



COLLEGE OF ENGINEERING & TECHNOLOGY

Department: Electronics and Communications Engineering, Cairo

Graduation Project Description Form

Project Title:

Antenna and Analog Front for Wireless Communications System

Project Supervisor(s):

Dr. Huessien Ghouz (EC. Dept., College of Eng., AAST, Cairo)

Dr. Mohamad Hassan (EC. Dept., College of Eng., AAST, Cairo)

Duration from mo/year: 2/2013 till mo/year 2/2014

Product Category

Algorithm _____ Hardware _____ Software _____ Circuits & Devices:

Standards:

Safety: UL, CE _____ IEEE FCC _____ Other _____

Practical Realization Form

PCB Firmware _____ Embedded CPU Kit (ARM, ..etc): _____

PC Software _____ Ready-made Package: DSP Kit _____ FPGA Kit _____

VLSI / Schematics VLSI Layout _____ VLSI Silicon (ASIC) _____

Language

VHDL/Verilog _____ Matlab _____ C/C++/Java _____

Productization

Finished Product Form: _____ Possible Commercialization _____

Amount of funds needed for buying components: _____

IEEE GOLD Made-In-Egypt/Engineering Day: _____

ITAC (ITIDA) or NTRA Funding Application: _____

Testing

Functional _____ Simulation Parameters Final Hardware Other: _____

Lab Test Setup

EMC _____ Environmental _____ Microwave Analog Lab _____ Other: _____

CAD Tools (No unauthentic software is allowed): RF & Microstrip Simulator

Elective Classes Recommended:



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Abstract

Antenna and Analog Front for Wireless Communications System

Dr. Huessien Ghouz / Dr. Mohamad Hassan

In this project, antenna for 3G/4G and high speed data wireless communications is designed, simulated and implemented. Analog front electronics for matching with the antenna is also designed and implemented, plus any needed amplifier circuits. RF, circuit and microstrip simulation using CAD tools is conducted.

Final system testing of the built system will also be conducted

References and Links