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## GRANDSTREAM NETWORKS

Firmware Release Notes

Firmware Version 1.2.3.5

Name of Product BT200/GXP280/GXP1200/GXP2000/GXP2010/GXP2020

Date: March 16, 2010

**Note: Firmware 1.1.6.x has major changes that can NOT be downgraded to 1.1.5.x or any previous releases.**

### SUMMARY OF UPDATES

The main purpose of this release is improving voice quality and addressing stability issues observed in previous releases.

### CHANGES SINCE FIRMWARE RELEASE 1.2.2.26

#### BUG FIXES

- Fixed '<' '>' in display name of From or To header of a SIP request such as SUBSCRIBE or INVITE causes GXP responses 400 Bad Request
- Fixed GXP1200 displays no line info after hold conference
- Fixed phone HTTP upgrade lasts too long
- Fixed Cseq of SIP INFO error after GXP sends out PRACK
- Fixed display name check problem
- Fixed GXP2020 does not have account 5/6 in EXT page
- Fixed GXP semi-attended transfer issue
- Fixed one way audio issue after receiving INVITE with two c lines in SDP
- Fixed LCD menu display error with "Disable Direct IP Calls"
- Fixed LCD display error
- Fixed phone crashes when doing Offhook Auto Dial
- Fixed LCD display issue after blind transfer
- Fixed wrong Timestamp in RTP Packet
- Fixed CallerID blocking removed after 302 redirect on GXP2020 with 1.2.1.4
- Fixed phone does not re-register after network down in certain network environment
- Fixed no MoH GXP to GXP via 3CX, but does hear MoH when GXP calls a non GS phone
- Fixed phone sends out INVITE with incorrect To-tag in the TO header
- Fixed phone fails to handle "Session Attribute (a): inactive" correctly
- Fixed phone Codec negotiation issue with 3-way conference
- Fixed phone comes back to conversation hears busy tone
- Fixed phone sends new INVITE with to-tag
- Fixed incorrect Event Duration
- Fixed regression on MSG Button when using a lengthy voicemail user ID
- Fixed call records of GXP2020 account6 saved to phonebook error
- Fixed phone cuts off the call if it receives NOTIFY with unsupported Event
- Fixed no event duration on RTP packets when pressing MultiPurpose Keys using SEND DTMF RFC2833
- Fixed request in the same dialog does not include Route Headers from previous response
- Fixed GXP20xx phone Locks up and does not send out PRACK messages

- Fixed SDP response is wrong if iLBC payload type is 101
- Fixed after conversation for 10 hours, BT200 call time display is not correct
- Fixed phone sends inactive to resume the audio call if it is in remotely held state
- Fixed phone adds empty phonebook record automatically
- Fixed phone does not send SIP register to Broadsoft using STUN and SIP over TCP
- Fixed issue with processing big INVITE packets on TCP transport
- Fixed GXP eventlist BLF issue under certain condition: LED dos not change status when a monitored phone receives calls
- Fixed GXP crashes after receiving long NOTIFY message for eventlist BLF

## ENHANCEMENTS

- Updated bootloader to 1.1.6.8
- Added GXP-extend capability for customizable XML screen
- Added LCD Menu option to configure MPK
- Added web UI option for "Disable in-call DTMF display"
- Added support to load XML idle screen file on reboot for GXP20xx
- Changed registration renewal time to half of the expiration time
- Added support to hide "ForwardAll" softkey if call feature code is disabled
- Added support to use phonebook while offhook for GXP2010/2020
- Added support to use Speed Dial and Re-Dial for Direct IP Calls
- Added support for Signin automatically if there is only one callqueue
- Added web UI option "Use custom filename" for GXP2000 and GXP2010
- Modified BLF LED to flash when a monitored phone hears ring back tone under Broadsoft mode
- Added web UI option to enable/disable SIP instance ID

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## Firmware Release Notes

Firmware Version 1.2.2.26

Name of Product GXP280/GXP1200/GXP2000/GXP2010/GXP2020

Date: December 28, 2009

## CHANGES SINCE FIRMWARE RELEASE 1.2.2.19

### BUG FIXES

- Fixed Phonebook Scrambles when upgrading firmware to 1.2.2.14 from 1.2.1.4
- Fixed Memory Values displayed on GXP2010 LCD after upgrading to 1.2.2.1 from 1.2.1.4

### ENHANCEMENTS

- Added LCD option to clear phonebook entries on GXPs

### NOTE

There is no new build for BT20x in this release

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## Firmware Release Notes

Firmware Version 1.2.2.19

Name of Product BT200/GXP280/GXP1200/GXP2000/GXP2010/GXP2020

Date: October 28, 2009

## CHANGES SINCE FIRMWARE RELEASE 1.2.2.14

### ENHANCEMENTS

- Added support for VLAN filtering
- Added new feature: "constraint mode"

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### Firmware Release Notes

Firmware Version 1.2.2.14

Name of Product BT200/GXP280/GXP1200/GXP2000/GXP2010/GXP2020

Date: October 1, 2009

## CHANGES SINCE FIRMWARE RELEASE 1.2.1.4

### BUG FIXES

- Fixed BT200 runs "Out-of-memory" at eth\_malloc
- Fixed Call forward indication on GXP2010/2020 doesn't look good
- Fixed phone runs out of memory when attended transfer target is a direct IP call
- Fixed GXP2000 sends NOTIFY request for noevent Event with empty Request-Line and To header
- Fixed phone fails to send session refresh requests after receiving UPDATE without a Session-Expires header
- Fixed phone has noise during line switch
- Fixed abnormal busy tone under the G.722 voice codec
- Fixed GXP2020: XML app key unresponsive after network problem
- Fixed GXP sends out re-subscribe for 'presence' after subscription period expires
- Fixed Attended Transfer fails on BT200, GXE responses 403 forbidden to REFER
- Fixed iLBC RTP size error
- Fixed phone automatically sends out DTMF tone
- Fixed "End of Event" error when using DTMF RFC2833
- Fixed GXP cannot display the caller number correctly with "P-Asserted-Identity" header in INVITE
- Fixed GXP sends NOTIFY without from tag for dialog or presence events
- Fixed GXP2000 loses gateway IP address after sometime if it's set to use DHCP in some particular network
- Fixed phone logs a missed call even there is a REASON header with "SIP;cause=200"
- Fixed GXP280 doesn't go back to idle screen after canceling a transferred call
- Fixed GXP2020/GXP2010 fails to pick up phone calls via BLF key on the extension module
- Fixed phone fails to reply SIP options query
- Fixed Cseq of PRACK does not increase
- Fixed Phonebook XML file which contains version attribute would cause GXP to crash

### ENHANCEMENTS

- Added support for configuration via DHCP Option 66 tunnel through Option 43
- Added support to hide "ForwardAll" softkey if call feature code is disabled for Account 1
- Added support for HUB mode on GXP1200/GXP280
- Added support for Call Park and Pickup feature on GXP2020/2010
- Added support for automatically provisioning the HTTP provisioning URL via DHCP option 66
- Added support for Call Queue feature
- Added support for BLF "Offline" state to allow PBX to turn off BLF LED when subscriber lost registration
- Added support for XML Application on GXP2010
- Added support to configure Call Pickup dialing prefix
- Added support to display MAC address in HTTP firmware upgrade request

- Added support for Reason header in BYE requests (RFC3326)
- Set default LCD contrast value to 10 for GXP2010 and GXP2020

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## Firmware Release Notes

Firmware Version 1.2.1.4

Name of Product BT200/GXP280/GXP1200/GXP2000/GXP2010/GXP2020

Date: May 28, 2009

## CHANGES SINCE FIRMWARE RELEASE 1.1.6.46

### BUG FIXES

- Fixed GXP loses account information after remote party that's using non-pcm codec hold/unhold the conference call
- Fixed DTMF sent incorrectly from MPK
- Fixed softkey is changed when LCD menu is on and headset key is pressed if it's under "toggle headset/speaker" mode
- Fixed phone stops sending RTP leading to call drop
- Fixed anonymous call shows phone number during transfer
- Fixed GXP quick IP Call failed after making a direct IP call with specific port through menu
- Fixed phone can't hear from HT502 after un-hold a SRTP call
- Fixed GXP2000 phonebook error check is inconsistent with other GXPs
- Fixed only G.711 codec is offered in re-invite when making 3WC
- Fixed LPF file is not downloaded when the phone is upgrading via HTTP and the ringtone file is too big
- Fixed mishandling of inactive attribute
- Fixed while already in an active call, auto answer fails under BroadSoft mode
- Fixed phone prevents n-way conference using G722
- Fixed GXP fails to change the BLF indicator status after receiving NOTIFY without <dialog> and <state> tag
- Fixed BLF doesn't work properly when using multiple accounts
- Fixed phone crashes when HT502 hold and resume the call established using SRTP

### ENHANCEMENTS

- Added support of LCD menu auto-quit on GXPs
- Added five enhancements for Anatel project
- Added support of session modification by UPDATE (RFC3311)
- Added support to restart subscription upon receiving a 481
- Added CallFwd indication on idle screen for GXP2010/2020
- Improved SIP stack robustness for RFC4475 test cases
- Added support for phone sending out a syslog message on receive receiving NOTIFY

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## Firmware Release Notes

Firmware Version 1.1.6.46

Name of Product BT200/GXP280/GXP1200/GXP2000/GXP2010/GXP2020

Date: February 15, 2008

## CHANGES SINCE FIRMWARE RELEASE 1.1.6.44

### BUG FIXES

- Fixed when GXP is under "Toggle Headset/Speaker" mode, a missed call will cause white noise played out through headset

- Fixed when GXP tries to attended transfer a call to an idle line, the original call can't be resumed correctly
- Fixed there is only G.711 codec in re-invite when make 3WC
- Fixed GXP phones does not send out 'Cancel' when switching lines before a call established on Sphere SIP server
- Fixed GXP phones does not stop sending 'Notify' if they receive 481 responses
- Fixed GXP not to send 'Register' to 0.0.0.0 after a phone call with the stun server enabled when account 2,3,4 are in use but have server fields blank
- Fixed Attended Transfer failed on BT200 when it's the transfer target
- Fixed phones take log time to get IP through DHCP from certain FIOS route
- Fixed phone crashes when doing call and transfer multiple times under Broadsoft mode
- Fixed phone sends out wrong DNS SRV query when doing call and transfer under Broadsoft mode
- Fixed phone sends out re-INVITE with wrong Contact header
- Fixed on GXPs, while the LCD menu is open, if user updates the configuration web page, the softkeys get changed to onhook mode
- Fixed Dialing using Speed dial under headset mode, audio does not go through headset, but speaker
- Fixed dial plan prefix does not work when using onhook dial
- Fixed the time format on "status" webpage does not correspond to the setting
- Fixed when the incoming call is anonymous, LCD still shows "Anonymous" even display language is set to Chinese
- Fixed on GXPs, duplicated entries can be saved in phonebook
- Fixed when previewing different ring tone through the menu, the tone doesn't stop when "Back" is highlighted
- Fixed on GXP2000, the title of diagnostic window was miss-spelled; now changed it to "Keypad/LED Diagnosis"
- Fixed on GXP2020 and GXP2010, the BLFs configured on EXT2 will show at the corresponding place on EXT1 when EXT2 is not connected
- Fixed "voice\_frame\_per\_TX" value is not used correctly by accounts other than "account 1"
- Fixed GXP2000/2010/2020 ignores NOTIFY with x-gs-screen event when the phone is offhook
- Fixed gratuitous ARP is not handled during the conversation phone call
- Fixed phone keeps sending registration requests
- Fixed PADT sent before a PPPoE session established
- Fixed on BT200, there is no Message Waiting tone when offhook
- Fixed LCD display corruption when multiple keys are pressed in GXP2000 HV2.1
- Fixed the symbol for "hardware information" is inconsistent between LCD menu and Web
- Fixed GXP1200 and GXP280 would display remnants under onhook dial scenario

## ENHANCEMENTS

- Added "Transferred Call Log" on GXPs which will record the information of the transfer target
- Added feature on GXP1200 and GXP280 to have the option choose display phone number or caller's name for incoming calls
- Modified the RLMI parser for eventlist BLF
- Added CallFwd condition to customizable screen XML syntax
- Added differentiation of BT200 and BT201
- Enabled 4-way conferencing feature for GXP2010
- Modified to update DHCP ACK options on renewal, rebinding, and renewing state
- Added support to reply with 405 for methods known but not allowed
- Added support to reply with 420 requests that contains extensions that we do not support
- Added support for RFC5389 STUN
- Added PPPoE setting configurable through LCD menu on GXPs
- Added option to disable "Transfer" button
- Removed "Ring Timeout" option out of session timer

## CHANGES SINCE FIRMWARE RELEASE 1.1.6.37

### BUG FIXES

- Fixed on GXP2000 string for SPEED DIAL keys does not display completely under Diagnostic Mode
- Fixed GXP2000 v0.3 and some v0.4 cannot upgrade to another build
- Fixed GSM was not getting packed correctly in the RTP payload dues to byte offset, caused of the odd size of GSM code frame
- Fixed when phone is trying to send “DNS SRV” type query, it fails to send additional “A Type” (it sends out “empty” query)
- Fixed on GXP2000, under Chinese mode, "forward" function doesn't display properly. i.e. forward target number won't display on LCD
- Fixed on GXP2000, under Chinese mode, during a call, press keypad many times, till it reaches the end, and the left most digit doesn't display correctly
- Fixed phone sends UDP packet to 0.0.0.0 when the NTP host name field is blank on the configuration web page
- Fixed phone sends out driver syslog using old IP address even when new IP address acquired by DHCP or PPPoE
- Fixed the phone cannot regain IP address after the PPPoE server down
- Fixed CANCEL request violate RFC and sends to the wrong address

### ENHANCEMENTS

- Added multipurpose keys to be able to send DTMF during the communication state on GXP2000/2010/2020. It is disabled by default, but it can be enabled on the web configuration page
- Added support to reg-id and instance-id when we build REGISTER messages
- Added web configuration option to disable DND

## CHANGES SINCE FIRMWARE RELEASE 1.1.6.16

### BUG FIXES

- Fixed BT200 as transferor in a blind transfer, it will display “4” on LCD after about a minute of busy tone after transferee sends “BYE”
- Fixed when phone is configured to use HTTP to download config file and xml phonebook, the phonebook won't be downloaded
- Fixed under headset toggle mode, when headset is used, onhook dialing ends with send key switches to speaker mode
- Fixed when P342 is set to 1 in config file, the phone will keep downloading config file and rebooting
- Fixed in a call, A can't hear B if B is using PPPoE and A is not. They can't hear each other if both of them are using PPPoE
- Fixed “Disable direct IP call” doesn't work on BT200
- Fixed GXP280 would meet 1s blank display if another call comes in
- Fixed “SIP Transport” setting is not synchronized between web and LCD menu
- Fixed G.723 5.3K speed would run out of memory when DTMF is RFC2833
- Fixed softkey doesn't work for phonebook on GXP1200 and GXP280
- Fixed BT200 keypad freeze after reboot when using static IP
- Fixed softkey for name edit window on GXP280 and GXP1200 can't display properly after certain steps
- Fixed GXP280 and GXP1200 will freeze if off-hook while editing phonebook entry

- Fixed on GXP280 and GXP1200, conversation time on LCD would return to 0 after about 18 hours
- Fixed we failed to get IP address when the PPPoE server not setting a DNS
- Fixed bad audio quality if callee select its first choice to iLBC but negotiate with G.726
- Fixed GXP280 and GXP1200 don't show name edit window correctly after coming back to menu from phonebook window
- Fixed on BT200, GXP280 and GXP1200, MIC muted for first direct IP call after factory reset
- Fixed no busy tone play with "486 BUSY" under Asterisk
- Fixed "Out of memory" after download 200 records phonebook via TFTP
- Fixed phone crashes when switch audio payload type from PCMU to G.729
- Fixed to update the screen immediately after DEL/MUTE key pressed in onhook dialing
- Fixed IP address corrupted with Gateway Address when we lost IP address due to DHCP renewal failure
- Fixed on GXPs, call drop issue related to accounts not registering and use random port
- Fixed when GXP280 sends out re-invite with "sendrecv" when press TRNF
- Fixed "Local RTP port" can be set to the number which is not within the range "1024-65535"; now allowed range is "1024-65500" and must be even number
- Fixed SUBSCRIBE for MWI failed when register expiration time is shorter than subscribe time
- Fixed if firmware server address is invalid, the phone will still keep retrying
- Fixed if the STUN server address is invalid, the phone floods out DNS queries
- Fixed GXP1200 incorrect display when another call comes
- Fixed phone may freeze when local RTP is set to 6000 and Syslog is enabled
- Fixed BT200v2 lose IP problem
- Fixed IP address corrupted with Gateway Address when we lost IP address due to DHCP renewal failure
- Fixed call drop issue related to accounts not registering and use random port (N/A to BT200)
- Fixed BT200 SIP Transport (UDP/TCP) not locked in MENU when "Lock Keypad Update" is enabled
- Fixed XML Application Frozen because a variable failed to deallocate
- Fixed quitting Xml application quickly will cause the application to reappear
- Fixed random characters on xml application softkey label
- Fixed XML Application froze due to callIdPrefix is not reseted when the xml application exits
- Fixed pressing softkey multiple times for HTTP GET caused session overlap
- Fixed the LCD keeps showing "FLASHING" when it is actually not after trying to download config file
- Fixed for GXP1200, when there are two lines in use, and when the second line got "486 Busy" or "408 Time Out", the bottom of the number is chopped a little by the softkey region
- Fixed upon request, for bt200, stop turning on lcd backlight when it's doing a periodic configuration/firmware upgrade.
- Fixed multiple audio media description that does not get accepted is not set to port 0 in SDP response
- Fixed multiple audio media description cause some attributes to be overwritten by the last m
- Fixed half display in LCD option of "LDAP select filter "
- Fixed after caller terminates the call and callee,B, doesn't hang up, while B is hearing busy tone, a new call comes in, then the new line info on GXP1200 lcd overlaps with previous terminated call info.
- Fixed when phone is configured using static IP, it will still send DNS query even though the DNS server IP is 0.0.0.0
- Fixed BT200 (2.1HW) mute the speaker ringer not working
- Fixed upgrade IP showed incorrectly on LCD
- Fixed user id wasn't attached to URI when setting "presence watcher" in Ext1 and Ex2
- Fixed phonebook will freeze with 300+ records
- Fixed we failed to do the "Diagnostic Mode" for speed dial key 8-18
- Fixed audio glitches
- Fixed bt200 factory reset reboot cycle
- Fixed GXP2000 V0.4A hardware unable to reboot

- Fixed LCD display turn to reversed
- Fixed static IP, netmask, and gateway configuration don't take dot-decimal format input
- Fixed our products fail to pass PROTOS c07-sip test
- Fixed we do not follow 301 redirect response for REGISTER
- Fixed GXP 1200 crashes after uploading template config file
- Fixed for all BTs: G.722 clock rate wrong in SDP
- Fixed GXP2000/GXP2010/GXP2020: BLF not update with latest notify
- Fixed re-subscription issue after a 481 response
- Fixed "Close" PUBLISH state changed to "Open" automatically after re-register
- Fixed we send wrong DNS when downloading directory with LDAP server path blank
- Fixed empty contact element cause duplicate copy
- Fixed Grandstream web UI does not check for hidden script inclusion
- Fixed phone will hang when receive 403 respond in Re-INVITE
- Fixes auto reboot issues
- Fixed cannot ping the phone from different network segment

## ENHANCEMENTS

- Removed "Ethernet Loopback" function from LCD menu
- For GXP280, GXP1200, GXP2010, and GXP2020, added config option for headset key so that it can work in either old scheme or a new added scheme that will use the headset key to toggle between speaker and headset (enable or disable headset mode). When the phone is using new scheme and the headset mode is enabled, speaker key, line key, or softkey can be used to answer or make calls; everything will go through headset. And while handset is picked up, speaker key can be used to toggle between handset and headset.
- Added "DND" feature on BT200. When mute/del key is pressed while phone is idle, "DND" will show on LCD instead of date, and no phone call will come in
- Changed "Received Calls" to "Answered Calls"
- Changed the term "default route" on web config page to "Gateway"
- Added feature that DNS server can be configured through LCD menu
- Send flash event radio button taken out from BT200 and GXP280 restored as well as its functionality. The radio button is on the advanced configuration page at the bottom
- Added ring timeout setting
- Added RFC3389/g711 Appendix II Comfort Noise support
- Make GXP MSG light keep blinking when using the phone (if VM exists)
- Change BT200 to not turn on LCD backlight during periodical config/firmware upgrade
- Added new option to disable direct IP call
- Added new option to disable 3 way conference
- Updated RTP's destination mac address when the arp table is updated
- Increased XML parser capacity
- GXP2000/GXP2010/GXP2020: To allow XML Idle Screen download periodically base on NOTIFY
- Updated BT200, GXP1200 handset tx gain to 29dB.
- Modified LDAP filter value for GXPs except GXP2000 to use softkeys.
- Updated BT200v2 audio gains to match BT200v1.
- Change the display format for static IP, netmask and gateway in dot-format in order to be consistent with the input
- Added SRTP Optional support
- GXP2020: Add Syslog for XML app GET and response
- Abort DNS retries once a "No such name" response is received
- Added SIP registration if the phone gets a new IP even after DHCP request to renew lease time does not get a response