

TFmini Plus is a single-point ranging LiDAR, based on TOF principle. Mainly used for stable, accuracy and high-frame rate range detection.

Main product features

- High frequency(Up to 1000Hz)
- Small size
- Low power consumption (550mW, <=100mW in special mode)
- IP65 Enclosure

Main application scenario

- Pedestrian detection
- Vehicle detection
- Altimeter
- Robot fall-arrest



Technical Specifications and Parameters

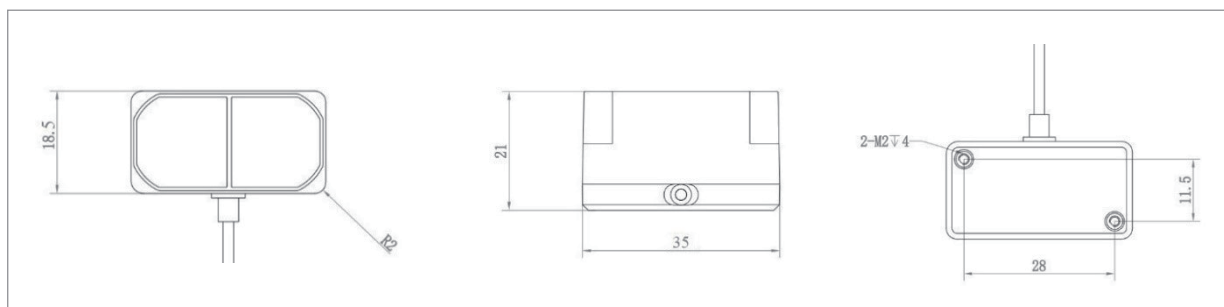
Parameters		UART	I ² C
Performance	Operating Range	0.1m~12m@90%Reflectivity; 0.1~4m@10% Reflectivity 0.1m~12m@90% Reflectivity (70Klux) 0.1~4m@10% Reflectivity (70Klux)	
	Accuracy	±5cm@(0.1-5m) ^① ; ±1%@(5m-12m)	
	Distance resolution	1cm	
	Frame rate	1-1000Hz(adjustable) ^②	1-100Hz(adjustable)
	Repetitive Accuracy	1σ: <3cm(@100Hz) ^③	1σ: <4cm(@100Hz)
	Ambient light immunity	70klux	
	Operating Temperature	-20°C~60°C	
	Enclosure Rating	IP65	
Optical parameters	Light source	LED	
	Central wavelength	850nm	
	Photobiological safety	Exemption level (EN62471)	
	FOV	3.6° ^④	
Electrical parameters	Supply voltage	5V±0.5V	
	Average current	≤110mA	
	Power consumption	550mW(Low Power Consumption Mode: <=100mW)	
	Peak current	140mA	
	Communication level	LVTTTL(3.3V)	
	Communication interface	UART、I/O	I ² C
Miscellaneous	Size	35mm*18.5mm*21mm	
	Housing material	ABS+PC	
	Storage temperature	-20℃~75℃	
	Weight	12g±1g	
	Cable length	30cm	

Note: ① Accuracy was calculated based on a standard whiteboard with reflectivity 90% in indoor condition;

② Only frame rates meet the formula – 1000/n (n is positive integer) can be set;

③ More detailed information please refer to the user manual; ④ This is a theoretical reference value.

Product Appearance and Structure



Dimension of TFmini Plus (Unit: mm)

Communication protocol

TFmini Plus supports two interfaces: UART and I²C.

Communication Interface--UART

Default baud rate	115200
Data bit	8
Stop bit	1
Parity	None

Communication Interface--I²C

Max transmission rate	400kbps
Master/Slave mode	Slave
Default address	0x10
Address range	0x01~0x7F

Configurable parameters

Parameters	UART		I ² C	
	Description	Default setting	Description	Default setting
Communication interface	UART, I ² C and I/O	UART	UART, I ² C and I/O	I ² C
Frame rate	Adjustable, 1~1000Hz	100Hz	Adjustable, 1~100Hz	/
Baud rate	Adjustable 9600~921600bps	115200bps	Adjustable, <=400kbps	/
Reset to default	Reset all the settings to default	/	Reset all the settings to default	/

Note: Refer to user manual for more information

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Product Certification