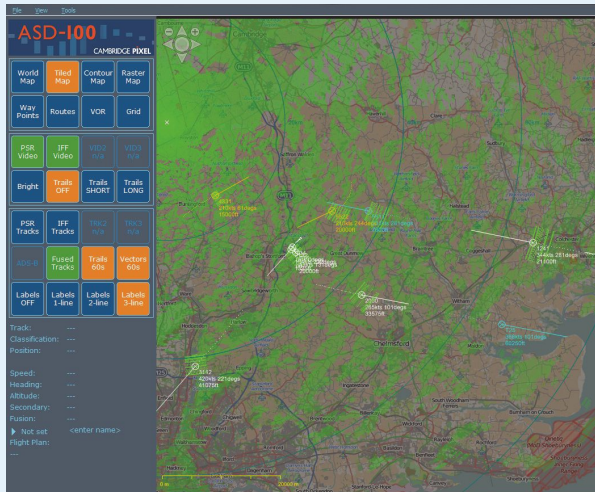


## ASD-100

### Air Situation Display Application



### Features:

- Complete ready-to-run application for Windows
- Windows 11 compatible
- Four channels of ASTERIX CAT-240 radar video input
- Four channels of ASTERIX CAT-48 input
- Safety alert input (ASTERIX CAT-4) and display of warnings
- High-quality scan-conversion:
  - Real-time fading
  - Persistence control
  - Programmable colour
- Multiple map support:
  - Tiled maps
  - Terrain contour map
  - Raster maps (up to 10 layered images)
  - User map graphics
- Flight plan support:
  - Create, edit and save flight plans
  - Callsign, Mode 3/A code, aircraft type, route and ETA information
  - Flight plans matched against current tracks
- History trails and target vectors ("leader lines")
- Configurable target label display
- Flexible configuration options
- Full zoom and off-centre control
- Multiple rulers with fixed end positions or tied to targets
- Intercept calculation and graphical display
- Overlay graphics:
  - Range rings
  - "Quick Lines"
- Range scale indicator
- Easy configuration Wizard
- PPI snapshot function

**ASD-100 is Cambridge Pixel's PC-based air surveillance display application for both primary and secondary radar data. It is a complete ready-to-run Windows application for display of radar and associated information, including: radar video, tracks and safety alarms. ASD-100 is designed principally for military air surveillance and ATC applications, it runs on any modern Windows PC, accepting input data from the network in open ASTERIX formats.**

ASD-100 can interface to a number of different ASTERIX data inputs, including: CAT-240 (radar video), CAT-48 (track reports) and CAT-4 (safety alert messages). All data is presented on a large, clear PPI display, overlaid on top of user-selectable maps. Cambridge Pixel's field-proven scan converter is built into ASD-100, providing a smooth, flexible and accurate display of the radar video. Up to four streams of radar video may be input and selected for display in any combination. These videos might include the background primary, processed primary, MTI and secondary (IFF), depending on the radar. In addition to the four video channels, four track receiving channels are available, allowing primary, secondary and fused tracks all to be received and displayed simultaneously.

Safety alerts such as Short Term Conflict Alerts (STCA), Area Proximity Warnings (APW) and Minimum Safe Altitude Warnings (MSAW) may be sent to ASD-100 in ASTERIX CAT-4 format. ASD-100 displays a prominent visual warning of any alerts on the screen, for acknowledgement by the operator, as well as a graphical representation of the conflicts while they persist.

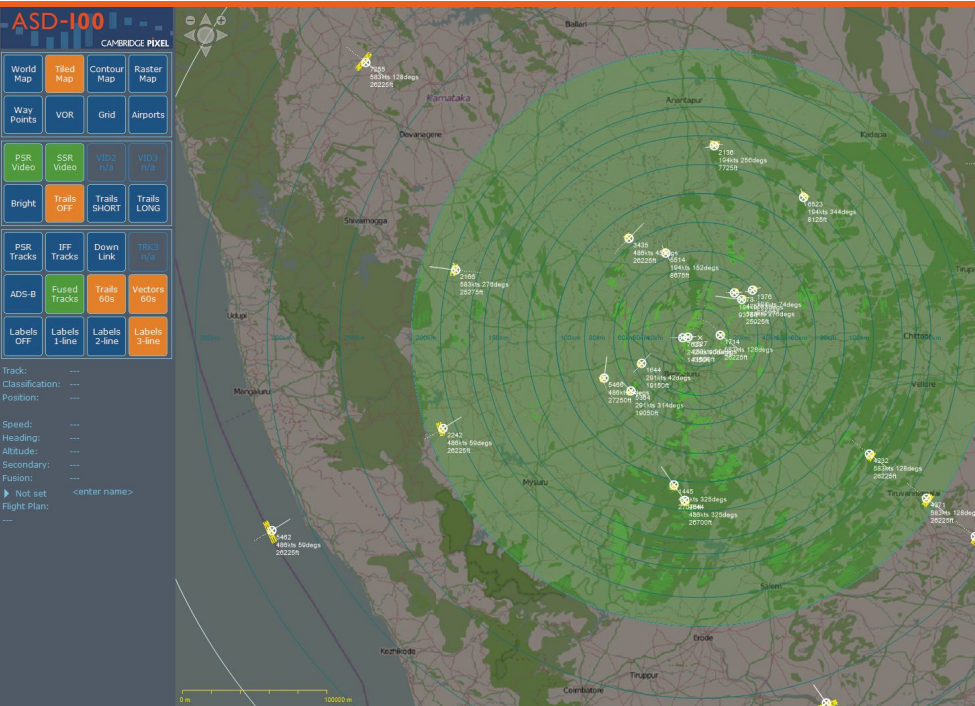
Flight plan support is built into ASD-100, allowing operators to create, edit and save flight plans into an internal database. Flight plans in the database are matched against all current aircraft tracks, using their callsign or Mode 3/A code, as available. A matched flight plan is deemed to be active and the label of the corresponding track may reflect this.



The graphical user interface has been designed with modern touchscreen displays in mind. To this end, the frequently used controls are readily accessible and operated by large buttons. Common view controls, such as pinch-to-zoom and slide-to-pan are supported. Tools available within ASD-100 allow intercept vectors to be calculated and displayed, rulers to be drawn between two reference points or targets, and individual tracks to be designated, all with simple touch controls.

ASD-100 can be used as part of a comprehensive upgrade of legacy air defence processing and display systems, which may also include replacement of legacy track extractor hardware. Such upgrades are predominantly software based, making them cost-effective and future-proof. Cambridge Pixel's software produces and consumes open standard ASTERIX data, meaning it is compatible with other systems using these formats. Furthermore, source code licencing of ASD-100 is available, allowing developers to extend and localise the operator displays and offer long term local support.

DATASHEET



Operating Systems

Windows 11

Number of Input Channels

Up to 4 channels of radar video  
Up to 4 channels of sensor tracks + 1 channel of fused tracks  
1 channel of ADS-B data  
1 channel of alarm/alert messages

Supported Inputs

Radar Video: ASTERIX CAT-240  
Track reports: ASTERIX CAT-48 (primary, secondary and fused tracks)  
ADS-B: ASTERIX CAT-21 or 112-bit extended squitter (with SPx header)

Flight Plan Support

Create, edit and delete functions  
Save to file and load from file  
Automatic matching with track callsign or Mode 3/A code  
Flight plan sharing via network

Summary	Flight Plan	Database
Total: 5	Create...	Load...
Active: 1	Edit...	Save...
Inactive: 4	Delete	Delete All
Display: <input checked="" type="checkbox"/> Active <input checked="" type="checkbox"/> Inactive		
AA015 2132 EGLL VIII		
B744 R R 06:30 11:50		
I S 01 420kts FL380		
N45013 3113 EGLL EDPH		
A319 R R 12:15 1:20		
I S 01 420kts FL360		
N45013 3112 VIII EGLL		
A380 R R 07:30 10:30		
I S 01 450kts FL390		
ETH07 2155 OMAA YSSV		
A341 R R 09:10 8:45		
I S 01 300kts 32000ft		
AFI 0000 XIAD UBBE		
B744 R V H 01 400kts FL350		

PPI Display

Radar video:  
Underlay maps:  
  
Overlay graphics:

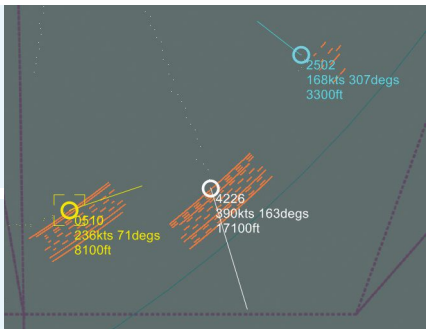
SPx software scan converter  
Open source tiled maps, contour map, world map, raster maps  
Range rings, user map graphics, target symbols, leader lines, trail history, track labels, rulers (x8), alarm indicators, range scale, cursor position, "Quick Lines"

Track Information

Programmable track label content  
Manual target ID assignment  
Manual threat level assignment

Track Designation

NMEA-0183 "TTM" output of a selected track



Control

Local GUI:  
Configuration File:

User interface for local control and configuration  
Human-readable/editable text file

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