

OVERVIEW

N2 is a 360 degrees 2D LiDAR. Based on the principle of Triangulation, it is equipped with related optics, electricity, and algorithm design to achieve high-frequency and high-precision distance measurement. The mechanical structure rotates 360 degrees to continuously output the angle information as well as the point cloud data of the scanning environment while ranging.



TECHNICAL SPECIFICATIONS

PERFORMANCE PARAMETER

Item	Min	Typical	Max	Unit	Remarks
Ranging frequency	/	3000	/	Hz	Ranging 3000 times per second
Motor frequency	5	6	8	Hz	Need to connect to PWM signal, recommended to use the speed of 6Hz
Ranging distance	0.12	/	8	m	Indoor environment with 80% Reflectivity
Field of view	/	0-360	/	Deg	/
Systematic error	/	2	/	cm	Range ≤ 1m
Relative error	/	3.5%	/	/	1m < Range ≤ 6m
Tilt angle	0.25	1	1.75	Deg	/
Angle resolution	0.60 (frequency @5Hz)	0.72 (frequency@6 Hz)	0.96 (frequency @8Hz)	Deg	Different motor frequency

ELECTRICAL PARAMETER

Item	Min	Typical	Max	Unit	Remarks
Supply voltage	4.8	5	5.2	V	Excessive voltage might damage the Lidar while low affect normal performance
Supply current	1000	/	/	mA	Instantaneous peak current at start-up
Working current	/	300	500	mA	System work, motor rotation

INTERFACE DEFINITION

Pin	Type	Description	Defaults	Range	Remarks
VCC	Power supply	Positive	5V	4.8V-5.2V	/
Tx	Output	System serial port output	/	/	Data stream: LIDAR→Peripherals
GND	Power supply	Negative	0V	0V	/
M_CTR	Input	Motor speed control terminal	1.8V	0V-3.3V	Voltage speed regulation or PWM speed regulation


SERIAL PORT SPECIFICATION

Item	Min	Typical	Max	Unit	Remarks
Baud rate	/	115200	/	bps	8-bit data bit, 1 stop bit, no parity
High signal level	2.4	3.3	3.5	V	/
Low signal level	0	0	0.6	V	/

MOTOR PWM SIGNAL SPECIFICATION

Item	Min	Typical	Max	Unit	Remarks
PWM frequency	/	10	/	KHz	PWM is a square wave signal
Duty cycle range	0	35%	100%	/	The larger the duty cycle, the faster the speed

LASER OPTICAL PARAMETERS

Item	Min	Typical	Max	Unit	Remarks
Laser wavelength	775	793	800	nm	Infrared band
FDA	 Class I				

OTHERS

Item	Min	Typical	Max	Unit	Remarks
Operating temperature	0	20	40	°C	No condensation
Storage temperature	-10	/	60	°C	With package
Lighting environment	0	550	2000	Lux	For reference only
weight	/	126	/	g	N.W.