

DVB-T2 modulator

The DVB - T2 modulator is compliant with the ETSI EN 302 755 standard. This modulator is optimized for Altera Stratix III and for Xilinx Virtex-5 FPGA devices.

DVB-T2 is a digital terrestrial transmission standard that introduces the latest modulation and coding techniques. As with its predecessor, DVB-T2 uses OFDM (Orthogonal Frequency Division Multiplex) modulation, with a large number of sub-carriers delivering a robust signal. Also in common with DVB-T, the new specification offers a range of different modes making it a very flexible standard. The DVB-T2 specification offers a choice of various robustness and protection levels for each service separately within a transport stream carried by a signal in a given channel through the use of Physical Layer Pipes (PLP).

Features

- Bandwidth agility 1.7 MHz, 5 MHz, 6 MHz, 7 MHz, 8 MHz, or 10 MHz with selective digital filter for shoulder attenuation
- Unique sampling output frequency thanks to a digitally controlled resampler
- OFDM modulation with QPSK, 16QAM, 64QAM or 256QAM constellation (BPSK, QPSK, 16QAM or 64QAM for L1 signalling information)
- Rotated constellation provides additional robustness in difficult channel
- FFT modes 1K, 2K, 4K, 8K, 16K, or 32K (normal or extended mode supported)
- Guard intervals 1/4, 19/256, 1/8, 19/128, 1/16, 1/32, or 1/128
- LDPC coding combined with BCH coding (code rate: 1/2, 3/5, 2/3, 3/4, 4/5, or 5/6; normal or short frame supported)
- 8 different selectable pilot patterns to optimize overhead for any transmission channel (from PP1 to PP8)
- adjustable time interleaving implemented with external SDRAM memory
- mono-PLP and multi-PLP modulation supported with T2-MI (Modulator Interface).