

Visible Light Communication Cyber-Physical Systems-on-Chip for Smart Cities

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Abstract—We review recent developments of light-emitting diode (LED) based visible light communication (VLC) technologies and related cyber-physical systems-on-chip (CPSoC) for smart city applications. Critical aspects of LED VLC cyber-physical systems are discussed. Designs of LED-based VLC CPSoC integrated circuits (IC) are depicted. LED VLC technology, as a viable internet of things (IoT) solution, has the potential for various applications for smart cities including smart hospitals, smart homes, smart communities and smart traffics in near future.