



## TOF-20S Navigation type Laser Radar



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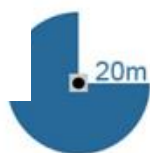
# Product Brief

## XD-TOF-20S Navigation Lidar

20S series two-dimensional TOF navigation type laser radar. 20 meters monitoring, 300° scanning angle. Weak measuring spot, 6 groups of areas, support self-learning background cropping, two-way ranging technology. Built-in point number monitoring, target width monitoring, contour detection. Support remote operation.

# Product Features

## Features



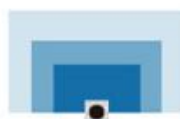
**20 meters away**  
**0.5° angular resolution**  
**300° scanning angle**



**Multi-region monitoring**  
Independent setting of monitoring area  
Three signal outputs



**External interface**  
Power socket, Ethernet socket and I/O lead  
Working voltage power consumption  
9V~28V DC/5W



**16 regional group settings**  
Quick configuration, fast loading



**Monitoring mode:**  
Point monitoring  
target width monitoring  
contour line monitoring



**Shield monitoring signal output**  
Start background self-learning  
Reboot the device



**IP65**  
Waterproof and dustproof  
Harsh industrial environment is still applicable

# Product parameters

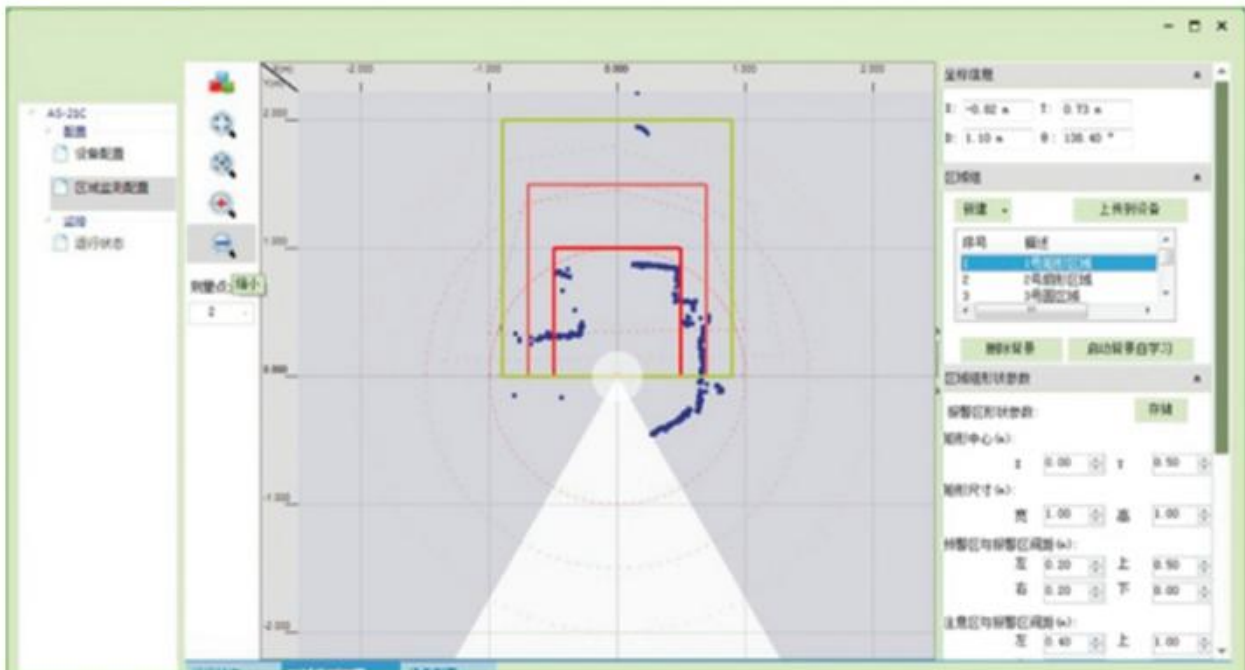
Characteristic XD-TOF-20S	
light source	Infrared laser (905nm)
Laser safety level	Class I (GB7247.1-2012, human eye safety)
Laser spot exit caliber	8mm
Laser spot divergence angle	12.5m rad
Scanning angle range	300°
Scanning frequency	25Hz
Scanning angle resolution	0.5°
Detection range	0.1m~20m
10% reflectivity range	10m
Outdoor performance	Resistant to dirt and sunlight
Rain, fog and dust penetration	Support
Range of working temperature	- 25 ℃ ~+50 ℃
Storage temperature range	- 30 ℃ ~+70 ℃
Environmental illumination range	≤ 70000 lux
Frequency Range	10Hz~150Hz
Operating Voltage	9V~28V
Power consumption	5W
Enclosure rating	IP65 ( GB4208~2088 )

Technical performance	
System error (typical value)	5cm (1~20m)
Statistical error (1σ)	2cm (1m~20m)
Monitoring mode	Number of points / target width / contour detection
Types of monitoring signals	Attention/Warning/Alarm
Number of regional groups	16 groups, support self-learning background tailoring
Number of concurrent work area groups	16 groups (max)
Equipment self-test	Translucent cover is dirty/shielded/high temperature/low temperature
Humidity	93% +40 ℃ , 2h (GB/T 2423. 3)
Insulation resistance	1M Ω (GB16796~2009.5.5.4)

# Product parameters

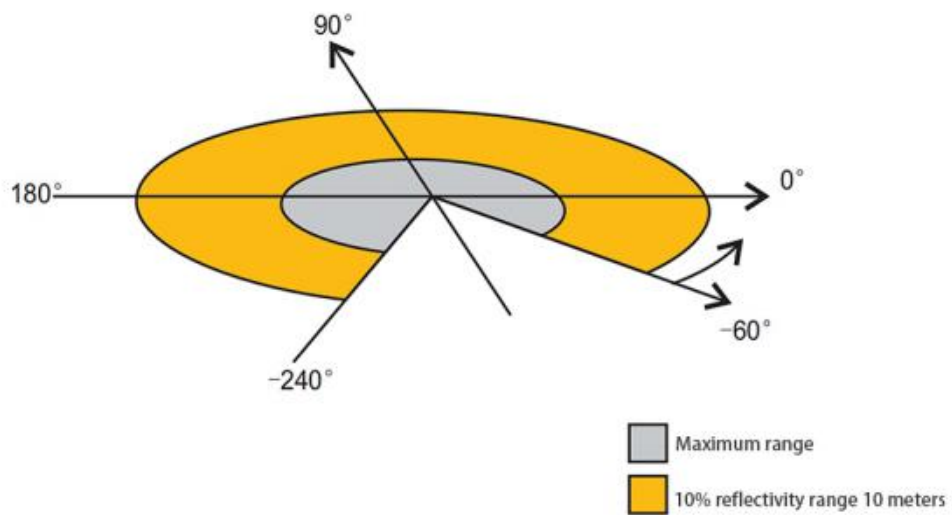
Device interface		
Electromagnetic compatibility (EMC)	Electrostatic discharge	6KV (GB/T17626. 4~2006, Level 3)
	Fast burst	1KV (GB/T17626. 4~2008, Level 2)
	Electromagnetic field radiation immunity	GB/T17626. 3~2006, Level 2
Surge immunity		GB/T17626.5-2008; Power interface: 1.2/50 $\mu$ s, 2KV/1KA (level 3); Ethernet interface: 10/700 $\mu$ s, 1KV/25A (level 2); I/O interface: 1.5/50 $\mu$ s, 0.5KV/0.25KA (level 1);
Shock		GB/T 2423. 5
Single impact		15g, 11ms
Continuous shock		10g, 16ms
Vibration		GB/T 2423. 10
Amplitude		5g
Ethernet		Rate: 10/100 Mbps; Network protocol: TCP/IP; Function: equipment configuration/measurement data output/monitoring signal output
I/O input		Quantity: 4 Type: Level input High level: 9V~28V DC Low level: 0~5V DC Input current: 3.6mA(max) Preset function: Monitoring area group selection (0x0~0xF) Regional monitoring disarm/control alarm, effective level: high level
I/O output		Quantity: 4; Type: PNP OC output; Output voltage: power supply voltage; Power on state: cut off; Preset function: area monitoring signal output/device ready, valid state: high level
Indicator light		Quantity: 2; Definition: ERR (equipment alarm: dirty/shielded light shield, high and low temperature); HTR (operation status indication: detection signal/self-learning/ready to restart)
Front panel buttons		Quantity: 1; Definition: shield monitoring signal output/start background self-learning/restart device

# Software diagram

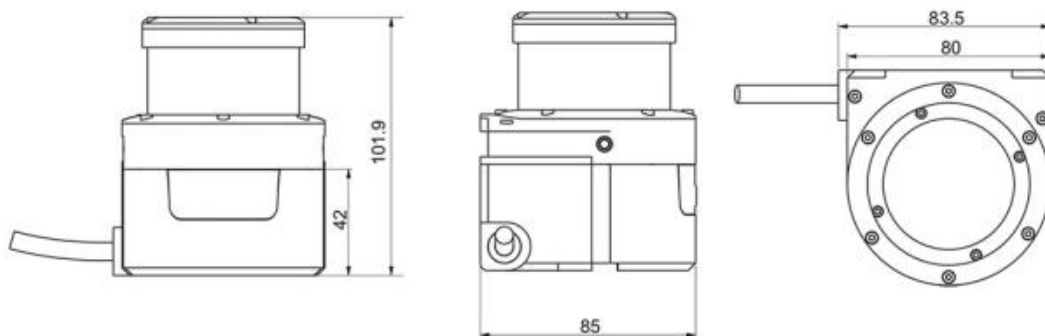


# Product Size

Measuring coordinate system/scanning range/range






Product size chart

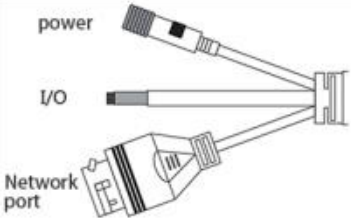


# Power accessories

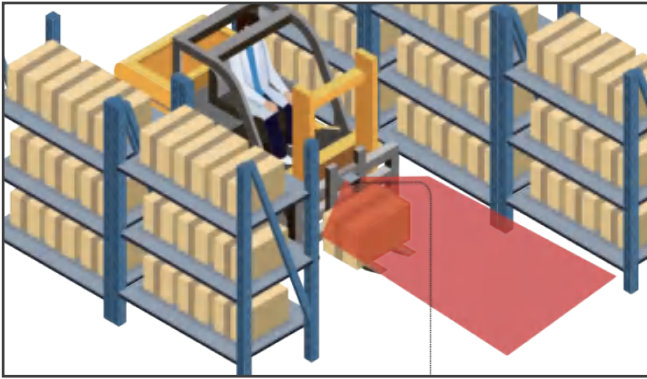


			Mounting screws, washers And easy installation tool
1	1	1	1
Mounting bracket	power cable	waterproof protective jacket for network cable crystal head	M4*8

Device interface: three external interfaces, namely power socket, Ethernet RJ45 socket and I/O lead

	Socket	Types	Explanation
	Dc002	power	Female 2 core
	Ethernet	RJ45 socket	4 core
	I/O	lead	9 core

# Application field



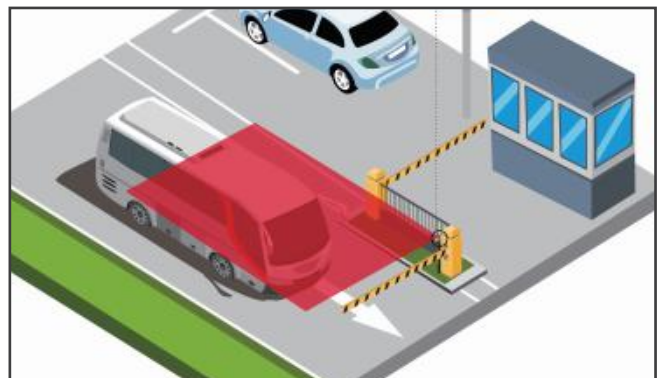
Protect people in narrow aisle warehouses



Boarding bridge anti-collision system



Liquid level detection



Classify vehicles



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