



KIRK Release Note
KWS300

Firmware Version PCS03B_
Q3/2009

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1. General

These release notes apply to released versions of the KWS300 Firmware. This version specifically applies to version PCS03B of the firmware. This release replaces the PCS03A__ release as the latest generally available (GA) release.

1.1 Important Notes

If upgrading from PCS01B_ to a newer version and subsequently downgrading from the newer version back to PCS01B_ the user database will be lost. It will however be possible to restore a backup made while running PCS01B_.

1.2 Feature License and Platform Limitations

None.

1.3 System Requirements

Hardware Platform:	Description
KWS300 HW PCS 10 or newer	KWS300 Server

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 PCS03A_ of the KWS300.

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 timezones”, 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.
 - 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 usernames 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
- Remove Require 100rel header from PRACK as this is wrong according to RFC3262.
- 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 problem with time drift making NTP stop correcting the time.

- Allow changing remote RTP address during a call.
- Fixed handling of too long dialed 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.
- 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><protocol>://[<user>:<password>@]<host>[/<path>]</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.
- Auto 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). Optional: Default is disabled.
- When a user is deleted, unsubscribe the handset. When the user is deleted the handset is signaled to remove the subscription to the system.
- Added RFC3896 Referred-By handling.
- BMC Allow dummy bearer on neighbor slot.
- BMC Do not scan RSSI - only move dummy bearer based on timer.
- BMC Do not ask RFP IP process for dummy bearer.
- BMC Added BMC/radio configuration.

4.3.2 Removed Features

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

4.3.3 Corrections

- Fix RTP handling when call is on hold.
- 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.
- BMC EEPROM read bug fixed.
- BMC Remove bug stopping dummy bearer.
- BMC Do not print from interrupt.

4.3.4 Configuration File Parameter Changes

File	Action	Parameter	Description
config.xml	Added	provisioning.server.method	Specifies how the KWS300 will obtain the boot server address. dhcp – obtain from DHCP option 66. static – use static configured. disabled – do not check for updates. Default: dhcp
config.xml	Added	provisioning.server.url	Specifies the static boot server URL from where the KWS will retrieve configuration information. The format is <protocol>://[<user>:<password>@]<host>/<path>. Protocol can be either tftp, ftp or http. Example: ftp://kws:ip6000@boot.example.com/phones

File	Action	Parameter	Description
			Default: Empty
config.xml	Added	provisioning.check.interval	Specifies an interval for checking for updates. 0 – do not check for updates periodically. >1 – interval in minutes. Default: 0
config.xml	Added	provisioning.check.time	Specifies a specific time for checking each day. The format is HH:MM. 00:00 – 23:59 Default: Empty
config.xml	Added	provisioning.check.check_sync	Specifies how the KWS300 will react to SIP NOTIFY check-sync events. disabled – do nothing if a check-sync event is received.. reboot – reboot and check for updates. update – check for updates and reboot if necessary. Default: disabled
config.xml	Added	provisioning.users.check	Specifies if the KWS300 will try to download and import users from the provisioning server. false – do not check for users. true – check for users. Default: false
config.xml	Added	provisioning.firmware.kws	Specifies the name of the firmware image to use for the KWS300. The KWS300 will check for a version file and a binary file. They must be located as <URL>/<firmware>.ver and <URL>/<firmware> Example: kws300-flash.bin Default: Empty
config.xml	Added	sip.send_to_current_registrar	Specifies how requests outside a dialog are sent if a list of SIP servers is received via DNS SRV. false – perform a DNS SRV lookup for each request and determine the destination from

File	Action	Parameter	Description
			<p>this. true – send each request to the server currently holding the registration.</p> <p>Default: false</p>
config.xml	Added	sip.separate_endpoint_ports	<p>Specifies if each user should use an individual UDP for its signalling or all users should use the local port defined in the SIP configuration.</p> <p>false – use one UDP port for all users. true – use individual UDP ports for each user.</p> <p>Default: false</p>
config.xml	Added	sip.pound_dials_over_lap	<p>Specifies if pressing # while off hook dialling will dial the entered extension.</p> <p>false – do not dial when # is pressed. true – dial when # is pressed.</p> <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>

4.4 Version PCS02_ (Q4/2008)

4.4.1 Added or Changed Features

- Added auto creation of users on subscription attempt.
- Allow insecure HTTP traffic to be redirected to HTTPS.
- Improved GUI, new icons for better user experience. Improved WCAG compliance. Status icons on WEB-gui now distinguishable even for the colour blind.
- NTP server is now obtained via DHCP if provided. Multiple DNS servers are now also supported.
- Encrypt Admin GUI password.
- Log when an unknown IPEI tries to subscribe.

- DTMF sending improved. When DTMF tones are overlapping, terminate tones correctly.
- Added enable/disable send date and time to handsets.
- Add distinctive alerting by interpreting the Alert-Info SIP header. Use external ring tone as default.
- 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 subscription.
- Added MWI retransmission.
- Allow for special characters like &_ in 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 (option). 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.
- Fixed problems with ntp and the clock which could cause the clock to drift.
- Send opaque param in authorization reply.
- Fix reversed time zones. GMT time zones were reversed – GMT+2 meant GMT-2. This has now been fixed.

4.5 Version PCS01B_

Initial KWS300 version.

5. Outstanding Issues

The following issues will be fixed in a subsequent release

- None identified.