Component	Qty	Description
Bolt 8 mm	2	Ø8 × 80 mm, stainless steel
Ball bearing 8×22×7	2	608 ZZ / 608 RS
Tilt gear (small)	1	Module 1, Z14, Ø16 mm,
Pan gear (small)	1	Module 1, Z14, Ø16 mm,
NEMA 17 stepper motor (Pan)	1	42×42 mm, 5 mm shaft, 12 V, ~1.5–2 A
NEMA 17 stepper motor (Tilt)	1	42×42 mm, 5 mm shaft, 12 V, ~1.5–2 A
A4988 driver	2	included with MKS DLC V2.1
MKS DLC V2.1	1	Atmega328P + stepper motor drivers
ESP32 DevKit (ESP-WROOM-32)	1	USB-C 5V, WiFi, BLE, GPIO, I2C, UART
IMU MPU-6050 GY-521	1	I2C, 3.3V
Compass QMC5883L GY-271	1	I2C, 3.3V
Buck converter 12V→5V	1	3A, step-down
Power supply 12V 8A	1	100W, AC 100–240V → DC 12V
Power cable	2 m	AC mains cable
Cable (0.75 mm²)	2 m	For power connections
Wires (0.25 mm²)	5 m	For signal connections
USB-C cable (ESP32)	1 m	For programming and power
bolt M3 (DIN913)	2	
bolt M3x10 (DIN912)	8	
bolt M3x12 (DIN912)	4	
bolt M3x6 (DIN7991)	11	
bolt M3x6 (DIN912)	18	
bolt M3x8 (DIN912)	10	
bolt M4x10 (DIN912)	8	
bolt M4x12 (DIN7991)	12	
bolt M4x8 (DIN7991)	8	
insert M3	42	
insert M4	28	
spring washer M3 (DIN127)	4	
spring washer M4 (DIN127)	8	
washer M3 (DIN125)	4	
washer M4 (DIN125)	8	