

# SBS-2™ Professional Mode-S/ADS-B Receiver

The **SBS-2™** is a 19" rack-mounted professional 1090 MHz Mode-A/C/S and ADS-B receiver that decodes transponder signals from aircraft. An option allows monitoring of ground and airborne interrogation signals on 1030 MHz.

Combining state-of-the-art electronics and new technological advances has enabled Kinetic Avionics Products Limited to produce the versatile **SBS-2™**.

## Specialised Functionality

The **SBS-2™** is a professional version of the best-selling and award-winning, innovative **SBS-1™** Real-Time Virtual Radar, compliant with the DO-260A standard. The **SBS-2™** is a standalone receiving station with Mode-A/C/S and ADS-B processing, RF monitoring and on-board database. Signals processed are SSR replies (on 1090 MHz), and Mode-S Extended Squitter (ADS-B).

Decoded data available from Mode S / ADS-B transmissions includes:

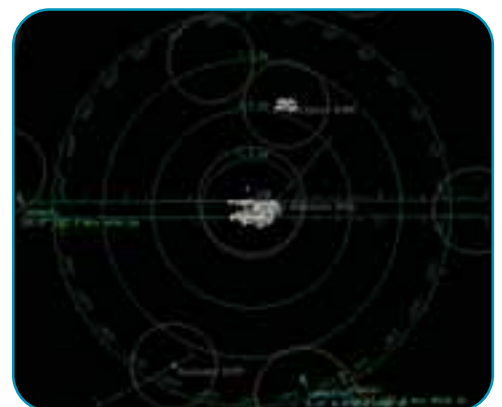
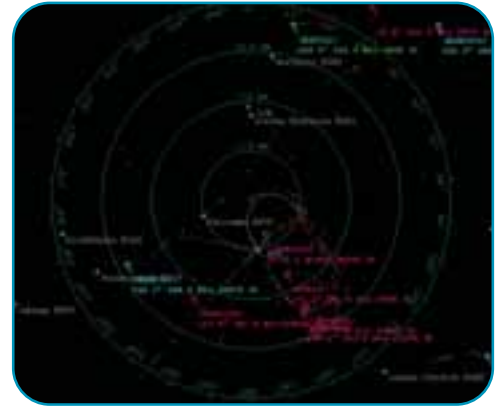
- Precise UTC date and time signal was received (using GPS synchronisation)
- Signal strength
- 24-bit aircraft address
- Mode S download format
- Altitude reported (Flight level)
- Altitude AMSL (calculated using pressure sensor)
- Position (Lat/Long)
- Horizontal and Vertical velocity
- Date/Time of last position update
- Navigational Uncertainty Category (NUC)
- Aircraft ID
- Aircraft Category
- Mode 3/A 4096 code (Squawk)
- Squitter status
- Transponder capability
- Surveillance status (SPI, alert)
- Single antenna flag (SAF)

Mode A/C signals provide timestamp and signal strength plus Mode A 4096 code or altitude data only.

## Hardware Interfaces

The **SBS-2™** is housed in a 19" card frame unit with auto-ranging power supply, touch screen, keyboard, mouse and front panel annunciators. The unit can be connected to a host system via Ethernet and provides a range of possible outputs including raw Mode A/C, Mode S and ADS-B data, processed aircraft data and a CAT 21 compliant data stream. There are number of user-selectable options at order time and the **SBS-2™** is fully retro-gradable. The **SBS-2™** is highly versatile in deployment and configuration and allows full access to real-time Mode-A/C/S and ADS-B data for processing, or logging of the data to hard disk for later retrieval. The **SBS-2™** is upgradable to the **SBS-2M™** which in addition features multilateration.

Customisation is available.



Innovative products for the avionics community

To discover more:

[www.kinetic-avionics.co.uk](http://www.kinetic-avionics.co.uk)



SBS2/Spec/12.05

# SBS-2™ Professional Mode-S/ADS-B Receiver

## Main Features

- Receives, processes and outputs Mode-A/C/S and ADS-B data in real time
- ASTERIX CAT 21 compliant data stream
- Signal strength measurement
- Fully upgradable to **SBS-2M™**
- Customised options available at ordering time, including 1030 MHz receiver and RF signal logging.
- High aircraft processing capacity
- Unambiguous aircraft identification using Mode S and ADS-B
- Easy to install and low power supply consumption
- No air conditioning required for electronic parts
- Fully unattended operation of the system
- An invaluable tool for research, development, analysis and bespoke applications
- Low costs for operation and maintenance

## Uses and applications

### Area of use

- Airports
- Airlines
- Flying Schools
- Specialist/Bespoke Users
- Avionics Manufacturers
- Educational
- Military/Government/Police
- Air Traffic Management

### Example uses

- ADS-B Ground Station
- ATC Tower Displays
- Airport Operations Management
- Fleet Identification and tracking
- Airline Operations analysis
- Cross-country navigation management
- Circuit evaluation
- Traffic pattern management
- Use of raw data streams in other software and hardware applications
- Environmental monitoring
- Ideal for Research Organisations and Universities
- Use of raw data streams in equipment testing and simulation environments
- Support of ATC education and training through interlinking data stream into software applications.
- Passive air traffic surveillance
- Use of raw data streams in customised application environments
- Monitoring of transponder equipage rates and capabilities
- Detection of transponder malfunctions and anomalies



## Specifications

- Range 250 nm achievable depending on antenna type and location
- Output Data Raw or decoded Mode-A/C/S and ADS-B Data • ASTERIX CAT21
- Antenna Connector 50Ω (50 Ohm) BNC
- Timestamp accuracy 100ns when used with GPS synchronisation
- Power Supply AC Input 300W
- Mounting 5U Height 19" RACK-mount chassis
- Colour White
- Construction Heavy-duty steel
- Dimensions 431mm wide • 479mm deep • 220mm high
- LCD Size 10.4" TFT
- LCD Brightness 250 cd/m<sup>2</sup>
- LCD View Angle H-V 80 (H) • 40 (V)
- Operation Temperature 0~50°C



E&OE. Specifications may change from time to time

## About Kinetic Avionic Products Limited

Kinetic Avionic Products Limited specialises in the design, development and deployment of innovative products for the avionics and aviation community. Umbrellaed as part of an ISO 9001-2000 company group with a global customer base, our engineers have designed, developed and deployed state of the art avionics within the UK and overseas territories.

The use of state-of-the-art technology allows KAPL to produce compact, advanced and highly reliable, industry compliant solutions. Embracing the latest technological advances is a key part of our ethos. Our specialised team of engineers, programmers and technicians work together to innovate pioneering and cost-effective products.

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