BlueSky™ Subscription and Extended Hardware Coverage Offerings

Features

- On-going security hardening to keep BlueSky™ GNSS Firewall secure
- Continuous implementation of new GPS vulnerability detectors
- Updates and upgrades of BlueSky GNSS Firewall software operating system environment
- BlueSky performance monitoring providing visibility for multiple firewalls through TimePictra™
- Assurance of proper behavior through future high-profile timing events such as leap second and GNSS rollover events
- Access to 24/7 technical support

Applications

- Wireless and wireline operators
- Utility/power grid providers
- Data centers
- Financial services
- Emergency services
- Transportation

Protection From GPS Signal Threats

1. Satellite Error
2. Environmental Effects
3. Weather Anomolies
4. Multipath Interference
5. Jamming
6. Spoofing
7. Cyber Attack

BlueSky Subscription

Security has become the most important requirement for critical infrastructure operations. Any device connected to critical infrastructure can become a target for exploitation and needs to be as secure as possible. Similar to other firewall products, the BlueSky GNSS Firewall is capable of being updated with ongoing security hardening to defend against the latest GPS attacks, both intentional and unintentional, that can cause GPS reception problems.

Security hardening is a continual process due to the constant emergence of new threats to a GPS system. Similar to network security threats, new GPS vulnerabilities are on the rise and Microchip is continuously tracking GPS signal manipulation and degradation including spoofing threats, jamming

attacks, multipath signal interference, atmospheric activity and many other issues that can create GPS signal anomalies, disruptions and outages.

BlueSky Software Engine Updates

Contained within the BlueSky GNSS Firewall is the BlueSky software engine that manages all the elements of the firewall system. This includes algorithms to aggregate and interpret the data from the GPS anomaly detectors within the GNSS firewall to make informed decisions on the validity of the GPS signal and take action to protect downstream GPS systems.

The BlueSky software engine reports on the status of the GPS firewall and the status of the GPS environment and provides a Graphical User Interface (GUI) for monitoring the current status of both.

As part of the BlueSky subscription, ongoing improvements to the BlueSky software engine are made available to update the GNSS firewall device.

BlueSky GNSS Firewall Block Diagram
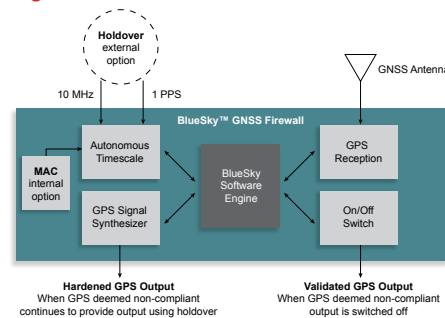
Another benefit of the BlueSky subscription is ongoing management of leap second events. For example, one benefit of tracking GNSS constellations is that simulators can be used to verify proper behavior through as yet unpublished events. In particular, the International Earth Rotation Service is responsible for determining when a leap second adjustment is inserted into UTC. These events are typically announced less than six months before the actual event. In response to a leap second announcement, Microchip simulates the leap event on the most current version of BlueSky software to assure proper behavior through the event. The BlueSky subscription enables installation of the verified version providing peace of mind that time service operations will perform smoothly through the event.

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# BlueSky Performance Monitoring From TimePictra

Many critical infrastructure environments are using GNSS in multiple locations. Not only are security and resiliency important at each location, but also the ability to have 24/7 monitoring and visibility at each location is equally important. Incorporated into the latest release of TimePictra is BlueSky performance monitoring. With BlueSky performance monitoring, criticial infrastructure operators are able to determine if a GNSS issue is isolated to a single location or, potentially, if multiple locations have been affected by an anomaly. The ability to distinguish between an event in one location versus event(s) impacting a larger area is vital for determining what kind of countermeasures may be required.

With BlueSky monitoring and visibility within TimePictra, a range of metrics can be measured such as GPS phase deviation, GPS satellite viewing and GPS signal strength. The ability to quickly view these metrics over time and perform trend analysis provides operators with a preventive view of GNSS operations throughout their critical infrastructure environment. The BlueSky performance monitoring within TimePictra is another component included as part of the BlueSky subscription.
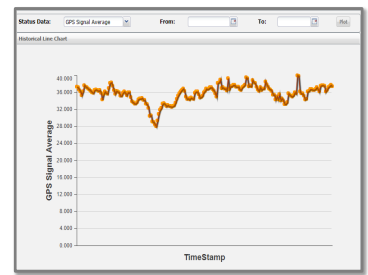
GPS Phase Deviation
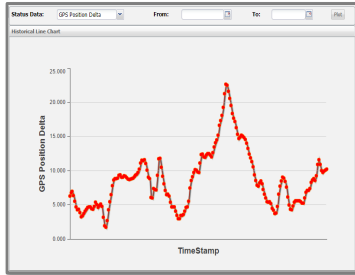
GPS Satellites in View
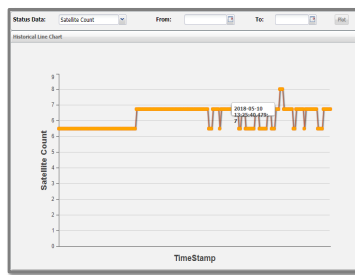
GPS Signal Strength

Technical Support

Another core part of the BlueSky subscription is access to worldwide technical support 24 hours per day, 7 days per week, 365 days per year. Microchip's technical support organization consists of timing experts with not only in-depth knowledge of BlueSky GNSS Firewall, but also deep understanding of the industry standards and network architectures that go into a synchronization network. Most importantly, the staff has years of hands-on experience in both responding to routine questions as well as restoring systems operations during emergency situations.

Incidents such as GPS jamming and/or spoofing can be very difficult to track down, requiring not only technical people resources, but also laboratory resources to re-create the problem. We maintain lab environments and support staff in North America, Latin America, Europe, Middle East and throughout Asia Pacific. These simulation labs are equipped with Microchip products and technology solutions so that an engineer can accurately mirror a customer environment to make sure that a proposed solution will solve your problem.

Extended Hardware Coverage

Extended hardware warranty coverage and/or rapid replacement services may also be purchased for the BlueSky GNSS Firewall. Additionally, Microchip has a worldwide network of partners who can provide in-country and on-site services.

Stay Informed

We encourage you to register on the online support portal at my.microsemi.com. A broad collection of information is available through the portal and Microchip keeps you informed of important updates once you have registered.

Get Protected

Please contact your local Microchip representative or directly to receive a quote for BlueSky subscription and extended hardware coverage options for your BlueSky GNSS Firewall(s).

For More Information

www.microsemi.com

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