

### Introduction

TDOA positioning system is a UWB positioning anchor, UWB positioning tag and Center Location Engine (CLE), RTLS-Controller, positioning visualization software (RTLS-DISPLAY). The composed products can realize a centimeter-level high-precision real-time positioning system according to the positioning method of the time difference of arrival. This system is characterized by:

1) The anchor tag is equipped with R&D and self-developed UWB modules. After years of project tests in complex industrial control environments such as mines and nuclear power plants, the modules are safe and reliable.

2) The system adopts the POE power supply mode to reduce the workload of on-site cable deployment.

3)Customers can read the position coordinate information from the central positioning engine software (CLE) for secondary development



### Application

- Smart Agriculture
- Asset tracking
- Automotive
- Building control
- Factory 4.0
- medical insurance
- Logistics Warehouse
- •mining
- Retail
- Safety
- Access control
- Crowd management
- Sports analysis

#### Main Features

- Positioning algorithm: TDOA
- Synchronization method: Wireless
- Accuracy: X-Y: 30cm in 3D in Line of Sight
- Support frequency band: 3.5G-4.2G
- Density: 1200Hz(@6.8Mbps)
- Typical distance between anchor and tag
  - •50m @6.8Mbps
  - •100m @110Kbps
- Maximum number of tags: unlimited
- Executive standard
  - Compliant with IEEE 802.15.4 UWB standard
  - Comply with FIRA Alliance standards (YCHIOT is a member of UWB FIRA Alliance)
  - Comply with the national standard "Information Technology Real-time Positioning" (YCHIOT is the drafting unit of the national standard for this technology)

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## Hardware selection



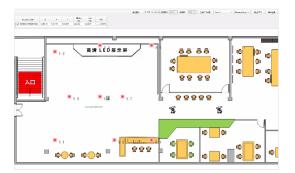
## Central Location Engine (CLE)

- Central Position Engine (CLE) for tag position calculation and clock synchronization
- Operating environment: windows ; Linux (under development)
- Read and write data through the Ethernet LAN port
- Provide API for console program and visualization software side

# Positioning Visualization Software (RTLS-DISPLAY)

- Support remote management anchor
- Support real-time display of tag positioning track
- Support UWB parameter setting
- Provide RTLS-DISPLAY source code for a fee
- Customers can customize functions independently





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