



U0 converts the output of a 100MHz digitizer into even and odd samples at a 50MHz rate.

U1 downconverts the data into I and Q data samples and decimates by two.

There are a set of 8 half-band filters in each I and Q leg. Each filter halves the bandwidth and decimates by two.

U18 converts the I and Q data back into real samples using the upconvert and interpolate mode.

U19 interpolates the real data samples to generate an oversampled data rate for the double nyquist mode.

U20 formats the data to maintain a constant RMS as the bandwidth is reduced.

The data is bussed by making use of a feature of the half-band filter chips.

In the external interpolate mode, the data on the A input is reproduced on the B output.

For example, for a 25MHz bandwidth, output A of U2 (I) and U3 (Q) are used.

U4 and U5 are in external interpolate mode and their B outputs are tristate enabled.

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B	Functional Block Diagram for the Half-Band Filter Board	
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