

Septentrio : when it *has* to fly

The 4th EU – JP Roundtable

14 march 2019

Sales Manager Japan & Korea

Jan De Turck

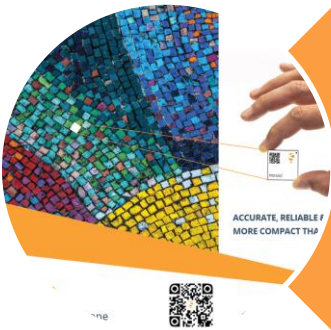
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Septentrio Introduction



UAV applications and Septentrio's solutions



Mosaic/CLAS

Who is Septentrio?

- Independent pure play GNSS receiver manufacturer
- Focus on accurate and reliable **GNSS position and timing solutions** in the most demanding industrial environments
- HQ in Leuven, Belgium with offices in US, China, Australia and Japan
- Founded in 2000. Spin-off from IMEC.

ESA / Galileo

Primary contractor since 2004

Built the first Galileo receiver

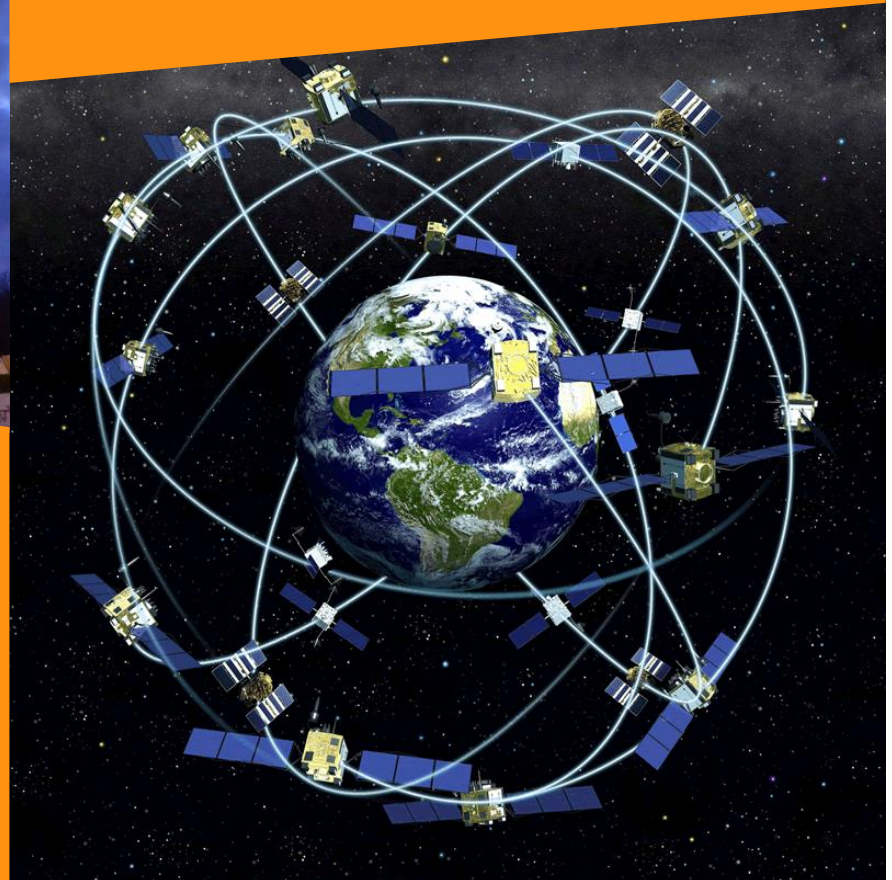


IMEC

3500 researchers

#1 independent semiconductor research institute world-wide.

Founder and major partner of SSN



Application Understanding



Application Engineering Assistance



Easy-to-integrate



Reliability



Availability



Accuracy



Security

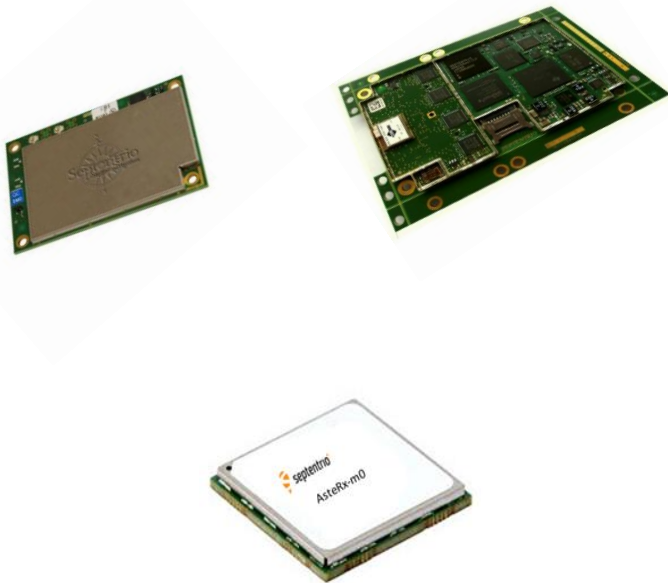


Technology

Our Products

OEM

OEM boards
for UAV and machine control



Integrated Receivers

Smart antennas
Machine Control
Base station



Reference receivers for
science and networks



Applications in UAV market



AIM+



Low pwr



Multi Const



Reliable



Accurate

CAPTURE IMAGES.
MAP ANYTHING.
ANYWHERE.



Mapping



AIM+



Multi Const



Reliable



Accurate



GeoTagZ

Inspection



AG



AIM+



Multi Const



Reliable



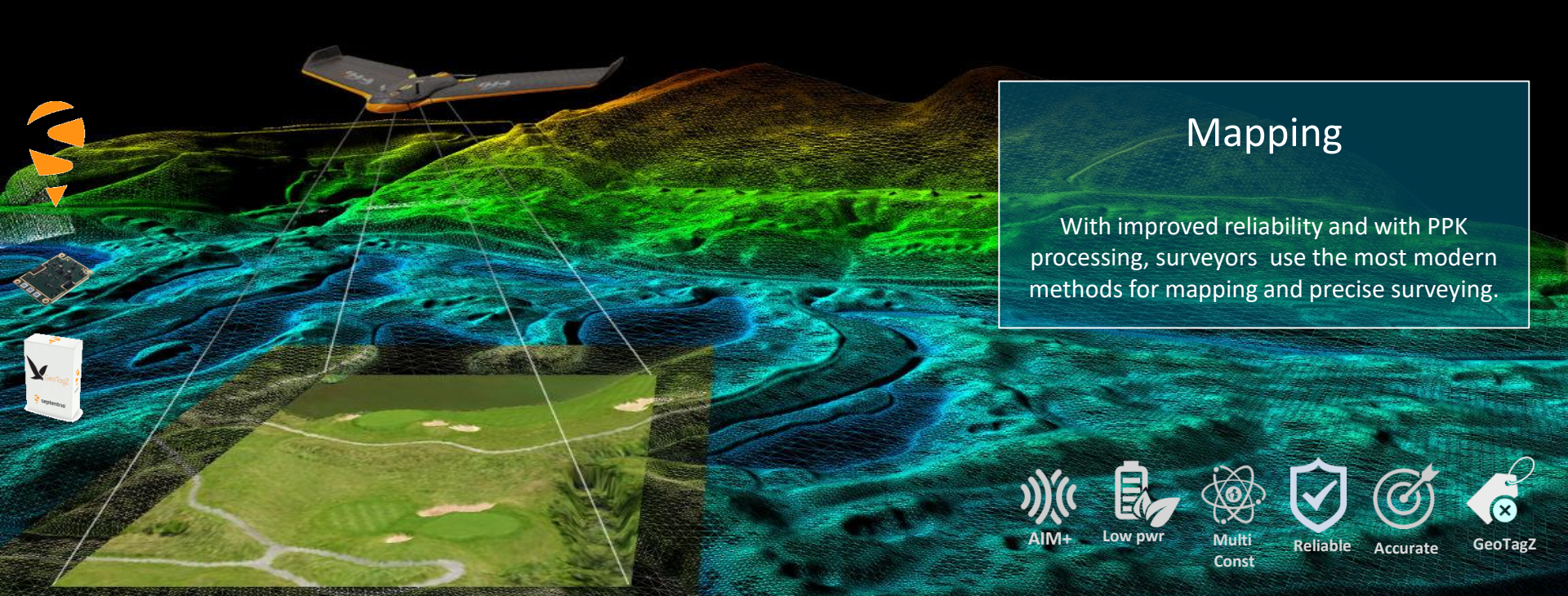
Accurate



GeoTagZ



With three downward sensors,



Mapping

With improved reliability and with PPK processing, surveyors use the most modern methods for mapping and precise surveying.



AIM+



Low pwr



Multi Const



Reliable



Accurate



GeoTagZ



Aggregates

With improved reliability quarry managers can quickly collect and process data to deliver aggregate product results for mining planning, slope stability analysis and volumetrics.



AIM+



Low pwr



Multi Const



Reliable



Accurate



GeoTagZ

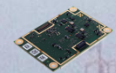


Wind turbine inspections

With improved flight stability in windy conditions and a top-mounted gimbal, turbine inspectors can spot millimeter-sized damage along all parts of a turbine's propellers.

With improved flight stability in windy conditions and precision to avoid collision in public areas, turbine inspectors can spot millimeter-sized damage along all parts of a turbine's propellers.

- AIM+
- Low pwr
- Multi Const
- Reliable
- Accurate
- GeoTagZ

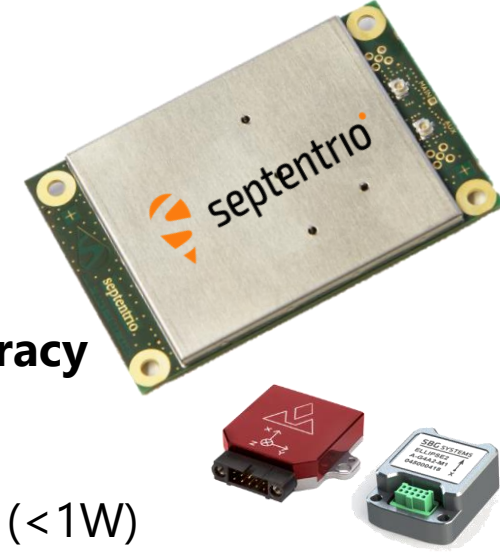


Boat inspections and onboard deliveries

With improved reliability and precision drones can avoid high costs for on-board delivery of small parcels, filled with urgent spare parts or mail

- AIM+
- Low pwr
- Multi Const
- Reliable
- Accurate
- GeoTagZ

AsteRx-m2/m2a/i - Key Features



- Best-in-class reliable and **scalable** position **accuracy**



- Industry-leading **ultra-low power** consumption (<1W)



- All-in-view satellite tracking: multi-constellation, multi-frequency, **100Hz** update rate.



- Easy to integrate : on-board logging, USB, 3 serial ports (PixHawk compatible), event marker for camera synchronization, 6-30V DC



- Sub-degree GNSS Heading and Pitch/Roll precision (m2a/i)

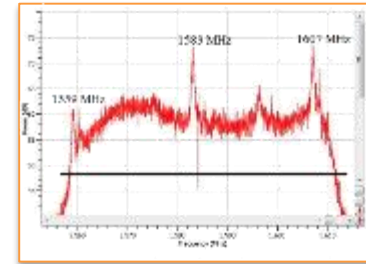
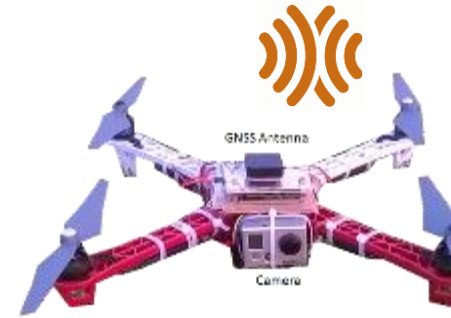


- AIM+ unique **interference** monitoring and **mitigation** system

Unique Interference monitoring/mitigation

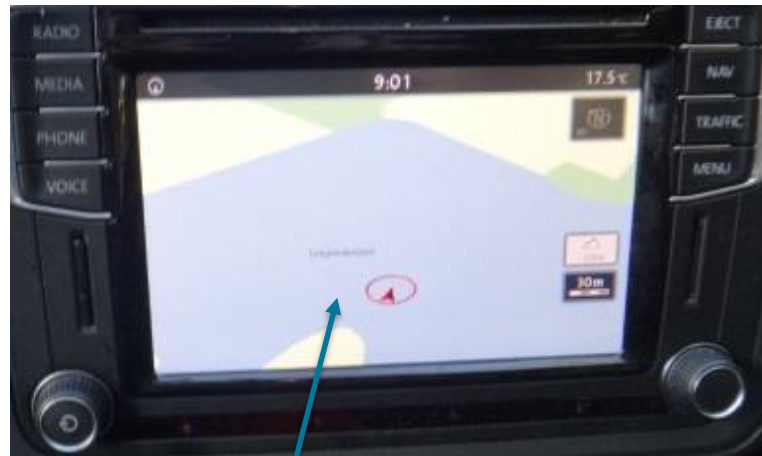
Self-interference

- GNSS receiver **interference monitoring** technology
- identification of self-interference issues

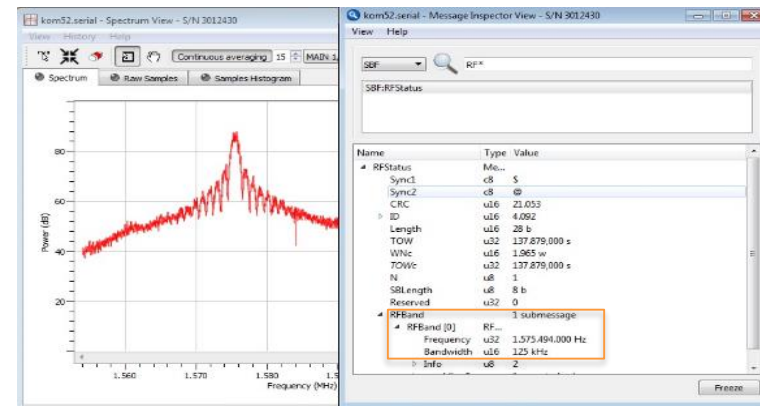


External interference/spoofing

- GNSS receiver passive and active **interference mitigation (AIM+)**
- Several **built-in techniques** identify spoofing
- And **compensate** : Reject, f Redundancy



L1 Spoofing is easy



Meet Mosaic™



**ACCURATE, RELIABLE & ROBUST GNSS
MORE COMPACT THAN EVER**

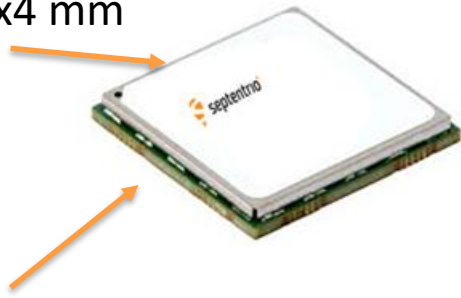
mosaic

Your positioning cornerstone



septentrio.com/mosaic

31x31x4 mm



4 chips

RF(New) + ASIC + CPU +
DRAM



LGA (surface mount)
solderable

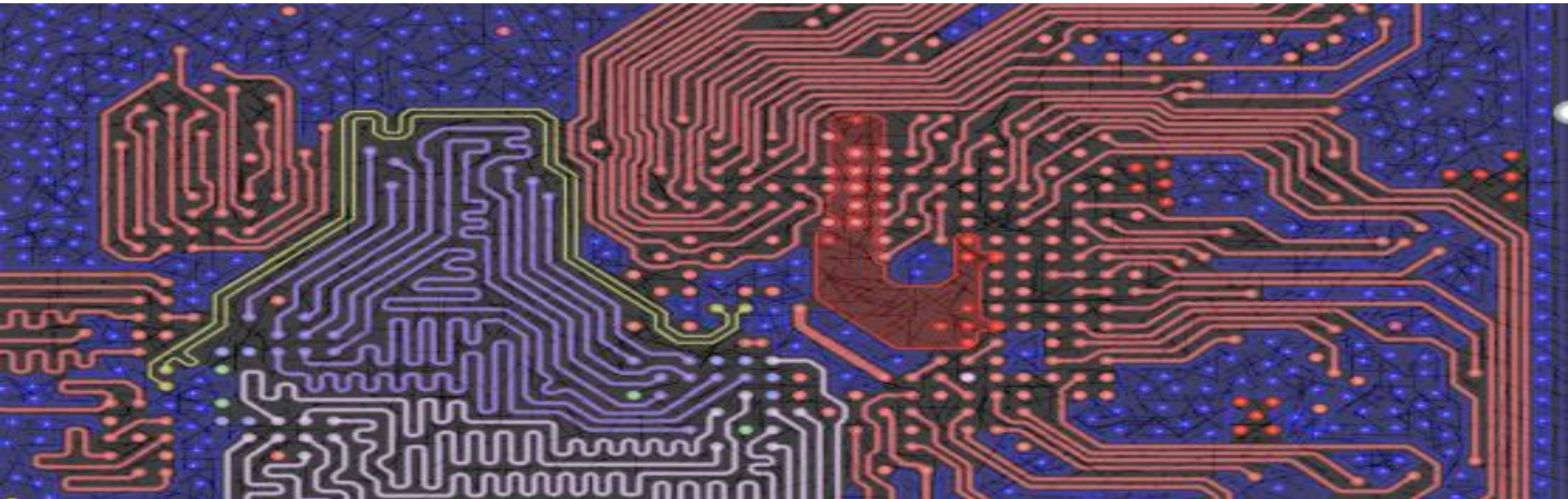
No compromise on
functionality !

GNSS

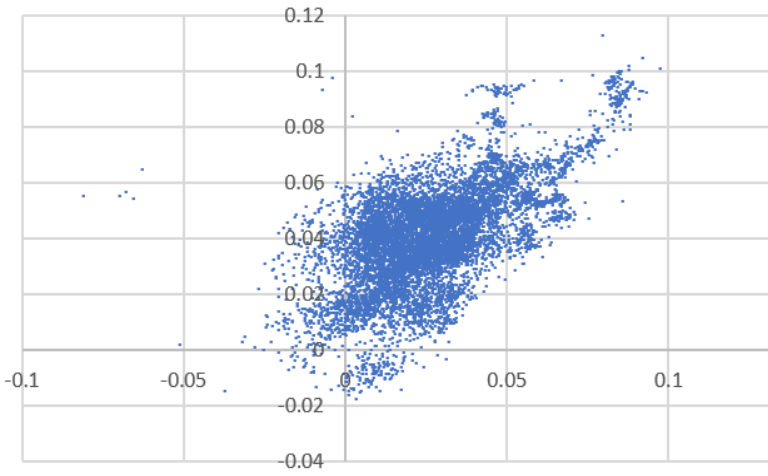
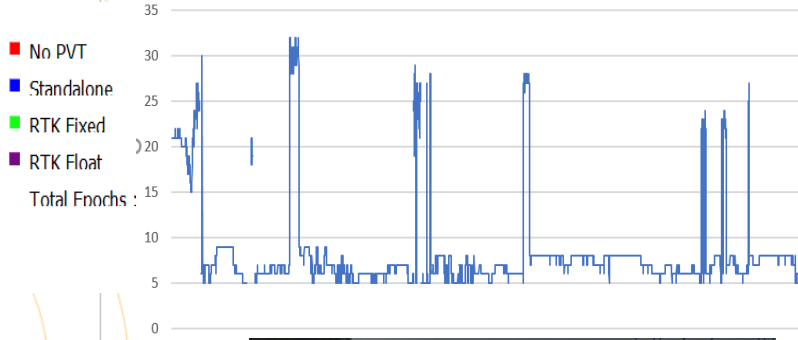
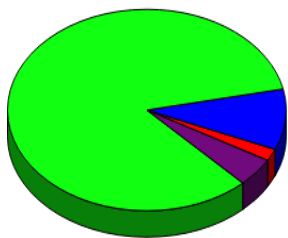
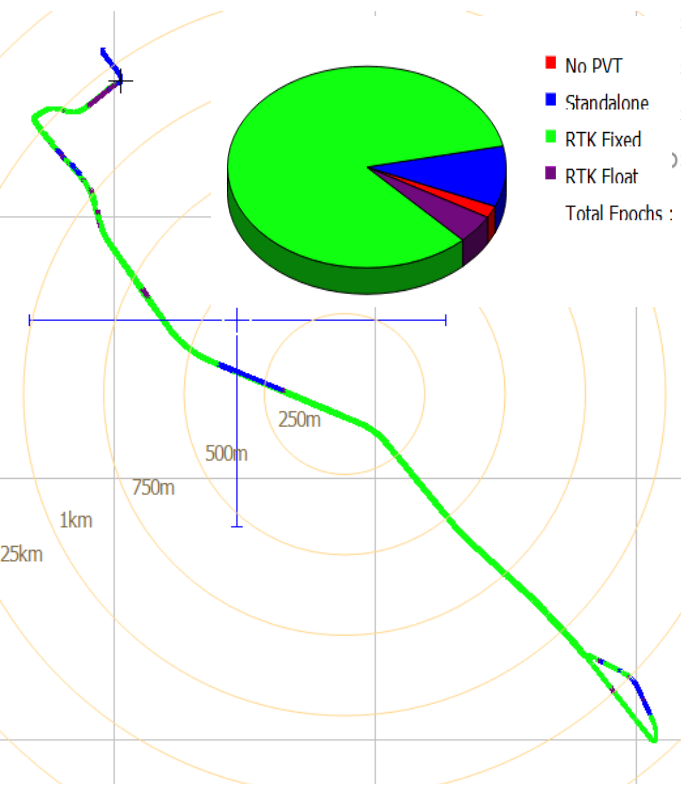
All constellations, all signals
Same capabilities as m2

Interfaces

4 COM, USB, 3 Events, Ethernet,
PPS



CLAS evaluation + comparison with RTK



How to contact us ...

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