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(54) **DIGITAL CIRCUIT FOR MULTIPLE
ANTENNA REMOTE RADIO HEAD AND
RADIO UNIT**

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(57) **ABSTRACT**

A digital circuit consists of a plurality of digital circuits for multiple antenna remote radio heads (RRHs) and radio units (RUs). For the digital circuit of the RRH, it has at least one programmable digital circuit or fixed digital circuit which includes a common public radio interface (CPRI) module. The other programmable digital circuit(s) and/or fixed digital circuit(s) include(s) one or more analog to digital converter (ADC) and digital to analog converter (DAC) module(s). For the digital circuit of the RU, it has at least one programmable digital circuit or fixed digital circuit which includes a fronthaul interface module. The other programmable digital circuit(s) or fixed digital circuit(s) include(s) one or more communication signal processing module(s). The digital circuit can be used in massive multiple-input and multiple-output (Massive MIMO) base stations such that the required transmit power can be reduced as a green technology.

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