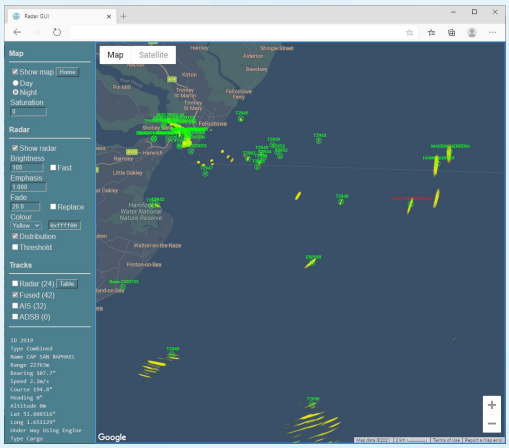
SPx Radar Web Server

Radar Video in a Browser



Features:

- Radar display in a standard web browser
- Per-client radar presentation
- GeoJSON Track/AIS/ADS-B data
- High quality radar scan conversion
- Selectable radar colours
- History trails
- Radar overlay on ENC charts and maps
- Target overlays
- Secure protocols
- Scan conversion on remote server or in cloud
- Moving platforms supported using NMEA navigation data
- Sample client display showing:

  - Radar video
  - Track table
  - Maps
  - Track symbols

- Full API support for custom development
- Remote control of SPx Server from web client

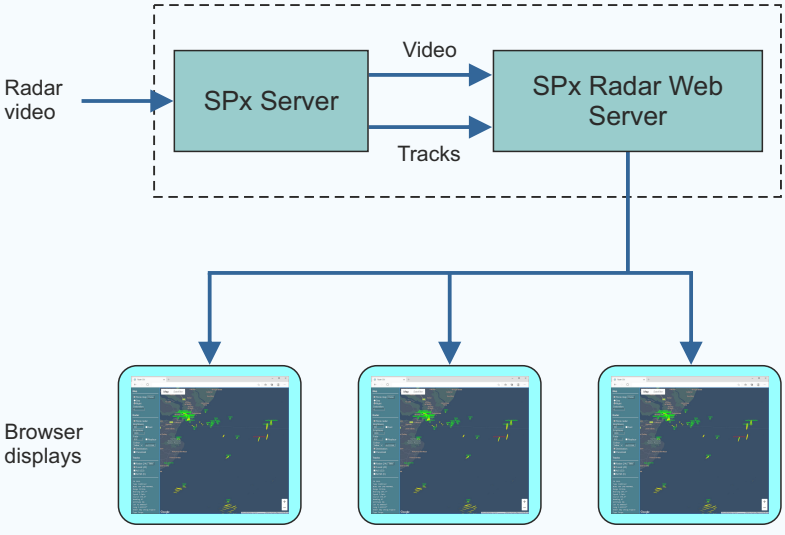
Cambridge Pixel's SPx radar display technology is available for browser-based client displays, to support the display of radar video in standard Internet browsers. This permits a wide range of device types from desktop computers, tablets and smart phones to all have access to radar imagery, with the radar processing handled by a remote server or cloud-based architecture.

A display solution that uses a standard web browser will automatically support a wide range of display devices from smart phones through to desk-top workstations, with no special requirements beyond the support for the browser. This is attractive when information needs to be shared with the widest range of users. For radar display, tablet devices using wi-fi or 4G/5G data links are an attractive solution for displays that need to be portable.

Cambridge Pixel's SPx Radar Web Server is a radar processing server that converts radar video into a sequence of scan-converted images that can be served to a web browser for display with maps, tracks and related symbology. A typical system architecture will have SPx Server at a radar site to receive and pre-process the radar video, then use SPx Radar Web Server to scan-convert and serve images to any number of connected browsers.

Each browser has its own unique view of the radar image, effectively having its own dedicated scan converter running in SPx Radar Web Server, allowing an operator to change scale and position and see the radar video at full resolution. In a cloud-based solution, a lightweight radar server (or HPx-346 unit) will receive the radar video and distribute it to a cloud-based server running SPx Radar Web Server. The client browsers then simply connected to the cloud-based server to request specific areas of radar data.

SPx Radar Web Server also handles track data (primary radar tracks, fused tracks, AIS, ADS-B), providing these in an extended GeoJSON format to connected browsers for rendering.



A typical system configuration, with SPx Server providing the radar access and SPx Radar Web Server providing the web server for clients to connect to.

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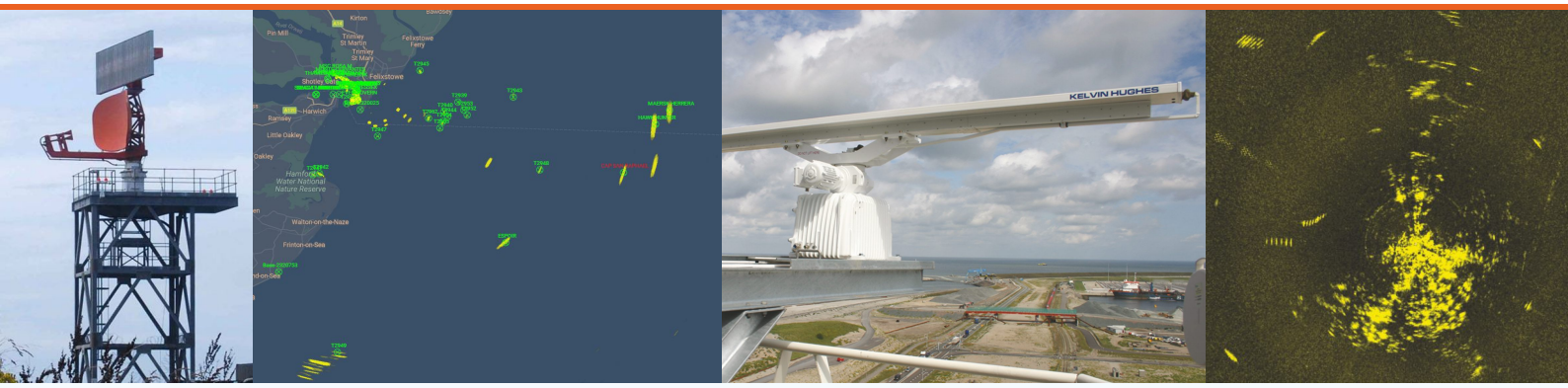
DATA SHEET



Radar Input

- Analogue radars using HPx cards and SPx Server or HPx-346 directly into SPx Radar Web Server.
- Network radars (Simrad, Furuno, Raymarine, ASTERIX CAT-240) using SPx Server.

Scan Conversion

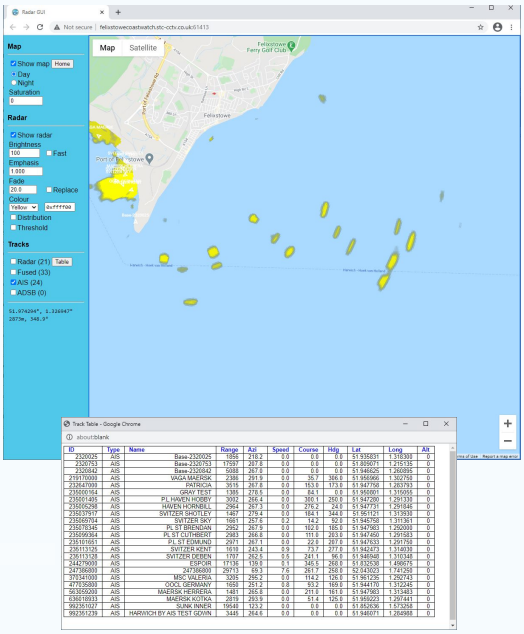
- Fully configurable scale and off-centre for radar image
- Configurable radar colour and persistence
- Radar history trails
- Any number of connected clients (licence and server resource limited)
- Static or moving platform radar

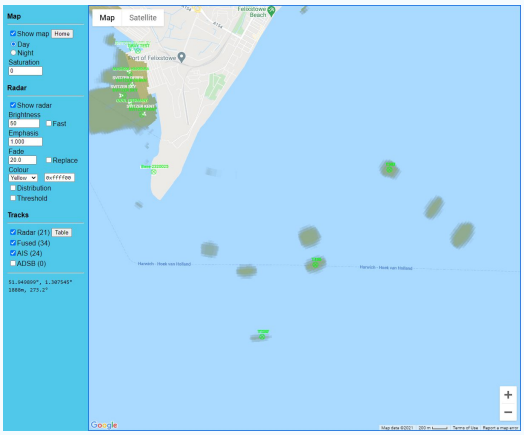
Browsers

- Edge, Firefox, Safari, Chrome
- Number of simultaneously connected clients: licence controlled

  Up to 2, Up to 5, Up to 10, Up to 25, Up to 100.

  (For a larger number of connected clients, the performance of the server hardware running SPx Radar Web Server needs to be considered. Having several servers handling fewer clients may be a preferred architecture.)





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