

# Smart-UPS SMT and SMC Series Firmware Release Notes

## Revision Information:

Rev.	Date	Remark
1.1	22-Nov-2023	Initial Version. Including Smart-UPS SMT ID 1015, 1027 and 1060, SMC ID 1018, 1028 and 1061 Firmware Release Notes
1.2	11-Jan-2024	Add Smart-UPS SMT ID 1015, 1027 UPS 17.2 release note.
1.3	24-May-2024	Add the SHA256 checksum and reintegrate the document note.

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**Introduction**

These release notes describe the version numbers that are applicable to UPS models that correspond with the relevant firmware. These models are SMT and SMC series which includes SMT ID1015, SMC ID1018, SMT ID1027, SMC ID1028, SMT ID1060, and SMC ID1061. The applicable SKUs are listed in their respective section.

## Firmware Revisions for ID 1060 and 1061 Series

### Firmware Revision: UPS 02.0

ID Number	Firmware Revision	Release Date
1060	UPS 02.0	17-Apr-2024
File Name	SHA256 checksum	
SMT1060UPS_02-0.enc	85f70ef5f019f8e73a8600a09fc1d6c5644929939fbe5dd6515dc2e7f8a6a442	
1061	Initial Released Version: UPS 02.0	17-Apr-2024
File Name	SHA256 checksum	
SMC1061UPS_02-0.enc	da23b6cb0a84ce3880391656ed284f885ac33b00995e5669b009a5f6274ce5c1	
Applicable SKUs		
<p><b>SMT:</b> SMT750C, SMT750RM2UC, SMT1000C, SMT1000RM2UC, SMT1500C, SMT1500RM2UC, SMT750IC, SMT750RMI2UC, DLT1500C, DLT1500IC, DLT1500RM2UC, DLT1500RMI2UC, SMT1000IC, SMT1000RMI2UC, SMT1500IC, SMT1500RMI2UC</p> <p><b>SMC:</b> SMC1000C, SMC1000-2UC, SMC1500C, SMC1500-2UC, SMC1000IC, SMC1000I-2UC, SMC1500IC, SMC1500I-2UC</p>		
Change logs		
<p>1. Add the SHA-1 hash in the MbedTLS for this product series.</p> <p><b>Note 1:</b> This revision enables the SHA-1 128 bits hash to connect to the new cloud server.</p> <p><b>Note 2:</b> The Smart-UPS Firmware Upgrade Wizard tool always includes the latest firmware and helps you upgrade to the UPS code via serial (RS232) port. For more information on the tool, see <a href="#">FA279197</a>.</p>		

**Firmware Revision: UPS 01.2**

ID Number	Firmware Revision
1060	Initial Released Version: UPS 01.2
1061	Not applicable
<b>Applicable SKUs</b>	
SMT: SMT1500RM2UC, DLT1500RM2UC	
<b>Change logs</b>	
<p>No changes currently applicable.</p> <p><b>Note:</b> The Smart-UPS Firmware Upgrade Wizard tool always includes the latest firmware and helps you upgrade to the UPS code via serial (RS232) port. For more information on the tool, see <a href="#">FA279197</a>.</p>	

## Firmware Revisions for ID 1015 and 1027 Series

### Firmware Revision: UPS 17.2

ID Number	Firmware Revision	Release Date
1015	UPS 17.2	17-Apr-2024
File Name	SHA256 checksum	
SMT1015UPS_17-2.enc	dc39e0167de3a90d6086449b09e2e5ef11df1ec262d2cd3bd66e21c9f3b7c019	
1027	UPS 17.2	17-Apr-2024
File Name	SHA256 checksum	
SMT1027UPS_17-2.enc	e562b9b7887319a1723ba1b5d0322553c2141a6620d341c4ae0762681506cd53	
Applicable SKUs		
<p><b>SMT:</b> SMT750C, SMT750RM2UC, SMT1000C, SMT1000RM2UC, SMT1500C, SMT1500RM2UC, SMT2200C, SMT2200RM2UC, STM3000C, SMT3000RM2UC, SMT750IC, SMT750RMI2UC, SMT1000IC, SMT1000RMI2UC, SMT1500IC, SMT1500RMI2UC, SMT2200IC, SMT2200RMI2UC, SMT3000IC, SMT3000RMI2UC</p>		
Change logs		
<p>1. Added a patch code for the affected SKUs as below listed to fix the RBC indication on the LCD panel with the correct RBC string, affected SKUS SMT3000IC, SMT3000C, SMT2200RMI2UC, and SMT2200RM2UC.</p>		
<p><b>Note 1:</b> This revision alters an incorrect message on the LCD panel about the RBC indication.</p>		
<p><b>Note 2:</b> The following security vulnerabilities have been addressed since SMT ID1015 rev UPS 04.6 and SMC ID1018 rev UPS 04.3:</p> <ul style="list-style-type: none"> <li>- <a href="#">CVE-2022-22805</a></li> <li>- <a href="#">CVE-2022-22806</a></li> <li>- <a href="#">CVE-2022-0715</a></li> </ul>		
<p><b>Note 3:</b> The Smart-UPS Firmware Upgrade Wizard tool always includes the latest firmware and helps you upgrade to the UPS. For more information on the tool, see <a href="#">FA279197</a>.</p>		

## Firmware Revisions for ID 1015, 1018, 1027 and 1028 Series

### Firmware Revision: UPS 17.0

ID Number	Firmware Revision	Release Date
<b>1015</b>	UPS 17.0	N/A
<b>File Name</b>	<b>SHA256 checksum</b>	
N/A	N/A	
<b>1018</b>	UPS 17.0	17-Apr-2024
<b>File Name</b>	<b>SHA256 checksum</b>	
SMC1018UPS_17-0.enc	f5da7dcd45bc1916c90c1d1ea38afad86bd886fc4ed4117d323415c1f10fd3f7	
<b>1027</b>	UPS 17.0	N/A
<b>File Name</b>	<b>SHA256 checksum</b>	
N/A	N/A	
<b>1028</b>	UPS 17.0	17-Apr-2024
<b>File Name</b>	<b>SHA256 checksum</b>	
SMC1028UPS_17-0.enc	b093ce9c823a7dd8dc31e30dcf3c5b8eb5d990b41d49f95d5823a20d757d1c57	
<b>Applicable SKUs</b>		
<p><b>SMT:</b> SMT750C, SMT750RM2UC, SMT1000C, SMT1000RM2UC, SMT1500C, SMT1500RM2UC, SMT2200C, SMT2200RM2UC, STM3000C, SMT3000RM2UC, SMT750IC, SMT750RMI2UC, SMT1000IC, SMT1000RMI2UC, SMT1500IC, SMT1500RMI2UC, SMT2200IC, SMT2200RMI2UC, SMT3000IC, SMT3000RMI2UC</p> <p><b>SMC:</b> SMC1000C, SMC1000RM2UC, SMC1500C, SMC1500RM2UC, SMC1000IC, SMC1000I-2UC, SMC1500IC, SMC1500I-2UC</p>		
<b>Change logs</b>		
<p>1. Increased detection of the USB D- signal has been implemented to ensure the UPS does not enter “suspend” mode.</p> <p><b>Note 1:</b> This revision revives the communication of the USB port while the UPS is on “suspend” mode when communication restarts with PowerChute Business Edition.</p> <p><b>Note 2:</b> The following security vulnerabilities have been addressed since SMT ID1015 rev UPS 04.6 and SMC ID1018 rev UPS 04.3:</p> <ul style="list-style-type: none"> <li>- <a href="#">CVE-2022-22805</a></li> <li>- <a href="#">CVE-2022-22806</a></li> <li>- <a href="#">CVE-2022-0715</a></li> </ul> <p><b>Note 3:</b> The Smart-UPS Firmware Upgrade Wizard tool always includes the latest firmware and helps you upgrade to the UPS code via serial (RS232) port. For more information on the tool, see <a href="#">FA279197</a>.</p>		

## Firmware Revision: UPS 15.5 and UPS 16.5

ID Number	Firmware Revision
1015	UPS 15.5
1018	
1027	Initial Released Version: UPS 16.5
1028	
<b>Applicable SKUs</b>	
<p><b>SMT:</b> SMT750C, SMT750RM2UC, SMT1000C, SMT1000RM2UC, SMT1500C, SMT1500RM2UC, SMT2200C, SMT2200RM2UC, STM3000C, SMT3000RM2UC, SMT750IC, SMT750RMI2UC, SMT1000IC, SMT1000RMI2UC, SMT1500IC, SMT1500RMI2UC, SMT2200IC, SMT2200RMI2UC, SMT3000IC, SMT3000RMI2UC</p> <p><b>SMC:</b> SMC1000C, SMC1000RM2UC, SMC1500C, SMC1500RM2UC, SMC1000IC, SMC1000I-2UC, SMC1500IC, SMC1500I-2UC</p>	
<b>Change logs</b>	
<ol style="list-style-type: none"> <li>1. The mechanism of firmware signing has been added to the code to protect the UPS from malicious firmware upgrades. Thus, re-enabling firmware upgrade via NMC.</li> <li>2. “Firmware Update Interfaces” has been added to the LCD under <b>Menu &gt; Configuration</b>. You can now decide if firmware upgrades can be enabled through the designated communication ports.</li> <li>3. The battery pack module name has been replaced to <b>APCRBC157/ APCRBC159</b> from APCRBC132/ APCRBC133.</li> <li>4. The TLS used for SmartConnect has been updated to <b>MbedTLS</b> for enhanced cybersecurity.</li> </ol>	
<p><b>Note 1:</b> This revision provides enhanced network data security protection via the mechanisms below to prevent malicious firmware from being upgraded to the UPS through communication interface ports (including RJ45).</p>	
<p><b>Note 2:</b> The following security vulnerabilities have been addressed since SMT ID1015 rev UPS 04.6 and SMC ID1018 rev UPS 04.3:</p>	
<ul style="list-style-type: none"> <li>- <a href="#">CVE-2022-22805</a></li> </ul>	
<ul style="list-style-type: none"> <li>- <a href="#">CVE-2022-22806</a></li> </ul>	
<ul style="list-style-type: none"> <li>- <a href="#">CVE-2022-0715</a></li> </ul>	
<p><b>Note 3:</b> The Smart-UPS Firmware Upgrade Wizard tool always includes the latest firmware and helps you upgrade to the UPS code via serial (RS232) port. For more information on the tool, see <a href="#">FA279197</a>.</p>	

## Firmware Revisions for ID 1015 and 1018 Series

### Firmware Revision: UPS 04.6 and UPS 04.3

ID Number	Firmware Revision
1015	UPS 04.6
1018	UPS 04.3
<b>Applicable SKUs</b>	
<p><b>SMT:</b> SMT750C, SMT750RM2UC, SMT1000C, SMT1000RM2UC, SMT1500C, SMT1500RM2UC, SMT2200C, SMT2200RM2UC, STM3000C, SMT3000RM2UC, SMT750IC, SMT750RMI2UC, SMT1000IC, SMT1000RMI2UC, SMT1500IC, SMT1500RMI2UC, SMT2200IC, SMT2200RMI2UC, SMT3000IC, SMT3000RMI2UC</p> <p><b>SMC:</b> SMC1000C, SMC1000RM2UC, SMC1500C, SMC1500RM2UC, SMC1000IC, SMC1000I-2UC, SMC1500IC, SMC1500I-2UC</p>	
<b>Change logs</b>	
<ol style="list-style-type: none"> <li data-bbox="134 913 1449 976">1. A UPS disability function has been implemented to disable your UPS firmware upgrades via NMC. This will mitigate the potential risk of malicious UPS firmware being passed through this channel.</li> <li data-bbox="134 1008 1366 1070">2. The UPS firmware code has been enhanced for protection against vulnerabilities of an unauthorized extraction of confidential firmware and unauthorized network access to SmartConnect UPS devices.</li> </ol> <p><b>Note 1:</b> The following security vulnerabilities have been addressed in this release:</p> <ul style="list-style-type: none"> <li data-bbox="140 1191 363 1223">- <a href="#">CVE-2022-22805</a></li> <li data-bbox="140 1247 363 1279">- <a href="#">CVE-2022-22806</a></li> <li data-bbox="140 1303 347 1335">- <a href="#">CVE-2022-0715</a></li> </ul> <p><b>Note 2:</b> The Smart-UPS Firmware Upgrade Wizard tool always includes the latest firmware and helps you upgrade to the UPS code via serial (RS232) port. For more information on the tool, see <a href="#">FA279197</a>.</p>	

## Firmware Revision: UPS 04.4

ID Number	Firmware Revision
1015	UPS 04.4
1018	Not applicable
<b>Applicable SKUs</b>	
<p><b>SMT:</b> SMT750C, SMT750RM2UC, SMT1000C, SMT1000RM2UC, SMT1500C, SMT1500RM2UC, SMT2200C, SMT2200RM2UC, STM3000C, SMT3000RM2UC, SMT750IC, SMT750RMI2UC, SMT1000IC, SMT1000RMI2UC, SMT1500IC, SMT1500RMI2UC, SMT2200IC, SMT2200RMI2UC, SMT3000IC, SMT3000RMI2UC</p> <p><b>SMC:</b> SMC1000C, SMC1000RM2UC, SMC1500C, SMC1500RM2UC, SMC1000IC, SMC1000I-2UC, SMC1500IC, SMC1500I-2UC</p>	
<b>Change logs</b>	
<ol style="list-style-type: none"> <li>1. Pre-charge control optimization has been implemented on SKUs over 2.2kVA.</li> <li>2. New SKUs are now supported by XYZ.</li> <li>3. <b>Bug-fix:</b> The runtime is now accurately reported during battery disconnect.</li> <li>4. <b>Bug-fix:</b> LoadShedRunTimeRemainingSetting and LoadShedTimeOnBatterySetting values were updated and can now write the setting through the port of Modbus protocol over Serial and TCP/IP.</li> <li>5. <b>Bug-fix:</b> The Modbus register UPSStatusChangeCause data is now correctly displayed when you power your UPS on/ off via the LCD UI.</li> </ol>	

## Firmware Revision: UPS 04.1

ID Number	Firmware Revision
1015	UPS 04.1
1018	
<b>Applicable SKUs</b>	
<p><b>SMT:</b> SMT750C, SMT750RM2UC, SMT1000C, SMT1000RM2UC, SMT1500C, SMT1500RM2UC, SMT2200C, SMT2200RM2UC, SMT3000C, SMT3000RM2UC, SMT750IC, SMT750RMI2UC, SMT1000IC, SMT1000RMI2UC, SMT1500IC, SMT1500RMI2UC, SMT2200IC, SMT2200RMI2UC, SMT3000IC, SMT3000RMI2UC</p> <p><b>SMC:</b> SMC1000C, SMC1000RM2UC, SMC1500C, SMC1500RM2UC, SMC1000IC, SMC1000I-2UC, SMC1500IC, SMC1500I-2UC</p>	
<b>Change logs</b>	
<ol style="list-style-type: none"> <li>1. The upper acceptable limit can now be set to 276V when the output voltage setting is 240V.</li> <li>2. An improvement has been implemented to the charging profile for SMT750IC and SMT750RMI2UC.</li> <li>3. Modbus over TCP has been added as a feature. This is not applicable to SMC series.</li> <li>4. Two report usages of USB HID have been updated on <code>ShutdownImminent</code> and <code>DelayBeforeReboot</code> (DVT 2.2.4).</li> <li>5. EnergyStar2.0/DOE function has been implemented to improve efficiency based on hardware change.</li> <li>6. The minimum and maximum limits have been updated for reported usages of battery runtime and shutdown countdown in a Linux application.</li> <li>7. The unit now displays the battery temperature in °F below freezing.</li> <li>8. The UPS now correctly communicates with PowerChute Business Edition as expected.</li> <li>9. <code>RemainingTimeLimit</code> and <code>AudibleAlarmControl</code> now correctly report their own usages as expected.</li> <li>10. The transfer of SMC units (SMTL1500RM3UC and SMTL750RM2UC) from <b>Battery</b> to <b>Line</b> now work as expected.</li> <li>11. 125V output configuration has been implemented to replace 127V.</li> <li>12. To comply with EnergyStar 2.0, the output voltage of the UPS has been changed to <b>125V</b> from 127V and is no longer configurable.</li> </ol>	

**Firmware Revision: UPS 03.5**

ID Number	Firmware Revision
1015	UPS 03.5
1018	
<b>Applicable SKUs</b>	
<p><b>SMT:</b> SMT750C, SMT750RM2UC, SMT1000C, SMT1000RM2UC, SMT1500C, SMT1500RM2UC, SMT2200C, SMT2200RM2UC, STM3000C, SMT3000RM2UC</p> <p><b>SMC:</b> SMC1000C, SMC1000RM2UC, SMC1500C, SMC1500RM2UC, SMC1000IC, SMC1000I-2UC, SMC1500I, SMC1500I-2UC</p>	
<b>Change logs</b>	
<ol style="list-style-type: none"> <li>1. The Department of Energy's EnergyStar 2.0 feature has been implemented to improve power efficiency.</li> <li>2. SmartConnect cloud connectivity has been improved to establish a reconnection to the cloud over time.</li> <li>3. UPS events such as 'battery disconnected' and 'output on' are now reported with increased accuracy to the SmartConnect cloud server.</li> </ol>	

## Firmware Revision: UPS 03.2

ID Number	Firmware Revision
1015	UPS 03.2
1018	
<b>Applicable SKUs</b>	
<p><b>SMT:</b> SMT750C, SMT750RM2UC, SMT1000C, SMT1000RM2UC, SMT1500C, SMT1500RM2UC, SMT2200C, SMT2200RM2UC, STM3000C, SMT3000RM2UC</p> <p><b>SMC:</b> SMC1000C, SMC1000RM2UC, SMC1500C, SMC1500RM2UC</p>	
<b>Change logs</b>	
<ol style="list-style-type: none"> <li>1. The boost charged function has now been enabled.</li> <li>2. The battery over-temperature-protection function has been improved and the UPS will now display a message on the LCD if this occurs.</li> <li>3. An OEM feature was added to automatically turn on the UPS when Alternative Current is within range.</li> <li>4. Add a setting to configure UPS to skip the <b>Site Wiring Fault</b> warning.</li> <li>5. An event will now be reported to the cloud when an outlet status changes.</li> <li>6. The Modbus configuration setting has been reversed.</li> <li>7. The countdown status report has been improved for “pending off” on the UPS.</li> <li>8. The LCD display will now report <b>&lt;1m</b> for runtime remaining when runtime is less than one minute.</li> <li>9. The default choice for confirming installation of firmware has been changed to <b>Confirm</b> from “Cancel”.</li> </ol>	

**Firmware Revision: UPS 02.6**

ID Number	Firmware Revision
1015	Initial Released Version: UPS 02.6
1018	Not applicable
<b>Applicable SKUs</b>	
<b>SMT:</b> SMT750C, SMT750RM2UC	

**Compatibility**

- AP9613 Dry Contact Version Next Gen Relay IO card 2.1
- AP9620 LCC Version 3.0
- AP9624 (Second Gen Interface Expander Card) v1.0X
- AP9631/AP9630 card APP SUMX 6.2.1, AOS 6.2.1
- AP9635 CH / AP9631card APP SUMX 6.4.6, AOS 6.4.6
- AP9635 CH card APP SUMX 6.4.0, AOS 6.4.0
- PowerChute Business Edition v9.2
- FUW (Firmware Upgrade Wizard) Tool v4.1.1