



SPECTRUM SITUATIONAL AWARENESS (SSA)

Deployable RF sensing for tactical platforms, contested environments and networked operations.

Detect, capture, locate, and record RF signals of interest from a compact SSA device built for the tactical edge.

www.IQHQ.co.uk

A compact route into spectrum dominance

The SSA brings a spectrum awareness capability into SWaP-constrained deployments, giving operators a practical way to detect, capture and act on RF signals of interest.

One device. Complete situational awareness

Detect, capture, locate, and record RF signals of interest with multiple applications. From UAVs and UGVs to dismounted and unattended deployments, SSA delivers tactical spectrum awareness wherever the mission demands.

SSA gives operators real-time visibility of the RF environment - helping teams identify threats, understand activity and act faster

Key Features

Detect emitters across 70 MHz to 6 GHz

Capture IQ data and signals of interest for offline analysis

Automatic target detection

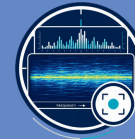
Support target location via trilateration or tracking

Re-transmit compressed waterfall plots over low-bitrate or long-range radio links

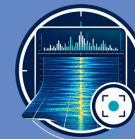
Multiple SSA Collaboration

APPLICATIONS

The SSA is a smart multi-application device for complete Spectrum Situational Awareness:



Spectrum Sensing - Rapid scanning for signals of interest across the operating range.



Spectrum Capture - High resolution or real-time waterfall plots.



Target of Interest Location - Trilateration or tracking.



Signal Capture - IQ recording or triggering on targets of interest.



Spectrum Recording - For offline or pattern-of-life analysis.



Collaborative Operation - Multiple SSA devices working together.

Our Company

IQHQ works with defence, UAV, and technology customers to turn complex RF requirements into deployable, mission-ready systems.

A responsive UK technology partner, IQHQ brings agile engineering, practical product development, and deep RF experience. Our approach: understand the mission, engineer the solution, deliver technology ready to integrate, test, and deploy. From prototypes to productised systems, IQHQ supports customers needing specialist RF and communications capability at pace.

We offer a focused team with expertise in waveform design, RF, software-defined radio, embedded systems, Product Design and defence-sector deployment.



UAV and UGV RF payload integration

SSA enables airborne and ground robotic systems to detect, capture, and report RF signals of interest within a wider mission system.

Counter-UAS sensing and support

SSA supports counter-UAS operations by detecting and monitoring RF activity linked to drone control links, telemetry, or other signals of interest.

As a standalone sensor or part of a wider system, it provides RF awareness for faster assessment of the local spectrum environment.

Its scanning, capture, and recording capabilities help operators build a clearer picture of RF activity around protected sites or deployed forces.

Covert or unattended spectrum monitoring

SSA suits covert, unattended, or remote spectrum monitoring requiring persistent RF awareness without a large footprint. With local control, remote IP control, and onboard recording, it captures spectrum activity for later review or pattern-of-life analysis.

Low power consumption and compact form factor enable discreet deployment in fixed, mobile, or temporary roles.

Dismounted tactical spectrum awareness

SSA gives dismounted users compact tactical RF awareness without large specialist equipment.

Operators can detect, capture, and record signals of interest at the point of need, improving understanding of the local electromagnetic environment.

SSA moves deployed teams from passive spectrum presence to active RF awareness.

Long-range compressed spectrum reporting

SSA supports variable-compression waterfall outputs, allowing spectrum data to be retransmitted over low-bitrate or long-range radio links.

This enables remote operators or HQ nodes to receive spectrum visibility even where bandwidth is limited.

Compressed reporting extends RF situational awareness from forward assets back to tactical decision-makers.

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