



LBD

Let's Build and Develop

ATAL Tinkering Labs by LBD Robotics Private Limited



GeM
Government
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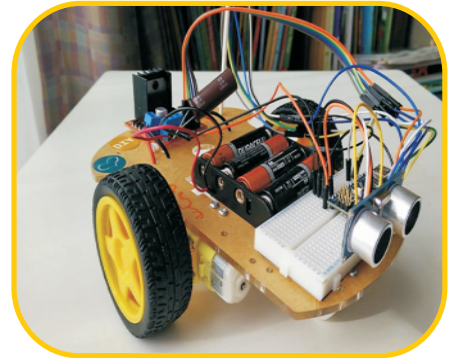
Registered Vendor
On GEM for ATL Package

www.lbdrobotics.com

saleslbdrobotics@gmail.com

Mob.: +91-8010317088, 9560119799





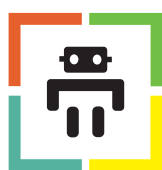
We, at **LBD Robotics** strive to provide quality products for our customers. As it is said that Great products build Great trust, we leave no stone unturned in ensuring quality for our products. Each and every detail of the product is monitored by our qualified engineers. We are dedicated towards developing quality products and enhancing them furthermore through regular feedback taken from our customers, and Clients.

We firmly believe that good relations with the customers is the sole reason behind the success of the product and we put in best of our efforts to maintain this relation. According to the market requirements and customers' demand, we are providing a wide range of Robotic components, materials Services

LBD provides products that are tested for their quality, durability while ensuring optimum pricing which helps us to provide the best solutions for everyone.

For any further information, reach us at saleslbdrobotics@gmail.com

Thank You



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LBD Robotic Pvt. Ltd.

G-268, Ground Floor Sector - 63

Noida Uttar Pradesh - 201305

www.lbdrobotics.com

saleslbdrobotics@gmail.com

Contact No: +91-8010317088, 9560119799

Congratulations on getting selected as one of the best innovation center for ATAL TINKERING LABS. This letter is regarding establishment of a Robotics Lab in your school by LBD Robotics Pvt Ltd. A tentative cost of all the packages enlisted in the procurement procedure of atal tinkering lab is as follows:

SI No	Package	No of Items in The package	Total Cost
1.	P1- Electronics Development, Robotics, Internet of Things, and Sensors	102	4,00,000
2.	P2- Rapid Prototyping Tools	10	1,00000
3.	P3- Mechanical, Electrical, and Measurement tools	50	1,30000
4.	P4- Construction kit, Power Supply, Consumables, Accessories and Safety equipment	13	20,000
5.	Advanced Prototyping	01	50,000
6.	ATL Laptop and Projector	04	1,50,000
7.	ATL Furniture For 30 Students	01	1,50,000
	Total(Inclusive of all taxes)		10,00000
	In words: Ten Lakhs Rupees Only		

In addition of the above package we would also supply the following services bundled under the above deliverables which are enlisted as follows:

- 1) Once the purchase order is put in place the components will arrive within two weeks of time.
- 2) Installation of all equipment will be done free of cost.
- 3) Training sessions to use the equipment would be provided at no additional charges.
- 4) LBD Robotics would provide two years of comprehensive warranty at no additional cost for all equipment including 3D printers, as well as replacement of equipment during repair.
- 5) LBD Robotics would be providing the training on handling and usage of equipment at no additional cost.
- 6) LBD Robotics would provide three years of comprehensive AMC (Annual Maintenance Contract) at no additional cost
- 7) In addition to the above, LBD Robotics would also provide free training on safety precautions which needs to be taken while carrying out experiments with soldering iron and hot air/glue gun.
- 8) LBD robotics would be developing one static website for displaying the work carried out in the Robotics Lab of the school at no additional cost.
- 9) LBD robotics would help in networking of the schools with industries, academia and research institutions of India to inculcate creativeness among children of the school at no additional cost.

Kumar Mayank
Director - LBD Robotics Pvt Ltd


List of Equipment

Packages 1 : Electronics Development, Robotics, Internet of Things and Sensors

S. No.	Category	Product Image	Name	Specification	Suggested Quantity	Brand	Price
1.	Electronics Development		Arduino Uno	Atmega 328P - 8 bit AVR family microcontroller. Operating Voltage: 5V Digital I/O Pins:14 (of which 6 provide PWM output) PWM Digital I/O Pins : 6 Accessories : Case shell enclosure, compatible USB cable (length - 6 inch or more)	30	Arduino	400
2.	Electronics Development		Arduino Nano	ATmega 328P - 8 bit AVR family microcontroller. Operating Voltage: 5V Digital I/O Pins:14 (of which 6 provide PWM output) Analog Input Pins : 8 Accessories : Compatible USB cable (length - 6 inch or more)	10	Arduino	300
3.	Electronics Development		Arduino Mega	Atmega 2560P - 8 bit AVR family microcontroller. Accessories:Case shell enclosure, Compatible USB cable (length - 6inch or more)	10	Arduino	1350
4.	Electronics Development		Raspberry Pi 3 Model B+	RASPBERRY PI 3 MODEL B+, equivalent or better Accessories - Micro SD card-32 GB, USB 3.0 cable (1 meter), HDMI to VGA - 1 meter, HDIM to VGA adapter, CAse shell enclosure	5	Element 14	4750
5.	Electronics Development		Breadboards & Mini Breadboard	Solderless 400 pin breadboard	30	Embinator	120
				Soloderless 800 pin breadboard	20	Embinator	150
				Self-Adhesive Proto Shield	20	Embinator	100
			General Purpose solderable Board	FR2AGradeMaterial(140x90 mm)	30	Embinator	80
				FR2AGradeMaterial(80x55 mm)	30	Embinator	100
	Berg Strips	Female Berg Strip, 2.54 mm pitch, 40 pin single row.	30	Connflay	25		
		Male Berg Strip, 2.54 mm pitch, 40 pin single row.	30	Connflay	20		
6.	Electronics Development		16x2 LCD display	Dot matrix LCD display. 16 characters X 2 lines. 12 C	10	Embinator	200
7.	Electronics Development		USB Cables	USB Cable Set (A to B, 12 inch or more)	10	Connflay	42
				USB Cable Set (Mini, 12 inches or more)	10	Connflay	42

S. No.	Category	Product Image	Name	Specification	Suggested Quantity	Type	Price
8.	Electronics Development		Battery	9V battery Equivalent or better	10	High Watt	25
9.	Electronics Development		Resistor Kit	One kit contains - 30 carbon film resistors of 20 different resistance values each assorted, packaged together and labelled, 0.125W to 1W.	30	Embinator	140
10.	Electronics Development		Capacitor Kit	One kit contains - 20 electrolytic capacitors of 10 different capacitance values each.	30	Embinator	150
11.	Electronics Development		Linear Voltage Regulator	7805, 7812, 7809	30	ST	45
12.	Electronics Development		Water Pump module	DC12V 3W Submersible Water Pump	4	Embinator	220
13.	Electronics Development		Piezoelectric Plate	Normal Copper based 4 cm Diameter approx.	30	Embinator	30
14.	Electronics Development		8*8 LED Matrix Module	Max7219 Dot LED Matrix Module. MCU Control LED Display Module	10	CJ3D	220
15.	Electronics Development		Bluetooth module	HC 05 Bluetooth module Voltage Rating: 5 V	15	BNS	450
16.	Electronics Development		7 Segment Led Display	LED 4-Digit Display Module Voltage Rating: 2.4V to 5.5V 4-Pin interface: Vcc, Gnd, Data, Clock	20	CJ3D	150
17.	Electronics Development		GSM	Sim900 GPRS Transfer Board Micro Sim GSM Core TTL Port Module for Arduino	4	Simcom	700
18.	Electronics Development		GPS	GY-NEO6MV2 new GPS module	4	Ublox	750
19.	Electronics Development		Laser Diode Emitter	650 nm 5mW Mini Laser Dot Diode Module	10	Embinator	150
20.	Electronics Development		LDR Module	5mm/12mm, Photosensitive LDR Light Sensor Module	30	Embinator	200
21.	Electronics Development		Keypad	Universal 16 Key Switch Keypad	10	Embinator	140
22.	Electronics Development		JoyStick	2-axis joystick with push button function	10	Embinator	120
23.	Electronics Development		Active Buzzer	Small 5 volt	40	Embinator	20
				Big 5 volt	40	Embinator	30
24.	Electronics Development		Motor driver Module	L293D	10	Embinator	235
25.	Electronics Development		Sound Playback Module	ISD1820 voice recording module or equivalent	10	Embinator	250
26.	Electronics Development		DC Plastic Gear motor with wheel	12V, 150RPM, Side Shaft BO (Battery operation) Motor	40	Embinator	250

S. No.	Category	Product Image	Name	Specification	Suggested Quantity	Type	Price
27.	Electronics Development		Node MCU	ESP 8266 I2C, 1 wire, plug and play	6	AI Tinker	600
28.	Electronics Development		WeMos D1 R2	WeMos D1 R2 with WiFi ESP8266 Operating Voltage: 5V	6	Arduino	750
29.	Electronics Development		Vibrating Motor	Weight: 10 Grams Operating Voltage: 1.5 to 3V	20	Embinator	70
30.	Electronics Development		Alligator Connectors	Multi-Colour Alligator Connectors - 12 inch	200	BNS	20
31.	Electronics Development		Battery clips with DC Jack	9-volt battery clips with DC Jack	40	BNS	25
32.	Electronics Development		Hook-up Wires	Red & Black set 100 Meters each	4	BNS	380
33.	Electronics Development		Jumper Cable	Male-Male	1000	BNS	2
				Male-Female	600	BNS	2
				Female-Female	400	BNS	2
34.	Electronics Development		RGB LEDs	Regular 5mm 3-5 volt Range	400	Superlite	5
35.	Electronics Development		LEDs (Red)	Regular 5mm 3-5 volt Range	1000	Superlite	2.5
36.	Electronics Development		LEDs (Green)	Regular 5mm 3-5 volt Range	1000	Superlite	2.5
37.	Electronics Development		LEDs (Blue)	Regular 5mm 3-5 volt Range	1000	Superlite	2.5
38.	Electronics Development		LEDs (Yellow)	Regular 5mm 3-5 volt Range	1000	Superlite	2.5
39.	Electronics Development		LEDs (White)	Regular 5mm 3-5 volt Range	1000	Superlite	2.5
40.	Electronics Development		Timer IC - LM 555	LM 555 Timer IC. Voltage range - 4.5V to 16V	30	ST	22
41.	Electronics Development		Atmega16u2	8 bit microcontroller Individual IC (DIP). Voltage range: 2.7V to 5.5V. Operational Range: -40°C to +80°C	10	Atmel	190
42.	Electronics Development		Diodes and Transistors Kit	Ope Kit Contains - 25 Assorted Basic Diodes of 4 different types each.	3	Embinator	400
43.	Electronics Development		Button Switch Set	One Kit Contains - 100 buttons of different types. Types: Push, toggle, rotary, selector and slide switch.	3	Embinator	700
44.	Electronics Development		Capacitive touch Module	MPR 121 with I2C. Voltage Range: 2.5V to 3.6V DC.	20	Adafruit	235
45.	Electronics Development		Capacitive Touch Switch Module	Digital Capacitive touch switch module -TTP223B Voltage Range: 2V to 5V DC.	10	Embinator	155

S. No.	Category	Product Image	Name	Specification	Suggested Quantity	Type	Price
46.	Internet of Things & Sensors		IR Sensors, Obstacle avoider sensor module	Lm393 Detection distance: 2 - 30 cm Detection angle: 30 - 40°	20	Embinator	116
47.	Internet of Things & Sensors		Triple Axis Magnetometer	3-Axis Magneto resistive Sensors I2C Digital Interface Integrated 12-bit ADC Range of -8 to +8 Gauss	10	Embinator	250
48.	Internet of Things & Sensors		Humidity Sensor	Operating range: 20 - 95 % RH Temperature: 0 - 60 Celsius Power supply:1.5V AC (Max sine)	10	Embinator	110
49.	Internet of Things & Sensors		MQ Series	MQ - 2 Smoke Detection	3	Embinator	181
				MQ-3 Alcohol - Ethanol Sensor	3	Embinator	180
				MQ-4 Methane Natural Gas Sensor	3	Embinator	180
				MQ-5 Methane Liquefied Gas Sensor	3	Embinator	180
				MQ-6 Liquefied Petroleum Gas Sensor	3	Embinator	180
				MQ-7 High Sensitivity CO Carbon Monoxide Sensor Detector	3	Embinator	180
				MQ-8 Hydrogen Gas Sensor	3	Embinator	180
				MQ-135 Air Quality Sensor	3	Embinator	180
				50.	Internet of Things & Sensors		IR transmitter / receiver
Switching rate: 38 KHz							
Voltage Rating: 5V							
51.	Internet of Things & Sensors		Ultrasonic Sensor Module HC-SR-04 or compatible	Working Voltage - DC 5V Working current - 15 mA Range - 1 cm to 4 m Effectual Angle - <15° Measuring Angle - 30°	40	Embinator	180
52.	Internet of Things & Sensors		Triple Axis accelerometer-	3-axis sensing Small, low profile package 4 mm x 4 mm x 1.45 mm LFCSP Single-supply operation:1.8V to 3.6 V	10	Embinator	200
53.	Internet of Things & Sensors		PIR Motion Detector Module	High digital pulse when motion detected Low digital pulse when idle /no motion detected Sensitivity range (up to 6 m) Power supply: 5V - 12 V	20	Embinator	170
54.	Internet of Things & Sensors		Pulse Rate Heart Sensor	Pulse Rate Sensor Finger Based (finger or earlobe) Working voltage 3 -5V	4	Embinator	250
55.	Internet of Things & Sensors		Relay Module	5V 10A - 2 Channel Relay Module. Compatible with Arduino.	20	Embinator	185

S. No.	Category	Product Image	Name	Specification	Suggested Quantity	Type	Price
56.	Internet of Things & Sensors		Relay Module	5V 10A - 2 Channel Relay Module. Compatible with Arduino.	20	Embinator	145
57.	Internet of Things & Sensors		Big Sound microphone module	Large Electret capsule sound module	10	Embinator	300
58.	Internet of Things & Sensors		Soil Moisture Sensor module	FC-28 with LM293 comparator Operating Voltage: 3.3V to 5V.	6	Embinator	110
59.	Internet of Things & Sensors		Touch Sensor	Capacitive Touch Sensor Module. TTP22X series. Voltage Range: 2.4V to 5.5V	6	Embinator	125
60.	Internet of Things & Sensors		Metal Touch Sensor Module	KY-036 or equivalent metal touch sensor module	6	Embinator	180
61.	Internet of Things & Sensors		Rain Drop Sensor	Rain Sensitive, Rain Drop Detection Sensor Module. Voltage Range: 3.3V to 5.5V.	6	Embinator	140
62.	Internet of Things & Sensors		Flex Sensor	Flex Sensor. Size - 2.2 Inches	6	Embinator	400
63.	Internet of Things & Sensors		Temperature Sensor	LM35 Full range temperature sensor. Voltage Range: 4V to 30V. Error: $\pm 0.5^{\circ}\text{C}$	6	Embinator	110
64.	Internet of Things & Sensors		Temperature and humidity sensor module	DHT 11 Voltage Range: 3V to 5V	40	Embinator	90
65.	Internet of Things & Sensors		Force Pressure Sensor	Force sensitive resistor with a square, 1.75x1.5" sensing area	4	Embinator	600
66.	Internet of Things & Sensors		Colour Recognition Sensor	TCS3200 Colour Recognition Sensor	4	Embinator	350
67.	Internet of Things & Sensors		Water Flow Sensor	Arduino Compatible Water flow sensor. 5V DC Inpur.	4	Embinator	200
68.	Internet of Things & Sensors		Sound Sensor	Sound Sensor Module, Microphones module	10	Embinator	150
69.	Internet of Things & Sensors		IR Sensors Array module for Line Following	8 IR Sensors Array module for Line Following Operating Voltage: 5V	10	Embinator	200
70.	Internet of Things & Sensors		Power Bank	10000 mAh 5-volt Power Bank	5	Intex	1500
71.	Internet of Things & Sensors		RFID Reader - Tags	Current :13-26mA / DC 3.3V Idle Current :10-13mA Operating Frequency. 13.56MHz<30mA Read range between 20 cm to1 m	10	Embinator	220

S. No.	Category	Product Image	Name	Specification	Suggested Quantity	Type	Price
72.	Internet of Things & Sensors		RFIModules Tx & Rx 315 MHz ASK	Frequency Range: 433.92/315 MHz Supply Voltage: 3 - 6 V Output: 4 - 16 Dbm	10	Embinator	150
73.	Robotics		Stepper motor with Driver board	28BYJ-48 ULN2003 5V Stepper Motor + ULN2003 Driver Board	10	BNS	250
74.	Robotics		DC motor	12V DC Gear 150 RPM	20	Classic	130
75.	Robotics		Servo motors	Position Servo Angle based Metal Gear	10	Tower Pro	450
				Small Servo Metal Gear	10	Tower Pro	300
				Continuous Metal Gear Servo 360	10	Tower Pro	350
				Small Servo Plastic Gear	40	Tower Pro	150
76.	Robotics		150 RPM BO Motor	150 RPM BO Motor	10	BNS	100
77.	Robotics		L298N Motor Driver	L298P Motor Driver Shield or relative Driver Shield	10	Adafruit	300
78.	Robotics		Servo Motor Tester	CCPM 3 channel Servo Tester	4	Tower Pro	250
79.	DIY Kit		Robotics DIY Kit	Robotics DIY kit with programmable intelligent brain/brick.	3	Cretile	6500
80.	DIY Kit		Mechanical (Modular) Construction kit	Metal/plastic mechanical construction kit compatible with electronic equipment.	5	Techno	3000
81.	STEM Learning/Application Kit		Drone Kit	Educational Purpose	1	Drona Aviation	7000
			Aerospace Kit		1	Avitron	5000
			Automobile Kit		1	LBD	5000
			Bio-Medical Kit		1	Jal Tara	6000
			Agri-Tech Kit		1	Jal Tara	6000
			Water/ Sanitation Kit		1	Jal Tara	6000
			Bio Tech Kit		1	Jal Tara	6000
			Other Potential STEM Application Kit		1	LBD	6000

List of Equipment

Package 2: Rapid Prototyping Tools							
S. No.	Category	Product Image	Name	Specification	Suggested Quantity	Brand	Price
1.	Rapid Prototyping Tools		3D Printer Kit and tools	<p>Printer Type: FDM (Fused Deposition Modelling), Minimum Dimensions: 160mm *160mm *160mm Build Size or 4 litre Build Volume., Nozzle: 0.3mm to 0.4mm nozzle diameter, slicing software should be free or Open source, LCD Screen UI that display print metrics, Good Heated Print bed. Material Compatibility - PLA, ABS, and derivatives of PLA, Ninjaflex Quality Anti-bacterial/fungal Cover. Repair Kit - with spare springs, screws, keys, tweezers, etc.</p>	1	Ender 3 Pro	66500
2.	Rapid Prototyping Tools		Dedicated UPS/Power back up	Dedicated UPS/Power Back up with 2-hour battery backup.	1	Intex	7000
3.	Rapid Prototyping Tools		Filament for 3D printer	Compatible 1000 Grams Filament in 5 different colours	5	WOL 3D	1600
4.	Rapid Prototyping Tools		Filament Storage Box	Compatible Filament storage box	5	Nayasa	400
5.	Rapid Prototyping Tools	 <p>Set of Arts & Crafts Accessories - e.g.- stationary items and basic prototyping material</p>	Cardboard	5	LBD	5	
			Foam core boards	5		30	
			20m spool of thick strings various colour	5		5	
			Rubber band	100		2	
			Popsicle sticks	100		13	
			Wood glue - 500 ml	2		140	

List of Equipment


Package 3: Mechanical, Electrical and Measurement tools							
S. No.	Category	Product Image	Name	Description	Suggested Quantity	Brand	Price
1.	Mechanical Tools		Hacksaw Frame	Size: 12 inches	1	Stanley	350
2.	Mechanical Tools		Hacksaw blades	Size: 12 inches	10	Stanley	25
3.	Mechanical Tools		Mini Hacksaw Frame	Size: 6 inches	1	Stanley	80
4.	Mechanical Tools		Mini Hacksaw blades	Size: 6 inches	10	Stanley	20
5.	Mechanical Tools		Pliers: 4.5-inch size	External Straight	1	Satanley/ Taparia	170
				Nose Circlip Plier	1		180
				Long Nose Plier	1		190
				Combination Mini Plier	1		140
				Wire stripping pliers	1		170
				Bent nose plier	1		170
				Needle nose pliers	1		150
6.	Mechanical Tools		Tweezer Set	6 Pc Non-Magnetic Tweezer Set Size - 6 inches	2	Satanley	750
7.	Mechanical Tools		Ball Pein Hammer	Ball Pein Hammer Weight - 0.75kg	1	Satanley/ Taparia	450
8.	Mechanical Tools		Steel Shaft Claw Hammer	Claw Hammer Steel Shaft Weight - 0.75kg	1	Satanley/ Taparia	400
9.	Mechanical Tools		C-Clamp	Metal Clamp: 3-inch size	4	Satanley/ Taparia	650
10.	Mechanical Tools		Allen Key Set	10 Piece Ring Imperial Allen Hex key	1	Taparia	450
11.	Mechanical Tools		Drill Machine Set	Drill Machine with accessories Hammer/Screw and clockwise/anticlockwise modes. Power: 500W Chuck capacity - 1 to 10mm Drill Bits - Masonry, Metal, Wood	1	Bosch	3750
12.	Mechanical Tools		Drilling Workstation	Drill Press, Drill Holder and Rotary Tools, Compatible with Drilling machine provided	1	Yiking	2750
13.	Mechanical Tools		Spanner Set	12-piece combination Spanner Set Range - 4 mm to 30 mm	1	Satanley/ Taparia	600
14.	Mechanical Tools		Vice Normal	Table top vice	1	Gizmo	750

S. No.	Category	Product Image	Name	Description	Suggested Quantity	Brand	Price
15.	Mechanical Tools		Wrench	Adjustable Universal Wrench	2	Satanley/ Taparia	450
16.	Mechanical Tools		Wire Strippers	Wire Stripper Cutter Plier With Spring -26x6x20 cm	5	Satanley/ Taparia	143
17.	Mechanical Tools		Screwdriver	40 pc Multi-purpose screwdriver set	3	Taparia	450
18.	Mechanical Tools		Cordless Rotary Multitool Set	Cordless Rotary multitool with all cutting, grinding, polishing, engraving and drill bits. Speed: Adjustable up to 30000 RPM Voltage/current range : 8-10V, 0-2 A	1	Equipment	3200
19.	Mechanical Tools		Air Blower	500 W or more. Variable speed blower	1	Satanley	1950
20.	Mechanical Tools		Drill Bit Set	High Quality 13 Pcs HSS Drill Bits Set for Wood, Iron, Aluminium, Plastic etc.	1	JS	350
21.	Mechanical Tools		File Set	6 pc file set Working length - 6 inch	1	Bhandari	350
			Mini File Set	6 pc mini file set Working length - 3 inch	1	Bhandari	290
22.	Mechanical Tools		Flexible Cutting Mat	A3 Size with Marked Pattern and Grids (18" X 12")	1	Mornsun	650
23.	Mechanical Tools		Plastic Storage Drawer/Organiser	Number of Drawers: 60 or equivalent Drawer Size (l*w*d) (inch) : 2*2*5	2	Alkon	2150
24.	Mechanical Tools		Pegboard	Peg board System to mount tools on wall with attachments.Size : 3ft*2ft	2	Alkon	1800
25.	Electric Tools		Hot glue gun	Works with standard 0.5-inch glue sticks. Temperature - 230 to 280°C	4	Satanley	600
26.	Electric Tools		Digital Oscilloscope	Minimum Bandwidth: 50 Mhz. Minimum number of channels: 2. Sample Rate: 1Gsa/s With inbuilt waveform function generator.	1	Scriptroincs	9000
27.	Electric Tools		Adapters	DC power Adapter with 5V, 2A	10	ERD	190
28.	Electric Tools		Adapters	DC power Adapter with 12V, 2A	10	ERD	190
29.	Electric Tools		Electric Screw Driver Set	Multipurpose Electric screwdriver set. Accessories - Compatible bits Mode - Wireless Battery - Li-ion 3.6V or equivalent with charging dock	1	Black & Decker	3000
30.	Electric Tools		Dual Temperature Heat Gun	1800 W Dual Temperature Heat Gun	1	Black & Decker	2750

S. No.	Category	Product Image	Name	Description	Suggested Quantity	Brand	Price
31.	Electric Tools		Soldering Kit	Variable Wattage of Soldering Iron: 15-30 watts/230 volts De-Soldering Pump, Soldering Flux (Paste) 100 grams, DE-soldering Wick 1.5m* 2mm Soldering Wire: 20/22 AWG soldering Wire with rosin core flux (100 Grams)	4	Siron/ Soldron	3500
32.	Electric Tools		Soldering Helping hand	Specifications: Adjustable corcodile holding clamps/clip. Soldering iron holder. LED light. Magnifying lens.	4	TE-801	1800
33.	Measurement Tools		Return measuring tape	Return measuring tape 5Mx19MM	2	Stanley	400
34.	Measurement Tools		Stainless Steel Rule	Stainless Steel 12" / 150 mm Rule	5	Omega	38
35.	Measurement Tools		Digital Vernier Calliper	150 mm / 6" Digital Vernier Calliper	2	Thermocare	1600
36.	Measurement Tools		Spirit Level	12" Spirit Level	1	Satanley/ Taparia	550
37.	Measurement Tools		Digital Pen electric Tester	Voltage tester	1	Satanley/ Taparia	250
38.	Mechanical Tools		Screw Driver	6 Pieces Precision Screw Driver Set	1	Satanley/ Taparia	250
39.	Measurement Tools		Digital Multi Meter	Digital Multi Meter Voltage Current voltage 200mV to 1kV AC voltage 200 V - 750 V DC current 200 μ A - 10 A Resistance 200 -2 M Ohm and Transistor & diode test.	5	Mastech	750
40.	Biology Kit		DIY Paper Microscope	DIY Paper microscope. Magnification range - 100x to 2000x	5	Foldscope	850
41.	Astronomy Equipment		Telescope	All glass optical components Altazimuth mount suitable for terrestrial and astronomical use minimum 700 mm focal length	1	Celestron	11000
42.	Textile Equipment		Sewing Kit	Semi-Automatic Sewing machine Straight stitch Consumables - 2 set of assorted needles and 10-colour spool set.	1	Usha/ Brother	12000

List of Equipment

Package 4: Power Supply & Accessories and Safety Equipment

S. No.	Category	Product Image	Name	Description	Suggested Quantity	Brand	Price
1.	Power Supply & accessories		Glue Sticks	11mm x 200mm Hot Melt Glue Stick	100	Classic	20
2.	Power Supply & accessories		Nuts and Bolts and screw	Specs - M4X12MM M4X20MM M5X16MM M5X25MM M6X20MM	40	Generic	5
3.	Power Supply & accessories		Cable Tie	Small Cable Tie Pack - Pack of 100	30	Classic	130
				Medium Cable Tie Pack - Pack of 100			
				Big Cable Tie Pack - Pack of 100			
4.	Power Supply & accessories		Sand Paper	Grit Values - 80, 100, 120, 200, 300. 5 Nos of each	10	Generic	20
5.	Power Supply & accessories		Power Strip Adaptors	Standard Quality Extension with 5Amp safety fuse. 5 or more sockets in each extension. 5-meter length of each extension.	5	Anchor	270
6.	Power Supply & accessories		Bulb Holders	Regular Hanging Bulb holder	10	Anchor	20
7.	Power Supply & accessories		Electric Wires	Twisted Red black pair	20 meters	Anchor	20
8.	Power Supply & accessories		USB TO DC jack cable	USB to DC jack cable for Battery bank	10	Xcluma	30
9.	Safety equipment		First-Aid Kit	Standard Medical First Aid kit in portable container.	2	Milton	399
10.	Safety equipment		Fire extinguisher (handy units)	Powder Type Fire Extinguisher 2KG	2	ECO Fire	1750
11.	Safety equipment		Safety goggles (with/ without LED torch)	Polycarbonate Safety goggles Clear lens with no tint	30	3M	100
12.	Safety equipment		Safety Gloves Pairs	Latex Coating Gloves (Medium Size)	10	Frontier	90
13.	Safety equipment		Safety Mask	Filtering efficiency ranging 80 percent when tested against 0.3-micron sodium chloride particle	20	3M	10

STEAM Learning Kits



AEROSPACE KIT

WIFI CONTROLLED INDOOR DRONE



OTHER POTENTIAL KIT

WATER SANITATION



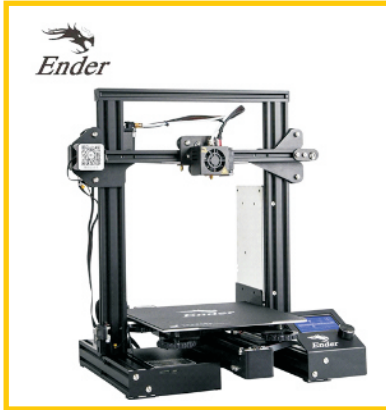
AGRITECH KIT



BIO MEDICAL KIT



3D Printer



Creality3D Ender 3 Pro

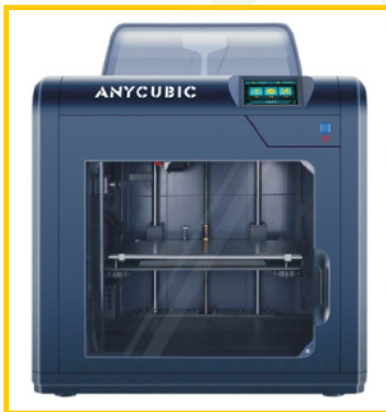
Technical Specifications

- Printing Technology: FDM (Fused Deposition Modeling)
- Build Volume: 140mm(L)×140(W) ×140mm(H)
- Extruder Quantity: sin
- Nozzle Diameter: ϕ 1.75/0.4mm
- Supported Materials: ABS, TPU, PLA, HIPS, etc.
- Software Input Formats: .STL, .OBJ, JPG, PNG
- Display: 3.2inch LCD display
- Connectivity: SD Card; USB Cable

Flashforge Finder 3D Printer

Technical Specifications

- Printing Technology: FDM (Fused Deposition Modeling)
- Build Volume: 140mm(L)×140(W) ×140mm(H)
- Extruder Quantity: sin
- Nozzle Diameter: ϕ 1.75/0.4mm
- Supported Materials: ABS, TPU, PLA, HIPS, etc.
- Software Input Formats: .STL, .OBJ, JPG, PNG
- Display: 3.2inch Touch Screen
- Connectivity: SD Card; USB Cable



ANYCUBIC 4MAX PRO2.0 (3D Printer)

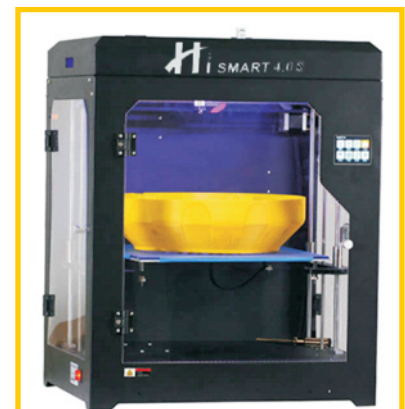
Technical Specifications

- Printing Technology: FDM (Fused Deposition Modeling)
- Build Volume: 270mm(L)×210(W) ×190mm(H)
- Extruder Quantity: Single
- Nozzle Diameter: ϕ 1.75/0.4mm
- Supported Materials: ABS, TPU, PLA, HIPS, etc.
- Software Input Formats: .STL, .OBJ, JPG, PNG
- Display: 3.5inch Touch Screen
- Connectivity: SD Card; USB Cable

Hi Smart Dual Extruder

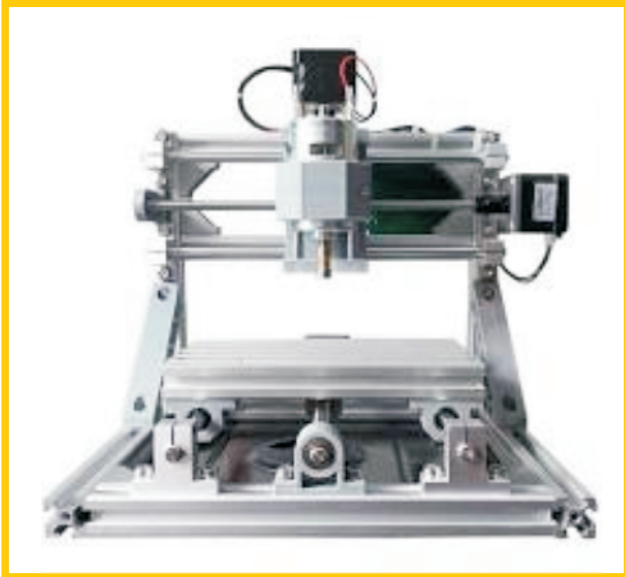
Technical Specifications

- Printing Technology: FDM (Fused Deposition Modeling)
- Build Volume: 250mm(L)×300(W) ×400mm(H)
- Extruder Quantity: Dual
- Nozzle Diameter: ϕ 1.75/0.4mm
- Supported Materials: ABS, TPU, PLA, HIPS, etc.
- Software Input Formats: .STL, .OBJ, JPG, PNG
- Display: 3.2inch Touch Screen
- Connectivity: SD Card; USB Cable



Advanced Prototyping Tools & Material

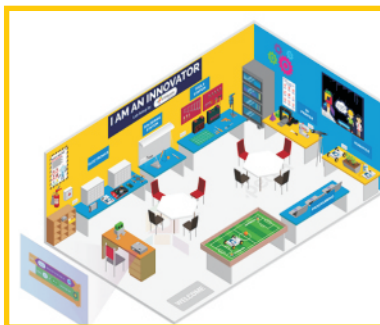
MINI CNC Engraving Machine with Laser



The mini CNC engraving machine with laser engraving is suitable for non-metal processing. It can be used for both milling and laser engraving applications. The machine has a body made of aluminum and plastic, is small in size, light in weight, and easy to learn. It can use a carving knife, but also can use laser engraving. The machine provides a USB interface and GRBL Control.

Technical specifications and Features:
Profile Dimensions: 260x240x220mm
Step stepping motor: NEMA17 4.2kgcm
Voltage: 12V
Phase current: 1.3A
Application: Milling & Laser engraving
Support G code file : txt, tap, nc, ncc, cnc

Our Services for ATL Schools includes



Lab Design / Branding



PFMS



Lab Survey & Planning



Tinkerfest / Competition



GEM



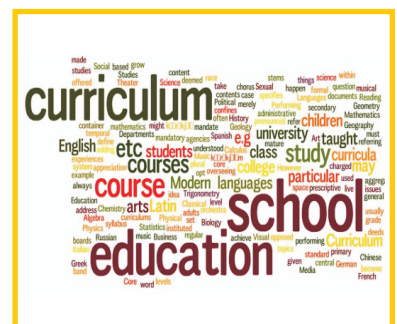
Training Program



Online LMS for ATL



ATAL Dashboard



ATAL Curriculum

How LBD Robotics helps your school set-up the ATL Tinkering Lab

- Designing the Atal Tinkering Lab space
- Identifying the right human resource
- Integrating Atal Tinkering Lab with the school curriculum via four levels of tinkering
- Engaging the nearby community and non- Atal Tinkering Lab schools

How LBD Robotics helps your school managing the ATL Tinkering Lab

Inventory Management

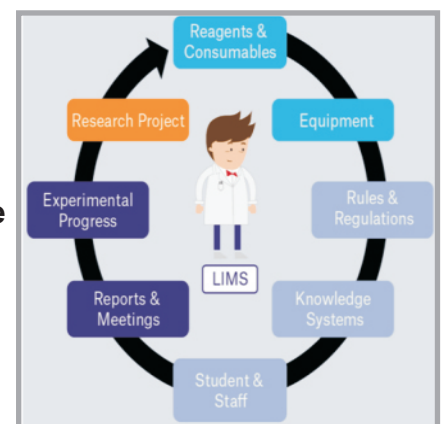
- Maintaining an inventory document
- Maintaining records of all supplies and consumption of equipment
- Determining frequency of ordering stocks
- Maintaining a record of bills/ expenses
- Maintaining the safety and security of the lab

Inventory Management Form				
	Lister			
	Warehouse			
Category	Model/Specification	Outbound	Storage	B
xxx	xxx	100	200	

How LBD Robotics helps your school managing the ATL Tinkering Lab

Information Management

- Information sharing with internal purposes/ audience
- Information sharing with external purposes/ audience



Proposed Schedule for managing the ATL Tinkering Lab

Day/Period	1	2	Recess	3	4	5
Mon	Class 6 th				Class 12 th	
Tue	Teacher Sessions				Class 9 th	
Wed	Class 8 th			Community Sessions		
Thu					Class 10 th	
Fri	Class 7 th				Class 11 th	

- Zero Periods
- Activity periods or two adjacent periods
- Post school hours and weekends

Training Program from LBD Robotics (Included with the Package Delivery)

Per Tinker (Phase 1) : Introduction to Tinkering, per-ideation and idea generation. This will include one teacher session and one student session which would be covered in a single day.

Creation of Tinker Club (Phase 2) : introduction to design thinking, digital literacy, computational thinking with Do-It-Yourself activities make students Tinkers. This would include one teacher session and 4 student sessions.

Tinker Lab (Phase 3) : Introduction to physical computing and building real time projects, make students Makers. This would include one teacher session and 4 student sessions.

Post Tinker Lab (Phase 4) : Encourage motivated students continue to solve real world problems, ATL Incharge and mentors guide, make them Innovators. This would include one teacher session and 4 student sessions.

Additional Training Program based on United Nation's 17 Sustainable Developmental Goals

(Main Indicators of SMART CITIES)

(Not Included with the Package Delivery)



Theme Based Training Program from LBD Robotics

(Not Included with the Package Delivery)

**Water Resource
(National Water
Mission)**

**Waste
Management
(Swachh Bharat)**

**Clean Energy
(Power for All)**

Smart Mobility

**Health (Swasth
Bharat)**

Agri-Tech

Training Sessions in Schools



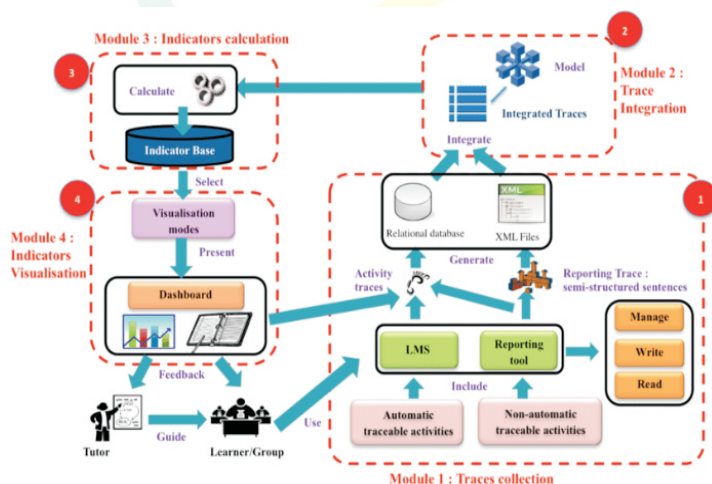
Sample Projects Built in Schools



Actual Image of Lab setup in school



Artificial Intelligence Based learning Management System



*(Not Included with the Package Delivery)



LBD Robotic Pvt. Ltd.

G-268, Ground Floor

Sector - 63 Noida

Uttar Pradesh - 201305

Mob.: +91-8010317088, 9560119799

