

Title (en)  
ANTENNA AND METHOD FOR TRANSMITTING AND RECEIVING WIRELESS SIGNAL

Title (de)  
ANTENNE UND VERFAHREN ZUM SENDEN UND EMPFANGEN DRAHTLOSER SIGNALE

Title (fr)  
ANTENNE ET PROCÉDÉ POUR ÉMETTRE ET RECEVOIR UN SIGNAL SANS FIL

Publication  
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Application  
**EP 14865653 A 20141128**

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Abstract (en)  
The present application discloses an antenna and methods for transmitting and receiving a wireless signal. The antenna includes a first power splitter that splits a first beam signal into k1+m first beam branch signals, a second power splitter that splits a second beam signal into k2 second beam branch signals, a first phase-shift network that performs phase-shift processing on the m first beam branch signals to obtain M first beam branch phase-shifted signals, a signal multiplexing network that performs processing on the k1 first beam branch signals and the k2 second beam branch signals to obtain K multiplexed signals, M first antenna elements that are configured to transmit the M first beam branch signals, and K multiplexing antenna elements that are configured to transmit the K multiplexed signals, where a first beam is formed after the M first beam branch phase-shifted signals and the K multiplexed signals are transmitted, and a second beam is formed after the K multiplexed signals are transmitted. The antenna can increase system capacity without increasing an antenna volume.

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