

## OVERVIEW

D-pro is a 360 degrees 2D LiDAR. Based on the principle of ToF, it is equipped with related optics, electricity, and algorithm design to achieve high-precision laser distance measurement, while measuring the distance, the mechanical structure rotates 360 degrees to continuously obtain angle information, thereby realizing 360 degrees scanning distance measurement and outputting point cloud data of the scanning environment.



## TECHNICAL SPECIFICATIONS

### PERFORMANCE PARAMETER

Item	Min	Typical	Max	Unit	Remarks
Ranging frequency	/	4000	/	Hz	/
Scan frequency	6	6	12	Hz	Software speed regulation, default 6Hz
Ranging distance	0.02	/	12	m	80% reflectivity
	0.02	/	4	m	10% reflectivity
Field of view	/	0-360	/	Deg	/
Systematic error	/	20	/	mm	0.05m < Distance ≤ 12m
Angle resolution	0.54	/	/	Deg	/
Tilt angle	0	0.75	1.5	Deg	/

### ELECTRICAL PARAMETER

Item	Min	Typical	Max	Unit	Remarks
Supply voltage	4.8	5.0	5.2	V	Excessive voltage might damage the Lidar while low affect normal performance
Start-up current	/	840	1000	mA	Peak current at power-on
Working current	/	340	480	mA	System works, motor rotates
Sleeping current	/	/	45	mA	System sleeps, motor stops


## INTERFACE DEFINITION

Pin	Type	Description	Defaults	Range	Remarks
VCC	Power supply	Positive	5V	4.8V-5.2V	/
Tx	Output	System serial output	/	/	Data stream: Lidar→Peripherals
Rx	Input	System serial port Input	/	/	Data stream: Peripherals→Lidar
GND	Earthing	Negative	0V	0V	/

## SERIAL PORT SPECIFICATION

Item	Min	Typical	Max	Unit	Remarks
Baud rate	/	230400	/	bps	8-bit data bit, 1 stop bit, no parity
High signal level	2.4	3.3	3.5	V	/
Low signal level	0	/	0.6	V	/

## LASER OPTICAL PARAMETERS

Item	Min	Typical	Max	Unit	Remarks
Laser wavelength	895	905	915	nm	Infrared band
Laser power	/	16	/	W	/
FDA	 Class I IEC60825-1				

## OTHERS

Item	Min	Typical	Max	Unit	Remarks
Operating temperature	-10	25	40	°C	/
Store temperature	-20	25	70	°C	/
Lighting environment	/	/	60000	Lux	For reference only, the laser transceiver window cannot be directly facing the strong light source such as the sun
Weight	/	45	/	g	N.W.