Enhance end-products robustness

ST’s family of Smart Reset™ ICs provides dual-assert manual-reset (push-button) inputs called smart reset inputs that make it possible to reliably resolve a system hang or freeze condition. Dual-assert manual-reset inputs require the user to assert two inputs simultaneously to initiate the system reset function (except the STM6504 which is edge triggered). This dual-key approach is more advanced than conventional single push-button resetting because it prevents the system from accidentally resetting. ST’s Smart Reset™ ICs allow the designer to use existing buttons to reset a device and eliminates the need for an unsightly reset access hole or a dedicated reset button.

**KEY FEATURES**
- Wide operating voltage: 1.0 to 5.5 V
- Low supply current: 1 to 2 μA (typ.)
- Voltage thresholds monitoring: 1.575 to 4.625 V
- Open-drain or push-pull output
- Active-high or active-low reset
- Adjustable input reset delay: 0.5 s to 12.5 s (typ.)
- Adjustable reset pulse width: 1.28 to 2240 ms
- Power-on reset
- Test mode
- Operating temperature: -40 to +85 °C
- DFN6 or DFN8 package

**KEY BENEFITS**
- Ideal for touchscreens or low-pin-count devices
- Smart recovery from system freeze or product misuse
- Increases product robustness / perception of quality
- Enhanced end user satisfaction
- Also suitable for hidden functionality (not only reset): e.g. data sync, device pairing, shortcuts, etc.

**KEY APPLICATIONS**
- Smartphones, tablets, smart watches
- Wearable / IoT devices
- Multimedia and MP3 players
- Activity trackers
- Portable navigation devices
- Any application that requires 1 or 2 delayed push buttons
# TYPICAL APPLICATION SET-UP

![TYPICAL APPLICATION SET-UP Diagram](image)

# SMART RESET PRODUCT RANGE

<table>
<thead>
<tr>
<th>Part number</th>
<th>Number of monitored voltages</th>
<th>Input reset configuration</th>
<th>Input reset delay (s)</th>
<th>Reset pulse configuration</th>
<th>Reset pulse width (s)</th>
<th>Package (mm)</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM6503</td>
<td>1</td>
<td>Three-state</td>
<td>[2 - 10]</td>
<td>Factory-programmed</td>
<td>[0.14 - 0.48]</td>
<td>DFN8 2x1x0.55</td>
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<tr>
<td>STM6505</td>
<td>2</td>
<td>Capacitor-adjustable</td>
<td>[2 - 15]</td>
<td>Factory-programmed</td>
<td>[0.21 - 0.36]</td>
<td>DFN8 2x1x0.55</td>
<td>-</td>
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<td>STM6510</td>
<td>1</td>
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<td>[1 - 15]</td>
<td>Capacitor-adjustable</td>
<td>[0.01 - 2.24]</td>
<td>DFN8 2x1x0.55</td>
<td>-</td>
</tr>
<tr>
<td>STM6513</td>
<td>1</td>
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<td>[2 - 10]</td>
<td>Capacitor-adjustable</td>
<td>[0.01 - 2.24]</td>
<td>DFN8 2x1x0.55</td>
<td>1 push-pull output</td>
</tr>
<tr>
<td>STM6519</td>
<td>0</td>
<td>Factory-trimming</td>
<td>[0.5 - 10]</td>
<td>Factory-programmed</td>
<td>[0.001 - 0.36]</td>
<td>QFN6 1x1.45x0.55</td>
<td>Customer test mode</td>
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<td>STM6520</td>
<td>0</td>
<td>Dual-state</td>
<td>[7.5 - 12.5]</td>
<td>-</td>
<td>-</td>
<td>DFN8 2x1x0.55</td>
<td>1 push-pull output</td>
</tr>
<tr>
<td>STM6522</td>
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<td>Capacitor-adjustable</td>
<td>[2 - 15]</td>
<td>Factory-programmed</td>
<td>0.21</td>
<td>DFN8 2x1x0.55</td>
<td>-</td>
</tr>
<tr>
<td>STM6524</td>
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<td>Factory-trimming</td>
<td>[0.5 - 10]</td>
<td>Factory-programmed</td>
<td>[0.001 - 0.36]</td>
<td>1.3X1.6 X0.55</td>
<td>Customer test mode</td>
</tr>
</tbody>
</table>

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