

Atlans R7

Real Time Localization Solution

Atlans R7 provides 100% available Real Time Position, Speed and Attitudes. Based on the Fiber-Optic Gyroscope technology (FOG) and coupled with a GNSS data-acquisition solution, it has been designed for railway applications.



FEATURES & BENEFITS

- Convenient rack mounting
- Wide range of power supply
- Quick implementation
- High data-logging capability
- Compatible with railway standards
- Outstanding accuracy after long dropouts
- Multi-frequency and multi-constellation GNSS receiver
- Navigation algorithm optimized for railway applications
- Designed for railway applications
- North-finding even in GNSS denied environment
- Dynamic alignment with GNSS
- INS/GNSS smart coupling
- Compatible with iXblue post processing software Apps
- 24/7 worldwide technical assistance
- INS map matching and smart coupling (option)

APPLICATIONS

- Railway cartography and trajectography
- 100% available Dynamic measurements of vehicules
- Ground-truth system
- Real Time for Fleet Management
- Onboard aiding tools and passenger information

TECHNICAL SPECIFICATIONS

Performance for rail applications

	Position	Speed	Attitude
Sampling rate	Up to 200Hz	Up to 200Hz	Up to 200Hz
Along track accuracy in high density urban environment, with SBAS GNSS outages over 20 mn**	<5m 95% of measurements	<0.05 m/s 95% of measurements Fully compliant to Subset-41, regardless of speed	Heading 0.03 Roll&Pitch 0.015
Max along track accuracy without GNSS	<0.1% DT	<0.005 m/s per 100m DT	Heading 0.03 Roll&Pitch 0.015

*No map coupling implementation | **From track records on all Paris Suburb Regional Line C

Interfaces

4G/LTE*	1 x 4G/LTE interface on rear panel - Type N receptacle
Odometer input	1 x odometer input on rear panel - free-floating blind mate connector
Pulse output	1 x PPS output on rear panel - X-coded M12 receptacle

*4G/LTE for Atlans R7 full configuration(optional)

Data-logging*

Format	NMEA, iXblue post-processing format and raw GNSS data allowing PPK tightly-coupled post-processing
Capacity	Two-externally accessible SSD SATA MMC 256 Gb each (greater than 100 days storage capability)

* Data logging through 4G/LTE for Atlans R7 full configuration (optional)

GNSS

Supported signals	GPS (L1, L2, L5), GLONASS (L1, L2, L3), GALILEO (E1, E5a, E5b, AltBOC, E6), BEIDOU (B1, B2, B3), SBAS (EGNOS, WAAS, CAGAN, MSAS, SDCM) (L1, L5), IRNSS (L5), QZSS (L1, L2, L5, L6).
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Electrical

Continuous input voltage range	16.8 Vdc to 137.5 Vdc
Temporary input voltage range	14.4 Vdc to 154.0 Vdc for 1.0 s
Inrush current	11 A @ 110 Vdc 14 A @ 137 Vdc
Interruptions of input voltage supply according to EN50155-2017	Class S2 (10 ms). The rack continues to operate as intended during and after the interruption, with no degradation of performance or loss of function (Performance criterion A).

After alignment is completed

Actual performance obtained under operational condition of use

Mechanical

Rack dimensions according to F61-005	3U x 21T x 320 mm
Overall dimensions	132.6 mm height x 483 mm width x 399 mm depth
Weight	15 kg

Environmental

Operating temperature according to EN50155-2017	Class 011: -25°C to +55°C and class STO
Cooling	Natural convection
Storage temperature	-40°C to +85°C
Altitude class	Up to 15.000 m
MTBF	> 40.000 h (conservative value)
Applicable standards	EN 50155-2017 Railway applications - Rolling stock - Electronic equipment IEC 60571-2012 Railway applications - Electronic equipment used on rolling stock