

ACARS/AIS/ADS-B 3 in 1 receiver

SBS-3

AvionixTech

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1. ADS-B IN function of SBS-3

SBS-3 is an ACARS/AIS/ADS-B 3 in 1 receiver, it integrates an ACARS receiver module, an AIS receiver module and an ADS-B receiver module into one box. In this manual, we'll introduce how SBS-3 can work as an ACARS ground receiver and ADS-B ground receiver.

First, SBS-3 is a little bigger than a credit card.



SBS-3 is delivered with 1x SBS-3 main unit, 1x ADS-B antenna, 1x VHF antenna for ACARS and AIS, 1x USB cable and 1x disc of BaseStation software.

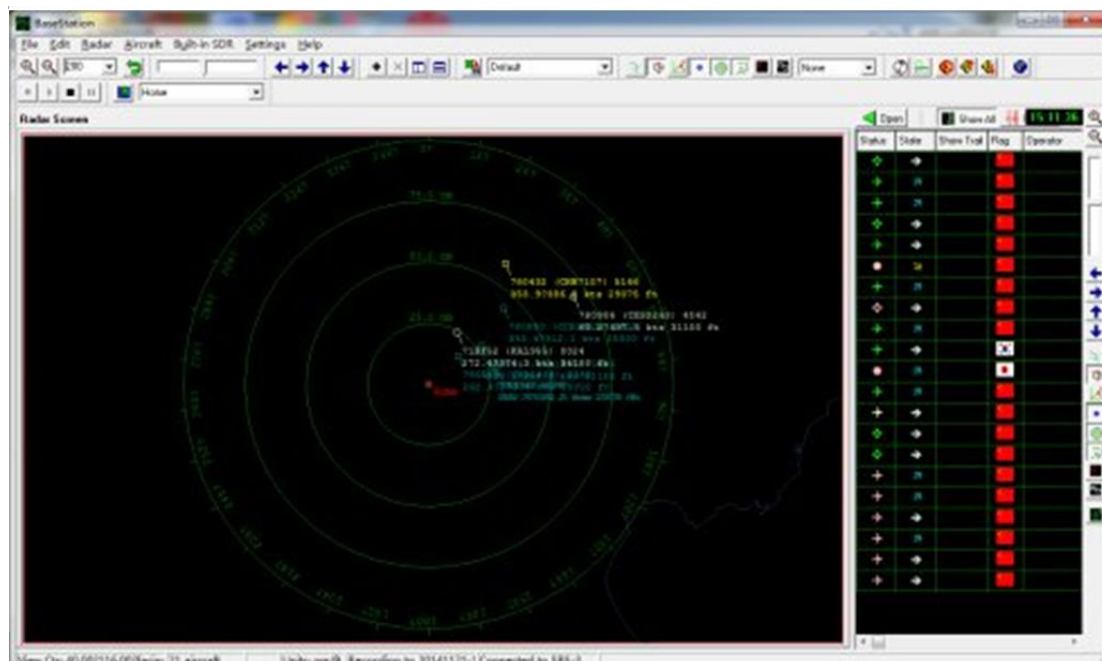


It's also quite easy to connect all these, just see the connectors on the back panel of SBS-3.



Simple start is to connect SBS-3 with computer via the USB cable and install the BaseStation software on computer. No need for any further configuration, you'll see aircrafts immediately. Computer would power SBS-3 also via the USB cable.

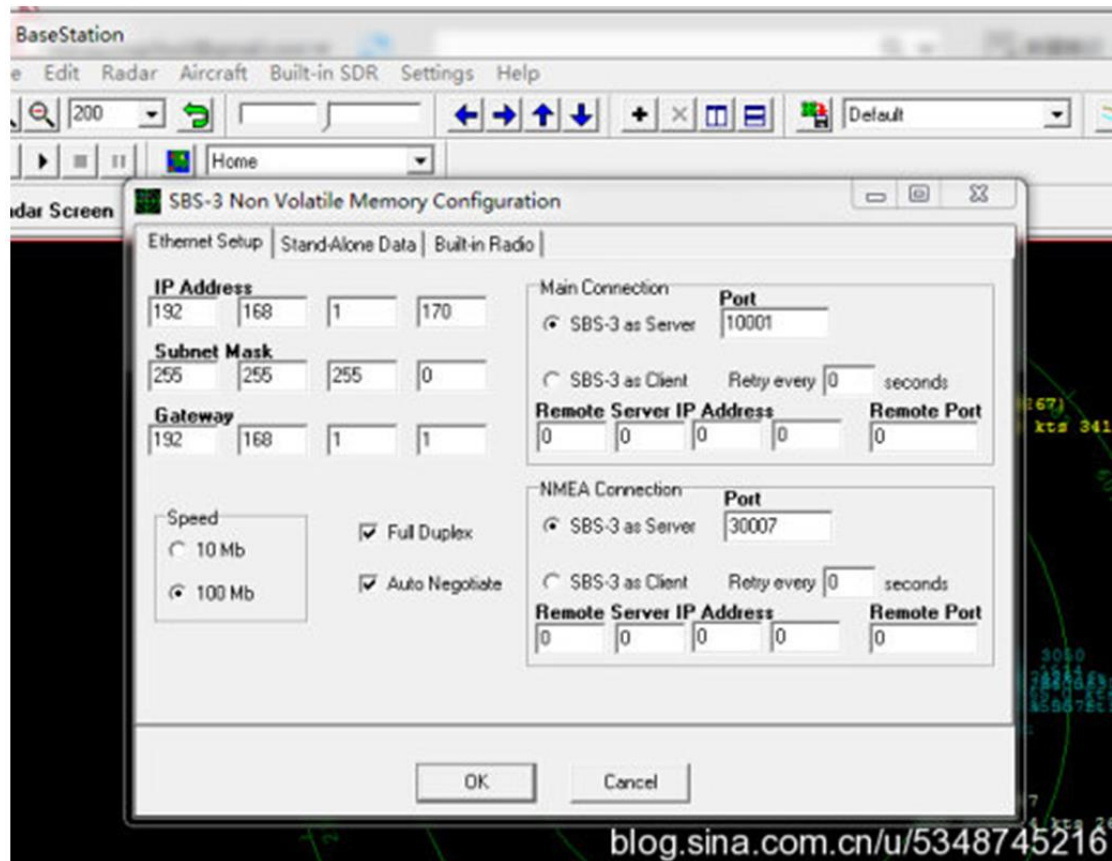




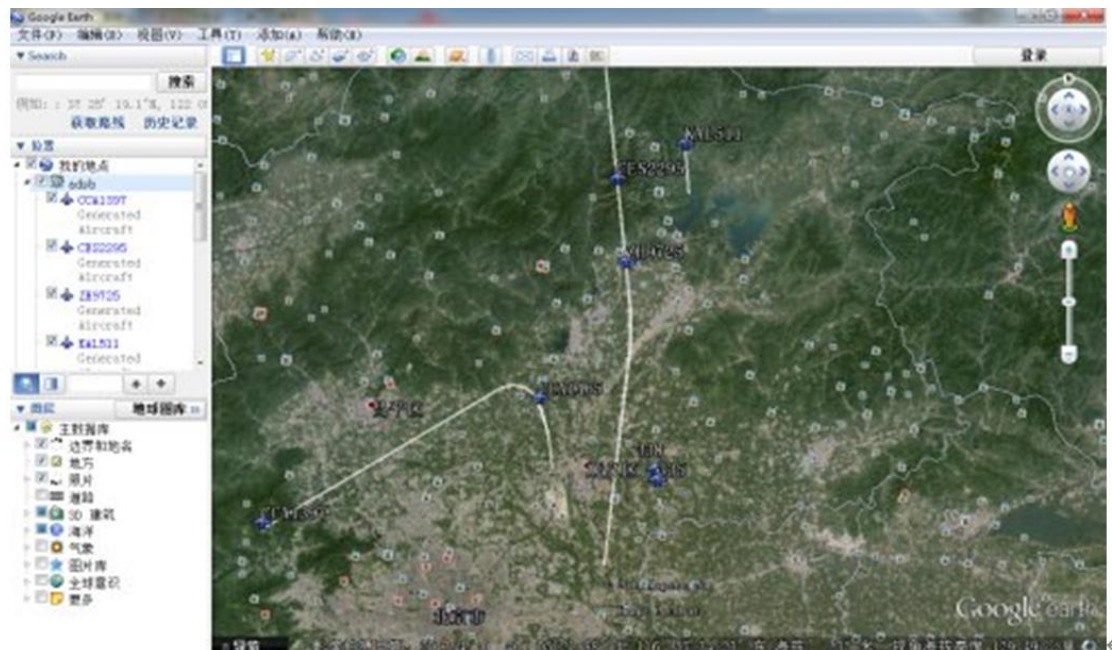
You may see aircraft track, flight ID, altitude, speed in BaseStation

For expert users, you may also output data for your own applications. Now you may need a network cable to connect SBS-3 with computer. But now I have to remind you that in this case, you must use a separate charger with USB cable to power SBS-3, can't use the USB cable with computer to power SBS-3.

In BaseStation, enter settings, then non volatile memory configuration. You must be aware that the non volatile memory configuration only appears when BaseStation get signals. Well, this might be not quite convenient.



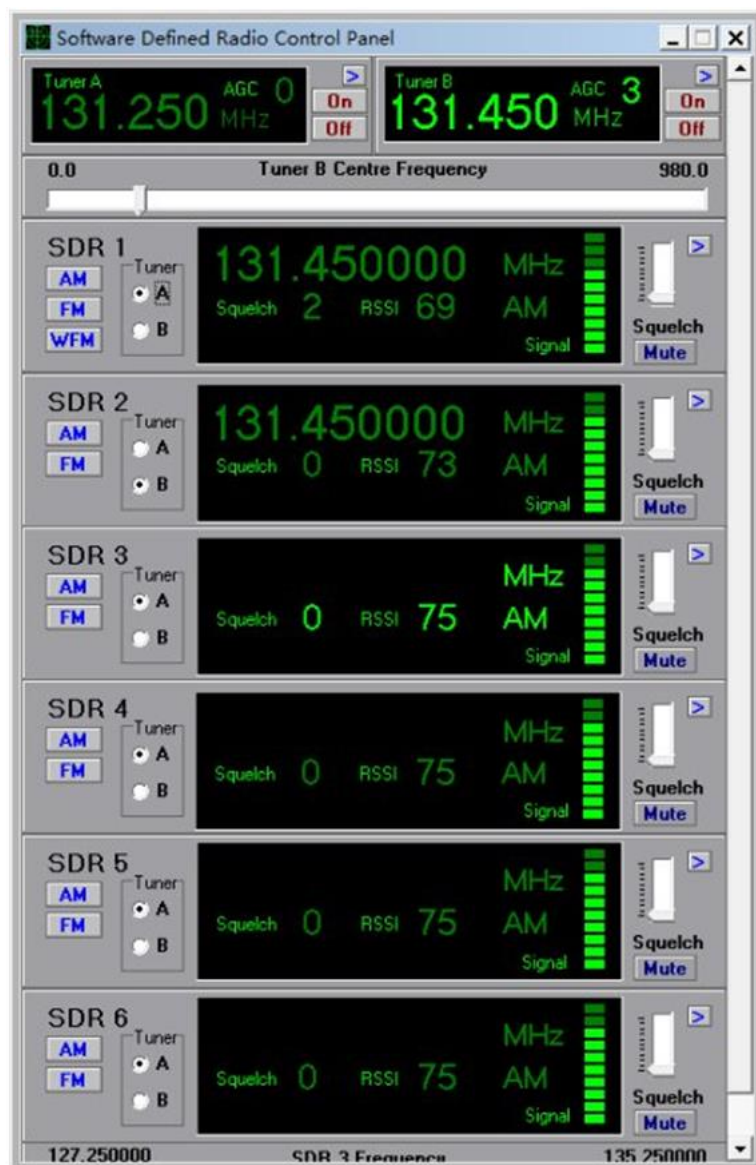
You can also configure SBS-3 TCP output to Google Earth.



2. ACARS functions in SBS-3

You may be aware that ACARS frequency is different from country to country. It's not like ADS-B have a global frequency 1090MHz, except U.S.A. general aviation

use 978MHz UAT. Let's take ACARS frequency 131.45MHz as an example for showing how to operate. In BaseStation, build-in SDR, control panel.



SBS-3 have two tuner, tuner1 and tuner. From 27 to 980MHz. There're six SDR. Four of which is useable and the other two are reserved for further use.

For example, you need to receive four frequency, 131.5MHz, 139.5MHz, 901.0MHz and 909.0MHz.

First, 131.5MHz and 139.5MHz are 8MHz different and so can use a same tuner. Configure tuner1 as 135.5MHz, SDR 1 as 131.5MHz and SDR 2 as 139.5. Same with 901.0MHz and 909.0MHz.

One tuner can best support 8MHz. So if you need to receive 131.5MHz, 139.8MHz, 901.0MHz and 909.0MHz, there's no way you can do this.

Come back to our example of setting just one frequency 131.45MHz, just need to set one tuner and one SDR is enough. Make sure you choose AM and you choose the right tuner with SDR, it would work.

In BaseStation build-in SDR, open ACARS window, wait a while, data would show

