SPIRENT PROFESSIONAL SERVICES

FOR AVIATION AND AEROSPACE

Move forward with confidence

Spirent Professional Services can accelerate and de-risk the testing regimen of the core systems and subsystems that support advanced positioning, navigation and timing (PNT) capabilities:

UAV/UAS/UAM navigation: Using GNSS as an integral part of a positioning engine for drone navigation and safety

Aircraft navigation: Using GNSS and GNSS error correction as a critical sensor for flight planning and IFR operations, especially during take-off and landing

GNSS-reliant systems: Assuring avionics and ground control systems that rely on accurate GNSS data, including EGPWS, ADS-B and ASMGC

With Spirent's industry-leading PNT and test expertise readily available through a portfolio of Professional Services, you can assure the safety, functionality and integrity of your PNT solutions throughout the full product lifecycle.

spirent™
Promise. Assured.

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Professional Services Portfolio

Lab as a Service

Assure your solutions in a world-class PNT test lab

Spirent will test your PNT solutions in our fully equipped UK lab, using high-end simulators, interference generators, RF Record & Playback systems, and Spirent software for scenario definition, test execution and test results reporting.

Lab as a Service is a simple, 3-step process:

1. We define the testing scope jointly with you
2. You ship your device(s) to our lab and we execute the agreed tests
3. We deliver the results to you in a full test report

If required, we can also set up a temporary test facility at your premises using our own equipment.

LAB TESTING COMPETENCIES

1 Standards Conformance Testing

Test conformance against key standards such as RED, ETSI, ANSI, RTCA (e.g. DO-229) or EUROCAE (e.g. ED-259).

2 Benchmarking

Compare your own or a supplier's solution against the rest of the industry to improve your performance.

3 Performance Testing

Lab testing to understand your PNT performance across global conditions (also for correction services).

4 Integrity Testing

Ensure your solution is robust to all (un-/intentional) perturbations encountered pre-, post- and during flight.

Installation and Onboarding

Get up and running fast with your Spirent equipment

Get your new Spirent investments up and running fast with our expert installation and onboarding service.

Spirent engineers will work at your premises to set up and configure your equipment, and provide customised integration with your existing third-party software and hardware.

Combine with a Spirent training programme to leverage the full value of your Spirent investment from day one.

Training

Accelerate your learning curve

Maximise the return on your Spirent investment with standard or tailored training courses for your test team. Spirent experts will deliver a course at your premises, at our UK premises in Paignton, Devon, or via videoconference.

A typical course is delivered over two days and includes:

- One day of training in the use of your Spirent hardware and software
- One day of tailored training geared to the specific objectives of your test programme

You'll quickly gain inhouse expertise to unlock the full value of your Spirent equipment.

SAMPLE COURSES

Training Name	Core Functionality	Customer-Specific Add-ons
SimGen Crash Course	1 day	N/A
SimGen Training	2 days	1 day
SimTest Training	1 day	1 day
SimReplay Training	1 day	1 day
GSS6450 Training	1 day	1 day
Sim3D Training	3 days	N/A
Sim3D + SimGen Package	5 days	1 day

AVAILABLE SCENARIO DATABASE

Scenario Group	Functional	Performance	Integrity
Leap Second	X		X
Motion	X		
PRN Codes	X		
Rollovers	X		
RAIM		X	X
GNSS Operability	X		X
Standards		X	
Fundamentals	X	X	
Health Monitoring	X		X
Real Events			X
Spoofing		X	X
Timing	X	X	X
Multipath		X	
Interference		X	X
Klobuchar Models	X		
Ephemeris Data	X		
Scintillation			X
Augmentation (RTK/SBAS)	X	X	X

Scenario Provisioning

Test faster and more reliably with Spirent-built scenarios

Choose existing test scenarios from Spirent's extensive database built up over years of PNT testing, or have Spirent build custom scenarios according to your test requirements.

This service is tailored to your needs and budget, with options including:

- Scenarios for any Spirent GNSS simulator
- Scenarios generated on a Spirent simulator and recorded with an RF Record & Playback system
- Real-world recordings captured in a location of your choice on an RF Record & Playback system

Available scenarios in our database include test packs for conformance with aviation standards including RTCA/DO-229 and EUROCAE/ED-259.

Test as a Service

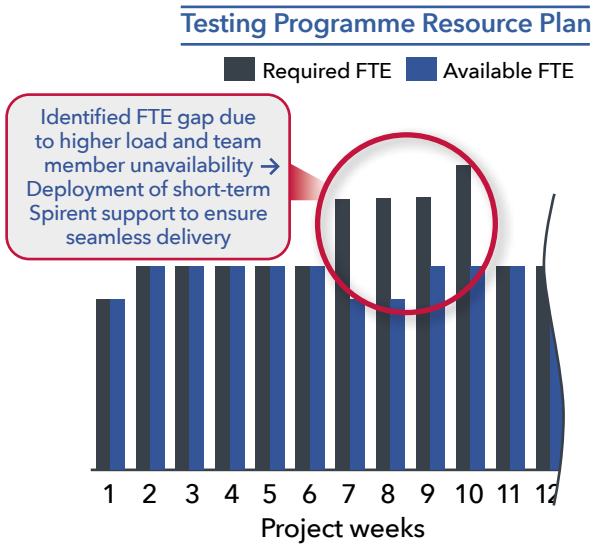
Accelerate and de-risk your GNSS testing

One or more Spirent test engineers will work onsite with your lab team to set up, manage and conduct the PNT testing element of your overall test programme.

Our end-to-end service can include:

- Test strategy
- Scenario definition and creation
- Test execution
- Test environment management
- Analytics and reporting

Engagements are tailored to your requirements: short-term to fulfil a specific need or longer-term to manage and oversee a complete PNT test programme.



Environment Assessment

De-risk your real-world operations

Spirent engineers will assess your operational environment to uncover issues affecting GNSS performance for your ground and air operations. Depending on your needs, we'll apply:

- Multipath analysis using 3D simulation
- Signal obscuration site survey
- RFI site measurements
- DOP analysis based on simulation

You'll get a detailed report that you can use to understand and mitigate operational hazards in your field deployments or determine optimum placement of ground reference equipment (e.g. RTK base station, GBAS ground stations).

USE CASE: TRACING HARMFUL RFI

An airport operator was facing cyclical issues with its GBAS operation. It asked Spirent to assess the airport environment and identify the root cause of the issues.

Spirent conducted a site survey over five days, including RFI detection and measurement.

The survey uncovered cyclical RFI events impacting GBAS performance. They were traced to a faulty RF emitter nearby, which the airport operator was then able to fix, restoring GBAS performance.

Tailored Services

Test expertise tailored to your needs

If you have a PNT test requirement that isn't covered in any of the services outlined in this brochure, Spirent can still provide a solution. Contact us to discuss your needs and to see how our experienced PNT test engineers and consultants can help.

Next Steps

1

DISCOVER

Our Professional Services experts will reach out to you and discuss your challenge and requirements.

2

DEFINE

Based on your requirements, we will define a SoW as required including timing, deliverables and budgetary quotation.

3

DELIVER

Here's where the project really gets started. We will execute against the defined SoW and provide the desired deliverables.

4

DEBRIEF

We will jointly go over all deliverables to assure that all expectations are met and no question goes unanswered.

Positioning you for success

Spirent has spent over 30 years at the forefront of PNT, working with leading government, military, industry and aerospace organisations to evaluate and test PNT solution performance.

Our test engineers and consultants have many years of professional test experience, combined with in-depth knowledge of PNT testing hardware and software. We can help you get started faster and make full use of Spirent's expertise to assure every aspect of your product's PNT capabilities.

Contact us to discuss your PNT test programme today.

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MCD00421 PNT Issue 1-00 | 04/20