

# Adaptive Linear Pre-correction

## bc010

The Binary Core adaptive linear pre-correction core bc010 is a 128-tap digital filter used to automatically compensate in-band linear amplitude and phase/group delay characteristics introduced by analog filters.

## Features

- Suitable for digital modulation (QAM, OFDM).
- 128 complex taps digital estimation.
- Linear amplitude compensation.
- Linear phase/group delay compensation.
- Iterative Minimum Mean Square Error algorithm.
- Optional 128 complex taps linear filter.
- Selectable iterative algorithm convergence speed.
- Automatic forward power control.
- Logic Elements  $\simeq$  4600
- 18x18 Multipliers  $\simeq$  55

## Function overview

The 128 complex taps used by the pre-corrector are computed iteratively to obtain the minimum mean square error between the input forward signal  $x$  and the input

