



## 1. Mailbox Device

<b>[SmartPost-1] <u>Activation of PIR Motion Sensors</u></b>	
<b>Project:</b>	SmartPost - Test Cases Nov 2015
<b>Description</b>	<p>Expected: Motion sensor is activated when any size envelope is put in the mailbox. Status LED #1 turns on when motion is detected.</p> <p>Steps:</p> <ol style="list-style-type: none"> <li>1) Place envelopes of various sizes underneath the device.</li> </ol>

<b>[SmartPost-2] <u>Activation of Camera flash LED</u></b>	
<b>Project:</b>	SmartPost - Test Cases Nov 2015
<b>Description</b>	<p>Expected: Camera flash LED turns on when motion ends.</p> <p>Steps:</p> <ol style="list-style-type: none"> <li>1) Courier places mail in the mailbox.</li> <li>2) Flash LED turns on when motion ends.</li> <li>3) Flash LED remains on until camera is finished capturing image.</li> <li>4) Flash LED turns off.</li> </ol>

<b>[SmartPost-3] <u>WiFi Shield - Connecting to network</u></b>	
<b>Project:</b>	SmartPost - Test Cases Nov 2015
<b>Description</b>	<p>Expected: Device is able to connect to network with hardcoded SSID/password.</p> <p>Steps:</p> <ol style="list-style-type: none"> <li>1) Supply power to device</li> <li>2) Status LED #2 turns on when connection is successful.</li> </ol>

<b>[SmartPost-4] <u>Camera Module - Takes Snapshot &amp; Saves to SD Card of WiFi Shield</u></b>	
<b>Project:</b>	SmartPost - Test Cases Nov 2015
<b>Description</b>	<p>Expected: When motion sensors are activated, camera saves JPEG image in the SD Card of the WiFi shield.</p> <p>Steps:</p> <ol style="list-style-type: none"> <li>1) Courier places mail in the mailbox.</li> <li>2) Flash LED turns on once motion has ended.</li> <li>3) Camera takes snapshot of mailbox contents.</li> </ol>

4) Snapshot is saved as JPEG file in the SD card of the WiFi shield.

**[SmartPost-5] Email Server - Send Email with image attachment**

<b>Project:</b>	SmartPost - Test Cases Nov 2015
<b>Description</b>	<p>Expected: When motion sensors are activated, device connects to the email server and sends an email notification with image attachment to the recipient.</p> <p>Steps:</p> <ol style="list-style-type: none"> <li>1) Courier places mail in the mailbox.</li> <li>2) Motion detector is activated.</li> <li>3) Flash LED turns on once motion has ended.</li> <li>4) Camera takes a snapshot of the contents of the mailbox.</li> <li>5) Snapshot is saved as JPEG file in the SD card of the WiFi shield.</li> <li>6) JPEG file is attached to the email message.</li> <li>7) Email is sent to the user's email address.</li> </ol>

**2. Parcel Box**

**[SmartPost-6] Push Button & Solenoid Lock - Opening of the Parcel Box**

<b>Project:</b>	SmartPost - Test Cases Nov 2015
<b>Description</b>	<p>Expected: Solenoid lock unlocks. Security system is enabled and new parcels can be placed in the parcel box without triggering the alarm.</p> <p>Steps:</p> <ol style="list-style-type: none"> <li>1) Courier presses pushbutton.</li> <li>2) Courier opens and places parcel in the parcel box.</li> </ol>

**[SmartPost-7] Force Sensitive Resistor**

<b>Project:</b>	SmartPost - Test Cases Nov 2015
<b>Description</b>	<p>Expected: FSRs are activated and detects the pressure being applied to the FSR of the box and checks for positive weight discrepancies. Alarm is not activated because pressure is applied (and not removed) due to the addition of the parcel(s).</p> <p>Steps:</p> <ol style="list-style-type: none"> <li>1) Courier presses pushbutton.</li> <li>2) Courier places parcel in the parcel box.</li> </ol>

<b>[SmartPost-8] <u>Keypad &amp; Solenoid Lock - New Password - Inputs Correct Password</u></b>	
<b>Project:</b>	<u>SmartPost - Test Cases Nov 2015</u>
<b>Description</b>	<p>Expected: 4 digit password is saved by the user and container unlocks. Alarm system is not triggered.</p> <p>Steps:</p> <ol style="list-style-type: none"> <li>1) User inputs new password consisting of 4 digits on the keypad and saves it.</li> <li>2) User inputs the new password (to unlock container).</li> <li>3) User opens the parcel box.</li> </ol>

<b>[SmartPost-9] <u>Keypad &amp; Solenoid Lock - Incorrect Password Triggers Speaker &amp; Parcel Box Remains Locked</u></b>	
<b>Project:</b>	<u>SmartPost - Test Cases Nov 2015</u>
<b>Description</b>	<p>Expected: A 2 second alarm will sound along with the speaker saying "Incorrect Password". The parcel box remains locked and password input is reset to allow the user to try again.</p> <p>Step:</p> <ol style="list-style-type: none"> <li>1) User enters incorrect password on the keypad.</li> </ol>

<b>[SmartPost-10] <u>Camera - Takes Snapshot &amp; Saves to SD Card</u></b>	
<b>Project:</b>	<u>SmartPost - Test Cases Nov 2015</u>
<b>Description</b>	<p>Expected: User's snapshot is taken from the outside of the parcel box and saved to the SD card.</p> <p>Steps:</p> <ol style="list-style-type: none"> <li>1) User presses pushbutton.</li> <li>2) User opens the parcel box.</li> <li>3) User takes out contents of the parcel box.</li> </ol>

<b>[SmartPost-11] <u>Triggering of Alarm System</u></b>	
<b>Project:</b>	<u>SmartPost - Test Cases Nov 2015</u>
<b>Description</b>	<p>Expected: Alarm from speaker turns on for 60 seconds.</p> <p>Steps:</p> <ol style="list-style-type: none"> <li>1) User presses pushbutton.</li> <li>2) User opens the parcel box.</li> </ol>



3) User takes out contents of the parcel box.

### **[SmartPost-12] Email Server - Attaches Snapshot and Sends Email**

<b>Project:</b>	SmartPost - Test Cases Nov 2015
<b>Description</b>	<p>Expected: User's snapshot is attached to an email and sent to an email address.</p> <p>Steps:</p> <ol style="list-style-type: none"><li>1) User presses pushbutton.</li><li>2) User opens the parcel box.</li><li>3) User takes out contents of the parcel box.</li><li>4) Alarm from speaker turns on for 60 seconds.</li><li>4) Snapshot is taken from the outside of the parcel box.</li><li>5) Snapshot is saved in the SD card as JPEG.</li><li>6) Onboard WiFi connects to email server.</li></ol>

### **[SmartPost-13] Automatic Lock After Set Time**

<b>Project:</b>	SmartPost - Test Cases Nov 2015
<b>Description</b>	<p>Expected: Once the parcel container is unlocked, the container locks itself after 5-10 seconds.</p> <p>Steps:</p> <ol style="list-style-type: none"><li>1) Unlock container by inputting correct password on keypad.</li><li>2) Wait 5-10 seconds.</li></ol>