Frequently Asked Questions

Q: Why the measured distance of Single-point Ranging LiDAR (e.g. TF01, TF02, mini) would sometimes change to a fixed value greater than its range?

A: Under different detecting environments (varied by the reflectivity of the target detecting object and ambient light), the signal strength detected by the LiDAR is affected to various degrees. To ensure reliability and stability of the tested data, LiDAR adopts algorithm removal, i.e., when the signal is weak, LiDAR feeds back a special value (which is varied for different types of LiDARs); such value is not the actual data detected by the LiDAR, but rather serves as an indication that such value can not be trusted.

Q: Why is the range detected by the LiDAR inconsistent with the one on the Specifications?

A: The range on the Specifications is detected under standard indoor environment and such value may vary with the environment. The range of Ranging LiDAR based on infrared laser is affected by the reflectivity of the target detecting object and ambient light.

Q: Why does the distance outputted by LiDAR vary significantly with the actual distance?

A: Please confirm the correctness of protocol analysis; and the LiDAR product is a kind of optical device which performs rather poorly towards target detecting object with higher reflectivity, so please avoid detecting glasses, mirrors, tiles and other objects with higher reflectivity.

Q: Is LiDAR product water-proof?

A: LiDAR product with its enclosure rating stated in the Specifications is water-proof, such as, the enclosure rating (of TF01, TF02, TF20) is IP65, meaning total prevention of foreign matters and dusts and waters ejected by nozzles of all directions.

Q: Why does the LiDAR output no data?

A: Our LiDAR products are completely inspected before leaving factory and thus their quality is assured. Before use, please confirm your product version and carefully read the Specifications, and conduct a quick examination according to the following steps:

1. Make sure the power is normally connected and the voltage within allowed range;

2. Face the LiDAR and check whether there is a dim red light at the transmitting terminal; under normal power supply, LiDAR transmits infrared light;

3. Check whether the receiving and transmitting terminals of LiDAR are correctly and properly connected with other devices;

4. Check whether the data analysis is correct and refer to the Specifications to confirm the Communication Protocol of the product;

If the problem remains unsolved, please contact the after-sale personnel of Benewake.

Q: Why does the LiDAR output no data when connected to the upper computer?

A: The upper computer of our TF series supports only the Windows system, both Win7 and Win10. If the computer system is correct, please conduct troubleshooting according to the following steps:

1. Check whether the version of LiDAR is CAN or UART. Upper computer currently supports only the UART products;

2. Check whether the TTL-USB adapter plate connecting the computer is correctly connected to the LiDAR;

3. Check whether the UART driver is correctly installed;

4. Check whether relevant configurations of the upper computer are adjusted according to the output protocol of the LiDAR product.

If the problem remains unsolved, please try other UART adjustment tools.

Q： Installation environment:

A: Ubuntu14.04, ros, rviz; slam operating environment is based on ROS system and ubuntu14.04 is a rather stable version.

Q： Wrong installation of LiDAR:

A: LiDAR has a front direction, the same as the robot and if installed wrongly, the scanning direction of the machine would be in disorder and the machine is likely out of control.

Q： Whether the simultaneous localization and mapping during navigation configure the best route:

A: Whether the route is the best is the key in simultaneous localization and mapping of navigation, or otherwise the machine would walk in "s" routes, significantly lowering its efficiency.

Q： Whether the mapping is accurate:

A: Quality of mapping depends on the algorithm, sensor (LiDAR) and the complexity of the environment.

Q： Whether the obstacle avoidance function could effectively avoid dynamic and static obstacles.

A: Obstacle avoidance is the primary task to be solved by slam. Currently it mainly relies on sensors like LiDAR, camera and ultrasound, and ultrasound is mainly used to deal with objects with high reflectivity like glasses.