

# Parameter

Model	Z1 AIR	Z1 PRO	
DOF	6 Axis	6 Axis	
Weight	4.3kg	4.5kg	
Payload	2kg	≥3kg	
Reach	740mm	740mm	
Repeatability [1]	~ 0.1mm	~ 0.1mm	
Power Supply	Voltage 24V Current > 20A	Voltage 24V Current > 20A	
Interface	Ethernet	Ethernet	
User Operating System	Ubuntu	Ubuntu	
Power	MAX 500w	MAX 500w	
Force Feedback and Collision Detection	Provide	Provide	
Control Interface [2]	Position + Force Control	Position + Force Control	
	<b>Joint</b>	<b>Range</b>	<b>Max Speed</b>
Joint Parameters	J1	±150°	180°/s
	J2	0-180°	180°/s
	J3	-165°-0	180°/s
	J4	±80°	180°/s
	J5	±85°	180°/s
	J6	±160°	180°/s

[1] It depends on the actual test according to the use requirements (the test standards of manipulator vary greatly, and the accuracy varies greatly under different test conditions).

[2] Since the reduction ratio used by each joint is relatively low, the position control stiffness of the whole machine is low. If the control mode is not optimized, there will be large position control error and shaking when the manipulator moves.

[3] This product is a civilian robot. We kindly request that all users refrain from making any dangerous modifications or using the robot in a hazardous manner.

[4] Please visit Unitree Robotics Website for more related terms and policies, and comply with local laws and regulations.

<b>FUNCTION</b>	<b>PARAMETER</b>
Backlash	~ 6 arcmin
Communication Method	RS 485
Maximum Torque	33N·m
Encoder Resolution	15bit
Weight	405g
Force Control Accuracy	~ 0.2N·m
Size	Φ65*52mm
Control Frequency	1KHz
Reducer	Harmonic Reducer
Bearing	Industrial grade cross roller
Reduction Ratio	60+
Motor Sensing Feedback	Torque, Angle, Angular Velocity
Voltage	24V(Recommend)
Motor Control Command	Torque, Angle, Angular Velocity, Stiffness, Damping