

AutonomousPrime

Order Proposal

Team Dec1721

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Parts List

Vehicle

Minimum Requirements

- Large enough to hold onboard computer and camera(What does this mean in inches?)
- Good mounting point for hardware(Computers, bumpers, camera)
- Can buy replacement parts

Scale	Model	Cost	Condensed Link	Additional Requirements
1/16	Turnigy 1/16 4 x 4 Mini Trooper SCT (RTR)	\$102.78	https://goo.gl/fnpc2s	Battery (Ref #1) 4 x AAA batteries

Battery

Requirements

- Can power the vehicle
- Can fit in desired chassis
- Semi Long battery life(high mah) or multiple batteries

Ref. #	Model	Cost	Condensed Link	Additional Requirements
1	Turnigy nano-tech 2200mah 3S 45~90C Lipo Pack	\$20.98	https://goo.gl/tBvBx	None

Onboard Computer

Minimum Requirements

- 3 USB ports

- Run the Neural Network in real time
- Not too big
- 5v power
- More than 16 GB of Memory

Model	Cost	Condensed link	Additional Requirements
NVIDIA Jetson TX1	\$579.00	https://goo.gl/zRoX72	More than 16 GB of onboard storage

BEC

Function

- Regulate voltage input for Nvidia Jetson TX1

Model	Cost	Condensed link	Additional Requirements
Micro BEC 3A/5v	\$4.16	https://goo.gl/w8Hgfd	

Wireless

Minimum Requirements

- Usb interface

Model	Cost	Condensed link	Additional Requirements
TP-Link N150 Wireless Nano USB	\$9.61	https://goo.gl/2GmmKS	

Radio System

Requirements

- 4 channels(Steering, Throttle, Kill Switch, Aux Switch)

Model	Cost	Condensed link	Additional Requirements
Turnigy Evolution Digital AFHDS 2A Radio Control	\$67.20	https://goo.gl/gSxQ4t	4xAA's

Camera

Minimum Requirements

- Fast exposure
- UVC compatible
- Software Configurable: Exposure, Brightness, white balance, autofocus, contrast
- Global shutter

Model	Cost	Condensed link	Additional Requirements
Odroid -1MGN-U	\$126	https://goo.gl/zq7dLx	

Miscellaneous Parts

Model	Cost	Condensed Link	Additional Requirements
HDMI	\$6.99	https://goo.gl/Lv5hGZ	None
Odroid eMMC 32 GB	\$41.50 + 1.50	https://goo.gl/beRJe9	eMMc sd reader

Proposal Summary

Quantity	Category	Model	Cost	Additional or notes
1	Vehicle	Turnigy 1/16 4 x 4 Mini Trooper SCT (RTR)	\$102.78	Battery (Ref #1) 4 x AAA batteries
3	Battery	Turnigy nano-tech 2200mah 3S 45~90C Lipo Pack	\$20.98	1 to power truck 1 to power TX1 1 as spare or increased runtime
1	Radio	Turnigy Evolution Digital AFHDS 2A Radio Control	\$67.20	4xAA's or 2S LiPoly/LiFe Battery Pack for transmitter
1	BEC	Micro BEC 3A/5v	\$4.16	
1	Camera	Odroid -1MGN-U	\$126	
1	Wireless	TP-Link N150 Wireless Nano USB	\$9.61	
1	Misc	HDMI	\$6.99	None
1	Misc	eMMC + sd reader	\$43.00	32 GB + sd reader
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:		Grand Total (max quantity and before shipping)	\$380.72	