

DVB-ASI FAQ

1) What is DVB-ASI?

DVB-ASI is a standard interface that is used to carry compressed audio and video information around a broadcast, contribution, or a distribution facility.

2) Why is DVB-ASI so popular?

DVB-ASI is popular because its signal characteristics, data rate, connector interfaces, cables, etc is identical to SDI. In fact the most popular chips that support SDI also support DVB-ASI. Guess what? SDI distribution amplifier can also be used to DA the DVB-ASI signal!

3) What kind of information can be carried over DVB-ASI?

Almost any kind of information can be carried over the DVB-ASI. Most popular content on the DVB-ASI interface is a compressed audio and video "Transport Stream". For example: Within its 270 mega bits of total capacity, a DVB-ASI pipe can safely carry up to 13 ATSC transport streams. Note that within each one of those 19.39 mbps ATSC transport stream, there could be anywhere from one to five programs. DVB-ASI is used to carry outputs of satellite contribution links, outputs of fiber optic links, and increasingly interfaces with Gigabit Ethernet networks. Most popular audio video encoders also support a DVB-ASI output.

4) Can signals over DVB-ASI interface degrade?

Yes, although DVB-ASI signaling is digital, long cable lengths, bad connectors, etc. can degrade the signal which can introduce packet errors. Most DVB-ASI Distribution Amplifiers (DAs) have as front-end a cable equalizer followed by a re-clocker stage. The output of this stage is then driven out using dedicated Cable Drivers. Note: the re-clocking stage only cleans up the DVB-ASI bit transitions (270 MHz). It does not smooth or de-jitter the audio video transport stream contained within.

5) Why is DVB-ASI called Packet Asynchronous (PA) interface?

DVB-ASI is a fixed frequency (270 MHz) transport pipeline. It means it is a conveyor belt that moves at 270 mega bits per second. On the belt once in a while some bags are carried (i.e. Audio Video packets). This is called payload. The rate of payload need have no relationship with absolute DVB-ASI rate. Therefore it is called Packet Asynchronous interface.

6) Does DVB-ASI introduce additional jitter to the payload?

Being packet asynchronous in nature, most of the time transferring payload using DVB-ASI will introduce a slight amount of jitter. A good design can minimize the amount of jitter such that at the decoder there is no buffer underflow or overflow.

7) Is DVB-ASI specific to MPEG-2 transport streams?

No. DVB-ASI does not care about what kind of payload is carried on it so long as the payload does not approach 270 megabit per second capacity. Today DVB-ASI is used to carry various types of streams. It includes (but not limited to) ATSC, DVB, H.264, Audio only, and data only payloads.

8) Who makes equipment specializing in DVB-ASI?

Only one company: **DTV Exchange LLC** has a range of products covering DVB-ASI monitoring, DVB-ASI decoding, DVB-ASI Re-clocking and DVB-ASI Test Pattern Streaming. That is why DTV Exchange LLC is known as the "DVB-ASI experts".