
- 27dB to 28dB typical LNA rating
- 50Ω output impedance
- -40°C to +85°C operating temperature range
- RG-174/U coaxial cable
- 1m, 3m, and 5m lengths
- Dimensions
- 22mm height and 70mm diameter (GNRM-L125A)
- 40.5mm x 38mm x 16.3mm (GNRM-L12A and GNRM-L15A)

260. Antennas GNSS L1 Linear PCB Chip Antenna, Internal/Embedded Solder Mount, Solder Pin, GPS, GLONASS, Galileo, Beidou, QZSS

SPECIFICATIONS

- 1.3 to 1.4 maximum VSWR range
- -18.7dB to -15.6dB return loss range
- 3.6dBi to 4.4dBi peak gain range
- 63% to 64% efficiency range

- 50Ω impedance
- 1/4-wave wavelength
- 5W maximum power
- -40°C to +130°C operating temperature range

261. Antennas Antenna, Remote Active Ceramic Patch GNSS GPS Galileo GLONASS Beidou L1/L2/L5, RHCP, 5m cable, SMA Connector,ANT-GNRM-L125A-3

SPECIFICATIONS

- Performance at 1575.42MHz
  - VSWR
    - ≤1.2 (GNRM-L125A)
    - ≤1.5 (GNRM-L12A and GNRM-L1A)
    - ≤1.3 (GNRM-L15A)
  - Peak gain
    - 31.7dBi (GNRM-L125A)
    - 32.4dBi (GNRM-L12A)
    - 30.5dBi (GNRM-L15A)
    - 33.5dBi (GNRM-L1A)
  - Axial ratio
    - 1dB (GNRM-L125A)
    - 11.4dB (GNRM-L1A)
    - 18.4dB (GNRM-L12A)
    - 145dB (GNRM-L15A)
- 27dB to 28dB typical LNA rating
- 50Ω output impedance
- -40°C to +85°C operating temperature range
- RG-174/U coaxial cable
- 1m, 3m, and 5m lengths
- Dimensions
  - 22mm height and 70mm diameter (GNRM-L125A)
  - 40.5mm x 38mm x 16.3mm (GNRM-L12A and GNRM-L15A)

262. Antennas GPS L1/L2 Dual Feed Double Stacked Patch (Tuned for 35x35 GP)

SPECIFICATIONS

- Dual-pin, stacked patch, dual feed design
- Covering Bands:
  - GPS L1
  - GPS L2
  - Galileo E1
- Low axial ratio
- 35mm x 35mm x 7.15mm dimensions
- Tuned for 70mm x 70mm ground plane

RoHS and reach compliant

263. TE Connectivity Antennas Ceramic ant., SMD, L1+G1 & L2+L5

FEATURES

- Improved precision by integration of antenna as part of the device
- Increased decimeter and centimeter accuracy

- GPS, GLONASS, BeiDou, and Galileo support for global access
- Stacked ceramic antennas to integrate multiple bands

264. STM32F401CCU6 Minimum System Board Microcomputer STM32 ARM Core Board

USB Connector	Type-C
Length (mm)	53
Width (mm)	20
Height (mm)	5
Weight (gm)	7
Shipment Weight	0.01 kg
Shipment Dimensions	6 × 8 × 2 cm

265. Black ABS Protective Box Case for Arduino Mega2560 R3 Controller Enclosure with Switch

Color	Black
Material	ABS
Dimension(mm)	110 * 58 * 25
Weight(g)	35
Shipment Weight	0.037 kg
Shipment Dimensions	12 × 6 × 3 cm

266. Phase Locked Loops - PLL XTAL-HCSL CLK GNRTR

Manufacturer:	onsemi
Product Category:	Phase Locked Loops - PLL
RoHS:	Details
Type:	PLL Clock Generator
Number of Circuits:	1 Circuit
Maximum Input Frequency:	25 MHz
Minimum Input Frequency:	25 MHz
Output Frequency Range:	25 MHz to 200 MHz
Supply Voltage - Max:	3.63 V
Supply Voltage - Min:	2.97 V
Technology:	Si
Minimum Operating Temperature:	- 40 C
Maximum Operating Temperature:	+ 85 C
Mounting Style:	SMD/SMT

Package/Case:	TSSOP-16
Packaging:	Reel
Packaging:	Cut Tape
Packaging:	MouseReel
Brand:	onsemi
Height:	1.05 mm
Length:	5.1 mm
Operating Supply Voltage:	3.3 V
Product Type:	PLLs - Phase Locked Loops
Series:	NB3N5573
Factory Pack Quantity:	2500
Subcategory:	Wireless & RF Integrated Circuits
Width:	4.5 mm
Unit Weight:	173 mg

267. Phase Locked Loops - PLL Ultra-low noise PLLatinum frequency synthesizer with integrated VCO 36-WQFN -40 to 85

Manufacturer:	Texas Instruments
Product Category:	Phase Locked Loops - PLL
RoHS:	Details
Type:	PLL Frequency Synthesizer
Number of Circuits:	1 Circuit
Maximum Input Frequency:	6000 MHz
Minimum Input Frequency:	5 MHz
Output Frequency Range:	32 MHz to 4000 MHz
Supply Voltage - Max:	3.45 V
Supply Voltage - Min:	3.15 V
Technology:	Si
Minimum Operating Temperature:	- 40 C
Maximum Operating Temperature:	+ 85 C
Mounting Style:	SMD/SMT
Package/Case:	WQFN-36
Packaging:	Reel
Packaging:	Cut Tape
Packaging:	MouseReel
Brand:	Texas Instruments
Features:	Integrated VCO , Integrated VCO
Height:	0.8 mm
Length:	6 mm
Moisture Sensitive:	Yes
Operating Supply Current:	120 mA
Operating Supply Voltage:	3.15 V to 3.45 V
Product Type:	PLLs - Phase Locked Loops
Series:	LMX2541
Factory Pack Quantity:	1000
Subcategory:	Wireless & RF Integrated Circuits

Tradename:	PLLATINUM
Width:	6 mm
Unit Weight:	86.400 mg

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268. Modulator/Demodulator Sat mod

Manufacturer:	Analog Devices Inc.
Product Category:	Modulator/Demodulator
RoHS:	Details
Type:	Modulator
Operating Supply Voltage:	4.75 V to 5.25 V
Operating Supply Current:	380 mA
Technology:	Si
Mounting Style:	SMD/SMT
Package/Case:	LFCSP-56
Brand:	Analog Devices
Height:	0.83 mm
Length:	8 mm
Moisture Sensitive:	Yes
Packaging:	Reel
Packaging:	Cut Tape
Packaging:	MouseReel
Product Type:	Modulator / Demodulator
Series:	ADRF6755
Factory Pack Quantity:	750
Subcategory:	Wireless & RF Integrated Circuits
Width:	8 mm
Unit Weight:	212 mg

269. Modulator/Demodulator 300MHz to 4GHz Quadrature Modulator

Manufacturer:	Texas Instruments
Product Category:	Modulator/Demodulator
RoHS:	Details
Type:	Modulator
Modulation Format:	Quadrature
Maximum Frequency:	4 GHz
Minimum Frequency:	300 MHz
Output Power:	2.1 dBm

Operating Supply Voltage:	3.3 V
Operating Supply Current:	306 mA
Technology:	Si
Minimum Operating Temperature:	- 40 C
Maximum Operating Temperature:	+ 85 C
Mounting Style:	SMD/SMT
Package/Case:	VQFN-24
Brand:	Texas Instruments
Conversion Loss - Max:	- 1.9 dB
Development Kit:	TRF3705EVM
Moisture Sensitive:	Yes
Packaging:	Reel
Packaging:	Cut Tape
Packaging:	MouseReel
Product Type:	Modulator / Demodulator
Series:	TRF3705
Factory Pack Quantity:	250
Subcategory:	Wireless & RF Integrated Circuits
Unit Weight:	54.600 mg

270.Audio Jack – 3.5mm TRRS (SMD)- 4Pcs

CertificateREACHRoHS,
ModelDC
MaterialABS
Salt Spray Test24 Hours
GenderFemale
DurabilityOver 5000 cycle
Insertion Force0.2~2 kg
Operating Temperature (°C)-10 to 85
ColorBlack
ApplicationHeadphone, Mobile phone, Computer,MP3/MP4
Shipment Weight0.04 kg
Shipment Dimensions5 × 5 × 5 cm

271. RJ45 (8P-8C) Male Plug (Pack of 10)

Connector Type	RJ11/12
Gender	Male
Voltage(V)	30V AC / 42V DC
Operating Current (A)	1.5
Body Material	Polycarbonate UL94V-0
Contact Material	Phosphor Bronze
Contact Resistance	20mΩ

Contact Plating	Gold flash
Insulation Resistance (MΩ)	≥1000
Length (mm)	22
Width (mm)	12
Height (mm)	13
Weight (gm)	1 (approx) (each)
Shipment Weight	0.03 kg
Shipment Dimensions	8 × 8 × 1 cm

272. USB A-type Plug Male PCB R/A Connector (Pack of 5)

Connector Type	USB 2.0
Connector	USB Type A
Voltage Rating (V)	250V AC
Current Rating (A)	1.5
Transmission Speed	5 Gbits/s
Contact Material	Copper Alloy, Selective Gold Plated
Insulation Material	PBT UL 94V-0
Material	Metal and plastic
Contact Resistance	30mΩ
Insulation Resistance (MΩ)	1000
Operating Temperature Range (°C)	-40 to 60
Durability	1500 Cycles
Insertion Force (N)	35
Extraction Force (N)	10
Length (mm)	20
Width (mm)	12
Height (mm)	6
Weight (gm)	1 (Each)
Shipment Weight	0.062 kg
Shipment Dimensions	8 × 8 × 1 cm

273. Micro USB 2.0 B type 5 Pin Connector-5Pcs.

Model	Micro USB 2.0 B type
Contact resistance	30 mΩ
Insulation resistance	100 MΩ
Dielectric strength	500VAC
Length (mm)	6.6
Width (mm)	7.7
Height (mm)	3
Weight (gm)	approx 1 gm (each)
Shipment Weight	0.02 kg
Shipment Dimensions	5 × 5 × 3 cm

274. 2 Pins 3.96mm Pitch JST-VH Connector With Housing (Pack of 10)

Gender	Male-Female
Rated Operating Voltage (VDC)	250
Current Handling Capacity (A)	3
No. of Contact Points	10

Connector Type	JST XH
Contact Material	Phosphor Bronze
Allowed Wire Size (AWG)	30 ~ 22
Contact Plating	Nickel
Metal Connector Size (mm)	7.5
Operating Temperature Range (°C)	-25 to 85
Flammability Rating	UL94V-0
Color	White
Length (mm)	8
Width (mm)	8
Height (mm)	19
Weight (gm)	1 (approx) (each)
Shipment Weight	0.08 kg
Shipment Dimensions	6 × 5 × 2 cm

275. Micro USB Type-B Female 5 Pin Through Hole Connector (Pack of 5)

Connector Type	Micro USB
Connector	Type B
Voltage Rating (V)	5V AC
Current Rating (A)	1A max.
Transmission Speed	5 Gbits/s
Material	Metal and plastic
Contact Material	Copper Alloy, Selective Gold Plated
Insulation Material	PBT UL 94V-0
Contact Resistance	30mΩ
Insulation Resistance (MΩ)	≥1000
Operating Temperature Range (°C)	-40 to 85
Durability	10,000 cycles
Insertion Force (N)	35
Extraction Force (N)	8
Length (mm)	7
Width (mm)	7
Height (mm)	2.45
Weight (gm)	1 (approx)
Shipment Weight	0.03 kg
Shipment Dimensions	8 × 8 × 1 cm

276. 3 Pins 3.96mm JST-VH Connector With Housing (Pack of 10)

Gender	Male-Female
Rated Operating Voltage (VDC)	250
Current Handling Capacity (A)	3
No. of Contact Points	3
Connector Type	JST XH
Contact Material	Phosphor Bronze
Contact Plating	Nickel
Metal Connector Size (mm)	7.5
Operating Temperature Range (°C)	-25 to 85
Flammability Rating	UL94V-0
Color	White

Length (mm)	12
Width (mm)	8
Height (mm)	19
Weight (gm)	1 (approx) (each)
Allowed Wire Size (AWG)	30 ~ 22
Shipment Weight	0.08 kg
Shipment Dimensions	6 × 5 × 2 cm

277. RJ45 (8P-8C) Male Plug (Pack of 10)

Connector Type	RJ11/12
Gender	Male
Voltage(V)	30V AC / 42V DC
Operating Current (A)	1.5
Body Material	Polycarbonate UL94V-0
Contact Material	Phosphor Bronze
Contact Resistance	20mΩ
Contact Plating	Gold flash
Insulation Resistance (MΩ)	≥1000
Length (mm)	22
Width (mm)	12
Height (mm)	13
Weight (gm)	1 (approx) (each)
Shipment Weight	0.03 kg
Shipment Dimensions	8 × 8 × 1 cm

278. Double USB Type A Female Solder Jacks Connector PCB Socket (Pack of 5)

Connector Type	USB
Connector	USB Type A
Voltage Rating (V)	250 V AC
Current Rating (A)	1.5
Transmission Speed	5 Gbits/s
Material	Metal and plastic
Contact Material	Copper Alloy, Selective Gold Plated
Insulation Material	PBT UL 94V-0
Contact Resistance	30mΩ
Insulation Resistance (MΩ)	1000
Operating Temperature Range (°C)	-40 to 60
Durability	1500 cycles
Insertion Force (N)	35
Extraction Force (N)	10
Length (mm)	20.
Width (mm)	15
Height (mm)	15.7
Weight (gm)	3 (each)
Shipment Weight	0.08 kg
Shipment Dimensions	8 × 8 × 1 cm

279. Seeed Studio XIAO ESP32S3 Sense – 2.4GHz Wi-Fi, BLE 5.0, OV2640 camera sensor, digital microphone, battery charge supported, rich Interface, IoT, embedded ML

Item	Seeed Studio XIAO ESP32S3 Sense
Processor	ESP32-S3R8 Xtensa LX7 dual-core,32-bit processor that operates at up to 240 MHZ
Wireless	Complete 2.4GHz Wi-Fi subsystem BLE: Bluetooth 5.0, Bluetooth mesh
Built-in Sensors	oV2640 camera sensor for 1600*1200 Digital Microphone
Memory	On-chip 8M PSRAM & 8MB Flash Onboard SD Card Slot, supporting 32GB FAT
Interface	1x UART,1x IIC,1x IIS,1x SPI,11x GPIOs (PWM),9xADC,　1x User LED, 1x Charge LED,1x B2B Connector(with 2 additional GPIOs) 1x Reset button, 1x Boot button
Power	Input voltage (Type-C): 5V Input voltage (BAT): 4.2V
Webcam Web application	Type-C: – – Average power consumption: 5V/138mA – Photo moment: 5V/341mA – Battery: – Average power consumption: 3.8V/154mA – Photo moment: 3.8V/304mA
Microphone recording & SD card writing	Type-C: Average power consumption: 5V/46.5mA Peak power consumption: 5V/89.6mA – Battery: Average power consumption: 3.8V/54.4mA Peak power consumption: 3.8V/108mA
Charging battery current	100mA
Modem-sleep Model	~44mA
Wi-Fi Enabled Power Consumption	Active Model: ~ 110 mA (with expansion board)
BLE Enabled Power Consumption	Active Model: ~ 102 mA (with expansion board)
Working Temperature	-40°C ~65°C
Shipment Weight	0.007 kg
Shipment Dimensions	10 x 7 x 1 cm

280. USB TO UART TTL 5V 3.3V FT232RL Download Cable To Serial Adapter Module For Arduino

IC Chip	FT232RL
Pitch	2.54mm
Interface	Mini USB
Length (mm)	36
Width (mm)	18
Weight (gm)	4
Shipment Weight	0.005 kg
Shipment Dimensions	4 x 2.5 x 1.5 cm

281. CP2102(6-pin) USB 2.0 to TTL UART serial converter

Length (mm)	42
Width (mm)	16
Height (mm)	6
Weight (gm)	4
Shipment Weight	0.005 kg
Shipment Dimensions	5 × 4 × 3 cm

282. ENC28J60 Ethernet Module(10 Pin Package: SSOP)

Crystal Oscillator	25 MHz
Ethernet Port	HanRun HR911105A
Length (mm)	57
Width (mm)	34
Height (mm)	16
Weight (gm)	14
Shipment Weight	0.018 kg
Shipment Dimensions	6.5 × 4.5 × 3 cm

283. USB to UART/ESP8266 Adapter Programmer for ESP-01 WiFi Modules with CH340G Chip

Operating Voltage (VDC)	4.5 ~ 5.5
Operating Current (A)	0.3
Driver IC	CH340G
Logic Input (V)	3.3
Length (mm)	50
Width (mm)	18
Height (mm)	14
Weight (gm)	6
Shipment Weight	0.01 kg
Shipment Dimensions	6 × 3 × 1 cm

284. SD Card Reading Writing Module for Arduino

Supported Input	5V/3.3V
Voltage Regulator	3.3V
Onboard Chip	AMS1117
PCB Size (L x W) mm	48 x 30
Weight (gm)	8
Shipment Weight	0.012 kg
Shipment Dimensions	10 × 7 × 3 cm

285. CJMCU-2551 MCP2551 CAN Protocol Controller High-speed Interface Module

Model	MCP2551
Material	Metal and plastic
Input Voltage (V)	7
Operating Temperature (°C)	-40 to 125

Storage condition (℃)	-55 to 150
Shipment Weight	0.095 kg
Shipment Dimensions	8 × 6 × 3 cm

286. CAT6 RJ45 Female-to-Female LAN Cable Extension Adapter

Connectors	RJ45 8P8C
Compatibility	CAT6 Ethernet cable.
High speed	Up to 10 Gigabits
Length (mm)	37
Width (mm)	19
Height (mm)	19
Weight (gm)	20
Shipment Weight	0.022 kg
Shipment Dimensions	4 × 3 × 2 cm

287.W5500 TCP / IP SPI to LAN Ethernet Interface SPI to LAN / Ethernet Converter

Power Supply	3.3V External Power Supply, @Current < 200 mA
Control Interface	The TTL Level, 3.3V SPI Interface
PCB Size	23 x 25 mm
Length (mm)	25
Width (mm)	22
Height (mm)	20
Weight (gm)	17
Shipment Weight	0.02 kg
Shipment Dimensions	3 × 3 × 3 cm

288. MiNi ENC28J60 Ethernet LAN Network Module For Arduino SPI AVR PIC LPC

Brand	HanRun
IC Chip	ENC28J60/SS
Length (mm)	52
Width (mm)	20
Height (mm)	16

Weight (gm)	20
Shipment Weight	0.022 kg
Shipment Dimensions	6 × 3 × 2.5 cm

289. Waveshare Industrial USB TO TTL Converter Original FT232RL

Compatible With	Win7/8/8.1/10, Mac, Linux, Android, WinCE
Data Rate	300bps ~ 3Mbps
Host Port	USB
Device Port	UART
USB Port	Connector: USB-A Protection: resettable fuse, ESD protection
UART Port	Connector: 8PIN fool-proof header Protection: IO protection diode
Length (mm)	53
Width (mm)	23.5
Height (mm)	14.5
Weight (gm)	23
Shipment Weight	0.03 kg
Shipment Dimensions	7 × 3 × 2 cm

290. Waveshare RS485 CAN HAT for Raspberry Pi

Operating Voltage (VDC)	3.3
CAN controller	MCP2515
CAN transceiver	SN65HVD230
RS485 transceiver	SP3485
Mounting Hole(mm)	3
Length (mm)	65
Width (mm)	30
Height (mm)	15
Weight (gm)	18
Shipment Weight	0.02 kg
Shipment Dimensions	7 × 3 × 2 cm

291. CJMCU-MINI USB 5V/3.3V Socket USB DC Power Socket AMS1117 Module

MINI USB interface Input	5V
Type	CJMCU MINI USB AMS1117.
MINI USB outputs	5V and 3.3V
DC power socket interfaces Input	5 – 12V
Length (mm)	24
Width (mm)	24
Height (mm)	13
Weight (gm)	2
Shipment Weight	0.005 kg
Shipment Dimensions	7 x 4 x 2 cm

292. Waveshare RP2040-Zero Without Header

Operating voltage	3.3V
Processor	Raspberry Pi official RP2040 mini
Regulator	ME6217 (LDO, 800mA)
USB	Type-C
Memory	264KB of SRAM 2MB of Flash memory
Shipment Weight	0.003 kg
Shipment Dimensions	8 x 6 x 1 cm

293. Waveshare FT232 USB UART Board (Type C), USB To UART (TTL) Communication Module, USB-C Connector

Operating Voltage (VDC)	3.3 ~ 5
No. of Pins	6
Length (mm)	44
Width (mm)	19
Height (mm)	15
Weight (gm)	13
Shipment Weight	0.02 kg
Shipment Dimensions	5 x 2 x 2 cm

294. DFRobot Gravity I2C HUB

Length (mm)	37
Width (mm)	27
Weight (g)	17
Shipment Weight	0.02 kg
Shipment Dimensions	6 × 4 × 2 cm

295.HDMI to AV Adapter HD 1080P Video Converter

ColorBlack
Length (mm)72
Width (mm)55
Height (mm)20
Weight (gm)30
Shipment Weight0.033 kg
Shipment Dimensions6 × 5 × 2 cm

296. Waveshare Industrial Grade USB HUB, Extending 4x USB 2.0 Ports, Switchable Dual Hosts (Without Power Adapter)

Standards	high-speed USB: 2.0
Data Rate	up to 480Mbps
USB Output	5V@Imax:1.2A, USB-A connector
USB HUB Input	5V, switchable dual USB-C connector (standalone power su
Eternal Power	DC 5V, DC jack/USB-C power input
Operating Temperature (°C)	-40℃ ~ 85℃
OS Support	Mac OS (8.6 or above), Linux(2.4.20 or above), Windows 11
Shipment Weight	0.272 kg
Shipment Dimensions	16 × 10 × 5 cm

297. Adafruit ISO1540 Bidirectional I2C Isolator – STEMMA QT / Qwiic

Model Type	bidirectional I2C isolator
Operating Power	3 V to 5 V
Maximum Clock Frequency (MHz)	1
Operating Temperature Range (°C)	-40 to 125
Shipment Weight	0.003 kg
Shipment Dimensions	8 × 7.5 × 1 cm

298. Waveshare RP2040-One, 4MB Flash MCU Board Based On Raspberry Pi RP2040

Specifications:

1. Model: RP2040-One
2. On-board Flash memory: 246KB of SRAM, and 4MB
3. 2 x SPI, 2 x UART, 4 x 12-bit ADC, 16 x controllable PWM channels
4. GPIO pins: 29 x multi-function (20x via edge pinout, others via solder points)
5. 8 x Programmable I/O (PIO) state machines for custom peripheral support

Packages Includes:
1 x Waveshare RP2040-One, 4MB Flash MCU Board Based On Raspberry Pi RP2040

299. Waveshare Binocular Camera Base Board Designed for Raspberry Pi Compute Module 4, Interface Expander included

1 CM4 socket Suitable for all versions of Compute Module 4
2|HDMI connector supports 4K 30fps output
3 USB 2.0 ports for connecting sorts of USB devices
4 PWR & USB USB-C connector, 5V DC power supply or USB programming port
5 BOOT selection ON: CM4 will be booted from the USB-C interface
OFF: CM4 will be booted from eMMC or Micro SD card
6 CM4 status indicator PWR: Raspberry Pi power indicator
ACT: Raspberry Pi operating status indicator
7 RJ45 Gigabit Ethernet 10/100/1000M compatible
8 Micro SD card slot for connecting a Micro SD card with the pre-burnt image (Lite variant ONLY)
9 GPIO FFC connector for expanding 40PIN GPIO
10 HDMI & PCIe & USB FFC connector for expanding HDMI1, PCIe, USB
11 Dual cameras IMX219, 8MP

300. SeeedStudio Grove Differential Amplifier

Operating Voltage(V)	3.3～5.5
Input Voltage (V)	0.1/(Vcc-0.8)/Gain
Output Voltage(V)	Vcc-0.80
Max Gain	35/1085
Shipment Weight	0.009 kg
Shipment Dimensions	12 x 9 x 1 cm

301. LoRa Antenna 915 MHz

Specifications:

1. Center Frequency: 915 MHz
2. Wavelength: ¼-wave
3. VSWR: ≤ 1.9 typical at center
4. Peak Gain: 2.2dBi
5. Impedance: 50-ohms
6. Oper. Temp. Range: –20°C to +85°C
7. Connector: RP-SMA

302.Unsoldered Lora 915MHz Shield for TTGO T-SIM7000G Module

Operating voltage	3.3 – 7 V
Operating temperature range	-40 to 90°C
Data Rates	150 Mbps @ 11n HT40, 72 Mbps @ 11n HT20, 54 Mbps @ 11g, 11 Mbps @ 11b
Transmit power:	19.5 dBm @ 11b, 16.5 dBm @ 11g, 15.5 dBm @ 11n
Receiver sensitivity	up to -98 dBM
UDP sustained throughput	135 Mbps
Shipment Weight	0.04 kg
Shipment Dimensions	6 × 4 × 3 cm

303. Lora Antenna 433mhz

1. Center Frequency: 433 MHz
2. Wavelength: ¼-wave
3. VSWR: < 2.0 typical at center
4. Peak Gain: 3.6dBi
5. Impedance: 50-ohms
6. Oper. Temp. Range: –20°C to +85°C
7. Connector: SMA or RP-SMA

304. Lora Antenna 868mhz

1. Center Frequency: 868 MHz
2. Wavelength: ¼-wave
3. VSWR: ≤ 1.9 typical at center
4. Peak Gain: 0.6dBi
5. Impedance: 50-ohms
6. Oper. Temp. Range: –20°C to +85°C
7. Connector: RP-SMA

1. Eligibility of the bidders

SL No	Eligibility of the Bidders	Compliance
1	The bidder should submit an Earnest Money Deposit (EMD) at the rate of ₹46,000/-	
2	The supplier should be the authorized dealer/distributer/reseller for the quoted product. (Certificate for the same to be enclosed.)	
3	The bidder should participate as a single party and no consortium is allowed.	
4	The bidder should have minimum experience of 1 year in supplying similar items to other govt. organizations Documentary evidence of successfully executing and maintaining the orders should be submitted along with the bid or else the offer shall be rejected	
5	The bidder must have a turnover of minimum 1lakhs in each of the three financial years. Copy/Copies of document(s), like Audited Balance Sheet are to be submitted in support of bidder's annual turnover	
6	**MAKE IN INDIA (MII) CONDITIONS:** For this procurement, bids from Class I & class II Local Suppliers are admissible. Hence provisions contained in Public Procurement (Preference to Make in India), Order 2017 issued by Department for Promotion of Industry and Internal Trade (DIPP), Ministry of Commerce & Industries vide letter No. P45021/2/2017 PP(BE II) dated 04.06.2020 and subsequent amendment & directives shall be followed. Accordingly, offer will be evaluated & processed in conformation with above referred GOI order (Specially mentioned below). The bidder shall provide compliance and undertaking as per order and hereafter amendments: a) Order no: F.No.6/18/2019 PPD dated 23.07.2020 of Department of Expenditure), Ministry of Finance Under Public procurement division for the General Financial rule (GFRs). b) Class I local supplier means a supplier or service provider, whose goods, service or works offered for procurement, has local content equal to or more than 50%, as defined under order. c) Class II local supplier means a supplier or service provider, whose goods, services or works offered for procurement, has local content more than 20% but less than 50%, as defined under this Order. d) Bidders offering imported products will fall under the category of Non-local suppliers. They cannot claim themselves as Class I Local suppliers/Class II Local suppliers by claiming the services such as transportation, insurance, installation, commissioning, training and after sales service	

	support like AMC/CMC etc. as local value addition. e) Verification of local content: i) The Class I local supplier/ Class II local supplier at the time to tender, bidding or solicitation shall be required to indicate percentage of local content and provide self certification that the item offered meets the local content requirement for Class I local supplier / Class II local supplier as the case may be. They shall also give details of the location(s) at which the local value addition is made. ii) In case bid value is in excess of Rs. 10 Cr., Class I local supplier/ Class II local supplier shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content. iii) False declarations will be in breach of the code of Integrity under Rule 175(1) (i) (h) of the General Financial Rules (GFR) for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the general Financial Rules along with such other actions as may be permissible under Law Note: Transportation, Insurance, Installation, Commissioning, Training and after sales support like AMC/ CMC etc. are not to be taken into account while calculating local content [Refer OM No. P-45021/102/2019-BE-II (E-29930) dated 14.06.2022]	

2.   EVALUATION CRITERIA OF THE BIDS

 The selection/rejection of the technical bid shall be based on the followings: -

I)   The quoted product of the Bidder must comply the **TECHNICAL SPECIFICATIONS** as per Sl No 3 of **Annexure-I** of the tender document

II)   Bidder must fulfill and comply to all the **ELIGIBILITY CRITERIA** as per Sl No. 1 of **Annexure II** of the Tender Document

III) Bidder must comply to the Instruction to Tenderers (**Annexure II A**) and Terms and Condition of Tender (**Annexure II B**)

INSTRUCTIONS TO TENDERERS

1. **EMD at the rate of ₹46,000/- shall be submitted in form of Demand Draft from any of the Nationalized/Scheduled banks in favour of Director, NESAC payable at SBI Umiam (Branch Code 2010, Barapani), failing which the Tender will not be considered.**

2. **a) All taxes/duties/levies whether by Central/State/Local government where legally leviable and intended to be claimed should be distinctly shown separately (in percentage and words) in the tender, otherwise price quoted will be treated as inclusive of all taxes.**
   While quoting the tender, the tenderer should take into account all the extant statutory deductions under Central/State/Local statutes where legally leviable and show it separately (in percentage and words) and if not separately shown it will be treated as inclusive of all statutory deductions applicable as per the extant statutes.
   b) Our's being a Department of Government of India, we are eligible for concession/ exemption from payment of Customs Duty/GST.

3. As a Government of India Department, this office is exempted from payment of Octroi and similar local levies. Tenderers shall ensure that necessary Exemption Certificates are obtained by them from the Accounts Officer, I/C Purchase & Stores to avoid any payment of such levies.
   a) Prices are required to be quoted according to the units indicated in the annexed tender form. When quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.

4. Preference will be given to those tenders offering supplies from ready stocks and on the basis of F.O.R destination/delivery at site.
   a) All available technical literature, catalogues and other data in support of the specifications and details of the items should be furnished along with the offer.

   b) Samples, if called for, should be submitted free of all charges by the tenderer and the Purchaser shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of non- acceptance of tender, the tenderer will have to remove the samples at his own expense.

   c) Approximate net and gross weight of the items offered shall be indicated in your offer. If dimensional details are available the same should also be indicated in your offer.

   d) **Specifications**: Stores offered should strictly confirm to our specifications. Deviations, if any, should be clearly indicated by the tenderer in his quotation. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary, along with the quotations. Test Certificates, wherever necessary, should be forwarded along with supplies. Wherever options have been called for in our specifications, the tenderer should address all such options. Wherever specifically mentioned by us, the tenderer could suggest changes to specifications with appropriate response for the same.

5. The purchaser shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portions of the quantity offered and the tenderers shall supply the same at the rates quoted.

6. Corrections, if any, must be attested. All amounts shall be indicated both in words as well as in figures. Where there is difference between amount quoted in words and figures, amount quoted in words shall prevail.

7. The tenderer should supply along with his tender, the name of his bankers as well as the latest Income-Tax clearance certificate duly countersigned by the Income-Tax Officer of the Circle concerned under the seal of his office, if required by the Purchaser.

8. The authority of the person signing the tender, if called for, should be produced.

9. Quotation shall be valid for a period of **NINETY** days from the date of opening

TERMS & CONDITIONS OF TENDER

1. **DEFINITIONS:**
 a) The term 'Purchaser' shall mean Director, NESAC.
 b) The term 'Contractor' shall mean, the person, firm or company with whom or with which the order for the supply of stores is placed and shall be deemed to include the Contractor's successors, representative, heirs, executors and administrators unless excluded by the Contract.

 c) The term 'Stores' shall mean what the Contractor agrees to supply under the Contract as specified in the Purchase Order including erection of plants & machinery and subsequent testing, should such a condition is included in the Purchase Order.

 d) The term 'Purchase Order' shall mean the communication signed on behalf of the Purchaser by an Officer duly authorized intimating   the acceptance on behalf of the Purchaser on the terms and conditions mentioned or referred to in the said communication accepting the tender or offer of the Contractor for supply of stores or plant, machinery or equipment or part thereof.

2. **PRICES:**
Tender offering firm prices will be preferred. Where a price variation clause is insisted upon by a tenderer, quotation with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also the formula for any such variation/s.

3. **SECURITY DEPOSIT:**
On acceptance of the tender, the Contractor shall, at the option of the Purchaser and within the period specified by him, deposit with him, in cash or in any other form as the Purchaser may determine, security deposit not exceeding three percent of the value of the Contract as the Purchaser shall specify. If the Contractor is called upon by the Purchaser to deposit, 'Security' and the Contractor fails to provide the security within the period specified, such failure shall constitute a breach of the Contract, and the Purchaser shall be entitled to make other arrangements for the re-purchase of the stores Contracted at the risk of the Contractor in terms of Sub-Clause (ii) and (iii) of clause 10(b) hereof and/or to recover from the Contractor, damages arising from such cancellation.

4. **GUARANTEE/WARRANTY & REPLACEMENT:**
(a) The Contractor shall guarantee/warranty that the stores supplied shall comply fully with the specifications laid down, for material, workmanship and performance.
(b) For a period of 12 months after the acceptance of the stores, if any defects are discovered therein or any defects therein found to have developed under proper use, arising from faulty stores design or workmanship, the Contractor shall remedy such defects at his own cost provided he is called upon to do so within a period of 14 months from the date of acceptance thereof by the purchaser who shall state in writing in what respect the stores or any part thereof are faulty.

(c) If, in the opinion of the purchaser, it becomes necessary to replace or renew any defective stores such replacement or renewal shall be made by the Contractor free of all costs to the purchaser, provided the notice informing the Contractor of the defect is given by the purchaser in this regard within the said period of 14 months from the date of acceptance thereof.

(d) Should the Contractor fail to rectify the defects, the purchaser shall have the right to reject or repair or replace at the cost of the Contractor the whole or any portion of the defective stores.

(e) The decision of the purchaser notwithstanding any prior approval or acceptance or inspection thereof on behalf of the purchaser, as to whether or not the stores supplied by the Contractor are defective or any defect has developed within the said period of 14 months or as to whether the nature of the defects requires renewal or replacement, shall be final, conclusive and binding on the Contractor.

(f) To fulfill guarantee/warranty conditions outlined in clause 4 (a) to (e) above, the Contractor shall, at the option of the purchaser, furnish a Bank Guarantee (as prescribed by the purchaser) from a Bank approved by the purchaser for an amount equivalent to 10% of the value of the Contract along with first shipment documents. On the performance and completion of the Contract in all respects, the Bank Guarantee will be returned to the Contractor without any interest.

(g) All the replacement stores shall also be guaranteed/warranted for a period of 12 months from the date of arrival of the stores at purchaser's site.

(h) Even while the 12 months guarantee/warranty applies to all stores, in case where a greater period is called for by our specifications then such a specification shall apply in such cases the period of 14 months referred to in para 4 (b) & (c) shall be the 'asked for' guarantee/warranty period plus two months.

5. PACKING FORWARDING & INSURANCE:

The Contractor will be held responsible for the stores being sufficiently and properly packed for transport by rail, road, sea or air to withstand transit hazards and ensure safe arrival at the destination. The packing and marking of packages shall be done by and at the expense of the Contractor. The purchaser will not pay separately for transit insurance, all risks in transit being exclusively of the Contractor and the Purchaser shall pay only for such stores as are actually received in good condition in accordance with the Contract.

6. DISPATCH:

The Contractor is responsible for obtaining a clear receipt from the Transport Authorities specifying the goods despatched. The consignment should be despatched with clear Railway Receipt/Lorry Receipt. If sent in any other mode, it shall be at the risk of the Contractor. Purchaser will take no responsibility for short deliveries or wrong supply of goods when the same are booked on 'said to contain' basis. Purchaser shall pay for only such stores as are actually received by them in accordance with the Contract.

7. TEST CERTIFICATE:

Wherever required, test certificates should be sent along with the despatch documents.

8.   ACCEPTANCE OF STORES:

(a) The stores shall be tendered by the Contractor for inspection at such places as may be specified by the purchaser at the Contractor's own risk, expense and cost.

(b) It is expressly agreed that the acceptance of the stores Contracted for, is subject to final approval by the purchaser, whose decision shall be final.

(c) If, in the opinion of the purchaser, all or any of the stores do not meet the performance or quality

requirements specified in the Purchase Order, they may be either rejected or accepted at a price to be fixed by the purchaser and his decision as to rejection and the prices to be fixed shall be final and binding on the Contractor.

(d) If the whole or any part of the stores supplied are rejected in accordance with Clause No. 8 (c) above, the purchaser shall be at liberty, with or without notice to the Contractor, to purchase in the open market at the expense of the Contractor stores meeting the necessary performance and quality Contracted for in place of those rejected, provided that either the purchase, or the agreement to purchase, from another supplier is made within six months from the date of rejection of the stores as aforesaid.

9.   REJECTED STORES:

Rejected stores will remain at destination at the Contractor's risk and responsibility. If instructions for their disposal are not received from the Contractor within a period of 14 days from the date of receipt of the advice of rejection, the purchaser or his representative has, at his discretion, the right to scrap or sell or consign the rejected stores to Contractor's address at the Contractor's entire risk and expense, freight being payable by the Contractor at actuals.

10. DELIVERY:

(a) The time for and the date of delivery of the stores stipulated in the Purchase Order shall be deemed to be the essence of the Contract and delivery must be completed on or before the specified dates.

(b) Should the Contractor fail to deliver the stores or any consignment thereof within the period prescribed for such delivery, the purchaser shall be entitled at his option either.

   (i) to recover from the Contractor as agreed liquidated damages and not by way of penalty, a sum of 0.5% per week of the price of any stores which the Contractor has failed to deliver as aforesaid or during which the delivery of such store may be in arrears subject to a minimum of 10%, or

   (ii) to purchase from elsewhere, without notice to the Contractor on the account and at the risk of the Contractor, the stores not delivered or others of a similar description (where others exactly complying with the particulars, are not, in the opinion of the purchaser, readily procurable, such opinion being final) without cancelling the Contract in respect of the consignment (s) not yet due for delivery, or

   (iii) to cancel the Contract or a portion thereof and if so desired to purchase or authorise the purchase of stores not so delivered or others of a similar description (where others exactly if complying with the particulars are not, in the opinion of the purchaser, readily procurable, such opinion final) at the risk and cost of the Contractor.

In the event of action being taken under sub-clause (ii) & (iii) of clause 10 (b) above, the Contractor shall be liable for any loss which the purchaser may sustain on that account, provided that the re-purchase or if there is an agreement to re- purchase then such agreement is made within six months from the date of such failure. But the Contractor shall not be entitled to any gain on such re-purchase made against default. The manner and method of such re-purchase shall be at the discretion of the purchaser, whose decision shall be final. It shall not be necessary for the purchaser to serve a notice of such re-purchase on the defaulting Contractor. This right shall be without prejudice to the right of the purchaser to recover damages for breach of Contract by the Contractor.

11. EXTENSION OF TIME:

As soon as it is apparent that the Contract dates cannot be adhered to, an application shall be sent by the Contractor to the purchaser. If failure, on the part of the Contractor, to deliver the stores in proper time shall have arisen from any cause which the purchaser may admit as reasonable ground for an extension of the time (and his decision shall be final) he may allow such additional time as he considers it to be justified by circumstances, of the case without prejudice to the purchaser's right to recover liquidated damages under clause 10 thereof.

12. ERECTION OF PLANT & MACHINERY:

Wherever erection of a plant or machinery is the responsibility of the Contractor as per the terms of the Contract and in case the Contractor fails to carry out the erection as and when called upon to do so within the period specified by the purchaser, the purchaser shall have the right to get the erection done through any source of his choice. In such an event, the Contractor shall be liable to bear any additional expenditure that the purchaser is liable to incur towards erection. The Contractor shall, however, not be entitled to any gain due to such an action by the purchaser.

13. PAYMENT:

Contractor's bill will be passed for payment only after the stores have been received, inspected and accepted by the Purchaser.

14. RECOVERY OF SUM DUE:

Whenever any claim for the payment of, whether liquidated or not, money arising out of or under this Contract against the Contractor, the purchaser shall be entitled to recover such sum by appropriating in part or whole, the security deposited by the Contractor, if a security is taken against the Contract. In the event of the security being insufficient or if no security has been taken from the Contractor, then the balance or the total sum recoverable as the case may be, shall be deducted from any sum then due or which at any time thereafter may become due to the Contractor under this or any other Contract with the purchaser. Should this sum be not sufficient to cover the full amount recoverable, the Contractor shall pay to the purchaser on demand the remaining balance due. Similarly, if the purchaser has or makes any claim, whether liquidated or not, against the Contractor under any other Contract with the purchaser, the payment of all moneys payable under the Contract to the Contractor including the security deposit shall be withheld till such claims of the purchaser are finally adjudicated upon and paid by the Contractor.

15.   INDEMNITY:

The Contractor shall warrant and be deemed to have warranted that all stores supplied against this Contract are free and clean of infringement of any Patent, Copyright or Trademark, and shall at all times indemnify the purchaser against all claims which may be made in respect of the stores for infringement of any right protected by Patent Registration of design or Trade mark and shall take all risk of accidents or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for sufficiency of all means used by him for the fulfillment of the contact.

16.   ARBITRATION:

Any disputes that arise during the execution of contract will be mutually discussed and settled between NESAC Contract-In-Charge/Focal Person and Service Provider. Any dispute that remains unresolved thereafter will be referred to a one-man Arbitrator, appointed by Director, NESAC, Umiam, Meghalaya in accordance with Arbitration & Conciliation Act 1996 as amended from time to time, whose decision shall be final and binding on both the parties.

17.   COUNTER TERMS AND CONDITION OF SUPPLIERS:

Where counter terms and conditions printed or cyclostyled conditions have been offered by the supplier, the same shall not be deemed to have been accepted by the Purchaser, unless specific written acceptance thereof is obtained.

18.   SECURITY FOR PURCHASE OF MATERIALS:

Successful tenderer will have to furnish in the form of a bank guarantee or any other form as called for by the purchaser towards adequate security for the materials and properties provided by the Purchaser for the due execution of the Contract.

19.   BENEFITS EXTENDED BY MINISTRY OF MICRO, SMALL AND MEDIUM ENTERPRISE (MSME), GOVERNMENT OF INDIA

In order to avail of the benefits extended by Government of India to the Micro, Small and medium Enterprises, bidder should submit self attested copy of valid certificate of registration for specific services asked in the tender by any authority so authorized by Ministry of Micro, small and Medium Enterprise (MSME), Government of India to issue such certificate. Bidder will be required to produce original certificate when called for to do so by NESAC.

20.   BID SECURITY DECLARATION

Micro Small and Medium Enterprise (MSME) and firms registered with NESAC are exempted from submission of Bid Security but **i**n lieu of Bid Security bidders are required to submit along with the bid document signed "Bid Security Declaration" (Annexure-III) accepting that if they withdraw or modify their bids during period of validity etc, they will be suspended for the time specified in the tender documents"

****

Bid Security Declaration

Date: [Insert date (as day, month and year)]
Bid No.: …………………………………..
Tenderer/Bidder's offer no. _____ Dtd: _____

To,

The Director
North Eastern Space Applications Centre
Government of India
Department of Space
Umiam-793103, Meghalaya

Sub: Bid Security Declaration-Reg

We, understand that, according to your conditions, the Tender must be supported by a Declaration.

We accept that we will automatically be suspended from being eligible for bidding in any contract with NESAC for the period of time of 3 years starting from…………………, if we are in breach of our obligation(s) under the bid conditions because we:

a) have withdrawn our bid during the period of bid validity specified in the Letter of Bid/Tender; or
b) having been notified of the acceptance of our bid by NESAC during the period of bid validity, (i) fail or refuse to execute the Contract, if required, or (ii) fail or refuse to furnish the Performance Security.

We understand this Bid-Securing Declaration shall expire if we are not the successful Tenderer/ bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Tenderer/bidder; or (ii) twenty-eight days after expiration of our Bid.

Signed: [insert complete name of person signing the Bid-Securing Declaration]

Duly authorized to sign the bid for and on behalf of : [insert complete name of Bidder]

Dated on _____ day of _____, _____ (insert date of signing]

Corporate Seal [where appropriate]

[Note: In case of a Joint Venture, the Bid-Securing Declaration must be in the name of all partners to the joint Venture that submits the bid]

Report ID: GEM/GARPTS/28062023/W2ZO81A2OR45
निविदा सं./Tender No. : NESAC/1577/2023
संदर्भ सं./Ref No.   :.....................................
दिनांक /Date   :.....................................

PRICE BID

प्रपत्र/From ....

....

....

सेवा मे/To,

क्रय आधिकारी /Purchase Officer
I/C Purchase & Stores Division
एनई-सैक/NESAC, उमियाम/Umiam

श्रीमान/Dear Sir,

I/We hereby offer to supply the stores detailed herewith/below at the price hereunder quoted and agree to hold this offer open till ....I/We shall be bound to supply the stores hereby offered on the issue of the Purchase Order communicating the acceptance thereof on or before the expiry of the last mentioned date. You have the liberty to accept any one or more of the items of stores tendered for any portion of any one or more of items of such stores. I/We not withstanding that the offer in this tender has not been accepted in whole, shall be bound to supply to you such items and such portion or portions of one or more of the items as may be specified in the said Purchase Order communicating the acceptance.

Sl No	Items	Quantity/ unit	Rate per Unit (`)	Taxes (GST)		Total Amount including taxes (`)
				%	GST Per unit	
I	IoT & General Lab Items					
	A. General Electronics Items					
1	9x15-cm-universal-pcb-prototype-board-double-sided	50 nos.				
2	830-points solderless breadboard + Power Supply+ 140 Jumper Wires set	10 nos.				
3	500pcs 5mm LEDs Set	05 sets				
4	22AWG 600V 6 Colour Tinned Hook Up Wire Kit – Multicore	10 Sets				
5	Dupont Connector Kit	05 sets				
6	230m insulated PVC Coated 30AWG Wire Wrapping Wire-Black	20 rolls				
7	230m P/N B-30-1000 Insulated PVC Coated 30AWG Wire Wrapping Wire-RED	20 rolls				
8	230m P/N B-30-1000 Insulated PVC Coated 30AWG Wire Wrapping Wire-GREEN	20 rolls				
9	230m P/N B-30-1000 Insulated PVC Coated 30AWG Wire Wrapping Wire-BLUE	20 rolls				
10	10 cm 40 Pin Dupont Cable Male/Male, Male/Female,	10 sets				

	Female/Female Cable Combo					
11	65pcs Flexible Breadboard Jumper Wires	20 sets				
12	Metal Gear Servo Motor (180° Rotation)with CNC Aluminum Steering Servo Horn Arm	05 nos.				
13	Stepper Motor and Stepper Motor Driver	05 nos.				
14	ESD S-160 Anti Static Magnetic Heat Insulation Workbench Mat.	05 nos.				
15	6A 250V AC SPST ON-OFF Rocker Switch	10 nos.				
16	12x12x7.3mm Tactile Push Button Switch-10Pcs.	10 nos.				
17	DC 3-6 V Mini Micro Submersible Water Pump	05 nos.				
18	1.8V - 12V/2A DC Motor PWM Speed Regulator	05 nos.				
19	Advance Electronics Component Package kit	10 nos.				
20	Resistor Assortment Kit – 10 Ω To 1 MΩ (600pcs)	10 nos.				
21	BJT Transistors Assortment Kit with Bonus Resistor Pack	03 nos.				
22	Ceramic Capacitor Assortment Kit	05 nos.				
23	Crystal Oscillator Assorted kit – 9 Kinds	10 nos.				
24	1W Zener Diode Assortment Kit	05 nos.				
25	16-in-one sensor kit for Raspberry Pi 3	05 nos.				
26	37 in 1 Sensors Kit compatible with Arduino	03 nos.				
27	40 in 1 Sensor Kit for Arduino & R Pi	01 nos.				
28	31 in 1 Universal Multifunction Portable Screwdriver Set	02 nos.				
29	Anti-Static Tweezers 6pcs Set Vetus ESD	02 nos.				
30	Tools Kits Box Set Screwdriver Pliers Hex Repair	01 set				
31	Pliers Set	01 Set				
32	Compact Weighing Scale	01 no.				
33	Digital Electronic Microscope with LCD Display	01 no.				
34	All Purpose Hot Melt Glue Sticks for Glue Gun – 5pcs	10 pcs.				

35	DC-DC Step UP LED Voltmeter 3-34 to 4-35V Adjustable Boost Converter module	05 nos.					
36	Helping Hand for PCB with Multifunctional Magnifier (Magnifying Glass) and Soldering Iron Stand with LED Light	01 no					
37	Professional Balance Charger/Discharger	01 Nos.					
38	Mini Professional Balance Charger/Discharger	02 Nos.					
39	Hi-Speed Battery Charger with 2AA 1300mAh and 2AAA 750mAh Batteries	02 sets					
40	(Orange) 9V 2A Power Supply with 5.5mm DC Plug Adapter	05 nos.					
41	(Orange) 12V 2A Power Supply with 5.5mm DC Plug Adapter	05 nos.					
42	5V 4 Channel SSR Solid State Relay Module 240V 2A Output with Resistive Fuse	05 nos.					
43	10uF (10000nF) 50V Capacitor – 1206 SMD Package – (pack of 5)	50 nos.					
44	1uF Capacitor SMD:C 0402 (pack of 50)	20 nos.					
45	0.1uF Capacitor SMD:C 0402 (pack of 50)	20 nos.					
46	4.7uF 50V Capacitor – 603 SMD Package -(pack of 10)	20 nos.					
47	22 pF 50V 0603 SMD Multi-Layer Ceramic Capacitor - 0603N220J500CT Walsin	1000 nos.					
48	100k Ohm 1/4W 1206 Surface Mount Chip Resistor (Pack of 50)	20 nos.					
49	10k Resistor SMD:R 0402 (pack of 50)	20 nos.					
50	1K Resistor SMD:R 0402 (pack of 50)	20 nos.					
51	47 Ohm 1/4W 0805 Surface Mount Chip Resistor (Pack of 10)	20 nos.					
52	2.2k Ohm 1/4W 0805 Surface Mount Resistor (Pack of 50)	20 nos.					
53	680uF 16V SMD Capacitor (Pack of 20)	20 nos.					
54	330uF 16V DC Polymer Aluminium SMD Capacitor (Pack of 20)	20 nos.					
55	22uF 25V SMD Multilayer Ceramic Capacitor (Pack of 50)	20 nos.					
56	18650 x 2 battery holder with cover and On/Off Switch	20 nos.					
57	18650 SMD/SMT High-Quality Single Battery Holder	20 nos.					

58	CR2032 CR2025 Coin Battery Socket Holder-5Pcs.	20 nos.				
59	2 x 1.5V AA battery holder with cover and On/Off Switch	20 nos.				
60	Fireproof 4X 5 18650 Battery Holder with 18.4MM Bore Diameter	10 nos.				
61	ICR 18650 7.4V 4000Mah 3C 2S2P Li-Ion Battery Pack	10 nos.				
62	ISR 18650 7.4V 1500mAh 15C 2S1P Li-Ion Battery Pack	10 nos.				
63	10Mhz (SMD) Crystal Oscillator HC49/US Package(Pack of 5)	40 nos.				
64	14.318Mhz (SMD) Crystal Oscillator HC49/US Package – (Pack of 5)	40 nos.				
65	YXC – YSX530GA 16MHZ 20PF 10PPM 2Pad SMD/SMT Crystal	50 nos.				
66	25Mhz (SMD) Crystal Oscillator HC49/US Package	50 nos.				
67	460Pcs. Tactile Push Button Switch Kit	01 pkt.				
68	Automatically Solder Wire Feeding Soldering Iron	01 no.				
69	25 Piece Mini Plier Set with Ergonomic Handles	02 nos.				
70	100PCS 6mm Light Push Button Switch Kit	04 pkts.				
71	Multipurpose PCB Ruler Engineering Measuring Tool-1Pcs.	10 nos.				
72	18in1 RC Tools Kits Box	02 nos.				
73	Long Nose Pliers, 160mm, Drop Forged & Heat Treated Steel	05 nos.				
74	DURATOOL Screwdriver Kit, Phillips, Torx, Hex, Slotted, Assorted Accessories, 42 Pieces	02 nos.				
75	DURATOOL Wire Gauge, Stainless Steel, 37 Hole, 0 – 36 SWG, Etched	05 nos.				
76	DYKB 3IN1 Wire Wrap Strip Unwrap Tool Hand Manual Winding Rods For WSU-30M AWG 30	02 nos.				
77	Multifunction tool holder	03 nos.				
78	Screwdriver Storage Rack	02 nos.				
79	Tool Holder	02 nos.				
80	Aluminium Screw Tray with Magnetic Plate for RC Model	10 nos.				
81	Adafruit Monochrome 1.12″ 128×128 OLED Graphic Display – STEMMA QT / Qwiic	05 nos.				

82	Waveshare 1.3inch OLED (A)	20 nos.				
83	3MM Single Hole LED Light Holder with Red led Light (Pack of 10)	20 nos.				
84	0805 Surface Mount LED Green – 50 Pcs	20 nos.				
85	0805 Surface Mount LED Red – 50 Pcs	20 nos.				
86	0805 Surface Mount LED Blue – 50 Pcs	20 nos.				
87	0805 Surface Mount LED Yellow – 50 Pcs	20 nos.				
88	QFP/TQFP/LQFP/FQFP/SOP/SSOP32 to DIP Adapter/ Breakout Board	20 nos.				
89	12x12x7.3mm Tactile Push Button Switch-10Pcs.XR105 F3L	20 nos.				
90	3*6*2.5 mm SMD Tactile Switch (Pack of 20)	20 nos.				
91	12x12x7.3 mm Round Cap for Square tactile Switch – Black (10 Pcs.)	20 nos.				
92	ORANGE 100PCS 6mm Light Push Button Switch Kit	03 nos.				
93	MF-A05 Potentiometer Knob Cap 6 mm – 5 Pcs.	10 nos.				
94	ORANGE 50PCS 3296W Adjustable Potentiometer Kit	03 nos.				
95	ORANGE 140PCS 2A-40A Medium Car Blade Fuse Piece Kit	03 no.				
96	CR2032 Coin Cell Battery Holder SMD Button Contact	100 nos.				
97	RF Transceiver LR1121 LoRa Connect Dual-band Wireless Transceiver	20 nos.				
98	RF Amplifier SMT Low Noise Amplifier, 2 - 30 GHz, 50 Ohm	05 nos.				
99	RF Microcontrollers - MCU Automotive qualified SimpleLink wireless MCU for use in wireless battery management systems	05 nos.				
100	RF Front End 2.4GHz 802.11n PA+SW+LNA FEM in 2.5mmx2.	20 nos.				
101	RF Transceiver LoRa Smart Home low pwr 150-960MHz ISM	10 nos.				
102	DFRobot 5V Solar Power Manager	05 nos.				
103	3.7V Lithium Battery Protection Board for Polymer 18650 Bonding Pad (can Spot/Weld) 3A Overcurrent Value	100 nos.				

104	MCU-Micro USB Breadboard 5V Power Supply Module	100 nos.				
105	USB Female to 2.54mm Breakout Board with Direct 4P Adapter Board- 2Pcs	20 nos.				
106	PCF8563 RTC Board For Raspberry Pi Real Time Clock Module-Blue	20 nos.				
107	DS3231 RTC Module Precise Real Time Clock I2C AT24C32	20 nos.				
108	DS1302 Real Time Clock Module (with Battery)	25 nos.				
Total I(A)			**0.00**			
(B) ICs, SMD Components, Sensors, Modules						
109	3.3V Fixed output voltage regulator LDO	100 nos.				
110	3.3V Fixed Output Voltage Regulator	100 nos.				
111	5.0 5V Fixed Output Voltage Regulator	50 nos.				
112	1.2-5V Adjustable Output LDO RF-Linear Voltage Regulator 5-Pin SOT-23	50 nos.				
113	4.2V 1A Standalone Linear Li-ion Battery Charger with Thermal Regulation SOP8	50 nos.				
114	5.5V USB-Friendly Li-Ion Battery Charger Power-Path Management IC 16pin VQFN	50 nos.				
115	4.2V 500mA Single Cell Li-Ion/Li-Polymer Battery Charge Management Controller 5-Pin SOT-23	50 nos.				
116	8-Bit A/D Converter with 8-Channel Multiplexer IC DIP-28 Package	20 nos.				
117	8-Bit Digital to Analog D/A Converter IC DIP-16 Package	20 nos.				
118	24V/12V to 5V 5A Power Module DC-DC XY-3606 Power Converter	20 nos.				
119	DC-DC 1.8V-5V to 3.3V, Booster and Buck Power, Modules	20 nos.				
120	3.7V to 12V Mini DC-DC Boost Step Up Converter Board Module 5V/ 8V/ 9V 12V Output	20 nos.				
121	Air Quality Sensor Breakout – VOC and eCO2 – STEMMA QT / QwiicRoHS Compliant	05 nos.				
122	Air Quality Sensor Breakout – VOC Index – STEMMA QT/Qwiic	05 nos.				
123	infrared carbon dioxide sensor	05 nos.				

124	Carbon Monoxide Sensor	05 nos.				
125	Gas Detection Sensor, Ammonia, Carbon Monoxide, Ethanol, Hydrogen, Methane, 10-1000 ppm	05 nos.				
126	4 in 1 Soil PH Meter Soil Tester PH Moisture Meter Temperature Sunlight Measurement Analysis Acidity Alkali（Without Battery）	05 nos.				
127	Environmental Sensor (Breakout)	05 nos.				
128	Environmental Sensor, Supports Temperature / Humidity / Barometric Pressure / Gas Detection With AI function	05 nos.				
129	Mini Cellular GSM + GPS Breakout	02 nos.				
130	AHT20 Integrated temperature and humidity Sensor -40 ~ + 85 ℃	20 nos.				
131	AHT21 Integrated temperature and humidity sensor -40 ~ + 120 ℃	20 nos.				
132	Bluetooth Low Energy 2.4GHz SoC 48-Pin QFN	20 nos.				
133	Single-Chip 2.4GHz Transceiver Enhanced ShockBurst 3.6V 20-pin QFN	20 nos.				
134	Multiprotocol Bluetooth 5 ANT/ANT+ 2.4GHz SoC 48-Pin QFN	20 nos.				
135	Bluetooth low energy Connectivity 32-Pin QFN	20 nos.				
136	5V 2A 8-Channel SSR G3MB-202P Solid State Relay Module	05 nos.				
137	Based Motor Driver Module	05 nos.				
138	Digital Relative Humidity and Temperature Sensor Module	20 nos.				
139	LDR 5mm	10 pkts				
140	BME688 - Temperature, Humidity, Pressure and Gas Sensor Breakout	05 nos.				
141	AHT20 Temperature & Humidity Sensor Breakout Board - STEMMA QT / Qwiic	20 nos.				
142	Weather Click Board BME280 SPI / I2C - MikroE	02 nos.				
143	MAX7219 – 8-Digit LED Display Driver IC SMD-24 Package	50 nos.				
144	Transmitter chipset CMT2119AW-ESR.	100 nos.				
145	Receiver chipset CMT2210LH-ESR.	100 nos.				
146	CC2500RGPR Texas Instruments (TI)	20 nos.				

147	NRF52832-QFAA-R – Multiprotocol Bluetooth 5 ANT/ ANT+ 2.4GHz SoC 48-Pin QFN	50 nos.				
148	ESP32-S0WD Single-core 32-bit MCU 2.4GHz Wi-Fi BT/BLE SoC 48-Pin QFN	50 nos.				
149	ORANGE 66PCS 2.54mm Pitch IC Chip Plug-in Base Kit	05 nos.				
150	Figaro TGS2610 - Liquefied Petroleum Gas (LPG) Sensor	10 nos.				
151	RF Transceiver 1.9-3.6V 433/868/ 915MHz TRNSCVR	20 nos.				
152	RF Transceiver Dual Band IEEE 802.15.4 TRX, 48QFN, T&R	20 nos.				
153	RF Front End BLE FEM Common T&R PA/Rx bypass HD	40 nos.				
154	RF Front End 2.4 GHz 256 QAM WLAN/BT FEM	40 nos.				
155	Distance Sensor Modules 24GHz mmWave Sensor - Human Static Presence Module Lite - human presence, FMCW, Configurable Underlying Parameter, Arduino support, Home Assistant, ESP Home	20 nos.				
156	Power Management Modules 3.6-V to 36-V input, 1-V to 12-V output, 2-A, step-down module in 4-mm x 6-mm x 1.8-mm package	10 nos.				
157	ADXL345 LGA-14 3-axis Accelerometer	50 nos.				
158	MPU 6050 QFN-24 3-Axis Gyro/Accelerometer IC	50 nos.				
159	MAX98357AETE+T Audio Amplifiers Digital Input Class D Amplifier IC TQFN-16 Package	50 nos.				
160	AT24C128N 128K bit Serial I2C Bus EEPROM IC DIP-8 Package	50 nos.				
161	LM741N PDIP-8 Operational Amplifier (Pack of 3 ICs)	50 nos.				
162	SMA Jack Straight PCB Mount(V1.0)	50 nos.				
163	SMA(F) to SMA(F) Adapter	50 nos.				
164	SMA Female Connector Right Angled Through-Hole for PCB Mount	50 nos.				
165	RF Nano Integrated NRF24L01, Wireless Module with, Soldering	10 nos.				
166	AT-09 Bluetooth 4.0 UART Transceiver Module CC2541 Compatible with HM-10	10 nos.				
167	NRF52810-QFAA-R7 – Bluetooth 5 BLE ANT 2.4GHz 2Mbps 3V SoC	10 nos.				

	48-Pin QFN					
168	nRF8001-R2Q32-T – Bluetooth low energy Connectivity 32-Pin QFN	10 nos.				
169	CH340G SOIC16 USB to Serial TTL-RS232 converter IC	100 nos.				
170	MAX485ESA SO-8 Transceiver Interface IC	100 nos.				
171	FT232HL- Single Channel Hi-Speed USB to Multipurpose UART/FIFO-IC	20 nos.				
172	Arduino Portenta Vision Shield – LORA	02 nos.				
173	Arduino MKR GPS Shield	02 nos.				
174	Arduino Nano 33 IOT with Header	02 nos.				
175	Original ARDUINO NANO 33 BLE Board (Without Header)	02 nos.				
176	Original Arduino Nano 33 BLE Sense Rev2	02 nos.				
177	Arduino Nano RP2040 Connect without Header	02 nos.				
178	Arduino Leonardo without Headers	01 no.				
	Total I(B)					
(C) Microcontrollers & Other Development Boards						
179	ATmega328P U-TH Microcontroller	20 Nos.				
180	ATmega328P-U PDIP-28 Microcontroller	20 Nos.				
181	STM32F030F4P6 TSSOP-20 ARM Microcontroller-MCU	20 Nos.				
182	ATmega8A AU TQFP-32 Microcontroller	10 Nos.				
183	ATmega2560-16AUR Microcontroller	5 Nos.				
184	RP2040 Microcontroller IC by Raspberry PI	20 Nos.				
185	STM32F030F4P6 TSSOP-20 ARM Microcontroller-MCU	20 Nos.				
186	ESP32-D0WD Dual-core 32-bit MCU 2.4GHz Wi-Fi BT/BLE SoC IC QFN-48 Package	20 Nos.				
187	ESP WROOM 32 MCU Module	10 nos.				
188	TCS3200 Color Recognition Sensor Module for MCU Arduino	05 nos.				
189	Pixy 2.1 Smart Vision Sensor-Object Tracking Camera	02 nos.				

190	DS18B20 Water Proof Temperature Probe – Black (1m)	10 nos.				
191	LCD1602 Parallel LCD Display with IIC/I2C interface	05 nos.				
192	Pro Mini ATMEGA328P 5V/16M Black- Standard version	04 nos.				
193	Pro Mini ATMEGA328P 3.3V/8M (Official Version)	05 Nos.				
194	Raspberry Pi Sense HAT with integrated Sensors	04 nos.				
195	ESP WROOM 32 MCU Module	10 nos.				
196	Particle Boron IoT Development Board	02 nos.				
197	ESP32-D0WD Dual-core 32-bit MCU 2.4GHz Wi-Fi BT/BLE SoC IC QFN-48 Package	20 nos.				
198	NRF51822-CFAC-R – Bluetooth 3.1+EDR BLE 2Mbps 3V Medical 2.4GHz SoC ULP 48-Pin QFN	20 nos.				
199	NRF51822-QFAB-R7 – Multiprotocol Bluetooth Low Energy ANT 2.4GHz SoC ULP IC QFN-48 Package	20 nos.				
200	NRF51422-QFAA-R7 Nordic Multi-protocol Bluetooth Smart SoC 48-Pin QFN	04 nos.				
	Total I(C)					
(D)IOT Equipment & Communication Modules						
201	Pi Camera	03 nos.				
202	5MP 1080P IR-Cut Camera for Raspberry Pi 3/4 with Automatic Day Night Mode	03 nos.				
203	LoRa Radio 868MHz	05 nos.				
204	LoRa 868MHZ SX1276 Wireless Transmitter and Receiver RF Module	02 nos.				
205	LoRa Shield for Arduino	02 nos.				
206	XBee3 2.4GHz ZB3.0 RP-SMA Female Antenna	05 nos.				
207	BLE Bluetooth 4.0 CC2541 Wireless Module	10 nos.				
208	Bluetooth 4.0 UART Transceiver Module CC2541 Compatible with HM-10	10 Nos.				
209	RF Transmitter Receiver Module 315MHz Wireless Link Kit For Arduino	50 nos.				
210	NRF 51822 BLE 4.0 Bluetooth Module Wireless Low-power Development Board	10 nos.				

211	87-108Mhz Stereo FM Transmitter Module Digital LCD Display Wireless Microphone Board Multi-function Frequency Modulation	05 nos.				
212	SX1262 LoRa HAT for Raspberry Pi 868MHz Frequency Band	02 nos.				
213	SX1268 LoRa HAT for Raspberry Pi 433MHz Frequency Band	02 nos.				
214	GSM/GPRS/GNSS/Bluetooth HAT for Raspberry Pi	02 nos.				
215	ESP-32S Wifi Bluetooth Combo Module	05 nos.				
216	LoRa Series Ra-02 Spread Spectrum Wireless Module	05 nos.				
217	ESP32-Audio-Kit	02 nos.				
218	0.1-2000mhz RF Wideband Gain 30db Low-Noise Amplifier LNA Board Module	05 nos.				
219	2.4GHz 3.2dBi RP-SMA Male Omni Antenna for WiFi	10 nos.				
220	SMA Female Connector Right Angled Through-Hole for PCB Mount	50 nos.				
221	SMA Female Straight Connector Solder Type for Cable & Panel Mount	50 nos.				
222	GNSS Antenna for Raspberry Pi HAT and Arduino Shield with 3 Meter Cable	03 nos.				
223	GPS HAT for Raspberry Pi	02 nos.				
224	8MP Pan Tilt Zoom PTZ Camera for Raspberry Pi 4/3B+/3 and Jetson Nano / Xavier NX	02 nos.				
225	Pivariety 21MP IMX230 Color Camera Module	02 no.				
226	OpenMV Cam H7 Plus	02 nos.				
227	Speech Recognizer	02 nos.				
228	Sound Sensor	10 nos.				
229	Soil Temperature and Humidity Sensor Module	05 nos.				
230	Ultrasonic Range Finder	20 nos.				
231	LoRaST IoT Module	02 nos.				
232	ESP32 LoRa SX1278 0.96 Inch Blue OLED Display BT WiFi	02 nos.				

	Module for Arduino (Type C-Connector)					
233	LoRaE5 mini (STM32WLE5JC)	02 nos.				
234	LoRaWAN Gateway Module (SPI) – US915, based on LoRa Concentrator Semtech SX1302	02 nos.				
235	FeatherS2 – ESP32-S2 Feather Development Board	02 nos.				
Total I(C))						
Total I(A+B+C+D)						
II	**GNSS Modules**					
236	L80 GPS Module	05 nos.				
237	L86 GPS + GLONASS module	05 nos.				
238	MC60E dual SIM Quad-band GSM/GPRS/GNSS BT4.0 Module	05 nos.				
239	L89 Compact GNSS Module IRNSS-Enabled	05 nos.				
240	L89HA Breakout Multi-GNSS engines for GPS, IRNSS, GLONASS, BeiDou, Galileo and QZSS	05 nos.				
241	EC200U-CN LTE 4G GNSS Ultra-compact Nano Modem	05 nos.				
242	Industrial IoT Wireless Expansion Hat for Raspberry Pi Compute Module 4 (Base Board)	05 nos.				
243	Ultimate GPS GLONASS with USB Type-C 66 Channel 10Hz Updates	05 nos.				
244	L86-M33 GPS GNSS Arduino Shield and Data Logger	05 nos.				
245	GNSS 5 Click Board NEO-M8N GNSS Receiver - MikroE	05 nos.				
246	ZED-F9P-02B Chip	02 nos.				
247	NEO-M9N-00B Chip	10 nos.				
248	LC86GLAMD chip	10 nos.				
249	LC79HALMD chip	10 nos.				
250	Neo-D9S-00B module	10 nos.				
251	SKY85329-11 RF Front End	100 nos.				
252	Analog Devices / Maxim IntegratedMAX2678GTB/V+T GPS/GNSS RF Front End Module	100 nos.				
253	Sky65728-11 RF Front End GPS LNA Pre-Filter & LNA	100 nos.				

254	SKY65723-81 RF Front End GPS/GNSS/BDS Pre-Filter	100 nos.				
255	LLCC68IMLTRT RF Transceiver LoRa Smart Home low pwr 150-960MHz ISM	25 nos.				
256	SX1302IMLTRTRF Transceiver LoRa Gateway Baseband Transceiver	10 nos.				
257	RF Transceiver Ultra-Wide-Band (UWB) transceiver	25 nos.				
258	Antenna Development Tools SparkFun Satellite Transceiver Kit - Swarm M138(KIT-21287)	02no.				
259	Antennas Antenna, Remote Active Ceramic Patch GNSS GPS Galileo GLONASS Beidou L1/L2, RHCP, 5m cable, SMA Connector, ANT-GNRM-L15A-3	05 nos.				
260	Antennas GNSS L1 Linear PCB Chip Antenna, Internal/Embedded Solder Mount, Solder Pin, GPS, GLONASS, Galileo, Beidou, QZSS	100 nos.				
261	Antennas Antenna, Remote Active Ceramic Patch GNSS GPS Galileo GLONASS Beidou L1/L2/L5, RHCP, 5m cable, SMA Connector,ANT-GNRM-L125A-3	05 nos.				
262	Antennas GPS L1/L2 Dual Feed Double Stacked Patch (Tuned for 35x35 GP)	05 nos.				
263	Antennas Ceramic ant., SMD, L1+G1 & L2+L5	05 nos.				
264	STM32F401CCU6 Minimum System Board Microcomputer STM32 ARM Core Board	10 nos.				
265	Black ABS Protective Box Case for Arduino Mega2560 R3 Controller Enclosure with Switch	20 nos.				
266	Phase Locked Loops - PLL XTAL-HCSL CLK GNRTR	20 nos.				
267	Phase Locked Loops - PLL Ultra-low noise PLLatinum frequency synthesizer with integrated VCO 36-WQFN -40 to 85	20 nos.				
268	Modulator/Demodulator Sat mod	20 nos.				
269	Modulator/Demodulator 300MHz to 4GHz Quad- rature Modulator	20 nos.				
270	Audio Jack – 3.5mm TRRS (SMD)-4Pcs	20 nos.				
271	RJ45 (8P-8C) Female Plug (Pack of 5)	20 nos.				
272	USB A-type Plug Male PCB R/A Connector (Pack of 5)	20 nos.				
273	Micro USB 2.0 B type 5 Pin Connector-5Pcs.	20 nos.				

274	2 Pins 3.96mm Pitch JST-VH Connector With Housing (Pack of 10)	40 nos.				
275	Micro USB Type-B Female 5 Pin Through Hole Connector (Pack of 5)	40 nos.				
276	3 Pins 3.96mm JST-VH Connector With Housing (Pack of 10)	20 nos.				
277	RJ45 (8P-8C) Male Plug (Pack of 10)	20 nos.				
278	Double USB Type A Female Solder Jacks Connector PCB Socket (Pack of 5)	20 nos.				
279	Seeed Studio XIAO ESP32S3 Sense – 2.4GHz Wi-Fi, BLE 5.0, OV2640 camera sensor, digital microphone, battery charge supported, rich Interface, IoT, embedded ML	05 nos.				
280	USB TO UART TTL 5V 3.3V FT232RL Download Cable To Serial Adapter Module For Arduino	100 nos.				
281	CP2102(6-pin) USB 2.0 to TTL UART serial converter	100 nos.				
282	ENC28J60 Ethernet Module(10 Pin Package: SSOP)	10 nos.				
283	USB to UART/ESP8266 Adapter Programmer for ESP-01 WiFi Modules with CH340G Chip	100 nos.				
284	SD Card Reading Writing Module for Arduino	40 nos.				
285	CJMCU-2551 MCP2551 CAN Protocol Controller High-speed Interface Module	20 nos.				
286	CAT6 RJ45 Female-to-Female LAN Cable Extension Adapter	20 nos.				
287	W5500 TCP / IP SPI to LAN Ethernet Interface SPI to LAN / Ethernet Converter	10 nos.				
288	MiNi ENC28J60 Ethernet LAN Network Module For Arduino SPI AVR PIC LPC	10 nos.				
289	Waveshare Industrial USB TO TTL Converter Original FT232RL	10 nos.				
290	Waveshare RS485 CAN HAT for Raspberry Pi	10 nos.				
291	CJMCU-MINI USB 5V/3.3V Socket USB DC Power Socket AMS1117 Module	10 nos.				
292	Waveshare RP2040-Zero Without Header	20 nos.				
293	Waveshare FT232 USB UART Board (Type C), USB To UART (TTL) Communication Module, USB-C Connector	20 nos.				
294	DFRobot Gravity I2C HUB	20 nos.				

295	HDMI to AV Adapter HD 1080P Video Converter	10 nos.				
296	Waveshare Industrial Grade USB HUB, Extending 4x USB 2.0 Ports, Switchable Dual Hosts (Without Power Adapter)	02 nos.				
297	Adafruit ISO1540 Bidirectional I2C Isolator – STEMMA QT / Qwiic	03 nos.				
298	Waveshare RP2040-One, 4MB Flash MCU Board Based On Raspberry Pi RP2040	20 nos.				
299	Waveshare Binocular Camera Base Board Designed for Raspberry Pi Compute Module 4, Interface Expander included	02 nos.				
300	SeeedStudio Grove Differential Amplifier	02 nos.				
301	LoRa Antenna 915 MHz	20 nos.				
302	Unsoldered Lora 915MHz Shield for TTGO T-SIM7000G Module	02 nos.				
303	Lora Antenna 433mhz	10 nos.				
304	Lora Antenna 868mhz	10 nos.				
Total II						
Total Amount (I+II)						

NOTE: 1**. All the rates should be given both in figures and words**

वितरण का स्थान/Place of delivery:	**F.O.R. NESAC, Umiam**
Date by which the ordered item/s will be supplied	

     I/We have understood the terms and conditions of the contract and the instructions of tenderers annexed to the invitation to tender and have thoroughly examined the specification/drawing and/or pattern quoted or preferred to herein and/or fully aware of the nature of stores required and my/or offer is to supply the stores strictly in accordance with the requirements subject to the terms and conditions contained in the purchase orders communicating the acceptance of this tender either in whole or in part.

<div align="right">

निविदाकार के मुहर व हस्ताक्षर
Seal and Signature of the Tenderer

</div>

Date: