

SeeWave®

INTERFERENCE LOCATING SYSTEM

Scanning Receiver | Directional Antenna | SeeWave® Software

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

PCTEL
an **Amphenol** company

How can you improve network performance?



Interference impacts network performance and also threatens network quality. What if you could detect and locate the exact position of interferers economically and easily? With the SeeWave® interference locating system from PCTEL® you can.

CHALLENGES

For today's ultra-dense 4G and 5G network deployments, the effects of interference may include significantly reduced throughput rates. Interferers discovered in new spectrum allocations and the re-farming of existing bands also threatens network quality.

Potential sources of interference are too numerous to count, from fluorescent lights to garage door openers to unlicensed radio signals. Detecting and locating the exact position of these interferers can be expensive and time-consuming, often depending on equipment that can be cumbersome and difficult for one person to operate efficiently.

SOLUTION

SeeWave Interference Locating System

PCTEL's SeeWave is a comprehensive tool for a single user to accurately detect the interfering frequency and locate its exact source. SeeWave utilizes PCTEL's leading edge scanning receiver. A host platform links the scanner to both a direction-finding antenna and a touchscreen tablet for Android™.

The platform can be held comfortably in one hand while the user operates SeeWave's intuitive software application. Scanning receiver, host platform, antenna, and tablet-optimized software combine to create an economical, easy-to-use, and highly effective interference hunting system.

Spectrum analysis and proprietary algorithms combine to identify harmful interference and locate its source. Mobile operators save effort, time, and cost as they work quickly to eliminate interference and maximize network Quality of Service.

DELIVERING BUSINESS VALUE

Simplicity

Easily identify numerous types of interfering signals to enhance network performance.

Productivity

Locate the exact position of interference. Identify problems efficiently by collecting and analyzing results with ease.

ROI

Expand your range of network testing applications to increase return on investment of existing PCTEL scanners.

Flexibility

Dual scanning ability allows to clear spectrum or locate interference on two bands.

SeeWave Features

PRODUCT FEATURES

Software Application

- Intuitive touchscreen interface with a simple workflow
- Numerous charting options to quickly identify interfering sources
- Simplified OpenStreetMap® and triangulation functionality



IB*flex*® or G*flex*® Scanning Receiver

- Utilizes an IB*flex* or G*flex* scanning receiver for high-performance, portable spectrum analysis*
- Interference locating function adds to scanners' testing applications across the network life cycle and boosts ROI
- Accurately detects interference on time-based signals with 4G/5G TDD synchronization (5G requires G*flex* scanning receiver)

Hardware Platform

- Host platform connects the scanning receiver to the antenna and tablet-controlled software
- Ergonomic and lightweight design for one hand operation
- Includes digital compass, pre-amplifier and GPS antenna for accurate direction finding

SOFTWARE

Scan Setup

Allows for two independent scans at any time for parallel scanning and data collection

Spectrum Charts

Touch-and-drag adjustable Selected Frequency Marker determines the directional SeeWave bearings for mapping

Spectrogram

Waterfall depicts chronological, linear visual representation of the scan power levels

Maps

Triangulate and locate the source of interference easily with map-based visualization of bearings and likely signal source areas

Reports

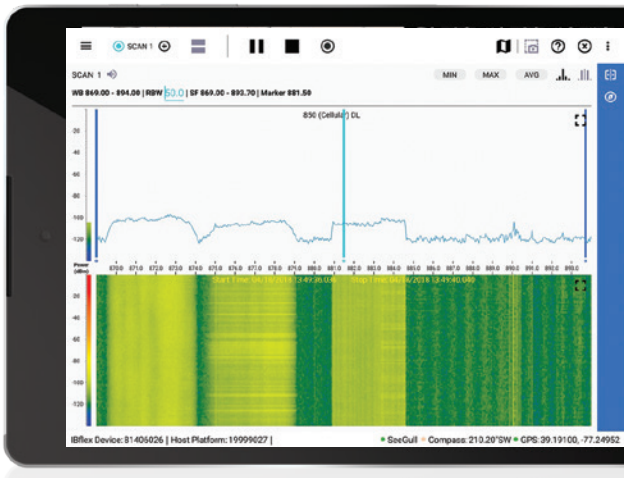
Easily compile documentation from the field, including spectrograms, triangulation maps, photos, and even videos of the interference source

Export

Export bearings and spectrum data as CSV for detailed analysis or post-processing

Android OS

Easy-to-use Android-based application, which can run on the same tablet as SeeHawk® *Touch* network testing software



* SeeWave requires a scanning receiver with the Enhanced Power Scan (EPS) scanner firmware option, included with super-band configurations. Older SeeWave host platforms may require an adapter kit to connect to G*flex* scanning receivers.

SeeWave Specifications

Preamplifier / Attenuator

Preamplifier bandwidth		200 MHz to 6 GHz		
Preamplifier gain	200 MHz – 2.7 GHz 2.7 GHz – 4.5 GHz 4.5 GHz – 6.0 GHz	**Bypass:** 0 dB 0 dB 0 dB	**Step 1:** 9 dB 6 dB 4 dB	**Step 1 & 2 :** 25 dB 20 dB 15 dB
Attenuation steps		0, 10, 20, 30 dB		

Digital Compass and GPS

Digital compass accuracy	<= 5 deg, nominal
GPS	Refer to scanning receiver specifications

Physical

Maximum power	0.9W with preamplifier on
Size	20.3" D x 10.0" W x 10.5" H (515.6 mm D x 246.4 mm W x 267 mm H) with 11" tablet mounted and antenna
Weight	4.1 lb. (1.9 kg) includes tablet, antenna, and cables
Tripod mount	¼ – 20 UNC x 9/32" (7 mm)
Temperature range	Operating: -10°C to +50°C; Storage: -40°C to +85°C
RF antenna connector	N Male
Cables (to Walk Test Kit)	50" (1.3 m) Length
Safety (CE)	EN 60950-1
EMC	EN 301 489-1
Shock and vibration	MIL-STD-810G, SAE J1455
RoHS	Compliant (6/6)

Directional Antennas

OP436 Antenna, 690 MHz – 6 GHz Log Periodic	
Size	13.8" L x 5.9" W (350 mm L x 149 mm W)
Weight	0.8 lb (0.4 kg)
Gain	6.5 dBd
RF antenna connector	N Female
OP016 Antenna, 440 MHz – 480 MHz Yagi	
Size	22" L x 13.2" W (558 mm L x 335 mm W)
Weight	1.2 lb (0.54 kg)
Gain	6.5 dBd
RF antenna connector	N Female

For more information about the SeeWave interference locating system, contact your sales representative or visit

> pctel.com/interference-locating-system/

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