

GPS Resilient Kit



Protecting PNT Against Jamming

Key Features

- Proprietary Interference Filtering Algorithm for maximum protection
- Minimal power consumption
- Based on proven OtoSphere™ technology
- Cloud based monitoring with real time reporting of jamming attacks
- Economic, compact solutions
- Supported constellations: GPS L1 (C/A Code)
- Latency: 100ns ± 15ns (fixed)
- Insertion loss: 6.5dB ±2dB

Protecting against GNSS Jamming

With a world heavily dependent on GNSS providing positioning, navigation and timing (PNT) information, it is vital that the integrity of the signals, especially location and time accuracy, remain trusted.

Quality of GNSS signals is affected by jamming, spoofing, and other cyber attacks. Blocking GNSS signals can significantly disrupt an organization's systems or even disable the entire organization. It is essential to receive good quality signals while staying protected from these attacks.

Protection & Monitoring in One

The GPS Resilient Kit is a cybersecurity device for monitoring and protecting time critical infrastructures. It is designed to protect time servers against GNSS threats while offering reliable monitoring and real-time reporting.

It includes both a protection module (OtoSphere™) and a communication module (GPSensor), providing server protection and real-time monitoring and reporting - allowing for minimal downtime of critical networks.

OtoSphere™ – Core Technology

At the heart of the GPS Resilient Kit is InfiniDome's OtoSphere™, a small module that protects any GNSS-based system against jamming attacks. It ensures continuity of timing and navigation capability thus making any receiver more resilient.

No other solution offering similar protection is as small, light, affordable, or easy to install as OtoSphere™.

Patent protected and unique

Our unique interference filtering algorithm combines the patterns from 2 omni-directional antennas. OtoSphere™ analyses the direction of the jamming attempt and feeds it into its algorithm, enabling it to filter out the jamming/spoofing signals.



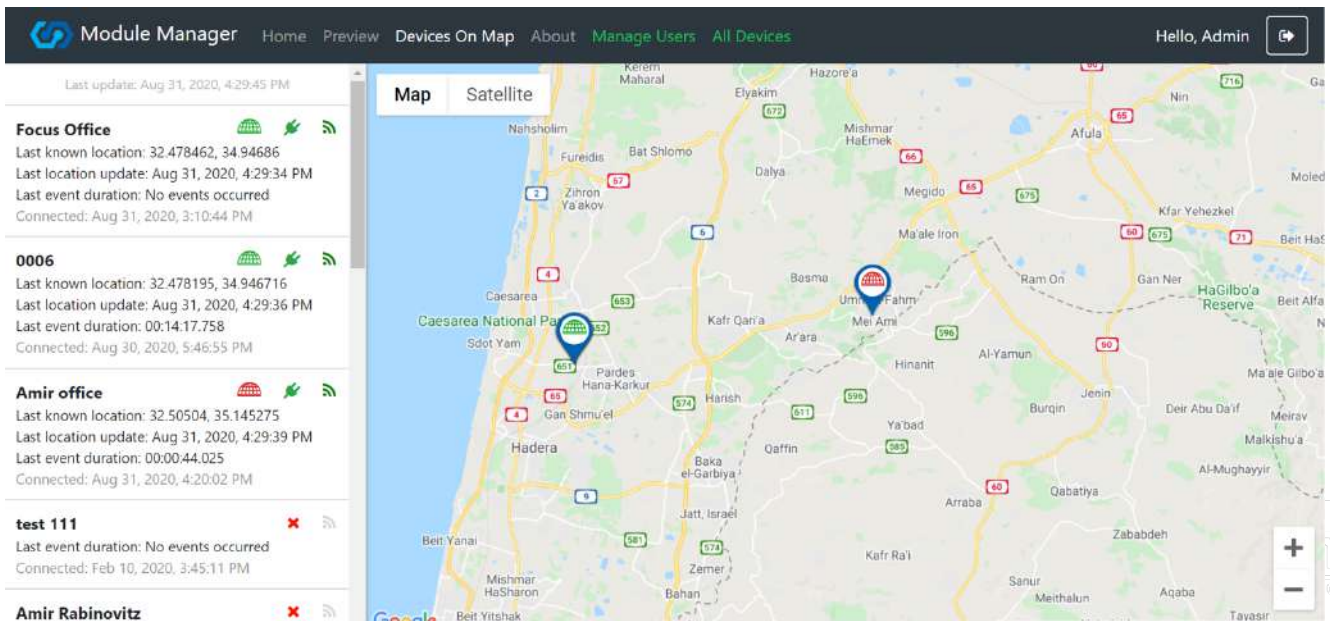
InfiniCloud monitoring and management

GPS Resilient Kit features a GPSensor and comms module. This provides real time monitoring that is reported to our security cloud (InfiniCloud) over a cellular link, or to the customer's dedicated cloud:

- Alerting of intentional and unintentional attacks on GNSS frequencies
- Which site is under attack
- Intensity of the attack at any given moment and how it changes over time
- Duration of the attack
- Regular monitoring of each site, displaying daily/weekly GNSS & cellular data:
 - Number of satellites tracked
 - Quality of satellite reception (SNR)
 - Quality of cellular reception

InfiniCloud Features

- Cloud based monitoring of critical assets
- Industry's first GPS cyber attack monitoring and management system
- Allows for control and visibility of GPS health and attacks for critical assets
- FCAPS - Fault management and handling, module Configuration, Accounting (Inventory), Performance, and Security management
- Geographical map that displays location and status of all monitored devices in real time
- Dashboard reporting of current GPS (GNSS) status, cellular signal quality, and detailed GPS attack information.



Specifications

GPS Resilient Kit Contents

- Main enclosure
- Power over RF (PoRF) module
- 2 x 26dB antennas with mounting brackets and cables

Performance

- Protected signal: 1575.42 MHz (GPS L1 C/A code)
- Pass-through signals: Glonass R1
- Latency: 100ns ±15ns (fixed)
- Compression point: 2dBm
- Amplification: 25dB ±2dB

RF Interfaces

- Main Enclosure: 2 x SMA 50Ohm (for antennas)
1 x TNC-F 50Ohm (to PoRF)
- PoRF: BNC 50Ohm (to GNSS Receiver)
BNC 50Ohm (to main enclosure)

Power (PoRF)

- Power supply: Use AC adapter - not included
- Rating: Input: 100-240VAC, 50/60Hz, 1.5A
Output: 24VDC 2.5A, 60W MAX.
- PoRF Input Connector: Micro B USB 2.0

Management

- Platform: InfiniCloud
- Connection: Wireless connection using built-in international SIM card

Environmental

- Operating Temperature: -40°C to +85°C (excludes AC adapter)
- IP Rating: IP55

Mechanical

- Dimensions (hwd): 275x155x85mm excluding connectors (main enclosure)
- Net Weight: 1.1kg
- Mounting: Mounting screws not included

Regulatory Compliance

- FCC part - 15B
- FCC47 CFR Section 2.907/2.906
- CE 2014/30/EU EMC
- 20011/65/EU+EU2017/2102 RoHS
- (EC) 1907/2006 REACH
- EN301489-1, EN301489-3

Ordering Information:

GPS Resilient Kit Part no. 6413

About Focus Telecom

Focus Telecom is a global provider of time synchronization solutions since 1995, offering consulting, cyber defence and synchronization solutions. Our end-to-end timing solutions generate, distribute and apply precise time for multiple industries: Communications, Government & Security, Finance & IT, Industry & Infrastructure. We enable our customers to build more reliable networks and systems supporting today's precise timing standards.

Want to learn more?

Contact Focus Telecom to find the right products and technologies for your timing and synchronization needs.

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