

Item	Robot Assembly	Source	Qty	Notes
Dynamixel Servos				Non-"A" (aluminum) servos are cheaper, but don't handle heat as well. Might be OK.
MX-28AT	Head	Robitis	5	Option: Replace 2 antenna servos with hobby servos or non-"A"
MX-28 Servo brackets	Head, Legs	Robitis	4	
MX-64AT	Legs	Robitis	6	Bluk-pack price for 6, plus servo horns
MX-64 Servo brackets	Head, Legs	Robitis	6	
MX-106	Legs	Robitis	2	Option to use MX64's instead. Needs 3D part change (upper leg) Servo Total cost approx: \$5,000
Computer:				
Intel NUC Gen8: NUC8i7BEH or NUC8i7BEK		Amazon	1	
SAMSUNG 990 EVO Plus SSD 1TB		Amazon	1	
Crucial DDR4 RAM, 16GB		Amazon		
				Computer Total cost approx: \$450
Head:				
Arducam 8MP USB Camera with 115°(H) M12 Wide Angle Lens	Head	Amazon	2	Narrower angle is OK. Different cameras will require eye CAD changes to fit.
Cyber Acoustics USB Microphone - Directional USB Mic	Head	Amazon	1	
Anker 4-Port USB 3.0 Unibody Aluminum Portable Data Hub	Head	Amazon	1	Remove from metal case and glue into head
Bingfu Dual Band WiFi 2.4GHz 5GHz 5.8GHz 3dBi MIMO RP-SMA Male Antenna (4-Pack)	Head	Amazon	1	
Adafruit Feather M4 Express	Body, Head	Adafruit	2	
NeoPixel FeatherWing - 4x8 RGB LED Matrix [ID:2945]		Adafruit	2	
NeoPixel Ring - 16 x 5050 RGB LED with Integrated Drivers[ID:1463]		Adafruit	4	Eyes and ears
Power:				
Spektrum 14.8V 5000mAh 4S 30C Smart LiPo Battery	Body	Amazon	1	Option: Buy 2, to have one to swap out.
Spektrum Connector: IC3 Device and IC3 Battery Set, SPMXCA301	Body	Amazon	1	For external power adapter to robot connection
APIELE 10 Amp 16mm Latching Push Button Switch	Body	Amazon	2	
Specialized ECU Repair Car Fuse Holder Connector - Mini ATM, 32V, 20 Amp	Body	Amazon	1	
ACEIRMC 20A 300W CC CV Step Down Module Adjustable DC 6-40V to 1.2-36V	Body	Amazon		
Spektrum Connector: IC5 Device and IC5 Battery Set, SPMXCA502 Medium	Body	Amazon	1	For Battery to robot connection.
SoloGood RC BEC UBEC 5V 3A Step Down UBEC Module	Body, Head, Legs	Amazon	4	
Body:				
Intel RealSense Depth Camera D435		Amazon	1	Option: use other sensors for object avoidance (ultrasonic, Sharp IR sensors)
SparkFun VR IMU Breakout - BNO086	Body	Sparkfun	1	
Stereo 20W Class D Audio Amplifier - MAX9744[ID:1752]	Body	Amazon	1	NOTE: Best option for audio. Required getting good speakers
Good Speakers for audio	Body		2	Price depends on speakers. (I took apart an old UE Boom)
NeoPixel Stick - 8 x 5050 RGB LED	Body	Adafruit	1	
Maxbotix Ultrasonic Rangefinder - LV-EZ0 [ID:979]	Body	Adafruit	1	
Hardware / Misc				
Kadrick 1290 Pcs M3 Metric Screw Assortment	All	Amazon	1	
ShineNow M2 M2.5 M3 Heat Set Inserts Threaded Brass 170pcs	Body, Legs	Amazon	2	
HARFINGTON PA Nylon Solid Plastic Balls 2"	Feet	Amazon	2	
20Pcs Mini Ball Transfer Bearing, 1/3 Inch Table Conveyor Roller Ball	Feet	Amazon	1	
Small Round N35 Rare Earth Magnets	Body	Amazon	1	
Chanzon 30 Values 300pc 1W Zener Diode Assorted Kit (3V 3.3V...)	Body	Amazon	1	For battery voltage sensing. Install on Body Arduino
Computer Cables, etc.			1	
NewerTech HDMI Headless Video Accelerator (HDMI Dummy Plug)		Amazon	1	

BESIGN Ground Loop Noise Isolator		Amazon	1
DFSucces USB Hub,3 Port High USB 3.0 Speed		Amazon	1
StarTech.com 1 ft. (0.3 m) Right Angle 3.5 mm Audio Cable		Amazon	1
Poyiccot USB C Right Angle Adapter, USB C 90 Degree Adapter 10Gbps, USB 3.1		Amazon	1
Jadebones 90 Degree USB 3.0 Adapter (4 Pack)		Amazon	1
Oxsubor USB 3.0 Male to Female Extension Data Cable Left and Right Angle (20CM,8IN)		Amazon	1
Other:		Amazon	1
Polymaker PLA PRO Filament		Amazon	4

**Total Required:**

Optional:

Spektrum S1100 G2 1x100W AC Smart Charger, SPMXC2080	Battery Charger	Amazon	1
Spektrum 6" Extension: IC5 Battery/IC5 Device, SPMXCA514	Battery Charger	Amazon	1
Readytosky JST-XH 4S LiPo Battery Balance Charging Extension Wire Cable	Battery Charger	Amazon	1
TOURIT Cooler Bag 48/60 Cans Insulated Soft Cooler		Amazon	1 Carry bag for robot
Controller Options:		Amazon	
Logitech G F710 Wireless Gamepad		Amazon	1
Cheap Used Android Phone		Ebay	1
Cyber Acoustics USB Speaker Bar (CA-2890) (instead of audio amp)	Body	Amazon	1 Option: Alternative for audio, but not very loud.
uxcell 1/4" Quick Change Shank 2mm Magnetic Hex Screwdriver Bits		Amazon	1

Total Optional:

**Total for all required plus optional**