SeeHawk™ Monitor

POLICE

FIRE

EMS

BUSINESS CRITICAL / LIFE SAFETY

UTILITIES & CRITICAL INFRASTRUCTURE

4G/5G NETWORK DOWNLINK PERFORMANCE

Multi-Application System for Critical Communications

- INTERFERENCE MONITORING
- 4G/5G NETWORK MONITORING
- UPLINK COVERAGE TESTING
- UPLINK COMMISSIONING TESTING

MADE IN THE USA
of U.S. and imported parts

PCTEL

INTERFERENCE MONITORING

Save time and improve network quality by immediately detecting interference and noise issues and investigating their source with SeeHawk™ Monitor's spectrum monitoring and spectrum analysis tools.

- Continuously monitor spectrum across multiple radio sites
- Rapidly detect under-detected service impacting problems
- Characterize the potential source of the problem
- Troubleshoot with real-time spectrum analysis
- Easily manage Remote Test Units (RTUs) from one software platform

How Spectrum Monitoring Works

1 CONFIGURE

User configures Remote Test Unit (RTU) monitoring, including noise thresholds and other parameters in the SeeHawk Monitor Platform Manager software

2 MEASURE

RTU located at site detects spectrum anomaly on the network *(noise floor rise, intermittent spike, etc.),* records and sends event data to Platform Manager via the cloud

3 NOTIFY

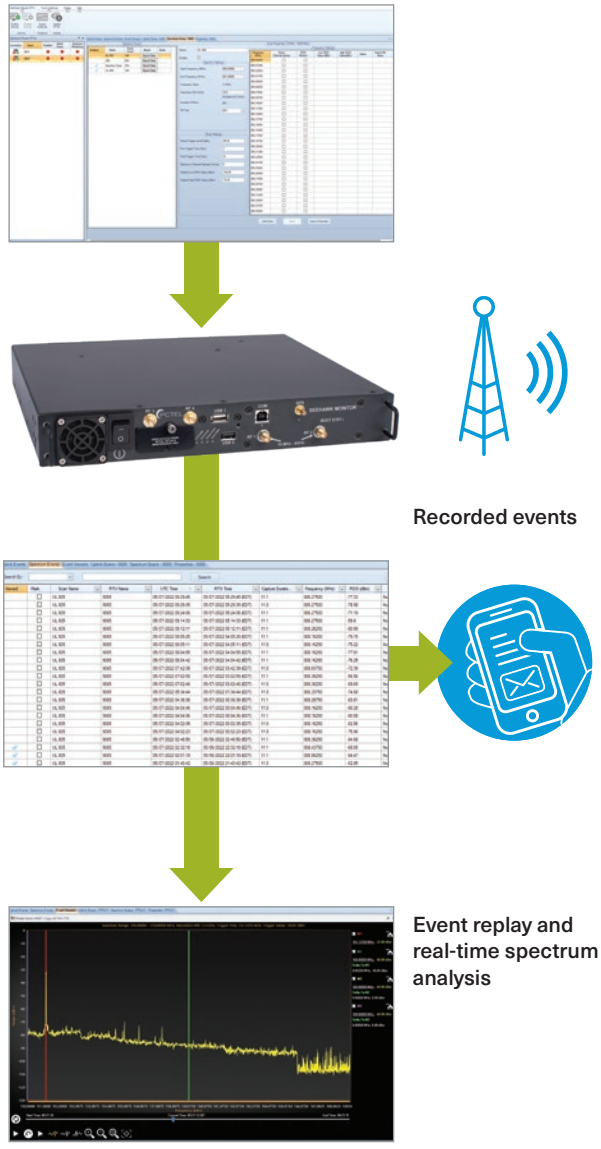
Platform Manager notifies the user of new events via email

4 REPLAY

User replays event in Platform Manager with spectrum analyzer for analysis

5 INVESTIGATE

Real-time spectrum analysis aids in identifying ongoing issues



Recorded events

Event replay and real-time spectrum analysis

AUTOMATED UPLINK TESTING

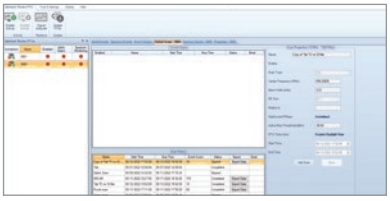
SeeHawk™ Monitor's uplink testing feature makes it easy to verify that public safety radio networks can deliver the high-quality coverage needed for critical communications.

- Automate uplink testing with SeeHawk® Touch software throughout your network
  - In-building **grid-based testing** for NFPA, IFC, and local code compliance
  - In-building system **commissioning and FCC compliance** testing
  - Indoor/outdoor **walk testing and drive testing** for network design, optimization and troubleshooting
- Prevent or mitigate interference between in-building systems and the outdoor network
- Objectively measure P25 uplink signal quality (BER and SINR) and channel power for any technology
- Easily schedule testing for multiple radio sites on the SeeHawk™ Monitor Platform Manager

How Uplink Testing Works

1 PREPARE

Remotely schedule uplink testing on SeeHawk Monitor *(no on-site support required)*



2 TEST UPLINK

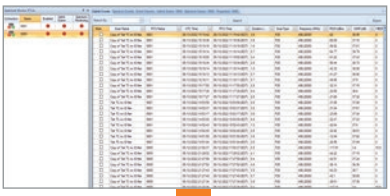
A single technician can conduct uplink testing with the PCTEL® Public Safety Network Testing Solution by activating a test radio during grid, drive or walk testing

3 RECORD

Remote Test Unit at radio site automatically measures the uplink signal, records the results, and sends data back to Platform Manager

4 EXPORT DATA

Authorized user exports uplink data from Platform Manager for import and synchronization in SeeHawk Touch software (included with the PCTEL Public Safety Network Testing Solution)



5 REPORT

SeeHawk® Touch automatically synchronizes data from SeeHawk Monitor and generates reports. Drive test reports can be generated automatically in SeeHawk Reports software.

Generate reports in real-time or on demand with user-customizable pass-fail criteria

6 SHARE (OPTIONAL)

Users share and track grid test results online with the SeeHawk™ Central cloud platform

4G/5G NETWORK DETECTION AND PERFORMANCE MONITORING

SeeHawk™ Monitor makes it easy to monitor spectrum for 4G/5G networks. An event notification system helps you rapidly detect changes in service quality and identify service-impacting issues such as interference.

- Monitor spectrum for 4G/5G coverage and service quality
- Rapidly identify service-impacting issues
- Detect rogue base stations
- Manage multi-tenant or cross-border spectrum usage
- Support coverage at live events, major venues, and critical infrastructure

How Network Monitoring Works

1 CONFIGURE

RTU scans user-selected spectrum for 4G/5G networks, providing a list of active cell IDs and channels with baseline measurements of KPIs such as RSSI, RSRP, and SINR. User configures events in the SeeHawk Monitor Platform Manager.

2 MONITOR

RTU continuously scans spectrum and sends data via the cloud to Platform Manager. Platform Manager compares new data to established baselines and event thresholds.

3 NOTIFY

Platform Manager notifies user of events via email. Events may include KPIs significantly higher or lower than baseline, disappearing channels, or the presence of a new channel or cell ID.

4 INVESTIGATE

Real-time monitoring aids in identifying ongoing issues by providing continuously updated measurements and health ratings compared to a baseline.

Real-time monitoring

SeeHawk™ Monitor System

AT A GLANCE

Remote Test Units (RTUs) installed at each radio site monitor spectrum and send data to Platform Manager.

Internet Connection

Platform Manager software remotely configures RTUs, schedules uplink testing and interference monitoring, and reports test results and interference problems.

COMPLETE YOUR SOLUTION

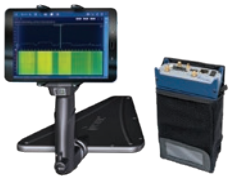
Gain visibility and insight into your wireless network with real-world data and easy-to-use testing solutions.

Public Safety Network Testing Solution

Verify and document critical communications coverage

SeeWave® Interference Locating System

Accelerate interference hunting for improved network performance



CW Transmitter (OP712) 23.5 MHz – 6 GHz

Portable CW transmitter for CW testing and commissioning tests

SeeHawk™ Central

Cloud reporting and automation platform for grid-based in-building critical communications network testing

Solving Complex Wireless Challenges

PCTEL is a leading global provider of wireless technology solutions, including purpose-built Industrial IoT devices, antenna systems, and test and measurement products. Trusted by our customers for 29 years, we solve complex wireless challenges to help organizations stay connected, transform, and grow.

PCTEL

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For more information on SeeHawk™ Monitor, contact your sales representative or visit

> pctel.com/monitor