Explanation of PID Algorithms

1. The role of P, I and D of the PID algorithm, and whether the final results are in line with expectations?

1) P (Proportion) plays a regulating role only when the error exists, which can make the vehicle return to the target position quickly; I (Integral) always can adjust the system, which can eliminate the static error of the system and enhance the anti-jamming ability of the system; D (Differential) can play a predictive role, that is, early adjustment. The function of the knot, it can speed up the adjustment process, so that the vehicle can accurately and quickly return to the target position.

2) In the whole adjustment process, the adjustment results of P, I and D are in line with our expectations.

2. How to choose P, I and D coefficients?

For the selection of PID coefficients, the P, I and D coefficients are calculated automatically by compiling C++ program and combining simulator.