DISTRIBUTED RADIO FREQUENCY COMMUNICATION SYSTEMS FOR AUTOMOTIVE

ABSTRACT OF THE DISCLOSURE

Distributed radio frequency (RF) communication systems for automotive are disclosed herein. In certain embodiments, an RF communication system for an automobile includes an RF module located close to an antenna to satisfy a specified output power with small insertion loss. Additionally, the baseband processor is placed remotely from the RF module in a different area of the automobile to provide a lower temperature environment. Additionally, the RF module communicates with the baseband processor in a digital format eliminating the need for higher cost cabling (for instance, due to higher noise immunity arising from using digital signaling) and using digital transfer cabling, which can already be present in the automobile for other purposes. The RF module can include an RF front-end (RFFE) and a transceiver used for providing frequency conversion, for instance, between RF and baseband.

[FIG. 6]