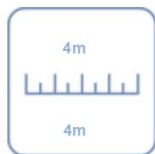
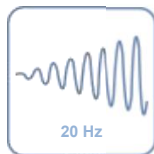


# LIDAR: CE30

Solid-state & 132° HFOV

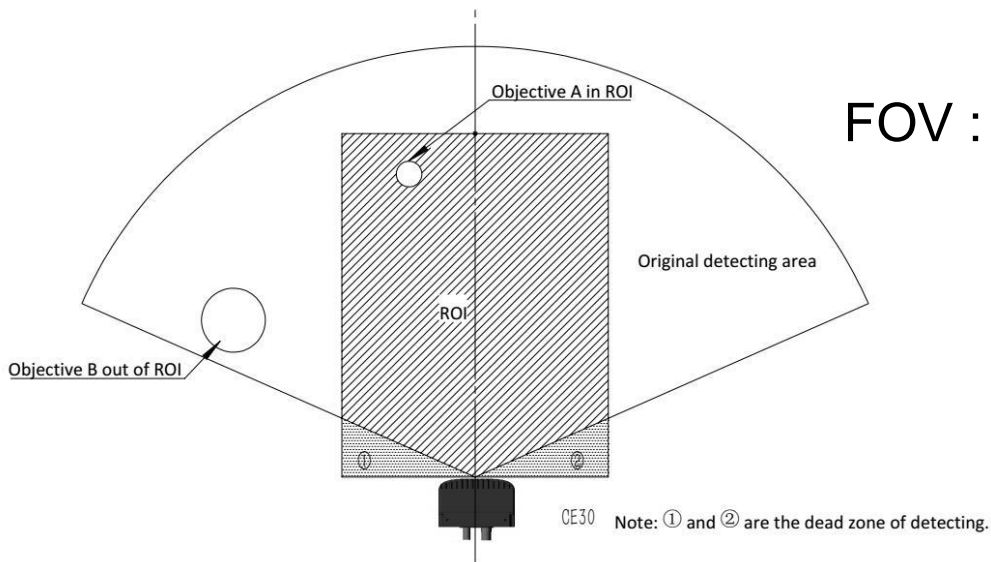




# Nature

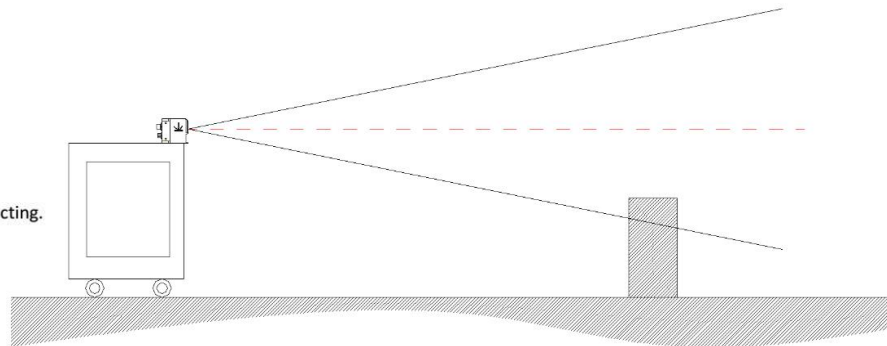


# Wide FOV of CE30



FOV :  $132^{\circ} \times 9^{\circ}$

CE30-A: ROI Function Determination



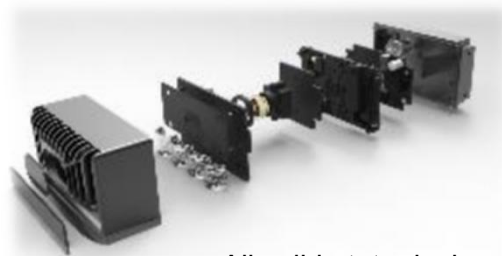
Compared with the 2D Scan LiDAR,  
CE30 can better avoid the low obstacles on the ground.



## Benewake solid-state LiDAR: CE30

### 【Highlight】

- Mass production
- Solid-state system (No rotating components)
- Calibration through software algorithms, without mechanical adjustment
- FOV 132\*9° , 320\*24 pixels
- Embedded AI obstacle avoidance algorithm
- >10,000 hours of lifetime



All solid-state design

### 【Mass production verification】

As of 12:00pm September 10, 2017 morning,

Benewake solid-state LiDAR single unit life is over 8,000h

CE30-A's accumulated life exceeded 1,000,000h

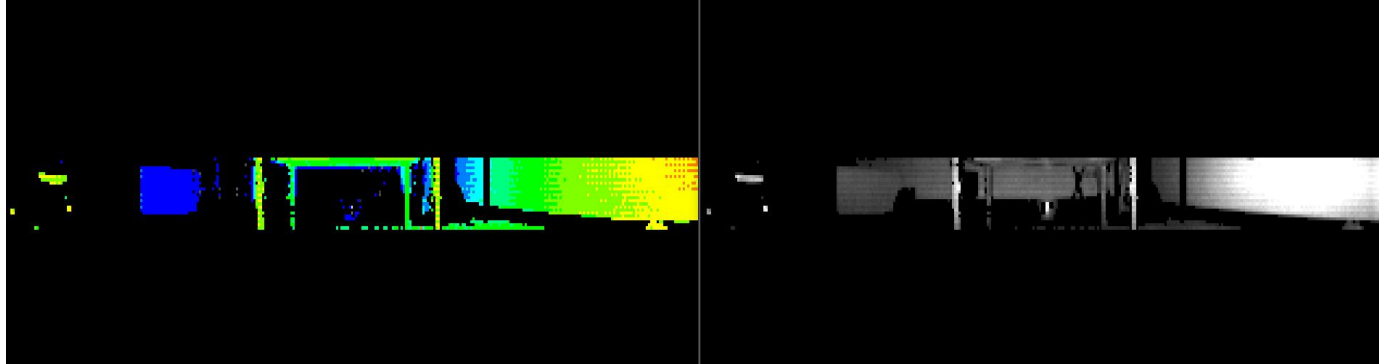
All LiDAR products' accumulated life exceeded 10,000,000h



## Solid-state LiDAR

- No rotating components : longer lifespan
- CE30-C Point Cloud Version:

Output depth information & grey image simultaneously



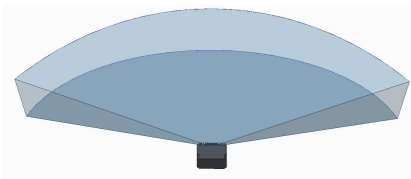


## Outdoor application

- Works under 60k lux
  - sunlight in Oct in Beijing : 20k lux
- Competitive price, better performance



FOV: 132° \* 9°  
Resolution: 320 \* 24



## Benchmark SICK TIM510

|              | TIM510              | CE30-A      |
|--------------|---------------------|-------------|
| Principle    | Mechanical rotation | Solid state |
| Range        | 2/4m                | 4m          |
| Refresh rate | 15fps               | 20fps       |
| Accuracy     | 1~4cm               | 1~4cm       |
| Channels     | 1                   | 24          |
| Price        | \$1000              | \$800       |
| Reliability  | High                | High        |



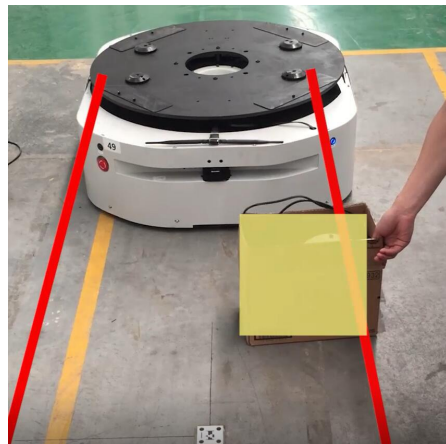


# Applications

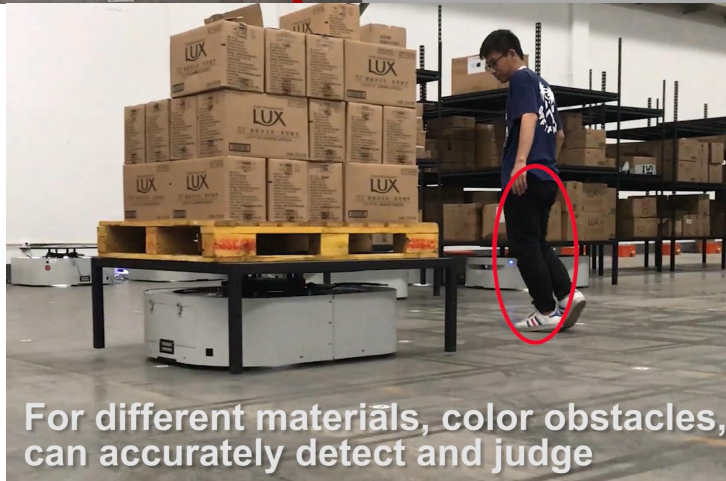
## ▶▶ CE30-A: AGV Obstacle Avoidance



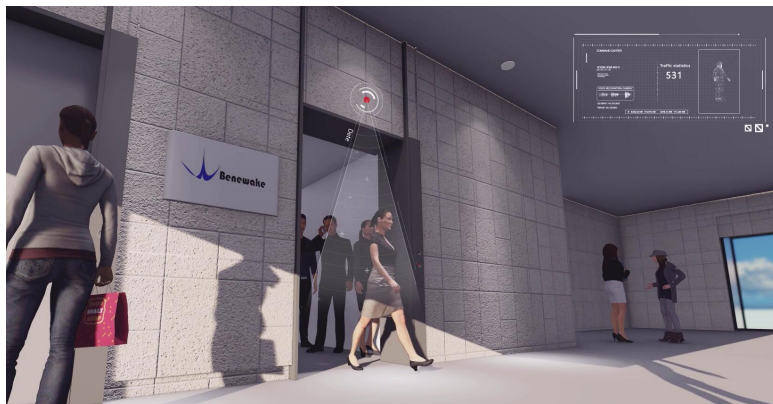
## ▶ CE30-A: Warehouse AGV Real Application



**A sudden obstacle appears during the vehicle movement, the vehicle will stop immediately until the obstacle is removed**

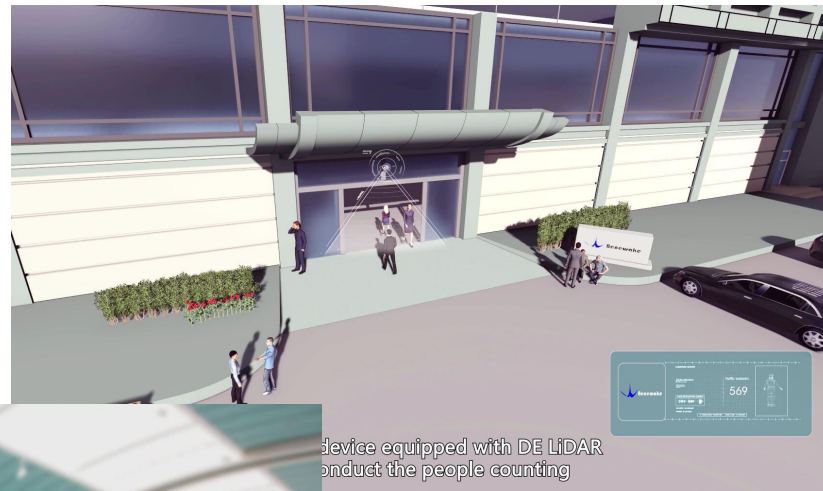


# ▶ CE30-C: Counting



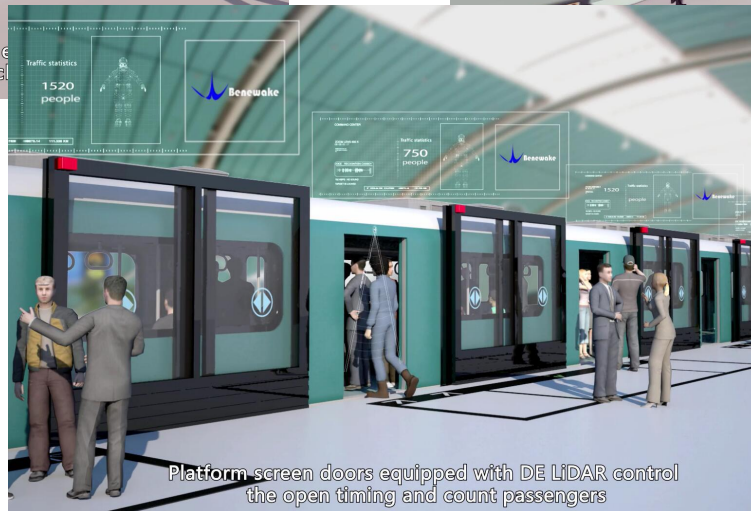
It can control the automate door of the e  
detect the passing pedestrians and open/c

## Elevator Alert



device equipped with DE LiDAR  
conduct the people counting

## Security



Platform screen doors equipped with DE LiDAR control  
the open timing and count passengers



## ▶▶ CE30-C: Large Clean Robot SLAM





Thanks

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