

TFmini Plus is a single-point ranging LiDAR, based on ToF principle.

Mainly used for stable, accuracy and high-frequency range detection.

### Main features of product

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

### Main applications

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



## ■ Technical Specifications and Parameters

Parameter Name		UART	I <sup>2</sup> C
Product 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) <sup>1</sup> ±1%@ (5m-12m)	
	Distance Resolution	1 cm	
	Frame rate	1-1000Hz (adjustable) <sup>2</sup>	1-100Hz (adjustable)
	Repeatability	1σ: <3cm(@100Hz) <sup>3</sup>	1σ: <4cm(@100Hz)
	Ambient light resistance	70Klux	
	Operation temperature	-20°C~60°C	
	Protection Level	IP65	
Optical Parameters	Light source	LED	
	Central wavelength	850nm	
	Photobiological safety	Exemption level (EN62471)	

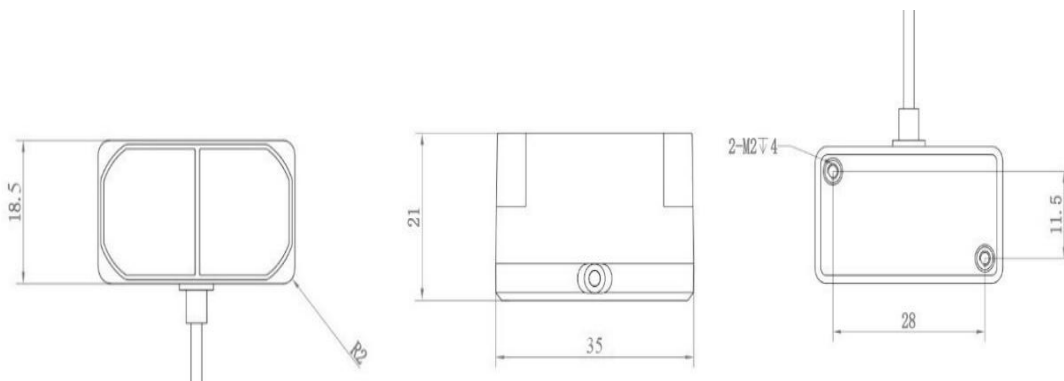
<sup>1</sup> Accuracy was calculated based on the standard indoor test condition of 25°C and whiteboard of 90% reflectivity, changes in conditions may cause errors to increase.

<sup>2</sup> Only frame rates meet the formula – 1000/n (n is positive integer) can be set.

<sup>3</sup> More detailed information please refer to the user manual.

	FoV	3.6° <sup>4</sup>	
<b>Electrical Parameters</b>	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 <sup>2</sup> C
<b>Other Parameters</b>	Dimensions	35mm*18.5mm*21mm	
	Enclosure material	PC/ABS	
	Storage temperature	-20°C~75°C	
	Weight	12g±1g	
	Cable length	30cm	

### ● Product Appearance and Structure



Dimension of TFmini Plus (Unit: mm)

<sup>4</sup> This is a theoretical reference value

## ■ Communication Interface

TFmini Plus supports two interfaces: UART and I<sup>2</sup>C:

Communication Interface--UART

Interface parameters	Value
<b>Default Baud rate</b>	115200
<b>Data bits</b>	8
<b>Stop bit</b>	1
<b>Parity</b>	None

Communication Interface--I<sup>2</sup>C

Interface parameters	Value
<b>Max transmission rate</b>	400kbps
<b>Master/Slave mode</b>	Slave
<b>Default address</b>	0x10
<b>Address range</b>	0x01~0x7F

## ● Configurable Parameters

Parameters	UART		I <sup>2</sup> C	
	Description	Default setting	Description	Default setting
<b>Communication interface</b>	UART, I <sup>2</sup> C, I/O	UART	UART, I <sup>2</sup> C, I/O	I <sup>2</sup> C
<b>Frame rate</b>	Adjustable, 1~1000Hz	100Hz	Adjustable, 1~100Hz	/
<b>Low power consumption mode</b>	Adjustable, normal/low power consumption mode	Off	Not support	/
<b>Baud rate</b>	Adjustable, 9600~921600bps	115200bps	Adjustable, <=400kbps	/
<b>Reset to default</b>	Reset all the settings to default	/	Reset all the settings to default	/

*PS: Refer to user manual for more information*

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