

Echo Canceller for DVB-T

The Echo Canceller system is the ideal solution for high selective filtering and echo cancellation for DVBT nonregenerative isofrequency repeater. Echo canceller provides an effective realtime echo suppression. Optimized for lowcost FPGA devices.

Features

- IF conversion to baseband.
- Downsampling filtering.
- High selective digital filtering (0dB @ 3.8 MHz, -60 dB @ 4.6 MHz for 8 MHz bandwidth) with filter response selection.
- Adaptive echo cancellation with a first order echo signal up to 5 dB above the wanted signal.
- Performance degradation of 3 dB with a first order echo 5 dB over the signal power (40 dB of background MER).
- Adaptive echo cancellation with a cancellation window up to 10 μ s to guarantee multiple echo cancellation.
- Output signal automatic gain control (user selectable gain).
- Upsampling filtering.
- Baseband conversion to IF.
- Echo canceller latency is less than 7 μ s.

The listed values are referred to an implementation on Xilinx Spartan-3A XC3SD1800A.