

# accurision®

5<sup>th</sup> EU-Japan GNSS Roundtable

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# GUIDANCE™ GNSS Sensor

# Sensor Fusion Engine

## Automotive Sensor Fusion Engine

RADAR

Odometry

LIDAR

GNSS

Infrared Vision

Ultrasound

Accelerometer

Steering Angle

Stereo/  
Monocular  
Vision

Gyroscope

Magnetometer

3D HD Maps

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# Automotive Requirements

- Absolute, robust positioning solution with an accuracy of 0.5 m (UERE x HDOP) in rural/suburban environments
- Access to raw data and possibility to control measurement engine via standard interface
- Free global correction model and data
- Ability to cope with the dynamics
- Integrity and resilience
- Easy integration into sensor fusion engine



# Our Approach

- „As robust as possible, as accurate as required“
- Medium dynamic applications (public roads)
- Wide band signals like Galileo E5 AltBOC with
  - high power,
  - small multi-path envelope, and
  - low code noise
- Code phase vs carrier phase



# Our Approach

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- Medium dynamic applications (public roads)
- Wide band signals like Galileo E5 AltBOC with
  - high power,
  - small multi-path envelope, and
  - low code noise
- Code phase vs carrier phase
- Combine Galileo E5 AltBOC pseudo-ranges with Galileo E6 HAS correction model and data



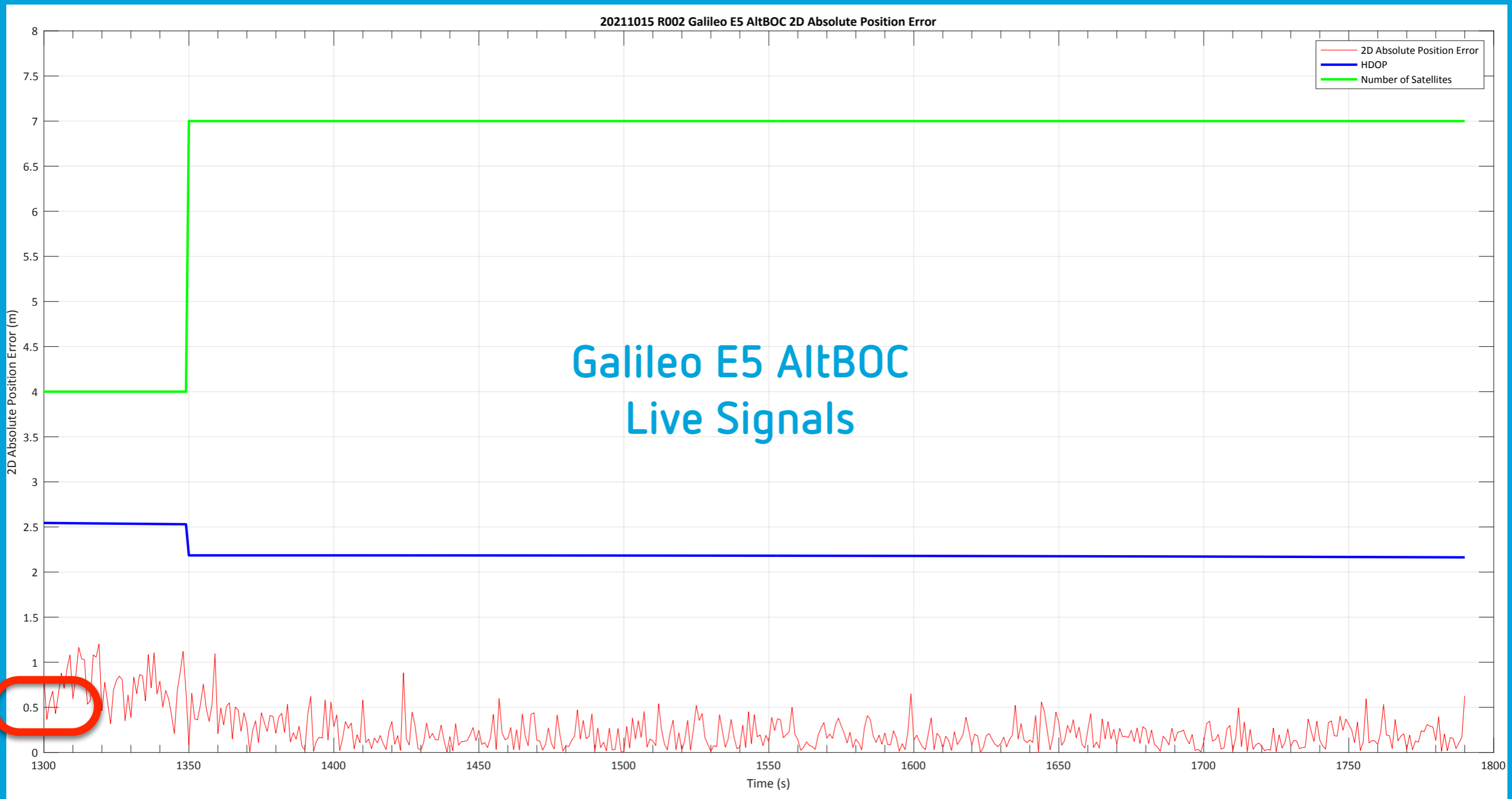
# GUIDANCE™ GNSS Sensor

- GUIDANCE™ NSE-M42™ GNSS sensor
  - Mixed-signal
  - Triple-frequency  
(full E1, E5, and E6 frequency bands)
  - Supports BeiDou, Galileo, and GPS (incl. SBAS)
  - Focus on wide-band signals like Galileo E5 AltBOC
- Free correction model and data using Galileo E6 HAS
- Focus on integrity, resilience, accuracy, and precision
- Provided as Soft & Hard IP





# GUIDANCE™ GNSS Sensor Performance



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