

# GSS200D

## INTERFERENCE DETECTION AND ANALYSIS SOLUTION

### A new way to understand your RF environment

Because Radio Frequency Interference (RFI) are impacting GNSS performance, knowing your RF environment is critical. The Spirent GSS200D is a truly end-to-end solution that builds up a complete picture of interference activity at a site of interest.



### GNSS interference is a growing threat

Interference is the most important threat to GPS and other global navigation satellite systems (GNSS), and it is becoming more common. This is partially due to the popularization of illegal jammers of the kind that are commercially available online and powered by a vehicle's power socket. However, RFI can also be unintentional - especially in busy industrial areas. At the same time, satellite positioning data from GPS and other GNSS systems is being increasingly relied upon in many industries. For safety-related and commercially sensitive applications, such as critical infrastructure or civil aviation, intentional and accidental jamming has the potential to fundamentally disrupt key outcomes. And the implications are potentially disastrous.

Monitoring the GNSS signal environment gives the benefit of allowing interference events to be correlated with any unexpected outages or system behaviour. This allows GPS jamming to either be highlighted or, just as significantly, eliminated as a cause of the problems.

### Introducing GSS200D

The GSS200D continuously monitors and analyses the GNSS bands for interference events, enabling 24/7 constant monitoring on multi-constellation and multi-frequency bands.

When RFI is detected in one or both frequencies, the system will capture the interference data and send an encrypted event

to PT Cloud, Spirent's secure cloud. Events are characterized and given a type, because it is important to understand the difference between unintentional interference and jamming. They are also automatically ranked according to a score based on the likely impact to GNSS services, allowing a quick prioritization of the threats.

What's more, whenever an event occurs, you can choose to be notified by email almost instantaneously.

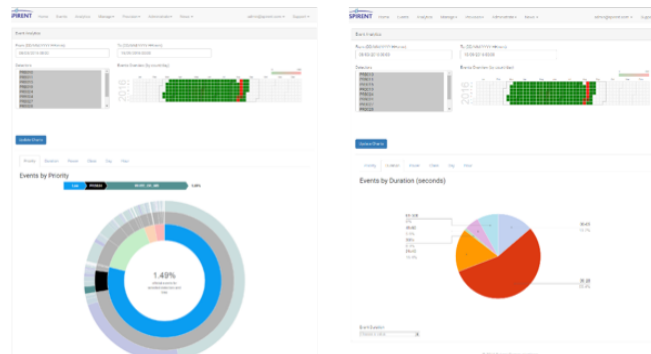
By using the GSS200D it is possible to distinguish different types of interference and jamming, to highlight multiple detections of the same jammer, to identify trends in RFI threats, and to support decision making about the development of countermeasures.

In a nutshell, the GSS200D gives you a comprehensive picture of your RF environment.

### PT Cloud

Spirent cloud server is the secure, fast and easy way to access the data detected by the GSS200D. Interference events are logged with the spectrum and spectrogram of the signal, and include information such as duration, power, type and priority of interference.

PT Cloud integrates data analytics and visualization tools, enabling monitoring over time and in-depth trend analysis - quantified information about GNSS interference threats at your site of interest.



*Discover PT Cloud's data analytics and visualization tools*

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### Key Features:

- Multi-frequency monitoring
- Automatic detection and alerts
- Interference Characterization
- Interference Prioritization
- Analytics and reporting
- Mitigation

### Specifications:

#### RF

Parameters	Value	Unit
Supported bands*	GPS L1, GLONASS L1, GALILEO E1	*Other bands considered on request
	Min.	Typ.
Maximum input power level		-25
Minimum Detectable Signal Level	-95	
Return Loss	@1575.42 MHz: -11 @1602 MHz: -8.6	
Bandwidth	L1: 16 (±8) G1: 9 (±4.5)	

#### Physical

Parameter	Value	Units	Size
Size	505x490x105 (max)	mm	Incl. extra front panel length and handle bar depth, connectors at the rear panel and feet height.
Weight	4 (max)	kg	Probe only
Temperature	+10 to +40	°C	Operating
	-10 to +65	°C	Storage
Humidity	90	% RH	Operating (Non-condensing)
	80	% RH	Storage (Non-condensing)

#### EMC and Safety and Environmental

Description	Standards
EMC	EN61326-2-1:2013 EN61326-1:2013 EN61000-3-2:2014 EN61000-3-3:2013 EN301 489-3v1.6.1 (EN301 489-1v1.9.2) Class 2 EN55024:2010 Annex C FCC CFR 47 Parts 15.107 & 15.109 ICES-003 Issue 5
Radio	EN 300 440-1 v1.6.1* (2010) EN 300 440-2 v1.4.1* (2010) R&TTE Directive 1999/5/EC Article 3(1)(a) Low Voltage Directive 2006/95/EC Article 2
Safety	IEC 60950- 1:2005 (2nd Ed: A1:2009) IEC CB Scheme
Environmental	RoHS

#### SALES AND INFORMATION

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#### Interfaces

Socket/ Port Name	Description	Function
RF INPUT	TNC female	GNSS RF input. Connect this to a GNSS antenna. It outputs 60mA DC @5V
VGA	VGA socket	VGA socket for Monitor connection
LAN1	CAT-5e RJ45 Socket	For connection to Ethernet
LAN2	CAT-5e RJ45 Socket	For connection to Ethernet
USB3.0	USB3.0 port Type-A female	2 USB3.0 Type-A ports for user access. Can be used to connect Mouse and Keyboard or other external USB storage devices.
Audio Jack	Audio Jack Line-Out	To plug an audio output device to the unit.
3-in-1 Power inlet module: (switch, socket, use)	Fused main AC socket with power switch. 100-240 V 50/60Hz 1A	For main input. Connect to the mains power supply.
	Fuse holder in the main AC socket. 250V 2A (T)	To access the fuse for main AC circuit.

#### Applications Sectors:



- GBAS/SBAS: Site selection and RFI monitoring for EGNOS and WAAS providers and operators
- Civil Aviation: Airports, national air traffic control, regulatory authorities
- Power Infrastructure: Energy infrastructure such as power grids and power stations
- Telecoms and broadcast: Infrastructure and service providers
- Transport infrastructure: Highway, Road Tolling, Ports and Inland ports, railways and logistics
- Autonomous vehicles: Autonomous vehicle providers



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