OPTIMIZE ENTERPRISE WI-FI

Sapphire Eye® 6200 from 7SIGNAL® is a revolutionary, patented Wi-Fi optimization sensor designed to improve the digital experience of end users. The discreet Sapphire Eye 6200 hardware and 7SIGNAL’s Software as a Service (SaaS) platform work together to mitigate risk associated with downtime which can impact revenue, productivity, customer & employee experiences. 7SIGNAL closes the visibility gaps that are to blame for digital connectivity problems with its unique “outside-in” point of view, and gives IT full control of the network.

HOW IT WORKS

The Wi-Fi 6 Sapphire Eye 6200 works as a Wi-Fi client, connecting to nearby AP’s while monitoring their performance around the clock. It also continuously monitors RF conditions, including spectrum analysis. Data collected by the Sapphire Eye is sent to 7SIGNAL platform in the cloud for analysis. It is then translated into a data-rich dashboard that provides insight into visibility gaps that hinder optimal enterprise Wi-Fi performance.

THE KEY DIFFERENCE

Unlike your infrastructure vendors, 7SIGNAL provides visibility of the Wi-Fi experience from the end-user’s point of view (from the outside-in). 7SIGNAL monitors the edge of the network (Layers 1-7) where the wireless experience matters most.

AT A GLANCE

- Optimize enterprise Wi-Fi from the outside-in
- Mitigate risk associated with connectivity failure
- Proactive user experience impact analysis
- Identify root cause
- Accelerate remediation
- Identify digital experience performance gaps
- Send alerts and alarms to existing ticketing, ITSM, AIOps and BI platforms
- Full spectrum analyzer with packet capture
- Supports any AP vendor

Schedule a demo today!
A COMPREHENSIVE WI-FI OPTIMIZATION SENSOR

Sapphire Eye® 6200 sensors capture and analyze the entire RF environment and ethernet connections. Its full range of capabilities are listed below.

<table>
<thead>
<tr>
<th>SYNTHETIC TESTS (L2-L7)</th>
<th>RF ANALYSIS (L1-L2)</th>
<th>TROUBLESHOOTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>24x7 Wi-Fi &amp; Ethernet interfaces</td>
<td>Full spectrum analysis</td>
<td>Historical data for passive and active tests (90 days)</td>
</tr>
<tr>
<td>Beacon, association, authentication, captive portal, DHCP, DNS</td>
<td>KPIs for each AP and channel</td>
<td>Remote over-the-air (OTA) packet capture</td>
</tr>
<tr>
<td>FTP, PING, HTTP, VOIP</td>
<td>Access point settings, capabilities, signal levels, channels, noise levels</td>
<td>Actionable data from alarms point to root cause quickly</td>
</tr>
<tr>
<td>Throughput, packet loss, latency, jitter, MOS</td>
<td></td>
<td>Manual test execution from remote locations</td>
</tr>
<tr>
<td>KPIs for each AP, SSID and Sonar</td>
<td></td>
<td>Out of band troubleshooting with zero impact to the Wi-Fi environment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PROTOCOL ANALYSIS (L2)</th>
<th>SPECTRUM ANALYSIS (L1)</th>
<th>FULL PACKET CAPTURE (L1-L2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automated passive tests</td>
<td>Automated passive tests</td>
<td>Radiotap headers included</td>
</tr>
<tr>
<td>Remote over-the-air (OTA) packet capture</td>
<td>High resolution 2.4 and 5 GHz spectrum analysis</td>
<td>Easy export to protocol analyzer, like Wireshark.</td>
</tr>
<tr>
<td>KPIs for each client, SSID, AP, and band</td>
<td>Chart types include waterfall, line and 3D</td>
<td></td>
</tr>
<tr>
<td>802.11 frame analysis for traffic flow between clients and access points</td>
<td>Historical spectrum data saved for 2 weeks</td>
<td></td>
</tr>
<tr>
<td>Statistics for all 802.11 frame types, reason codes and status codes</td>
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</tbody>
</table>

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# Technical Information

## Wi-Fi Standard

<table>
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<tr>
<th>802.11 a/b/g/n/ac/ax 4x4:4</th>
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</thead>
</table>

## Physical Layer

DSSS, OFDM, HT, VHT, HE

## Modulation

BPSK, QPSK, DBPSK, DQPSK, CCK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM

## Sensitivity (Typical)

- 802.11bg -96dBm @ 6Mbps
- 802.11gn 20 -95dBm @ MCS0
- 802.11gn 40 -92dBm @ MCS0
- 802.11a -93dBm @ 6Mbps
- 802.11n/ac/ax20 -93dBm @ MCS0
- 802.11n/ac/ax40 -91dBm @ MCS0
- 802.11n/ac/ax80 -89dBm @ MCS0
- 802.11ac/ax160 -86dBm @ MCS0

## Integrated Antenna

Four 2.4 GHz / 5 GHz broadband antennas

## Regulatory


## RF Output Power

2.4 GHz – Up to 20 dBm per antenna
5 GHz – Up to 19 dBm per antenna
*Regional restrictions may apply

## Frequency Bands

5.150 GHz – 5.850GHz, 2.412 GHz – 2.472GHz

## Channels: 802.11A/N/AC/AX


## Channels: 802.11B/G/N/AX

ETSI: 13 (ch.1-13)
US/Canada: 11 (ch. 1-11)

## Security

64-bit, 128-bit, 152-bit WEP, 128-bit AES

## Authentication

802.1X, PEAP, EAP-TLS, EAP-TTLS, EAP-FAST, WPA1-PSK, WPA2-PSK, Captive Portal, WPA3-SAE, OWE

## Processor and Memory

1.8 GHz Quad core ARM
16 GB eMMC
2 GB DDR4 RAM

## Radio Features

Spatial Multiplexing, Cyclic-Delay Diversity (CDD), Low Density Parity Check (LDPC), Maximal Ratio Combining (MRC), Space Time Block Code (STBC), OFDMA UL/DL, MU-MIMO UL/DL

## Spectrum Analyzer

2.4 and 5 GHz spectrum analysis with Qualcomm-Atheros on-chip Spectrum Analyzer

## External Connectors

Gigabit Ethernet 10/100/1,000
DC power adapter, USB-C Console port
### TECHNICAL INFORMATION (CONTINUED)

| **POWER** | Power over Ethernet (PoE+) IEEE802.3at (48V)  
|           | 12V DC, 2A, external power supply sold separately |
| **MECHANICAL** | Ceiling mount with T-bar clips included |
| **ENVIRONMENTAL** | Operating temperature: 32F ~ +113F (0C ~ +45C)  
| | Storage temperature: -40F ~ +185F (-40C ~ +85C)  
| | Environment: IP44, indoor usage |
| **DIMENSIONS** | Height: 1.7in, Length: 8.3in, Width: 8.3in |
| **WEIGHT** | 1.3 lb  
| | 20.08 oz  
| | .59 kg |

### PRODUCT IMAGES

![Product Images](image1.png)  ![Product Images](image2.png)  ![Product Images](image3.png)

### SOFTWARE

Use the Sapphire Eye dashboard to view Wi-Fi experience data from every corner of your global network.

![Software Images](image4.png)  ![Software Images](image5.png)  ![Software Images](image6.png)