

## Component List for ENGMT280/ENGEE281

### Off the shelf parts:

Item No	Item	Link	Max Qty/team
1	VReg	<a href="https://www.pololu.com/product/4082">https://www.pololu.com/product/4082</a>	3
2	Dual Motor controller	<a href="https://www.pololu.com/product/2135">https://www.pololu.com/product/2135</a>	1
3	Range Sensor	<a href="https://www.pololu.com/product/4079">https://www.pololu.com/product/4079</a>	5
4a	Gear motor St	<a href="https://www.aliexpress.com/item/1005009266880645.html">https://www.aliexpress.com/item/1005009266880645.html</a>	2
4b	Gear motor RA	<a href="https://www.aliexpress.com/item/1005004226888906.html">https://www.aliexpress.com/item/1005004226888906.html</a>	2
5	MicroServo	<a href="https://epartners.co.nz/products/servo-motor-sg90">https://epartners.co.nz/products/servo-motor-sg90</a>	2
6	ESP32 cam	<a href="https://www.aliexpress.com/item/1005007003821969.html">https://www.aliexpress.com/item/1005007003821969.html</a>	1
7	ESP32	<a href="https://nz.mouser.com/ProductDetail/Esspressif-Systems/ESP32-DevKitC-32E?qs=GedFDfLaBXFpgD0kAZWDrQ%3D%3D">https://nz.mouser.com/ProductDetail/Esspressif-Systems/ESP32-DevKitC-32E?qs=GedFDfLaBXFpgD0kAZWDrQ%3D%3D</a>	1
8	Lego Stuff	3673 - connector peg	
		64179 - beam frame 5x7	2
		62821 - differentiale 3m z28	1
		6589 - conical wheel z12	3
		24316 - cross axle 3module w/endstop	4
		10928 - gear wheel t8 m1	4
		87083 - cross axle 4m w/endstop	5
		42136 - 1/2 bush	8
		42798 - bush for cross axle	4
		18575 - double conical wheel z20 1m	1
		58090 - tire street 30.4x14	4
		55982 - rim wide 18x14 w.cross 4.8	4
		39888 - 3m connector peg	4
9	Li ions	<a href="https://cell-supply.co.nz/product/lg-mh1-18650-3200mah-10a-battery/">https://cell-supply.co.nz/product/lg-mh1-18650-3200mah-10a-battery/</a>	2
10	18650 batt holder	<a href="https://www.digikey.co.nz/en/products/detail/seeed-technology-co-ltd/114090053/10451921">https://www.digikey.co.nz/en/products/detail/seeed-technology-co-ltd/114090053/10451921</a>	1

## **In house manufacturing**

### Laser cuttable materials:

MDF	3mm, 4.75 mm, 6mm
Acrylic/PMMA	3mm, 4.5mm, 6mm
Acetal	4.5mm 6mm

### 3D printing materials:

PLA, TPU

### Assorted fasteners:

M2 to M6 nuts and bolts

M2.5 standoffs