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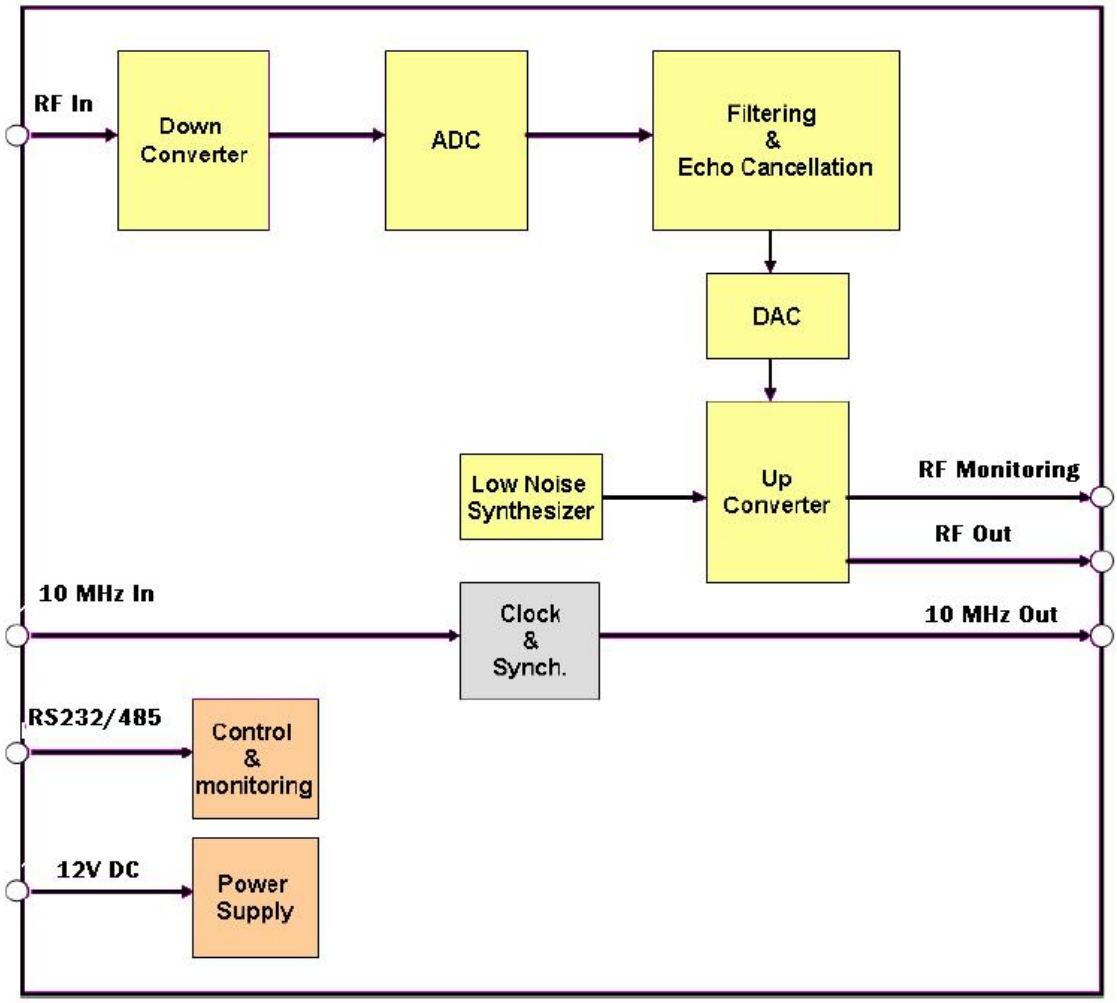
BLOCK DIAGRAM

The TLUD-30 is an agile solid state digital TV translator designed to accept a digital RF signal and outputs an amplified 8VSB signal on any UHF television channel.

From the AC-DC main power supply, the Processor takes 12Vdc for the boards in the module. The digital RF signal enters the processor module from the back panel on the enclosure. The unit consists of a RF down-converter and a digital processing platform and a up-converter as shown in details in the block diagram. The processor's internal AGC allows dynamically adjusting the power level of the module. The input nominal level is -55 dBm over a full admissible range of -10 to -75 dBm.

The control software communicates to the processor through the RS232 interface which displays processor status, changes output level, and selects in and out channel. After crating modulated 8-VSB signal processor passes the digital RF signal to RF amplifier which steps up the output level to 30 watts 8-VSB. The amplifier enclosure also contains a digital emissions mask filter. On units that potentially interfere with the RNSS band, the amplifier portion of the system also includes a GPS filter.

Processor


RF In
Down Converter
ADC
Filtering & Echo Cancellation
DAC
Low Noise Synthesizer
Up Converter
RF Monitoring
RF Out
10 MHz In
Clock & Synch.
10 MHz Out
RS232/485
Control & monitoring
12V DC
Power Supply

Power Amplifier