



# EPIC Online Technology Meeting on Increasingly Important Role for Mid-Infrared Photonics

3 February 2021

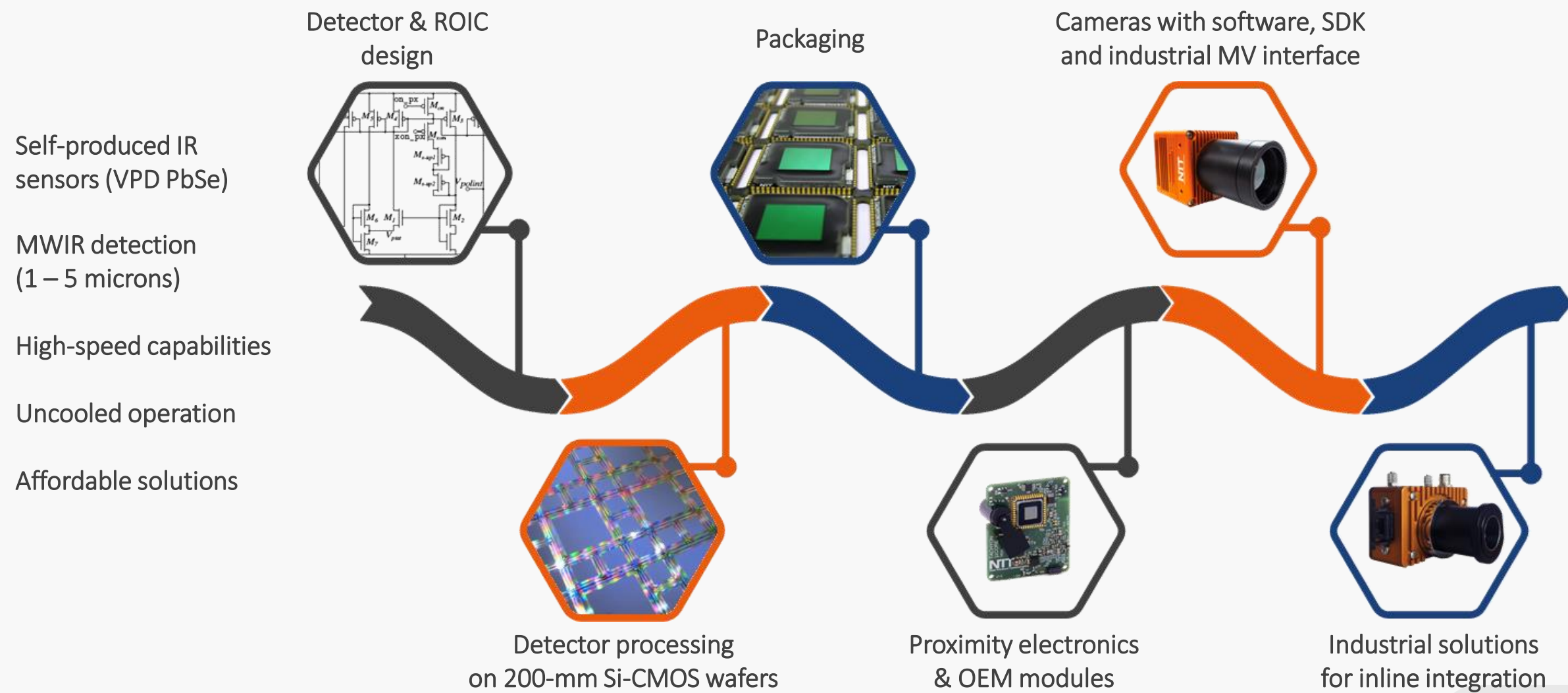
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**NIT**  
New Infrared  
Technologies

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# New Infrared Technologies: A vertically integrated company supplying innovative mid-IR detectors, cameras and industrial solutions





# New Infrared Technologies: Product and Solutions portfolio targeted to Integrators, Solution Developers and End-users

Single pixel

Linear array (256 px)

OEM modules  
(1x256, 32x32)

TACHYON 1024  
microCAMERA



CLAMIR

- Quality assurance of L-DED 3D metal printing
- Closed-loop control of laser power
- Real time monitoring of melt pool width
- Direct integration in laser optics



Winner of the Innovation Radar Prize 2018, category 'Industrial & Enabling Tech', awarded by the European Commission

TACHYON 16k  
CAMERA PLUS

- 128x128 px, pixel size: 50 um, uncooled operation
- Max. frame rate: 4,000 fps
- Snapshot acquisition
- GigE VISION & GenICam compliant
- Power-over-Ethernet



I3MS

monitoring system

- Continuous monitoring of melt pool width
- Analog output proportional to melt pool width
- Warning and Failure alarm levels



# New Infrared Technologies: mid-IR applications

- Quality assurance of laser-based processes
  - Laser DED 3D metal printing & laser cladding process monitoring and control
  - Laser welding with real-time Machine Learning processing
  - SLM processes (melt pool geometry, position and cooling rate monitoring)
- Arc welding & WAAM process monitoring and control
- Glass manufacturing quality control
- Spectroscopy & dual-comb hyperspectral imaging
- Strong collaboration with the industry in H2020 projects:





# NIT

## New Infrared Technologies

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