smart eye ➤ TUCO-3D
3D 360° PANORAMIC IMAGING

GENERAL
The centrepiece of our smart eye TUCO-3D panorama scanner is an innovative sensor head comprising a dynamic stereo vision line sensor that continuously rotates at ten revolutions/sec generating 3D 360° distortion-free panoramic views.

The dynamic stereo vision line sensor, allows high-speed rotations even in difficult lighting conditions, thanks to the high temporal resolution and to the wide dynamic range of the detectors. The large panoramic field of view of 360° in azimuth in 3D and continuous monitoring ensure to not miss events. Exploiting the on-chip processing of the dynamic vision sensor, TUCO-3D provides panoramic edge depth maps, suitable for low-cost transmission.

A user friendly tool allows the real-time display and recording of the panoramic edge depth maps. Operating in the MS® Windows environment by using a tool with graphical user interface (GUI) ensures easy setting of data quality and clear display of the panoramic grey-scale or edge-images.

ADVANTAGES
➤ Extremely wide area coverage: 360° in azimuth
➤ Panoramic views in 3D world coordinates
➤ High vertical resolution (1024 pixel)
➤ Fast image rate: ten 360° scans per second
➤ Wide intra-scene dynamic range of over 120 dB makes it perfectly suitable for outdoor applications
➤ Passive operation (no laser or additional light required)
➤ Abstract scene representation

APPLICATIONS
➤ Autonomous vehicles
➤ Search and rescue
➤ Collision avoidance
➤ Patrolling robots
## SPECIFICATIONS

- **Lens focal length:** 4.5 mm, 8 mm, 12 mm, 16 mm
- **Vertical FOV:** 48.9°, 28.7°, 19.37°, 14.59°
- **Horizontal FOV:** 360°, 360°, 360°, 360°
- **Image resolution:** 2300(H) x 1024(V), 4100 (H) x 1024 (V), 6200(H) x 1024(V), 8300(H) x 1024(V)
- **Depth:** 3D camera coordinates
- **Scanning speed:** 3600°/sec (10 rps)
- **On-chip compression:** > 30
- **Detector type:** CMOS (Dynamic Vision Sensor)
- **Dynamic range:** > 120 dB
- **Output:** Gigabit Ethernet
- **Power supply:** 12 VDC / ~1 A
- **Weight:** 1.42 kg
- **Dimensions**
  - Top (DIA x H): 80 x 140 mm²
  - Bottom (W x L x H): 110 x 125 x 70 mm³

## CONTACT

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