



POLYCOM®

*KIRK Release Note*

**KWS6000**

**Firmware Version PCS03B\_**  
Q3/2009

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## 1. General

This release note applies to released versions of the KWS6000 Firmware. This version specifically applies to version PCS03B\_ of the KWS6000 Firmware. This release replaces the PCS03A\_\_ release as the latest generally available (GA) release.

### 1.1 Important Notes

Some features require specific versions of the firmware loaded into the base stations or media resources.

### 1.2 Feature License and Platform Limitations

The following table summarizes features that require a particular hardware platform and / or a license key for activation.

Feature	Comment
DECT frequency swap	License required.

### 1.3 System Requirements

Hardware Platform:	Description
KWS6000 HW PCS 3C or newer	KWS6000 Server
Media Resource 6000 HW PCS 3C or newer	Media Resource 6000

## 2. Terms and Definitions

WCAG Web Content Accessibility Guidelines. W3C Recommendation. These guidelines explain how to make Web content accessible to people with disabilities.

## 3. Distribution Files

Click [here >>](#) to find the firmware image of the KWS6000.

## 4. Changes

### 4.1 Version PCS03B\_ (Q3/2009)

#### 4.1.1 Added or Changed Features

- DECT-97: Add service codes to read system information via handset. Initiated by typing codes and then pressing off hook from the handset. This information can be read from the system.
  - IP address: \*\*\*999\*00
  - MAC address: \*\*\*999\*01
  - Server Firmware: \*\*\*999\*02

- Allow custom posix timezone specification strings.
  - It is now possible to configure the system to show “½-hour time zones”, by entering a posix string
- Add revision to User Agent string.
  - Firmware version can be obtained from traces, inspecting the User Agent field
- Include DNS traffic when capturing SIP.
- Allow custom capture filters.
  - Customize the captured data to a trace by entering a filter in pcap format.
- DECT-63: New and improved NTP client.
  - Improved error recovery.
  - Information for the NTP client included in the log file.
- Add user/password and enable/disable options to MSF.
  - It is possible to change login username and password for MSF applications (text messaging interface)
  - MSF functionality can be enabled/disabled
- Send unregister and unsubscribe when deleting an endpoint.
  - Inform the PBX when a DECT handset is deleted.
- Clean out parameters in user names received from some PBX'es.
- Handle "302 Multiple Choices" - for now just pick the first choice.
- Handle SDP in multipart body.
- Added timestamp and synchronization statistics duration to rfps.xml.
- If SIP registration fails, re-register within a short time and then wait.

#### 4.1.2 Removed Features

- None

#### 4.1.3 Corrections

- Fixed problem with authentication on some PBX'es.
- Fixed problem with wrong answer to SDP update offers.
- Fixed timer problem that might break provisioning.
- MSF callback number length increased.
- Check for required SIP headers before creating a dialog.
- Handle timeout for SUBSCRIBE requests.
  - Retry if SIP subscription fails.
- Skip local media resource in central firmware update.
  - If media resource firmware is updated, the KWS6000 server is not affected even if it acts as local media resource.
- Remove require 100rel header from PRACK as this is wrong according to RFC3262.
- Improved CODEC card DTMF handling.
- DECT-111: Handle MSF timestamps.
- Does not crash in some rare call transfer scenarios.

#### 4.1.4 Configuration File Parameter Changes

File	Action	Parameter	Description
config.xml	Added	application.enable_msf	Specifies if the MSF application interface is enabled.  true – The MSF interface is enabled and applications can connect. false – The MSF interface is disabled.  Default: true
config.xml	Added	application.username	Specifies the username required for applications to log in.  Default: "GW-DECT/admin"
config.xml	Added	application.password	Specifies the encrypted password required for applications to log in.  Default: "f621c2268a8df24955ef4052bfbb80cf" (password "ip6000" encrypted)

## 4.2 Version PCS03A\_ (Q2/2009)

### 4.2.1 Added or Changed Features

- Retrieving a big file from the internal web server no longer blocks the server.
- Retain any existing other call when a REFER triggered INVITE fails, otherwise release the handset.
- Do not require username in URI in REFER.
- Handle "423 Interval to brief" REGISTER response.
- Default log level in the GUI increased from INFO to NOTICE.
- Add support for international letters using UTF-8.
- DECT-83: If no protocol is specified in the provisioning URL then default to TFTP.
- DECT-81: Do not repeatedly program flash if version and binary firmware files are inconsistent.
- Log an error if configuration XML contains invalid XML.
- Add support for keep-alive used by version 18 or later of MSF.DLL.
- Send "unknown op" error when an unknown operation is requested via MSF.

### 4.2.2 Removed Features

- None

### 4.2.3 Corrections

- Fixed bug in Refer-To handling.
- Fixed bug in Record-Route handling.
- Fixed bug that made the DTMF duration being rounded down to N\*80.

- Fixed handling of too long dialled numbers.
- DECTESC-75: Fixed bug making it impossible to save Wireless Server Configuration.
- Disable unsupported media lines correctly.
- Parse remote SDP ptime attribute correctly.
- Do not send SDP with new version if remote SDP version has not changed.
- Only check for remote SDP version changes if remote SDP was received earlier.
- Fixed problem with one-way voice when a call is answered during a handover.
- Fix bug not allowing MSF multi-byte status requests – required for RTLS.
- Handle MSF call release without call record correctly.

#### 4.2.4 Configuration File Parameter Changes

File	Action	Parameter	Description
config.xml	Changed	provisioning.server.url	<p>Specifies the static boot server URL from where the KWS will retrieve configuration information. The format is [<code>&lt;protocol&gt;://[&lt;user&gt;:&lt;password&gt;@]&lt;host&gt;[/&lt;path&gt;]</code>]. Protocol can be either tftp, ftp or http.</p> <p>It is optional to specify a protocol. If the protocol is not specified the KWS will default to tftp.</p> <p>Example: ftp://kws:ip6000@boot.example.com/phones or 192.168.0.1</p> <p>Default: Empty</p>

### 4.3 Version PCS03\_ (Q1/2009)

#### 4.3.1 Added or Changed Features

- Optional individual ports per handsets for SIP signaling. Extend support to SIP PBXs using per port registration.
- Cisco Unified Call Manager 6.1 support.
- Provisioning: Possible to centralize configuration and maintenance.
- Users export to XML and CSV format: Decrease installation and maintenance cost.
- Allow adding users with unspecified IPEI: Option of adding handsets without knowing the IPEI of the handset. Decrease installation and maintenance cost by allowing field subscription of handset(s) and possibility for remote configuration.
- Added system wide DECT access code: Possible to create a default DECT access code for all users – instead of per user (access code in user will overrule the system default value).
- Added automatic standby text update. When the standby text is updated (either through the GUI or through auto-provisioning) the change appears instantly on the handset (no power-cycle of the handset is needed).

- In overlap dialing send digits when # is pressed. Optional: Default is disabled.
- When a user is deleted, unsubscribe the handset: When user is deleted, the handset removes the subscription to the system.
- Added RFC3896 Referred-By handling.
- Offered rfc2833 payload type (DTMF payload type) can now be configured default is 96.
- Add refresh and clear button in base station administration.  
CLI / Name display for complete call duration for incoming calls.
- Base station lost sync. Ratio / percentage added.
- Added BMC/radio configuration.

### 4.3.2 Removed Features

- No longer possible to use local number – the SIP user name is now used for MSF.

### 4.3.3 Corrections

- Fix base station lost sync. ratio calculation.
- Fix DTMF payload type.
- Fix order in route sets for SIP dialogs.
- Fix statistics for failed MSF calls.
- Fix handling of escaped SIP URI parameters.
- Pass all parameters and headers from REFER to the sent INVITE.
- Remove http server crash when downloading rfps.xml.
- Remove crash on re-INVITE when collecting digits.
- Remove crash on INVITE with long From header.

### 4.3.4 Configuration File Parameter Changes

File	Action	Parameter	Description
config.xml	Added	provisioning.server.method	Specifies how the KWS6000 will obtain the boot server address. <ul style="list-style-type: none"> <li>• dhcp – obtain from DHCP option 66.</li> <li>• static – use static configured.</li> <li>• disabled – do not check for updates.</li> </ul> Default: dhcp
config.xml	Added	provisioning.server.url	Specifies the static boot server URL from where the KWS6000 will retrieve configuration information. The format is <protocol>://[<user>:<password>@]<host>/<path>. Protocol can be either tftp, ftp or http. <p>Example: ftp://kws:ip6000@boot.example.com/phones</p> Default: Empty
config.xml	Added	provisioning.check.interval	Specifies an interval for checking for updates.

File	Action	Parameter	Description
			<p>0 – do not check for updates periodically.                      &gt;1 – interval in minutes.</p> <p>Default: 0</p>
config.xml	Added	provisioning.check.time	<p>Specifies a specific time for checking each day. The format is HH:MM.</p> <p>00:00 – 23:59</p> <p>Default: Empty</p>
config.xml	Added	provisioning.check.check_sync	<p>Specifies how the KWS6000 will react to SIP NOTIFY check-sync events.</p> <ul style="list-style-type: none"> <li>disabled – do nothing if a check-sync event is received.</li> <li>reboot – reboot and check for updates.</li> <li>update – check for updates and reboot if necessary.</li> </ul> <p>Default: disabled</p>
config.xml	Added	provisioning.users.check	<p>Specifies if the KWS will try to download and import users from the provisioning server.</p> <ul style="list-style-type: none"> <li>false – do not check for users.</li> <li>true – check for users.</li> </ul> <p>Default: false</p>
config.xml	Added	provisioning.firmware.kws	<p>Specifies the name of the firmware image to use for the KWS6000. The KWS6000 will check for a version file and a binary file. They must be located as &lt;URL&gt;/&lt;firmware&gt;.ver and &lt;URL&gt;/&lt;firmware&gt;</p> <p>Example: kws300-flash.bin</p> <p>Default: Empty</p>
config.xml	Added	sip.send_to_current_registrar	<p>Specifies how requests outside a dialog are sent if a list of SIP servers is received via DNS SRV.</p> <ul style="list-style-type: none"> <li>false – perform a DNS SRV lookup for each request and determine the destination from this.</li> <li>true – send each request to the server currently holding the registration.</li> </ul> <p>Default: false</p>

File	Action	Parameter	Description
config.xml	Added	sip.separate_endpoints_ports	<p>Specifies if each user should use an individual UDP for its signaling or all users should use the local port defined in the SIP configuration.</p> <ul style="list-style-type: none"> <li>• false – use one UDP port for all users.</li> <li>• true – use individual UDP ports for each user.</li> </ul> <p>Default: false</p>
config.xml	Added	sip.pound_dials_overlap	<p>Specifies if pressing # while off hook dialing will dial the entered extension.</p> <ul style="list-style-type: none"> <li>• false – do not dial when # is pressed.</li> <li>• true – dial when # is pressed.</li> </ul> <p>Default: false</p>
config.xml	Added	dect.accesscode	<p>Specifies a system wide DECT access code required for subscribing handsets. The access code is from 0 to 8 decimal digits. Access codes assigned for specific users will override this setting.</p> <p>Example: 1234</p> <p>Default: Empty</p>
config.xml	Added	Sip.dtmf.rtp_payload_type	<p>Offered rfc2833 payload type (DTMF payload type) default is 96.</p>

## 4.4 Version PCS02A\_ (Q4/2008)

### 4.4.1 Added or Changed Features

- Added cluster handling. This is only relevant for de-centralized installations.
- Added support for DECT frequency swap (requires license and base station with firmware PCS02a\_ or later).
- Added phonebook application. This feature offers a centralized phonebook. The formats supported for the phonebook is csv-file and LDAP.
- Added enable/disable send date and time to handsets. This feature makes it possible to select whether the date/time should be visible in the handset or not.
- Add distinctive alerting by interpreting the Alert-Info SIP header. Use external ring tone as default. If distinctive ring is supported by the IP PBX, different ring tones can be set for the handset to differ between internal and external calls.
- Update MWI when a handset subscribes or makes a location registration.

- Always respond with 200 OK when a MWI NOTIFY is received. This is done to avoid terminating an existing MWI subscription.
- Added automatic MWI retransmission.
- Allow for special characters like &\_ in SIP authentication user/password.
- Allow alphanumeric SIP username.
- Implement RFC4235 Dialog state event package. Used for e.g. call pickup support.
- Allow for receiving asymmetric RTP (optional, requires media resource with firmware PCS02A\_ or later). This is required to operate with e.g. a Mitel NuPoint voice mail server.
- Detect merged invites after a fork and respond with “482 Loop Detected”.
- Added full system backup facility. Instead of separate backups of configuration, users etc. everything is now in one backup and it is optional how much is restored.
- Standby text length increased from 16 to 24 characters.
- Implemented Type-of-Service/DiffServ. Replaced old Quality-of Service approach with new Type-of-Service approach.

#### **4.4.2 Removed Features**

None

#### **4.4.3 Corrections**

- Corrected error in subscription statistics (subscriptions which failed due to e.g. wrong or missing DECT access code was logged as a success).
- Release MSF-call correctly when no CR is assigned.
- Fix reversed time zones. GMT time zones were reversed – GMT+2 meant GMT-2. This has now been fixed.

#### **4.5 Version PCS02\_**

Initial KWS6000 version.

### **5. Outstanding Issues**

The following issues will be fixed in a subsequent release

- None identified.