TFminiPlus-Q&A

Q: how many meters can the serial port cable be extended? How to achieve long-distance communication?
A: It is not recommended that the maximum distance of the connection cables supported by TTL interface communication should be more than 2m. Switch board can be selected to realize long-distance communication through other interfaces.

Q: Will configuration parameters be automatically written and automatically saved after power failure? Does it need to send "save settings" commands?
A: It doesn't save automatically. You need to send a save command. When you send only modified commands without saving, the radar will resume its output after restarting according to its previous configuration. Saving is equivalent to writing the modified settings

Q: How to set the radar for single test?
A: Single trigger measurement can be implemented in the following ways:
1 send a command to modify the frame rate, and modify the frame rate to 0, that is, turn on the single trigger measurement switch: 5A 06 03 00 00 63
2. Send the trigger command: 5A 04 04 63. Each time the command is sent, the TFmini Plus measures once and outputs the result.
3. Save command: 5A 04 11 6F

Q: How to solve the problem of crosstalk with multiple TFmini-Plus?
A: TFmini Plus does not generate crosstalk when it is not facing; If the TFmini Plus needs to be installed under special conditions, the radar can be set to a single trigger test, staggering the measurement time to avoid mutual interference.

Q: What is the current value when 3.3 VDC is output from I/O port?
A: According to the test, the maximum current I/O can output is 8mA.

Q: Can infrared camera see the spot of TFmini Plus?
A: Sure. Infrared cameras can refer to https://item.taobao.com/item.htm?spm=a1z10.5-c.w4002-15093766596.41.50fa7b53pyNoi1&id=544961710314
If you want to buy other infrared cameras, choose products with a visible central wavelength of 850nm.

Q: What is the life of the TFmini?
A: The short life of TFmini is LED, which can reach 30000h-50000h in general. Therefore, the product life can reach more than 30000h at room temperature of 25℃, equivalent to more than 3 years.

Q: What are the functions of temperature and signal strength in data in practical application?
A: The temperature in the data refers to the chip temperature, which has no special reference significance. Signal strength can help determine the accuracy of distance data.

Q: What performance degradation will be caused by setting the high frame rate?
A: The frame rate is related to the data fluctuation. The higher the frame rate is, the larger the data fluctuation range is. For details, please refer to the introduction of repetition accuracy in the manual.

Q: Can you remove the shell of the product?
A: No. Lens needs to be installed in the shell, which requires very high precision. The absence of a shell has a significant impact on product performance.

Q: How is the power consumption of TFmini Plus calculated?
A: The power consumption of TFmini Plus is: 5V voltage supply. The measured current fluctuates between 110-120mA. Take 110mA to get 550mW.

Q: What is the maximum voltage that the radar can withstand? Can it be battery powered?
A: Radar is very sensitive to power supply. Power supply higher than 5.5v may damage it, and lower than 4.5v cannot guarantee accuracy. It can use battery power supply. If the power supply does not match, it is recommended to use a transformer that supports both a wide range of high input voltage and stable output voltage.

Q: Can the PC software provide development code?
A: The host computer source code is not available, but we can provide the parsing code that can get the radar distance program.

Q: To ensure stability, how long before the radar is powered for testing?
A:The startup time is about 500ms. After startup, it can output normally.

Q: Is there any way to reduce the power consumption?
A: The power consumption can be reduced by the single trigger of the measurement command;

Q: What is the radar interface? Does the data need to be specially decrypted?
A: There are TTL, IIC and IO interfaces of radar, and the data format can be analyzed in the manual.

Q: What is the difference between accuracy and distance resolution mentioned in the manual?
A: Accuracy is the difference between the measurement result and the actual distance, and distance resolution is the minimum distance that can be recognized by radar.

Q: Can the radar work outdoors on sunny days? (<70klux or sun can illuminate about 100klux).
A: We can guarantee the radar to work properly within 70klux, but it does not mean that the radar will fail after exceeding 70klux.

Q: What is the standard frame rate of radar?

A: The standard frame rate of 1000,500,250,200,125,100,50,40,25,20,10,5,4,2,1

Q: What will be the effect on the radar transmitter if it is shielded? How much does dust affect it?
A: No shielding at the radar transmitter; Dust weather will have close range false alarm. Roadside dust, in theory, has no effect.

Q: Can the radar work less than 1Hz?
A: Currently, it is not supported, only 1-1000 integers are supported. For lower frequency measurement, it is suggested to adopt single trigger measurement mode.

Q: What's the difference between system reset and factory reset?
A: System reset means program restart; Restore factory settings are the parameters of the flash configuration to clear and restore to the default state.

Q: Is it necessary to add protective cover for outdoor application? Is the light source laser?
A: the radar has added filters, which can meet basic outdoor applications. It can increase the protective cover, but it needs to pay attention to the effect of crosstalk, the glass should be close to the front surface, not too thick, it is best to be measured. LEDs for light sources have no problem with ordinary glass transmittance.

Q: Is the radar usable in rainy weather?
A: The radar can work normally in the rain, but it will be affected to some extent during heavy rain.

Q: What's the difference between the radar measurements at night and during the day?
A: Radar works better at night than during the day. During the day, depending on the intensity of sunlight, if the intensity is high, the accuracy will decrease, but not too much, the maximum is not more than ±10cm.

Q：Is it possible to detect liquids?
A：It is not recommended to detect on the surface of the water. Due to the principle of optical radar ranging, it will pass through the water surface, resulting in inaccurate ranging. Opaque liquids are feasible, but there is a risk of failure.

Q: if the wiring sequence is wrong during use, will it directly burn out the radar?
A: if only the two cables of communication are reversed, it won't burn out the radar. However, if the power cable is connected incorrectly, as long as the power is turned on, the radar will be burned out, so the line sequence must be accurate.