

SWIR cameras for Hyperspectral

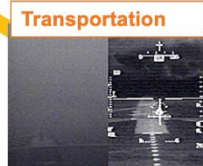
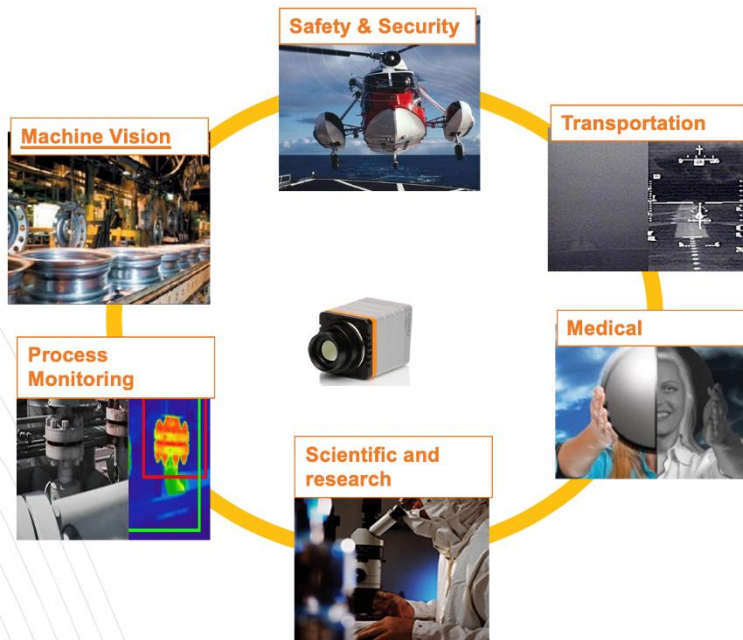
Marc Larive
Strategic Marketing Manager

EPIC Online Technology Meeting on
Hyperspectral Imaging 6 May 2020




Xenics
Infrared Solutions

Xenics activities

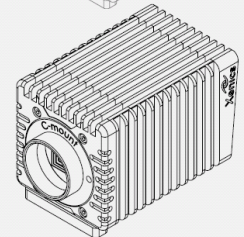
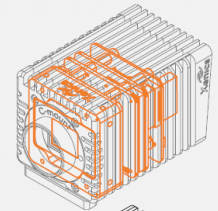
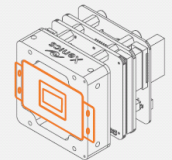


“Hyperspectral is a big underlying technology driver”

Vertically integrated manufacturing

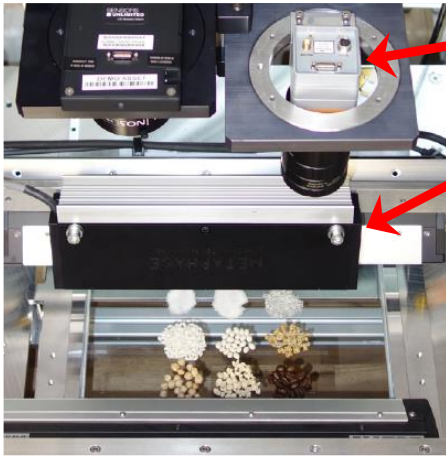
Wavelength 0.9 - 1.7 μm

- Fully independent production of InGaAs sensors, cores and full cameras
- 3 levels of customisation to meet your application needs
- Continued R&D to produce breakthrough sensors & cameras



“Xenics designs and delivers several integration blocks”

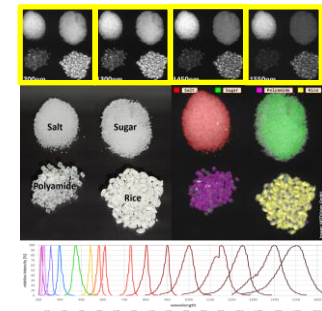
Hyperspectral and Multispectral Imaging



Presentation of the setup, using components by Metaphase, MTD, Polytec, Qioptiq and Xenics.

- High speed LineScan camera
 - Lynx or Manx type
- Multiplexed LED lighting
 - @ different wavelengths
 - Synchronized with acquisition
- Mobile conveyor
- Benefits
 - Up to 2048 pixels per line for wide belt
 - Low Cost Ultra High Definition Camera (4k)
 - High speed scanning
 - Adjustable throughput

- 2D Arrays:
 - Several solutions: push-broom with spectral analyzer in the other dimension, snapshot with FT...
 - Need for:
 - Low noise
 - High dynamic range
 - High speed
 - Wildcat: 0,9-1,7 μ m, 640x512, 200Hz, low noise, 63dB(HG) 68dB (HDR) dynamic range



Opportunities: identified next steps



- Wavelength extension:
 - Visible-SWIR
 - Up to 1,9 μ m or even 2,5 μ m
- Adaptation to the specific need:
 - Different form-factor (not the standard 4/3 or linear)
- System cost reduction opportunities:
 - Joint specification of pixel operability (selection of bins)
 - Embedded filters
 - Additional intelligence on the sensor or on the camera

NEED USERS TECHNICAL + BUSINESS INPUT



THANK YOU

Marc.larive@xenics.com

www.xenics.com