
Embedded Systems		
Part	Qty	Description
NEMA14	2	Stepper Motor
Arduino UNO	1	Microcontroller
Stepper Motor Drivers	2	
TP-Link TL-WR703N	1	Single-board computer
DVB	1	Signal receiver
USB Hub	1	—
Switching Power Supply	1	specs
Cables	—	—

3D printing Parts		
Part	Qty	Description
axis large.stl	3	
axis small.stl	1	
motor mount.stl	4	
base.stl	1	
worm gear.stl	2	
gear.stl	2	
gear ring.stl	1	
azimuth spacer.stl	1	
box axis bushing.stl	3	
Other Parts		
32,L350 PVC Tube	1	Azimuth axis
32,L1500 PVC Tube	1	Altitude axis
IP56 Box 300x220x120	1	The box host all the system

Fasteneres		
Part	Qty	Description
M3,L12 Allen Cap Screw	8	For stepper motors
M3,L88 Threaded Rod	8	For motor base
M3,L25 Allen Cap Screw	8	For connection of main base with motor base
M6,L56 Threaded Rod	2	For connection of the gear with axis
M6,L20 Hex Cap Screw	4	For connection of the main base with the box
M3 Washers	40	—
M3 Nylock Nuts	24	—
M6 Washers	12	—
M6 Nylock Nuts	8	—
M8,L80 Hex Cap Screw	1	For Azimuth axis
M8 Nuts	3	For Azimuth axis
M4,L15 Allen Cap Screw	12	Used to connect bushing to the waterproof box
M4 Washers	22	—
M4 Nylock Nuts	12	—
Ball Bearings d:8 D:22 B:7	3	For stepper axis and Azimuth axis



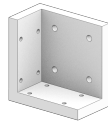
axis large.stl



axis small.stl



motor mount.stl



base.stl



worm gear.stl



gear.stl



gear ring.stl



azimuth spacer.stl



box axis bushing.stl



IP56 Box 300x220x120



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