1. OVERVIEW

ADM is a remote data collection device used to provide accurate last mile mail delivery measurements. The ADM is placed inside a mailbox or above a mail door slot. When a test letter (letter that contain a tag) is placed in the proximity of an ADM, the tag inside the envelope is excited and its unique ID is read. The ID and the time of read are then transmitted to a backend application over the GSM network using SMS.

The ADM concept is illustrated in Figure 1.

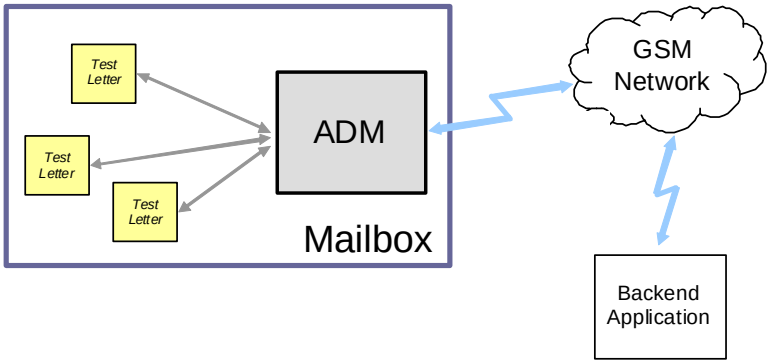

Figure 1 – ADM Concept

1.1 Main Characteristics

Overall Dimensions *(target)*
- Length: 185mm (including battery pack)
- Width: 85mm
- Height: 20mm (with small battery pack)

Reader
- 433MHz receiver, IPC UHF air interface
- Integrated antenna
- 125kHz 3-D coil transmitter, IPC LF interface

GSM Modem
- 2-Watt EGSM 900/GSM 850 radio section
- 1-Watt GSM 1800/1900 radio section
- Integrated antenna

Data Backup
- USB Flash Drive

Debug Interface
- USB

LEDs
- Power, Busy and GSM

Primary power
- Li-Polymer rechargeable cells

Package
- IP64 with battery pack
- IP20 w/o battery pack

Environment
- RoHS compliant

1.2 Physical concept

The ADM consists of a main unit and a detachable battery pack. The ADM physical concept is illustrated in Figs. 2-3

Figure 2 - ADM Assembly

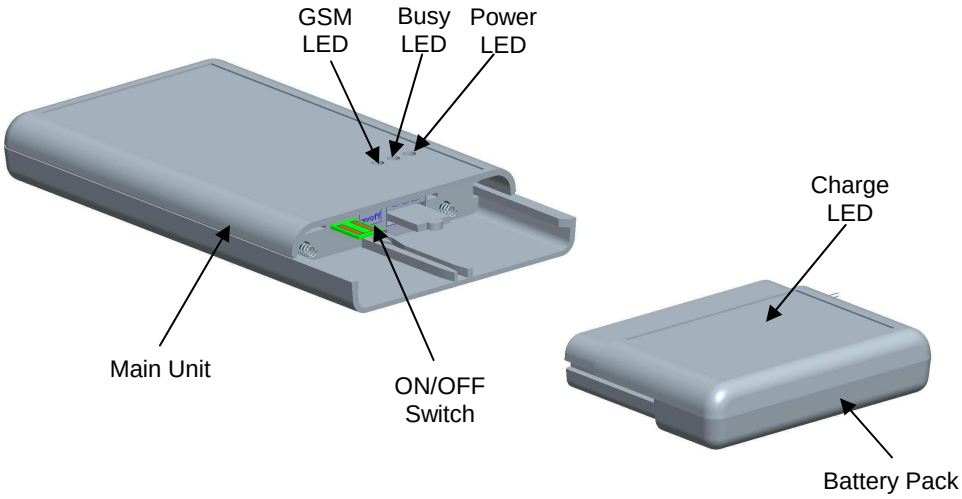

Figure 3 - ADM Main Unit and Battery Pack