

SPx Radar Image Server

SPx Radar Image Server (RIS) is a scan conversion server that captures radar video and scan converts using one of a number of predefined views into one or more radar images that may be delivered to client applications or web browsers.

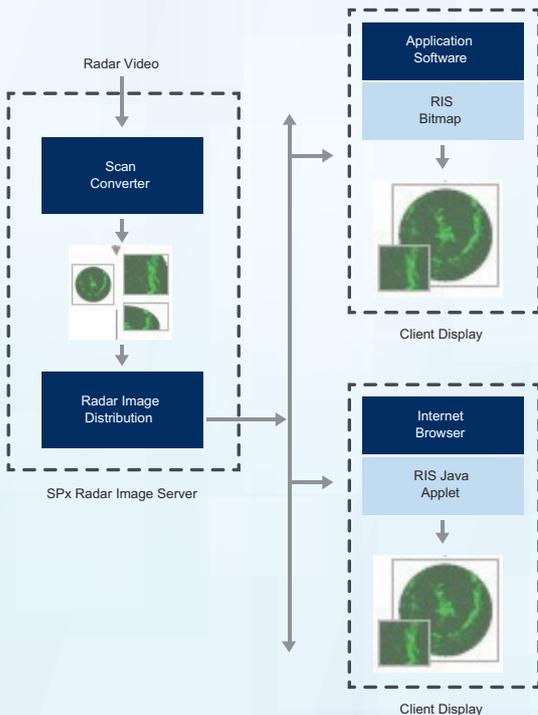
Interfacing to hardware or network source of radar video, RIS accepts radar video and scan converts into a set of bitmap images that may be distributed to any number of client applications. The client software receives the bitmap image, which can then be displayed in a custom application, optionally with underlay and overlay graphics, or in a standard web browser.

Unlike other SPx scan conversion solutions, the RIS does not permit the client application to change the view contained in the distributed bitmap. The view is preset in the RIS, although a single RIS server can distribute multiple views. In a typical application, a RIS server can be configured to distribute scan converted video for several different views, perhaps representing full radar coverage and then several zoom views of selected areas. The client software then receives these images and may display them in a custom-written application with optional graphics, or else in a standard browser window with the supplied Java applet.

Where it is required to display a radar image with fixed views, RIS offers an extremely cost-effective solution, since no client licenses are needed. The radar data can be displayed in a standard web browser using the supplied Java applet. Any number of client computers can connect to a single RIS server and display the radar image. Since bitmaps are distributed with UDP networking, the network bandwidth is unaffected by the number of connected clients.

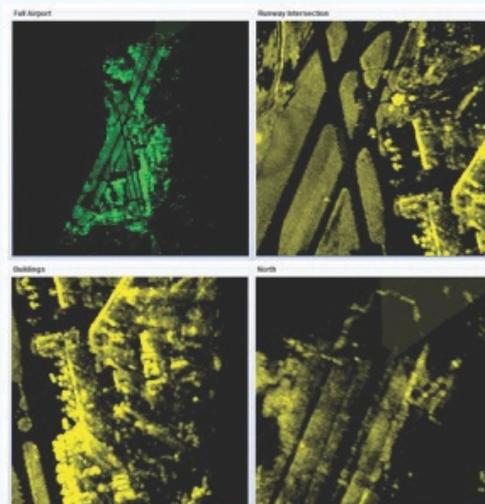
The distribution of the image from the RIS server may be configured so that bitmaps are distributed once per scan, in quadrants or at more frequent intervals. The client display will not show a smoothly rotating radar sweep (unlike other SPx scan conversion solutions), but for many applications where a simple radar image is required this will not be a limitation.

In the screen shot below, a single RIS is distributing 4 streams of video to a client computer which is using Internet Explorer to view the radar. The streams show different views (in this example an airport location with the top-left image showing the full radar coverage and then three additional windows showing zoomed areas) which are being updated once per scan of the radar. ■



Features:

- Distributes scan converted radar to clients
- Flexible radar input options
 - Supports HPx family hardware
 - Network radar input
 - Test channel
 - Recorded video (SPx format)
- Multiple streams (1, 2 or 4)
- Fixed radar views (client can't change)
- UDP bitmap distribution
- Metadata distribution
- Bitmap recording
- Client support software provided
- GUI for Server configuration
- Display radar in web browser
- No client licenses needed
- Works with standard web browsers for client display
- Fully configurable GUI for server set-up
- Configurable views
- Configurable update rate (per scan, per quadrant, time-based, angle-based)
- Windows 10 support



SPx-Radar Image Server – Configuration

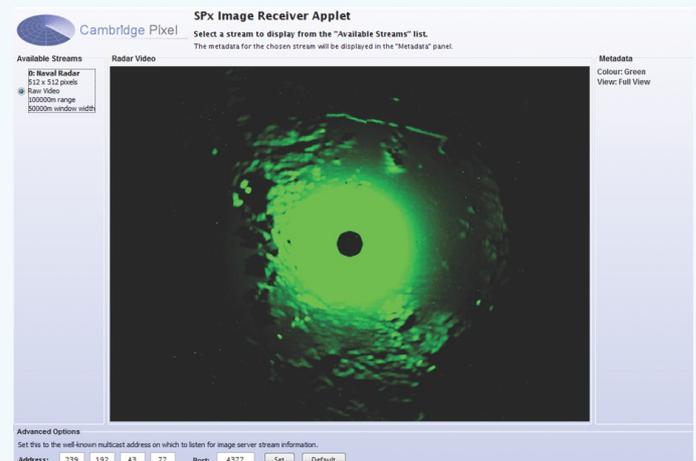
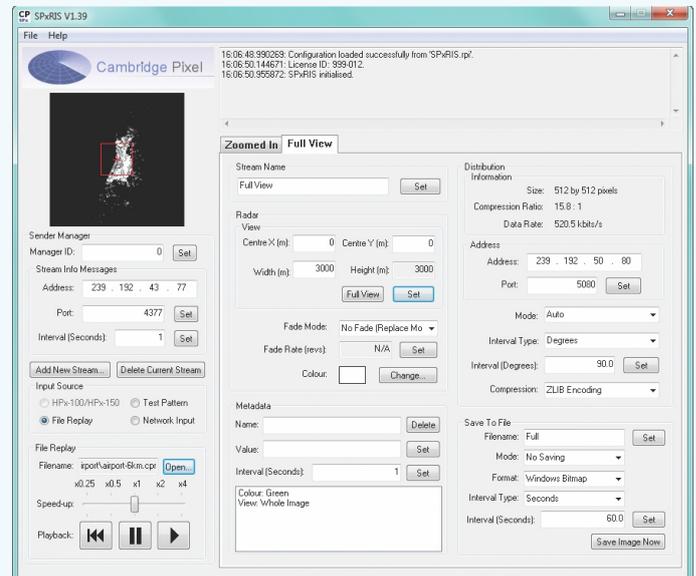
SPx RIS is a Windows application. A user interface allows for full configuration of the server in terms of the number of streams, radar views, update rate, radar colour and optional metadata that can accompany the video picture. When configured, the RIS runs without operator assistance and the software may be configured to start automatically for unattended operation.

RIS allows 1, 2 or 4 radar views to be distributed (license options) as streams. Each stream has a window size, radar offset and scale factor. In a typical application, one stream will be programmed for the full coverage of the radar and then one or more additional streams will provide zooms of selected areas. Each stream can be given a name and accompanied by metadata in the form of name + value strings. The streams of images and metadata are distributed using UDP to a programmed IP address and port. The frequency of distribution of the bitmap may be configured, allowing for once-per-scan, quadrant or time-based updates.

On the client side, an application may subscribe to one or more streams of data from RIS. It receives the bitmap data and accompanying metadata which it can display in a Windows application. RIS is provided with a Java applet that allows radar images to be displayed in a standard web browser. A multi-view radar display can easily be configured using a standard web browser.

Is RIS the right option for your application?

The SPx product family provides many different solutions for radar scan conversion. The RIS delivers bitmaps of scan converted data to a client. The client cannot control the view in the bitmaps, which are preconfigured in the server. So the client always receives the same view and scale of data. This works well if the client just needs one or more preset views of radar video. However, if the client expects to change view, zoom or pan the radar image then RIS is not the right solution. In this case the SPx RDC or C++ class library provides a richer set of display capabilities.



The RIS software is supplied with a USB dongle. The software is supplied with a client-side library to receive the bitmaps and a java applet for displaying radar data in a browser. No client-side licenses are needed so any number of clients can be displaying the video from a single RIS application.

A single RIS license supports a single radar input (either from a HPx card or network source). Multiple radars can be used (with multiple HPx cards) although then a separate license is needed for each RIS instance running.

Ordering and Licensing Information

SPx Module Runtime Licenses	Part Number
SPx Radar Image Server for Windows (4 streams)	110-751
SPx Radar Image Server for Windows (2 streams)	110-752
SPx Radar Image Server for Windows (1 stream)	110-753

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