



crosscan GmbH Press Release

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Sensor crosscan 3D: Maximum Performance in a Compact Housing

"Sometimes more is less" - the crosscan 3 D proves that this is true and sets new standards for the industry. The worldwide patented video sensor is "intelligent" in the best sense of the word. It can do much more than traditional sensors but, with its very compact housing dimensions, it costs substantially less.

As opposed to traditional optical sensors, the crosscan 3 D is able to differentiate between moving objects and persons very precisely, even at great distances, whether they are individuals, couples, families or groups. It thereby functions absolutely reliably even under the most extreme environmental conditions - it counts with 99 percent accuracy, whether by day or by night. The effects of light or shadows does not influence the top detection rate. Within certain defined time windows, the crosscan 3 D can even recognize people, while retaining their anonymity, by calculating an individual signature based on the distance information and the movement amplitude, which are identical for every sensor and object.

Why is this innovative laser sensor crosscan 3 D so good? - It is mainly due to a single silicon chip, the so-called Photonic Mixer Device which is located inside. This chip makes it possible for the sensor to also record and "understand" three-dimensional images. Philip Lehmann, the CEO of crosscan, says: "Especially in the areas of security applications and process automation, its use opens up entirely new possibilities."

Traditional optical sensors, which are equipped simply with a photodiode, only register the brightness of points, lines or two-dimensional images. They never incorporate the spatial dimension. In order to include it, one can improvise and evaluate the running time of the light between the source of light, the object and the receiver. But up to now this has required a great amount of switching - and therefore sensors with larger housing dimensions and more complex wiring.

In the CMOS technology, a modern process of semiconductor production, which is based on the use of complementary metal oxide semiconductors and is characterized by short switching times, it is, however, possible to realize photo sensors and complex circuits as a complete detector unit on a chip. The result is that the photonic mixer device can do without bulky external electronics and can directly "see" the distances within a range of up to ten meters.



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The crosscan 3 D comes in a robust, compact and innovatively designed metal housing and is priced at a fraction of the cost of traditional systems. It can be taken into operation very easily and it can be set up and installed within seconds.