

SCANTINEL[®]
PHOTONICS

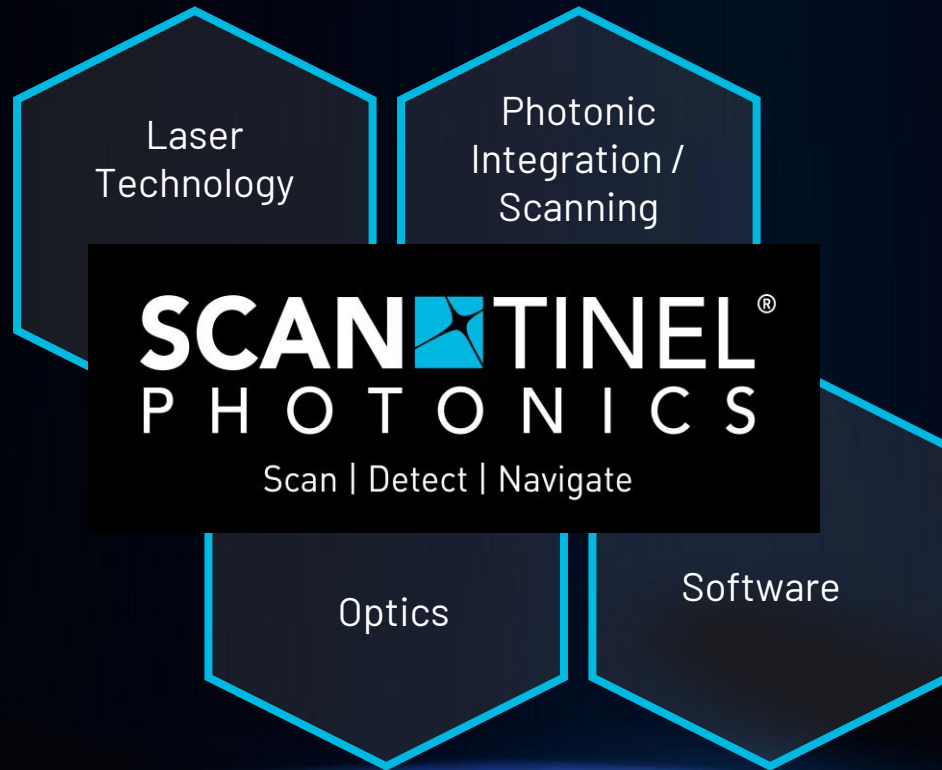
Scan | Detect | Navigate

Photonic integrated FMCW LiDAR

How to leverage silicon photonics for the next generation LiDAR

A brief introduction of Scantinel

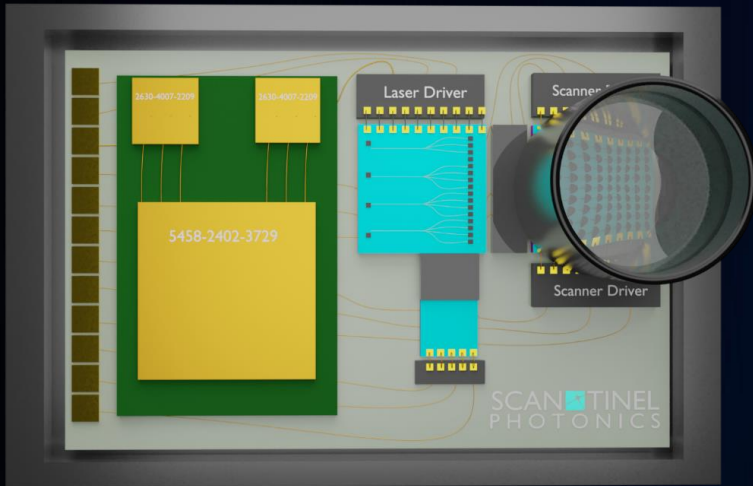
A peculiar set of competences:



- Spin-out of ZEISS
- Based in Ulm, Germany
- Focus on FMCW-LiDAR development for mobility applications

Scantinel's approach is a 1550nm Solid-state FMCW LiDAR with distinctive benefits

Our Product



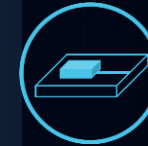
~8cm (incl. ASIC)

Our Approach

Combination of photonic integrated chip and optical collimator (Optical Enhanced Array - OEA™)



1550nm integrated swept source with narrow linewidth and high linearity



Coherent FMCW ranging



Silicon photonics to enable a full solid-state solution



Parallelization of multiple FMCW channels to achieve high MP/s data rate



Our Value Proposition

OEA™ – provides low power fully solid-state scanning

Superior SNR and over 300m range

Direct velocity in every pixel key to detect and predict narrow objects

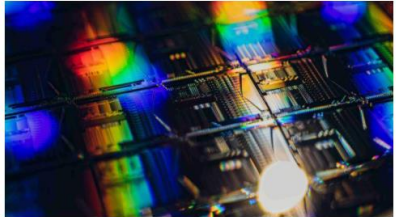
Designed for high volume manufacturing at highly competitive price position

5D – Point clouds (xyz, velocity, reflectivity) at more than 2MP/s

The first OEA™ PICs have been manufactured

Scantinel Photonics launches groundbreaking scanning FMCW lidar silicon chip for autonomous vehicles

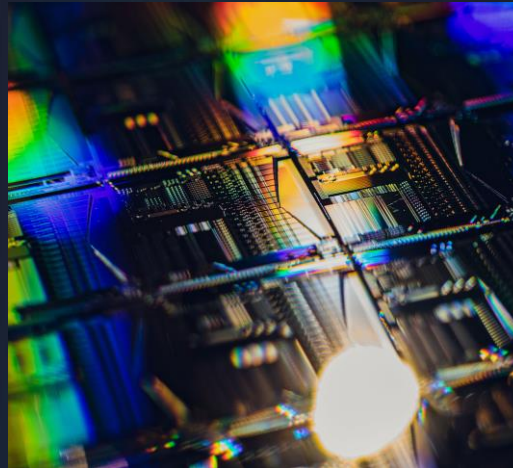
02-16-2021 03:33 PM CET | Business, Economy, Finances, Banking & Insurance
Press release from: Scantinel Photonics GmbH



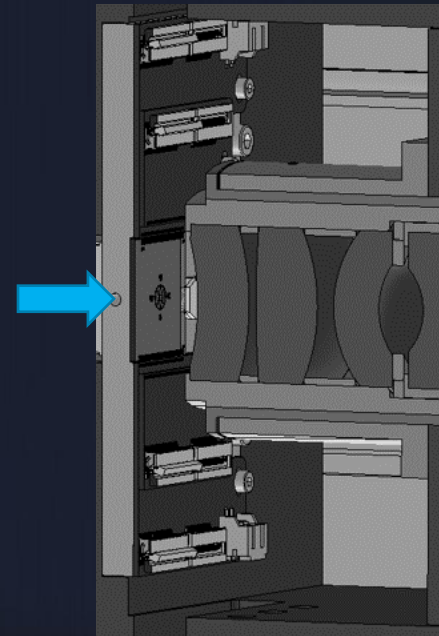
Photonic integrated circuit (PIC) from Scantinel Photonics

Ulm, (February 16.02. 2021)
Scantinel Photonics GmbH, a leading worldwide FMCW Lidar Company, launches the first chip-scale massive-parallelized scanning lidar system (OEA™) based on a photonic integrated circuit (PIC). The PIC has 256 channels and enables full performance long range (> 300m) solid state scanning.

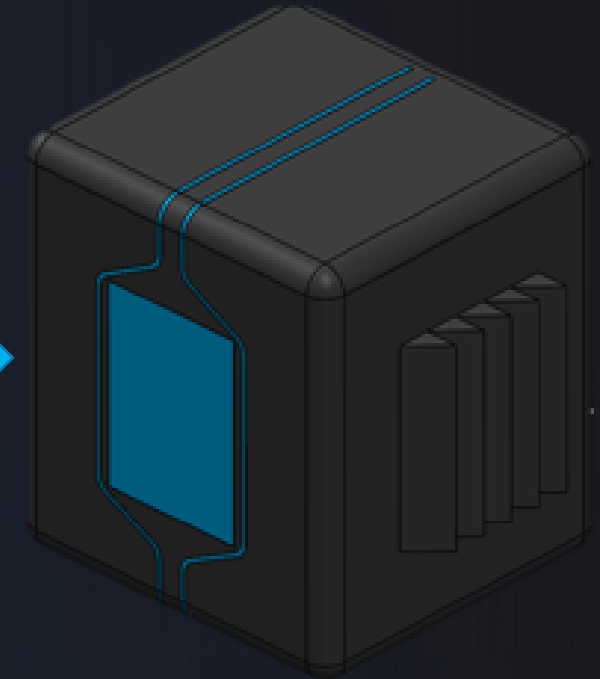
Prototypes demonstrating **multi-channel solid state scanning with full ranging performance** will be available this year



Wafer with OEA™ PICs



Prototype OEA™



Prototype OEA™ scanner

Scantinel believes that collaboration is essential

Our Ongoing Collaborations:



- Design and simulation of optical components



- Solid state beam steering/scanning
- Integrated long coherence length tunable laser sources



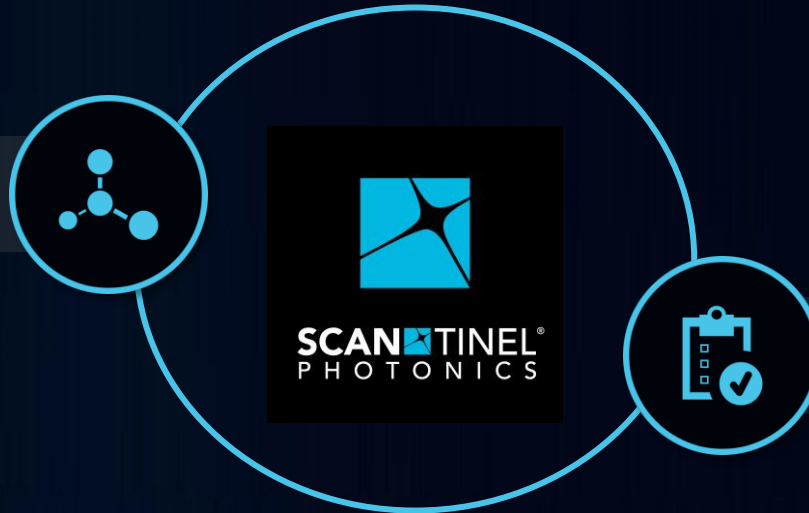
- Photonic packaging

Scantinel believes that collaboration is essential

We are looking for partnerships in the following areas:

Technical

- Low-power 1550nm switches and phase shifters with small footprint in CMOS compatible technologies
- Improved efficiency of grating out-couplers
- Integration of Semiconductor Optical Amplifiers (SOAs)
- Integration of isolators



Proof-of-Concept projects

- Long range FMCW measurement results available
- Looking for POCs in the following segments



Private
Vehicles



Delivery
Vehicles



Mobility
Services



Industrial

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Thank You.
Let's connect.



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