



Steve Sanghi
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DORIS 33% Hardware Status Update

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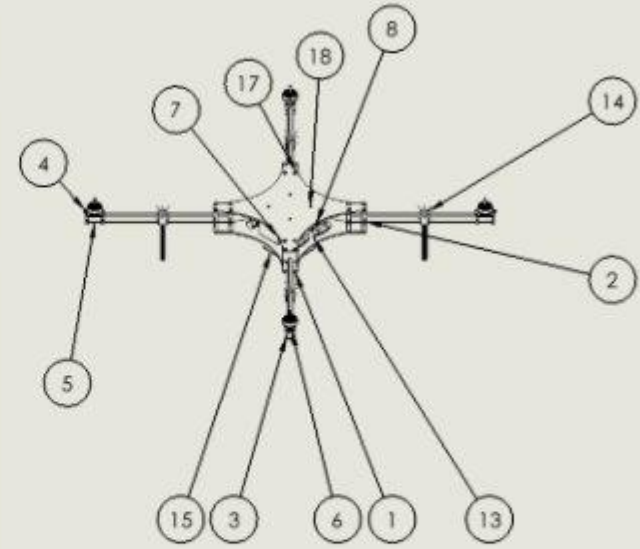
Project Overview

- Client: The Boeing Company
- Project: To develop and test a max payload drone using commercially bought flight components.
- Must lift 30% of drone weight and complete the Boeing Reconnaissance Mission test; including a camera payload and cruise missile payload.-

Design Efforts

- CAD Drawing Update With Legs
- Updated Design With 2 Batteries
- Updated Power Distribution System

2		1	
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	Drone_Base_V3		2
2	ArmMount_Design2		16
3	motormount_v3_bottom		16
4	MOtormount_plate		4
5	Drone_Arms		4
B6	XING 4214 2-8S X CLASS FPV Motor.stp		4
7	6S 9000mAh - 25C - Battery^TATTU 22000 mAh TAA22K6S30ASX		1
8	JST - XH MALE 6SATATTU 22000 mAh TAA22K6S30ASX		1
9	Balancing Cable^TATTU 22000 mAh TAA22K6S30ASX		1
10	XT60 Buchse^TATTU 22000 mAh TAA22K6S30ASX		1
11	EC5 connector - Socket^TATTU 22000 mAh TAA22K6S30ASX		1
12	Power Cable for EC5^TATTU 22000 mAh TAA22K6S30ASX		1
13	ESC_120A		4
A4	Arm_legs_V2		4
15	Drone_Payload_Base		1
16	MagSwitch	MAGSWITCH MAGJIG 60-8100818	2
17	HBOLT 0.2500-20x3.75x0.75-N		16
18	7in_allthread		4



NAME	DATE	
DRAWN		
CHECKED		
ENG. APPR.		
MFG APPR.		
G.A.		
COMMENTS		

SIZE	DWG. NO.	REV
Drone_Assembly_V3		
SCALE: 1:20/WEIGHT:	SHEET 1 OF 1	

Purchasing Plan

- Percent Purchased: 94.74%
- Left to Purchase:
 - Payload Camera
 - Payload servos
 - Improved body plate materials

Total Budget:	\$ 3,717.70	Total Donations:	\$ 717.70
Total Expense:	\$ 2,155.97	Left in SCE:	\$ 1,255.32
Total Remaining:	\$ 1,561.73	Left in donations:	\$ 306.41

Purchased Item	Primary Vendor	Manufacturer	Lead Time (incl. shipping)	Qty	Cost Per Unit	Total Cost	Part Status
DRONE ONLY					Total Cost:	\$1,730.91	
22Ah 6S LiPo Battery	Aliexpress	Tattu	2 weeks	2	\$ 240.00	\$ 480.00	Partial Install
Flight Controller (Pixhawk 6C)	HolyBro	HolyBro	7-10 business days	1	\$ 231.46	\$ 231.46	Installed
GPS/Compass (M10, included w/ FC)	HolyBro	HolyBro	7-10 business days	1	\$ -	\$ -	Installed
Pixhawk Wiring Kit	HolyBro	HolyBro	7-10 business days	1	\$ 35.00	\$ 35.00	Delivered
6-pin Molex PicoBlade to 6-pin JST-GH wire	3DR	3DR	7-10 business days	1	\$ 8.76	\$ 8.76	Installed
XING 4214 660KV Motor	iFlight	iFlight	2 weeks	4	\$ 62.75	\$ 251.00	Installed
6-channel RC receiver	Any	Any	7-10 business days	1	\$ 35.00	\$ 35.00	Installed
Power Distribution Module (Sky-Drones SmartAP PDB)	Sky-Drones	Sky-Drones	7-10 business days	1	\$ 90.00	\$ 90.00	Delivered
Electronic Speed Controller (120A)	Amazon	ApisQueen	7-10 business days	4	\$ 30.00	\$ 120.00	Installed
RC Controller	Any	Any	7-10 business days	1	\$ 50.00	\$ 50.00	Installed
Wiring kit (12AWG, 60ft)	Amazon	NAOEVO	3 business days	1	\$ 25.00	\$ 25.00	Delivered
LiPo Battery Charging Kit	Amazon	SmartCharger	3 business days	1	\$ 52.00	\$ 52.00	Delivered
Octagonal Carbon Fiber Tubing (500mm, 4pk)	Amazon	ZSJ	2 weeks	2	\$ 25.00	\$ 50.00	Installed
3D Printing Filament (ABS)	Amazon	Any	3 business days	2	\$ 20.00	\$ 40.00	In use
3D Printing Filament (PLA)	Amazon	Any	3 business days	1	\$ 24.00	\$ 24.00	In use
3D Printing Filament (TPU 95A)	Amazon	Any	3 business days	1	\$ 26.19	\$ 26.19	In use
XT90 Connectors (10pk)	Amazon	Amass	3 business days	1	\$ 14.17	\$ 14.17	Partial Install
Propellers (16", tri-blade)	HQProp	HQProp	7-10 business days	4	\$ 35.68	\$ 142.72	Installed
Extreme Fasteners	Home Depot	Scotch	0 days	1	\$ 13.03	\$ 13.03	Installed
M6 100mm lag bolts	Home Depot	Any	0 days	8	\$ 2.63	\$ 21.04	Installed
M6 locking nut	Home Depot	Any	0 days	8	\$ 0.68	\$ 5.44	Installed
MDF Board (1/4" x 2' x 4')	Home Depot	Any	0 days	2	\$ 8.05	\$ 16.10	Installed
MISSILE PAYLOAD					Total Cost:	\$ 300.62	
Cruise Missile Design Files	AeroJTP	AeroJTP	0 days	1	\$ 42.52	\$ 42.52	Delivered
3D Printing Filament (LWPLA)	Amazon	PolyMaker	3 business days	2	\$ 35.00	\$ 70.00	In use
3D Printing Filament (PLA)	Amazon	Any	3 business days	1	\$ 24.00	\$ 24.00	In use
50pcs M3 12mm hex heads	Aliexpress	Manufacturer U/K	3 weeks	1	\$ 5.00	\$ 5.00	Delivered
10pcs 150mm extension wires	Aliexpress	Manufacturer U/K	3 weeks	3	\$ 5.29	\$ 15.87	Installed
1350pcs Set C Black screws	Aliexpress	Manufacturer U/K	3 weeks	1	\$ 10.00	\$ 10.00	Delivered
3-axis Gyro	Aliexpress	Manufacturer U/K	3 weeks	1	\$ 14.26	\$ 14.26	Installed
7000KV 30mm motor	Aliexpress	QX-motor	3 weeks	1	\$ 23.64	\$ 23.64	Installed
2g motor servo	Aliexpress	DSPower	3 weeks	3	\$ 6.85	\$ 20.54	Installed
2-4S 20A Brushless ESC	Aliexpress	Surpass Hobby	3 weeks	1	\$ 25.10	\$ 25.10	Installed
1050mAh LiPo Battery	Amazon	Tattu	3 business days	1	\$ 29.25	\$ 29.25	Installed
Controller/Receiver	Aliexpress	HotRC	3 weeks	1	\$ 20.44	\$ 20.44	Installed
REGULAR PAYLOADS					Total Cost:	\$ 300.00	
GoPro/similar camera	GoPro	GoPro	7-10 business days	1	\$ 220.00	\$ 220.00	Not Ordered
Servo for Magswitch turning	-	-	-	2	\$ -	\$ -	Not Selected
Magswitch Maglig Magnet	Amazon	Magswitch	3 business days	2	\$ 30.00	\$ 60.00	Delivered
3D Printing Filament (ABS)	Amazon	Any	3 business days	1	\$ 20.00	\$ 20.00	In use
TOTAL OVERALL COST:						\$2,331.53	

Manufacturing Plan 43.58 %

- What has been manufactured
 - Motor and frame supports - 1 hr
 - Prototype frames - 1 hr
 - Cruise Missile - 7 hr
 - Structure of the drone - 8 hr
- What is currently being manufactured
 - New frames out of stronger material – 4 hr
 - Reconstruction of cruise missile - 6 hr
 - Reconstruction of power distribution system – 1 hr
- What is yet to be manufactured
 - Legs - 2 hr
 - Payload delivery system - 6 hr
 - Camera system - 4 hr
 - Protective guard for the electrical system – 2 hr

Demonstration



Gantt Chart

- On Schedule!

(TEAM ASSIGNMENTS)									
(INDIVIDUAL ASSIGNMENTS)									
(UGRADS)									
(Subtasks)									
Tasks	DUE DATE	Tasks Assigned To	Status	Week 3 (Jan 27 - Feb 2)	Week 4 (Feb 3 - Feb 9)	Week 5 (Feb 10 - Feb 16)	Week 6 (Feb 17 - Feb 23)	Week 7 (Feb 24 - Mar 2)	Week 8 (Mar 3 - Mar 9)
Hardware Status Update 33+% build	2/4/2025	Team	Complete						
HSU - Design Efforts	See above	Andre	Complete						
HSU - Purchasing Plan	See above	Micheal	Complete						
HSU - Manufacturing Plan	See above	Jeremy and Dylan	Complete						
HSU - Demonstration	See above	Team	Complete						
HSU - Gantt Chart Update	See above	Connor	Complete						
Peer Eval 1	2/7/2025	Team	In Progress						
Wk 4 Timecard	2/10/2025	Team	In Progress						
Wk 5 Staff Meeting	2/11/2025	Team	Not Started						
Wk 5 Timecard	2/17/2025	Team	Not Started						
Wk 6 Staff Meeting	2/18/2025	Team	Not Started						
Website Check 1	2/21/2025	Andre	In Progress						
Wk 6 Timecard	2/24/2025	Team	Not Started						
Hardware Status Update 67+% build	2/25/2025	Team	Not Started						
HSU - Design Efforts	See above	Andre	Not Started						
HSU - Purchasing Plan	See above	Micheal	Not Started						
HSU - Manufacturing Plan	See above	Jeremy and Dylan	Not Started						
HSU - Demonstration	See above	Team	Not Started						
HSU - Gantt Chart Update	See above	Connor	Not Started						
Peer Eval 2	2/27/2025	Team	Not Started						
Wk 7 Timecard	3/3/2025	Team	Not Started						
Wk 8 Staff Meeting	3/4/2025	Team	Not Started						
UGRADS Registration	3/6/2025	Connor	Not Started						
Wk 8 Timecard	3/17/2025	Team	Not Started						
Wk 9 Staff Meeting	3/18/2025	Team	Not Started						
Finalized Testing Plan	3/21/2025	Team	Not Started						
FTP - Design Requirements Summary	See above	Andre	Not Started						
FTP - Top Level Testing Summary	See above	Connor	Not Started						
FTP - Detailed Testing Plans	See above	Jeremy	Not Started						
FTP - Specification Sheet Preparation	See above	Micheal	Not Started						



Questions?