

EXHIBIT 11: DETAILED DESCRIPTION OF THE MODULATION SYSTEM

SECTION 2.1033(c) (13)

For equipment employing digital modulation techniques, a detailed description of the modulation system to be use, including response characteristics of any filters provided, and a description of the modulating wavetrain, shall be submitted for the maximum rated conditions under which the equipment will be operated.

Response

The Nokia AHNA supports LTE radio access technology, including multiple- input multiple-output (MIMO). An DFE provides all the digital processing for the downlink path and then presents them to the Tx DAC. The output of the DAC is filtered by low-pass filters and then up-converted via an I and Q modulator to the E-UTRA Band 30 carrier frequency in the range of 2305 - 2315 MHz.

The DFE performs channel filtering with a series of filters and signal conditioning stages. The overall response incorporates the necessary amplitude and phase equalization to meet the requirements of the 3GPP LTE standards.

Digital Pre-distortion performs amplitude sensitive adjustments to the signal in anticipation of power- amplifier non-linearity distortions and cancels out the distortion effects of the power amplifier. The GC block detects if the average power exceeds a set threshold and adjusts the power of the output signal. The Equalization block anticipates RF path propagation distortions and eliminates them with adjustments to the signal.

The DFE also includes a peak limiting block, which removes samples above a predetermined threshold without detrimental effects on the EVM (Error Vector Magnitude) metric. This enables the peaks of the baseband signal to be limited to obtain the desired peak to average ratio (PAR) in the output waveform. The overall response achieves pulse shaping and equalization which meets the transmitted signal Rho and EVM requirements when demodulated with the appropriate matched filter (e.g., in test equipment).