TFmini-Plus 常见问题Q&A

Q: how many meters can the serial port line be extended? How to achieve long-distance communication?

A: the longest connection distance supported by TTL interface communication is not recommended to exceed 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" instructions?

A: it doesn't save automatically. You need to send a save command. When you send only modified instructions 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 an instruction to modify the output frequency, and modify the output frequency to 0, that is, turn on the single trigger measurement switch: 5A 06 03 00 00 63

2. Send the trigger instruction: 5A 04 04 63. TFmini Plus will measure and output the result every time this instruction is sent.

3. Save the configuration instruction: 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 3.3VDC 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 this <https://item.taobao.com/item.htm?spm=a1z10.5-c.w4002-15093766596.41.50fa7b53pyNoi1&id=544961710314>

To buy other infrared cameras, choose products with a visible central wavelength of 850nm.

Q：请问雷达的具体的寿命是多少？

A：TFmini Plus寿命短板是LED，LED一般可达到30000h-50000h。因此在常温25℃产品寿命下可达30000h以上，等效3年以上。

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 judge the accuracy of distance data.

Q: what performance degradation will be caused by setting the frequency high?

A: the output frequency is related to the data fluctuation. The higher the output frequency is, the larger the data fluctuation range is. For details, please refer to the introduction of repetition accuracy in the instructions.

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 the equipment, Power supply 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 source 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.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 instruction;

Q: what is the radar interface? Does the data need to be specially decrypted?

A: there are three interfaces of radar, TTL, IIC and IO, and the data format can be analyzed in the manual.

Q: what is the difference between accuracy and distance resolution mentioned in the specification?

A: precision is the difference between the measurement result and the actual distance, and range 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 frequency of 1000500250200125100,50,40,25,20,10,5,4,2,1

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. LED light source, ordinary glass transmittance is no problem.

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：请问是否可以对液体进行探测？

A：不建议在水面探测，受光学雷达测距原理，会透过水面，导致测距不准。不透明液体有可行性，但会有失效的风险。

Q: if the wiring sequence is wrong during use, will it directly burn out the radar?

A: if only the two lines of communication are connected upside down, it won't burn out the radar. However, if the power cord is wrong, it can burn out the radar if it is plugged in, so make sure the wiring is in correct order.