

# MIMO Array Antenna Designs for Future Fifth Generation (5G) Mobile Devices

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**The evolution from present 4G LTE (or beyond 4G, B4G) to future fifth generation (5G) communication technology will be briefly described in this presentation. As the world is preparing to embrace the 5G communication system in the year 2020 or after, its related terminal mobile devices such as smart phone design operating in the sub-6GHz band will be discussed. The recently reported 5G antenna designs with MIMO technology (such as 8x8 MIMO mobile devices) will be introduced, and their vital parameters such as Channel Capacity and Throughput will also be discussed in detail.**



Prof. Chow-Yen-Desmond Sim was born in Singapore, in 1971. He received his Ph.D from the Radio System Group, Engineering Department, at University of Leicester, United Kingdom, in July 2003. Since then, he has been working in Taiwan, and in August 2016, he was promoted to Distinguish Professor of the Department of Electrical Engineering, Feng Chia University, Taichung, Taiwan. He is the author or co-author of over 100 SCI journal papers. He is a Fellow of the Institute of Engineering and Technology (FIET), Senior Member of the IEEE Antennas and Propagation Society, and a Life-Member of Institute of Antenna Engineers of Taiwan (IAET). He

was awarded three times as the Top Ten Outstanding Reviewers of IEEE Antennas and Propagation Society in 2014, 2015 and 2016. His current research interests include antenna design, VHF/UHF troposphere propagation, RFID applications, and wireless communications. Prof. Sim has received the “Zhiqian Professor” (Distinguish Chair Professor) title by Shanghai University in May 2015. He is now serving as the Executive Officer of Master’s Program, College of Information and Electrical Engineering (Industrial R&D), Director of Intelligent IoT Industrial PhD Program, and Director of Antennas and Microwave Circuits Innovation Research Center of Feng Chia University. Since October 2016, he has been serving as the technical consultant of SAG (Securitag Assembly Group), which is one of the largest RFID tag manufacturers in Taiwan. He is also now serving as the IEEE AP-S Taipei Chapter Chair (2016-2018), and Associate Editor of IEEE Access.