



1 Impasse de la Noisette
Verrières le Buisson
91370
FRANCE




A LEADING SUPPLIER
OF SWIR & HDR IMAGING SOLUTIONS

COMPANY OVERVIEW

 SME
PARIS, FRANCE

 SWIR & CMOS
SENSORS & CAMERAS

 **> 80%** EXPORT

 INDUSTRY

 AIR & SPACE

 DEFENSE &
SECURITY

 SCIENCE

●○ OUR PRODUCTS FOR YOUR APPLICATION



Complete Sensor Portfolio:

320x256
640x512
1280x1024
2048x1
...

Multiple Interfaces:

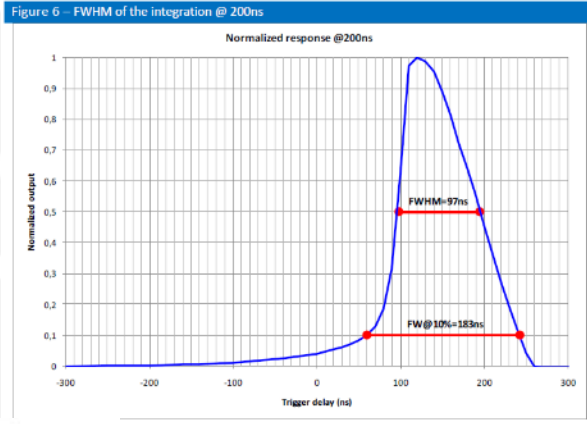
CameraLink
USB3
GIGE Vision
PAL/NTSC
HD-SDI
...

Unique Patented Features:

High Sensitivity and HDR (120dB)
Gated \simeq 100ns pulses
Low Power TEC-LESS iNUC

●○ Addressing Challenging Targets – 3D LIDAR

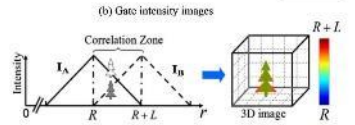
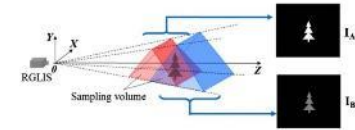
Active Imaging Capabilities - Mixed CTIA/DI Pixel architecture with short impulse width in order to propose **Highest Shutter efficiency** with WidY SenS high speed dual mode Lin/Log gated pixel design
 Optimized ROIC and Photodiode array:



Effective exposure time down to 100 ns → depth slices down to 15 m

Rise time down to 20 to 40ns ns → 3 m distance range definition

(a) The principle of range-gated imaging for canopy measurement



- Assets for
- Anti-drone solutions
 - Visibility in harsh environment (Fire&Smoke)
 - 3D LIDAR by range gating

Difficulty: Defining a technical solution vs market

●○ Addressing Challenging Targets – Hyperspectral imaging

Cost and complexity for integration is one of the major limitations to the technology

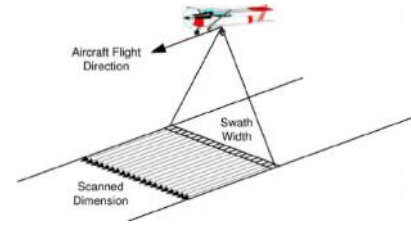
Push-Broom Hyperspectral imaging is a cost-efficient solution:

Linear sensor: 2048x1 7,5 μ m pitch

1280x1024 10 μ m pitch high sensitivity sensor with continuously variable filter

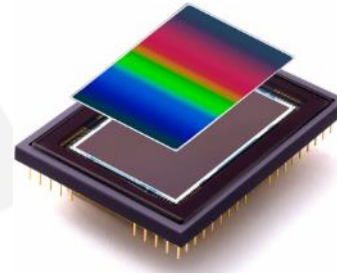
Specific design to select lines

Any lines or group of lines can be selected

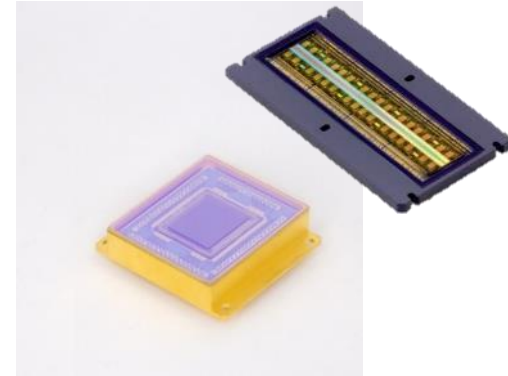


Assets for

- Cost efficient Multispectral Imaging
- Adapting wavelength on-demand depending on use-case



Difficulty: Collecting database



●○ Addressing Challenging Targets – Unpredictable dynamic range

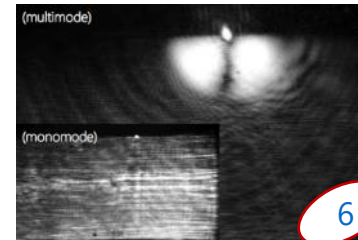
NIT unique patented native Logarithmic pixel :

Natural compression of static light but instant reaction to flash information



Assets for

- Variable lighting conditions – tracking devices
- Laser counter-measure resistant
- see spot imaging (blinking spot imaging, not spot detection)
- optical communication alignment & tracking





NewImagingTechnoNIT



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Grazie

谢谢

Danke

감사합니다

شكرا

Dank u

σας ευχαριστώ

Merci

Gracias

ありがとう

Terima kasih

Thank you

धन्यवाद

Teşekkür ederiz

Dziękuję

спасибо