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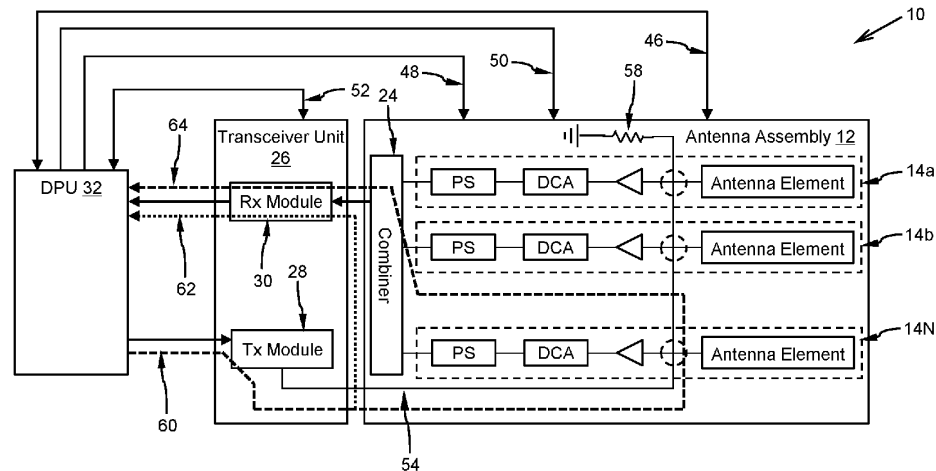


FIG. 2

(57) Abstract: Methods and devices provide a test signal to each of a plurality of antenna channels via a test signal line. Each antenna channel includes an amplitude adjustor and a phase adjustor associated with at least one antenna element. For each antenna channel, the test signal provided to the antenna channels is modulated to produce a modulated test signal. The modulated test signal is produced by: i) controlling the amplitude adjustor of the antenna channel to vary a current amplitude of the test signal between a plurality of amplitude states, and ii) controlling the phase adjustor of the antenna channel to vary a current phase of the test signal between a plurality of phase states. A received test signal received from the antenna channels is processed to determine amplitude and phase errors associated with the modulated test signals associated with the antenna channels.

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