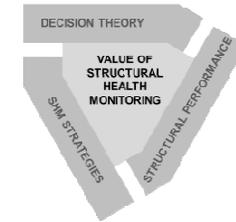


# Elaborations from an experimental campaign on a timber footbridge

Casciati F., Casciati S. / Italy



## Reference

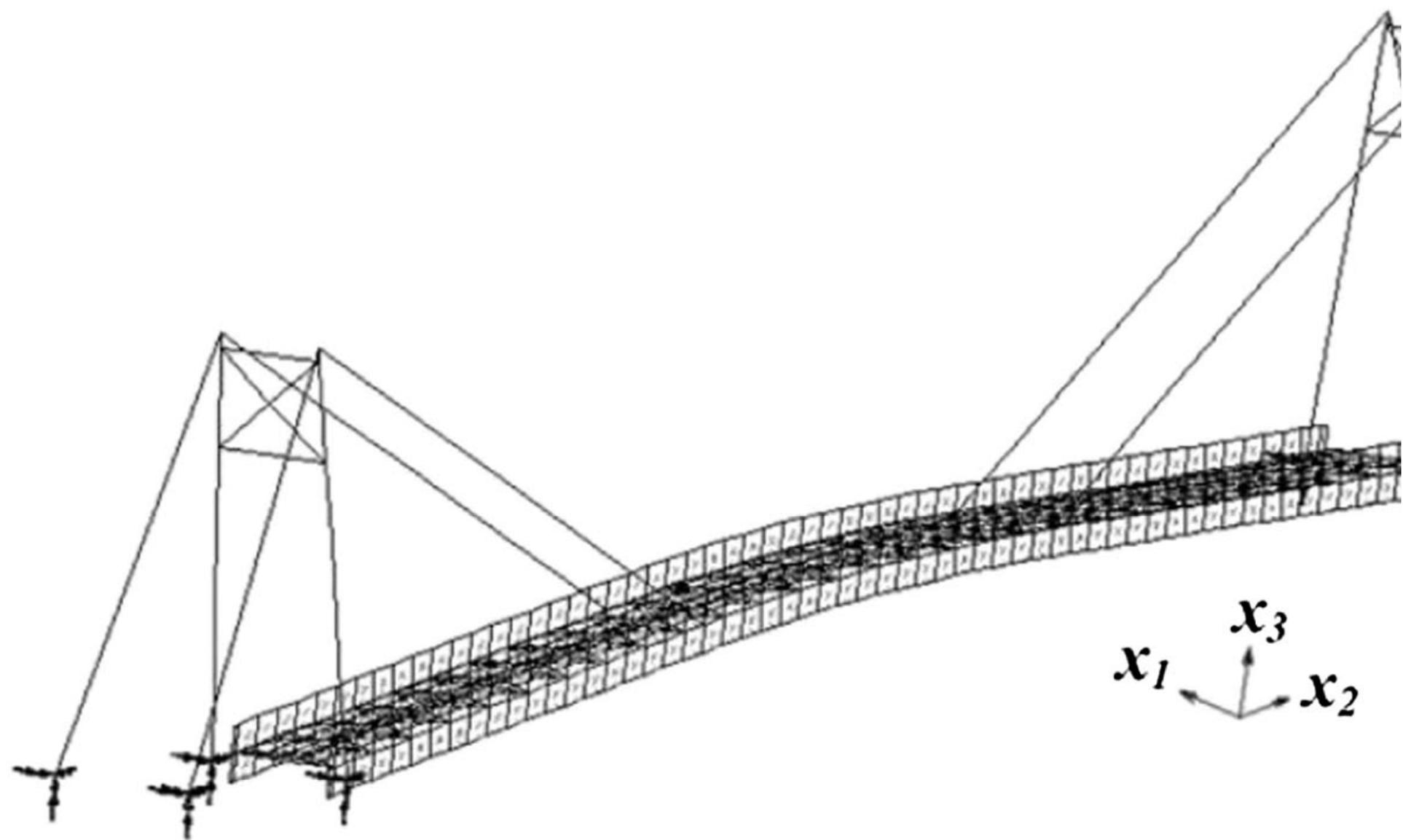
Designing the control law on reduced-order models of large structural systems

Fabio Casciati and Sara Casciati

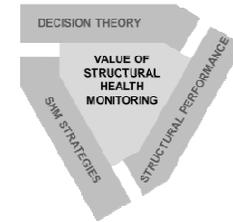
STRUCTURAL CONTROL AND HEALTH MONITORING

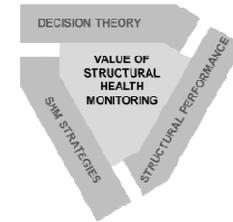
Struct. Control Health Monit. 2016; 23:707–718

Published online 1 October 2015 in Wiley Online Library ([wileyonlinelibrary.com](http://wileyonlinelibrary.com)). DOI: 10.1002/stc.1805

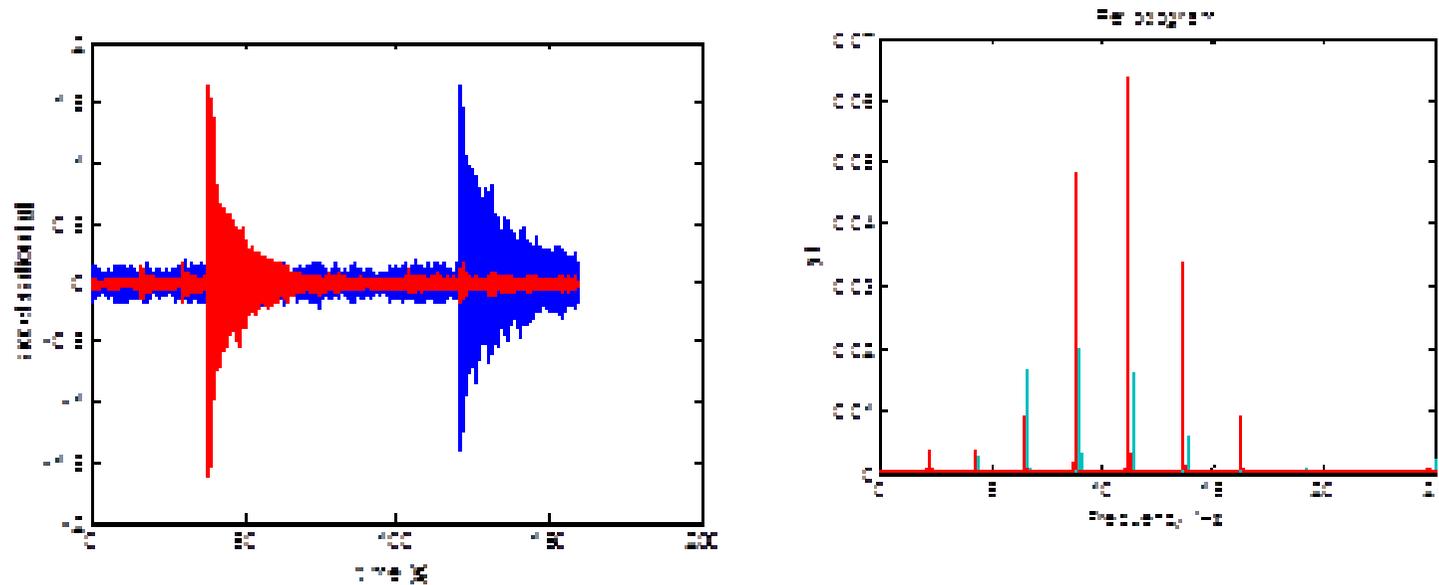


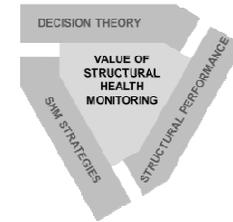
# COST TU1402: Quantifying the Value of Structural Health Monitoring





## Excitation: hammer on the cables



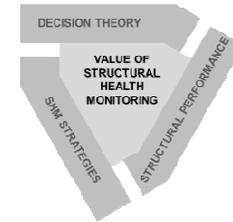


Other excitation schemes:

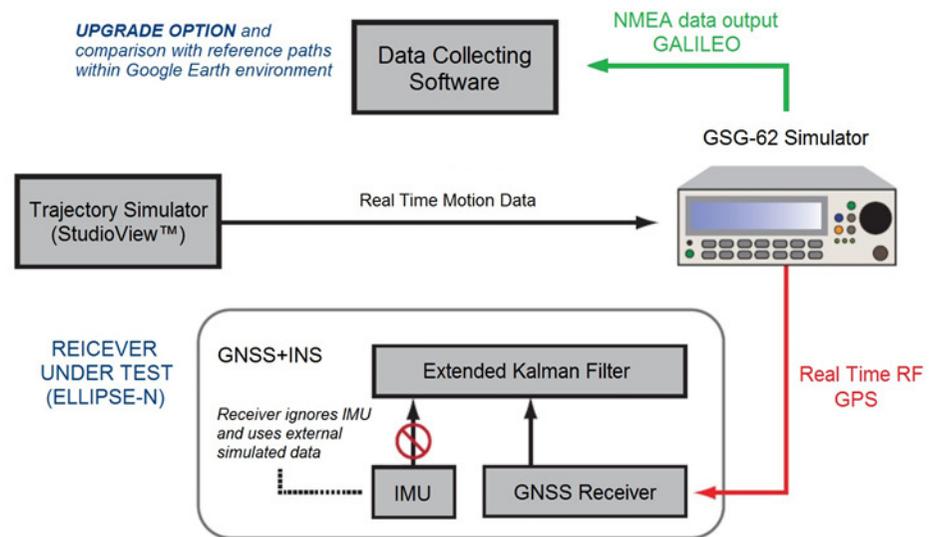
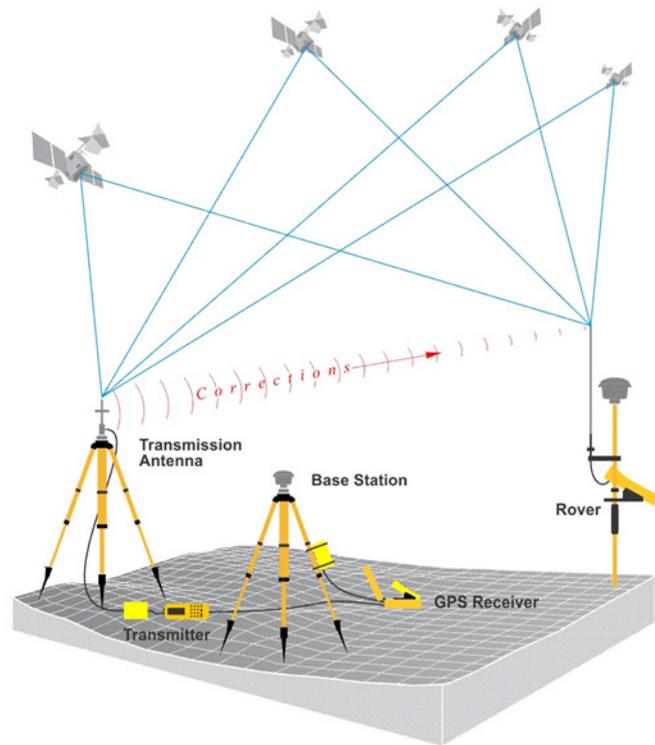
WIND

PEDESTRIAN WALKING

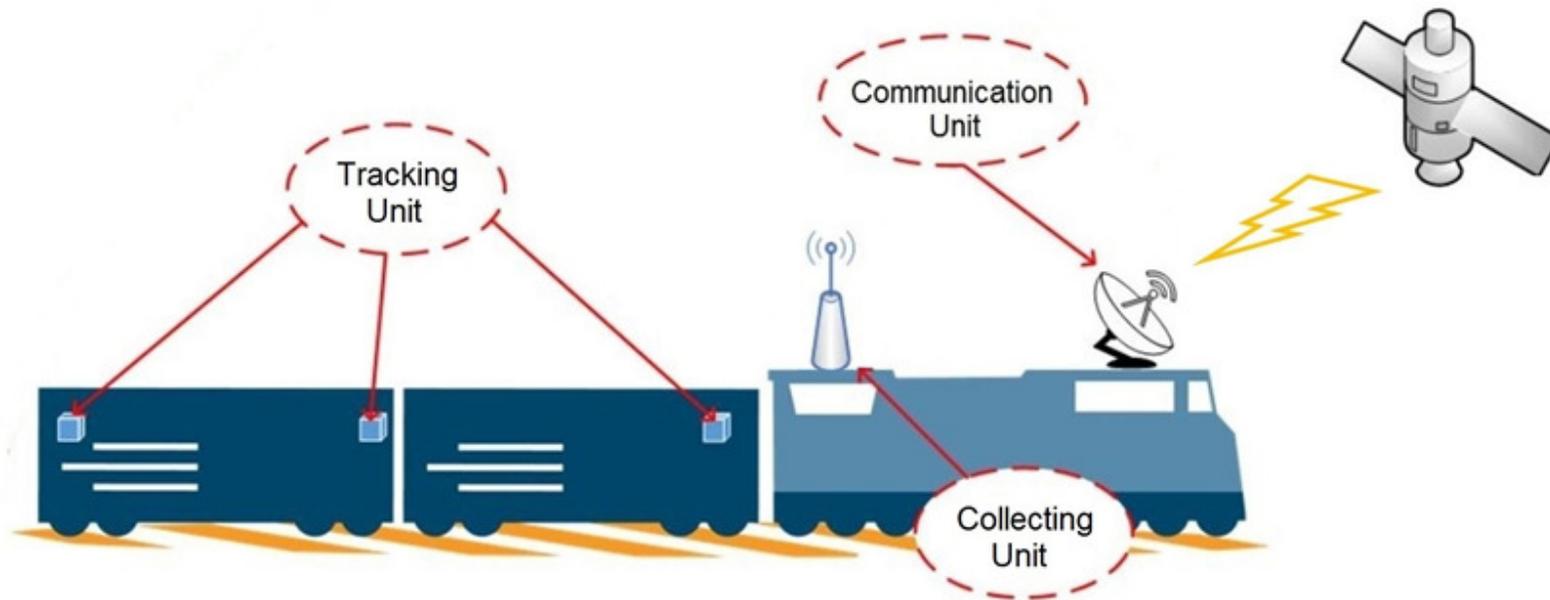
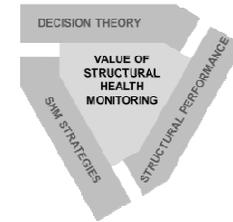
PEDESTRIAN RUNNING



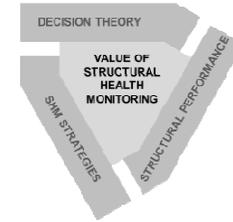
# GPS and GALILEO



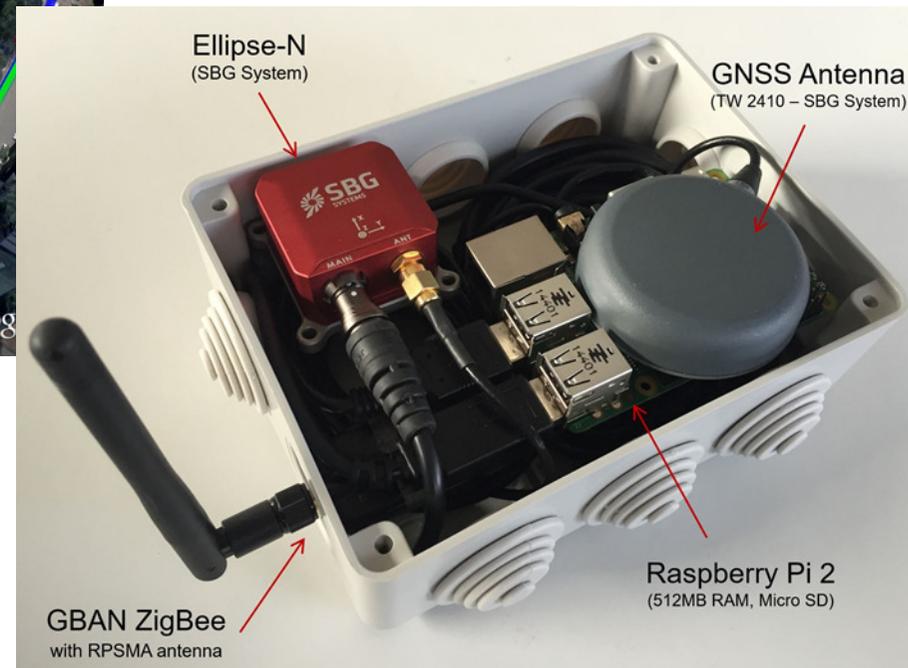
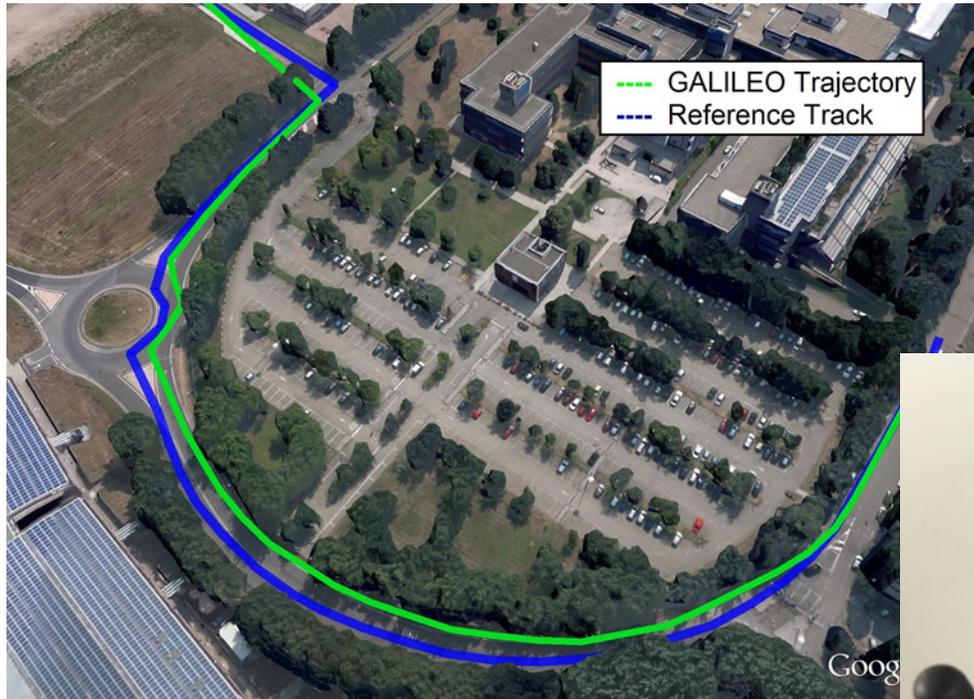
# COST TU1402: Quantifying the Value of Structural Health Monitoring

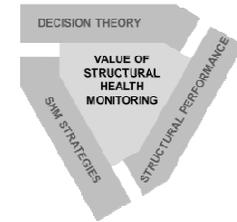


# COST TU1402: Quantifying the Value of Structural Health Monitoring

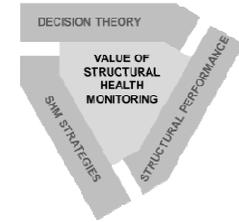


## GALILEO





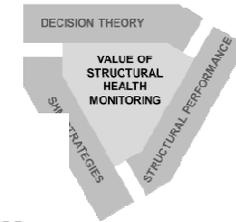
OEM (original equipment manufacturer) is a broad term whose meaning has evolved over time. In the past, OEM referred to the company that originally built a given product, which was then sold to other companies to rebrand and resell. Over time, however, the term is more frequently used to describe those companies in the business of rebranding a manufacturer's products and selling them to end customers.



# Multi-Constellation and Multi-Frequency Satellite Positioning Receivers

Centimeter-level positioning technology for OEMs and system integrators with the latest Trimble Maxwell® technology. These GPS/GNSS receiver modules harness the widest range of GPS L1/L2/L5 and GLONASS L1/L2 signals in easy-to-integrate modules that provides fast RTK initialization with proven low-elevation tracking.

# COST TU1402: Quantifying the Value of Structural Health Monitoring



## Multi-Constellation and Multi-Frequency Satellite Positioning Receivers

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### OEM Precision GNSS Receiver Boards and Modules



**BD910 Single Frequency GNSS Receiver**  
L1 GPS/GLONASS/Galileo/Compass. Single frequency receiver module designed for L1 RTK or high accuracy DGNSS positioning.  
[Datasheet](#) | [More Information](#)



**BD920 Multiple Frequency GNSS Receiver**  
L1/L2 GPS, L1/L2 GLONASS Dual frequency receiver module for RTK in space constrained mobile applications.  
[Datasheet](#) | [More Information](#)



**BD930 Multiple Frequency GNSS Receiver**  
Supports triple frequency from the GPS and GLONASS constellations plus dual frequency from BeiDou and Galileo.  
[Datasheet](#) | [More Information](#)



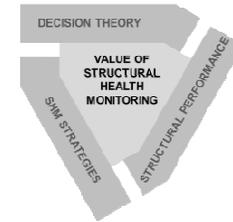
**BD970 Multiple Frequency GNSS Receiver Module**  
1/L2/L5 GPS, L1/L2 GLONASS, E1/E5 Galileo. Multi-frequency GNSS receiver for maximum performance and flexibility.  
[Datasheet](#) | [More Information](#)



**BD982 Multi-Frequency, Dual Antenna GNSS Receiver**  
L1/L2/L5 GPS, L1/L2 GLONASS, E1/E5 Galileo multi frequency GNSS receiver with dual-antenna input for precise positioning and heading.  
[Datasheet](#) | [More Information](#)



**BD920-W3G Multi-Frequency GNSS Receiver With Communications**  
L1/L2 GPS, L1/L2 GLONASS plus 3.5G Modem and WiFi/Bluetooth communications in a compact package.  
[Datasheet](#) | [More Information](#)



## BX935-INS

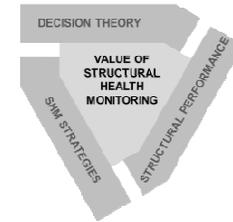


The Trimble® BX935-INS module has been designed for applications requiring continuous centimeter accuracy in a compact rugged package. By integrating inertial sensors on the same module, robust high accuracy positions are produced in all environments. The Trimble BX935-INS supports both triple frequency for the GPS and GLONASS constellations plus dual frequency from BeiDou and Galileo.

### Key Features:

- Easy to integrate rugged package
- Onboard high accuracy inertial sensor package integrated with GNSS for precise position and orientation
- 336 Channels for multi-constellation GNSS support
- Compact design for mobile applications
- Flexible RS232, USB and Ethernet interfacing
- Centimeter level position accuracy
- Proven Trimble Maxwell technology





## CONCLUSIONS

- Having the availability of a test-field represented by a pedestrian footbridge 100 m long;
- Having access to OEM technology, with their integrated devices;
- The goal is to exploit the offer by enhancing the potential of the new market offer.