



ECE-26

MediT–Medical Electronic Drug Infusion Therapy for Cancer Treatment

Mahmoud Ramadan Moudi, Mahmoud Gamal El-Sharkawy, Mohamed Magdy El-Dkoony
Menoufia University, Egypt, mahmoudmoudi@yahoo.com, mahmoud_8383@rocketmail.com,
mmm.mohamed37@yahoo.com

Supervisor: Mohamed Esmail Karar, Ph.D., IEEE Member
Faculty of Electronic Engineering (FEE), Menoufia University, 32952 Menouf, Egypt
mekarar@ieee.org, Phone: +201020003789, Fax: +20483660716

Drug infusion systems are used to inject intra-venous (IV) anti-cancer chemotherapy drugs inside the patients. These systems are mostly operator-based with very small options to achieve the treatment goals. Furthermore, the infusion systems with advanced options like wireless PC-based is very expensive and is rarely used in Egyptian hospitals and/or medical centers. Hence, this project aims at developing a new advanced medical drug infusion system for cancer chemotherapy, with inexpensive cost.

In this project, the NI-MyRIO as FPGA-based controller is basically used for controlling the drug infusion rates and the performance of the developed system. Moreover, it is possible to connect the developed system with a PC via a USB cable or using wireless communication technology, i.e. Wi-Fi, in order to adjust and monitor the drug infusion rate based on LabVIEW graphical interface during the session of chemotherapy.