Smart Medicine IoT Device using STM32 Microcontroller

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Abstract—The paper presents an Internet of Things (IoT) device for smart medicine applications using STM32 microcontroller.

Keywords— Smart medicine; IoT; STM32; micrcontroller.

I.   INTRODUCTION

- Non-adherence to medication of people or patients with dosing routines may lead for chronic diseases to even progress
- With the smart medicine Internet of Things (IoT) device, users and/or patients will have access for an automated method of organizing, monitoring, and taking up prescribed medicines at a scheduled time of intake

II.   TECHNICAL CONTENT

- The Smart medicine IoT device features an STM32 Nucleo microcontroller, an ST X-Nucleo NFC (near-

field communication) dynamic tag to easily connect to the device, an ST X-Nucleo Wi-Fi (wireless fidelity) module for internet connection, and RFID (radio frequency identification) tag for additional user security
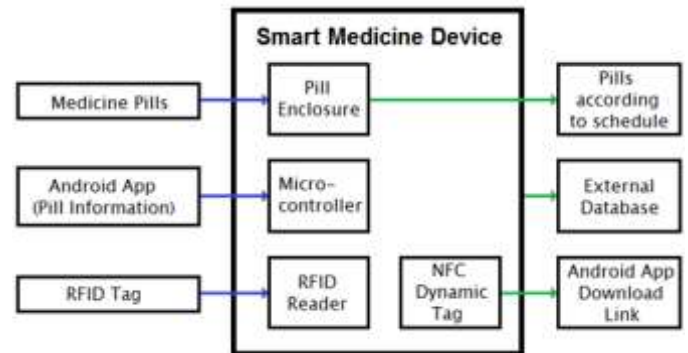

Fig. 1. Block diagram of the smart medicine IoT device.

III.   SMART MEDICINE IOT DEVICE

- The smart medicine IoT device offers simple but efficient way of automating the medicine intake, at a much cheaper cost

Fig. 2. Device prototype co-developed with students of First Asia Institute of Technology and Humanities (FAITH) College of Engineering.

- The device is intended for the benefit of people with chronic illnesses who are in need for continuous medical treatment as well as for the elderlies having troubles remembering to take their medications on time

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