

iWRAP 5.8.0 and iWRAP 6.3.0

RELEASE NOTES

Wednesday, 09 October 2019

Document Revision: 2.0



VERSION HISTORY

| Version | Comment |
|---------|---|
| 1.0 | First version |
| 2.0 | Added iWRAP 5.8.0 and 6.3.0 release notes |

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1 Updates in iWRAP 5.8.0 / 6.3.0, comparing to 5.7.0 / 6.2.0

1.1 Build numbers

- iWRAP 5.8.0 build 1149 for WT11i, WT11u, WT12, WT41, WT41u (Generic build)
- iWRAP 5.8.0 build 1150 for WT11i, WT11u, WT12, WT41, WT41u (iAP build for MFI licensees)
- iWRAP 6.3.0 build 1149 for WT32i (Generic build)
- iWRAP 6.3.0 build 1150 for WT32i (iAP build for MFI licensees)
- iWRAP 6.3.0 build 1151 for WT32i (aptX build)
- iWRAP 6.3.0 build 1152 for WT32i (aptX Low Latency Source build)
- iWRAP 6.3.0 build 1153 for WT32i (CVC build for CVC licensees)

1.2 New features in iWRAP 6.3.0 (for WT32i)

- Added protection against changing encryption key size in the process of connection establishment and during the connection by introducing minimum key size checking (IWRAP-983)
- Added sample rate conversion for A2DP (IWRAP-948)
- Added possibility of sending AT commands before receiving an answer for a previously sent one (IWRAP-949)
- Added high-pass filter to SCO codecs (IWRAP-941)

1.3 New features in iWRAP 5.8.0 (for WT11i, WT11u, WT12, WT41, WT41u)

- Added protection against changing encryption key size in the process of connection establishment and during the connection by introducing minimum key size checking (IWRAP-983)

1.4 Issues addressed

- Fixed problem with resuming music after PLAY command (IWRAP-822)
- Fixed left audio channel volume level downing after HFP call (IWRAP-937)
- Corrected information in INFO command about modules: WT11u and WT41u (IWRAP-942)
- Fixed missing channel when I2S is used as SCO output (IWRAP-950)
- Fixed problem with unintentional change of Bluetooth role during HID connection (IWRAP-983)
- Fixed module crashing after several SDC_CONNECTION_FAILED appeared (IWRAP-933)
- Fixed broken passing of FLOW parameter in CALL command (IWRAP-912)
- Fixed problem with binding HID raw reports with SET CONTROL BIND (IWRAP-922)
- Correction of error codes and events for handling pairing with MITM (IWRAP-964)
- Fixed BT ROLE link policy (IWRAP-991)

2 Updates in iWRAP 5.7.0 / 6.2.0, comparing to 5.6.0 / 6.1.0

2.1 Build numbers

- iWRAP 5.7.0 build 1118 for WT11i, WT11u, WT12, WT41, WT41u (Generic build)
- iWRAP 5.7.0 build 1119 for WT11i, WT11u, WT12, WT41, WT41u (iAP build for MFI licensees)
- iWRAP 6.2.0 build 1118 for WT32i (Generic build)
- iWRAP 6.2.0 build 1119 for WT32i (iAP build for MFI licensees)
- iWRAP 6.2.0 build 1120 for WT32i (aptX build)
- iWRAP 6.2.0 build 1121 for WT32i (CVC build for CVC licensees)
- iWRAP 6.2.0 build 1122 for WT32i (aptX Low Latency Source build)

2.2 New features in iWRAP 6.2.0 (for WT32i)

- Added AptX Low Latency Sink support (IWRAP-777)
- Added option to disable IAP1 protocol (IWRAP-905)
- Added HFPINIT command to set HFP initial indicators values (IWRAP-878)
- Added MEMORY command to HFP profile (IWRAP-879)
- Added GETREPORT command to HID profile (IWRAP-881)
- Added Business Card Pull feature in OPP profile (IWRAP-917)

2.3 New features in iWRAP 5.7.0 (for WT11i, WT11u, WT12, WT41, WT41u)

- Added option to disable IAP1 protocol (IWRAP-905)
- Added HFPINIT command to set HFP initial indicators values (IWRAP-878)
- Added MEMORY command to HFP profile (IWRAP-879)
- Added GETREPORT command to HID profile (IWRAP-881)
- Added Business Card Pull feature in OPP profile (IWRAP-917)

2.4 Issues addressed

- Improved multiple A2DP connections handling (IWRAP-834)
- Fixed problem with no SCO audio after connecting to mobile phone in active call (IWRAP-835)
- Improved quality of WBS codec (IWRAP-840)
- Fixed baudrate label for UART speed equal 4800 bps (IWRAP-841)
- Fixed MSBC codec settings for clients, which do not support MSBC (IWRAP-843)
- Fixed iWRAP reset when connecting PBAP or MAP to telephones without these profiles (IWRAP-850)

- Fixed iWRAP reset in case of too big SDP record (IWRAP-864)
- Fixed incorrect reject response to AVDTP reconfigure command (IWRAP-872)
- Fixed wrong error number in reject response to AVDTP open command (IWRAP-873)
- Added missing reject response to SET_CONFIGURATION command with incorrect media transport format (IWRAP-874)
- Corrected PDU in Add To Playing AVRCP command (IWRAP-875)
- Corrected DEL command in FTP profile (IWRAP-876)
- Fixed formatting of HFP command "+BCS:" (IWRAP-880)
- Added missing HANDSHAKE response for SET_REPORT command in HID profile (IWRAP-882)
- Fixed length of reject response for MD_CREATE_MDL_REQ command in HDP profile (IWRAP-885)
- Fixed OBEX Connect Request handling (IWRAP-887)
- Corrected Response Parameters in HDP reject MD_SYNC_CAP_RSP (IWRAP-888)
- Corrected Response Parameters in HDP reject MD_SYNC_SET_RSP (IWRAP-889)
- Fixed module reset when in case of nor recognized HSP command (IWRAP-894)
- Fixed problem with AVRCP PLAY_ITEM_RSP REJ (IWRAP-911)
- Fixed iWRAP reset after next track selection in YouTube application (IWRAP-913)
- Fixed ":ERROR:NOMEM" if more than 9 profiles are configured. (IWRAP-918)
- Fixed issue with decreased output volume after VOLUME UP command (IWRAP-921)
- Fixed problem with GPIO for A2DP stream indication when KEEPALIVE flag is used (IWRAP-924)
- Added missing volume report to the HFP-AG (IWRAP-927)
- Fixed problem with audio during HFP call (IWRAP-929)
- Corrected handling of Side Tone feature (IWRAP-931)
- Fixed problem iWRAP reset after SCO OPEN command (IWRAP-932)
- Fixed not working entry of pairing table (IWRAP-934)
- Improved SET CONTROL BATTERY handling during runtime (IWRAP-839)
- Added missing handlers related to Player Application Settings feature of AVRCP (IWRAP-916)

3 Updates in iWRAP 6.1.1¹

3.1 Build numbers

- iWRAP 6.1.1 build 1050 for WT32i (Generic build with AptX support)

3.2 New features in iWRAP 6.1.1 (for WT32i)

- BGScripting support added (IWRAP-776)

¹ This version of iWRAP is not supported any more. Later iWRAP versions do not contain BGScripting support

4 Updates in iWRAP 5.6.0 / 6.1.0

4.1 Build numbers

- iWRAP 5.6.0 build 1022 for WT11i, WT12 and WT41 (Generic build)
- iWRAP 5.6.0 build 1055 for WT11i, WT12 and WT41 (iAP build for MFI licensees)
- iWRAP 6.1.0 build 1022 for WT32i (Generic build)
- iWRAP 6.1.0 build 1055 for WT32i (iAP build for MFI licensees)
- iWRAP 6.1.0 build 1024 for WT32i (aptX build)
- iWRAP 6.1.0 build 1025 for WT32i (CVC build for CVC licensees)
- iWRAP 6.1.0 build 1029 for WT32i (aptX Low Latency Source build)

4.2 New features in iWRAP 6.1.0 (for WT32i)

- AVRCP Target and Controller supported at the same time (IWRAP-731)
- Mixed WAV support (IWRAP-771)
- Updated audio codecs – ABC, AAC, AptX, SBC – to newest possible revisions (IWRAP-796)
- Increased main program performance by increasing Flash speed² (IWRAP-805)
- I2C commands support, which allows to configure I2S codec on WT32i eval board (IWRAP-803)
- New Advanced Autocall functionality (IWRAP-770)
- Autocall now accepts FLOW parameters (IWRAP-556)
- Apple MFI 2.0B chip support added - I2C bus speed now is set to 50 kHz (IWRAP-787)
- Changed communication method with MFI chip from software to hardware solution (IWRAP-809)
- Added AptX Low Latency Source support (IWRAP-779)

4.3 New features in iWRAP 5.6.0 (for WT11i, WT12, WT41)

- New Advanced Autocall functionality (IWRAP-770)
- Autocall now accepts FLOW parameters (IWRAP-556)
- Apple MFI 2.0B chip support added - I2C bus speed now is set to 50 kHz (IWRAP-787)
- Changed communication method with MFI chip from software to hardware solution (IWRAP-809)

² NOTE: Because iWRAP performance was strongly improved, many time-consuming tasks speeded up. This causes, every external timer, which assumes some processing takes time, should be re-evaluated.

4.4 Issues addressed

- Fixed problem with handling incoming message for BGIO when data come before register BGIO handler (IWRAP-768)
- Fixed hanging CD signal when device 1 disconnects while calling device 2 (IWRAP-644)
- Fixed PIO binding after low battery has been received (IWRAP-655)
- Fixed module reset, when closing Link 0 in MUX mode with 3 data channels (IWRAP-761)
- Fixed problem with UART communication when module is in deep sleep state (IWRAP-574)
- Fixed AT+COPS parsing if network's name contains a dot (IWRAP-641)
- Fixed losing most significant bits during ADC read over BGIO (IWRAP-759)
- Fixed AIO1 pin state, now it is input by default (IWRAP-535)
- Fixed missing leading zeros in SSP PASSKEY event (IWRAP-579)
- Fixed problem with broken SCO audio after using PLAY command (IWRAP-706)
- Fixed displaying SCO parameters for different command combination call (IWRAP-726)
- "SET BT IDENT" call now correctly resets IDENT values back to defaults (IWRAP-763)
- Fixed SET BT PAIRCOUNT problem, when max number exceeded (IWRAP-764)
- Fixed issue with missing audio, when VOLUME is used during receiving call indication (IWRAP-785)
- Fixed not working 16-bit I2S bus (IWRAP-767)
- Fixed problem with sending data over uart when uart buffer is full (IWRAP-794)
- Fixed SDC_NO_RESPONSE_DATA error, received after AGENT CALL {bd_addr} call. (IWRAP-801)
- Fixed audio static noise during call (IWRAP-786)
- Fixed sporadic problem with setting PAGEMODE (IWRAP-810)
- Fixed SYNTAX ERROR problem after SET BT SNIFF 0 call (IWRAP-756)
- Fixed problem with sending match action when it is set to "0" for iAP2 connection (IWRAP-804)
- Fixed issue with Identification Information order when iAP2 is used (IWRAP-817)
- Fixed issue with possibility to send MUX frames before iAP identification is completed (IWRAP-823)
- Fixed missing iAP 0 OK sporadic issue (IWRAP-824)
- Fixed issue with presenting iAP RequestAppLaunch feature despite it is not configured (IWRAP-825)
- Fixed issue iAP 0 ERROR INTERNAL aa01 0080 (or ea02 0000) when IAP2 is used (IWRAP-829)
- Fixed unreliable connection with 2.0B MFI chip (IWRAP-830)
- Updated *Cumulative Ack. Timeout* to prevent warnings during ATS 5.0 tests (IWRAP-832)

5 Updates in iWRAP 5.5.0 / 6.0.0

5.1 Build numbers

- iWRAP 5.5.0 build 952 for WT11i, WT12 and WT41 (Generic build)
- iWRAP 5.5.0 build 953 for WT11i, WT12 and WT41 (iAP build for MFI licensees)
- iWRAP 6.0.0 build 952 for WT32i (Generic build)
- iWRAP 6.0.0 build 953 for WT32i (iAP build for MFI licensees)
- iWRAP 6.0.0 build 954 for WT32i (aptX build)
- iWRAP 6.0.0 build 955 for WT32i (CVC build for CVC licensees)

5.2 Issues addressed

5.2.1 General issues

- AVRCP browsing bit is enabled by default.
- Fixed SCO and A2DP volume to be same in CVC use cases.
- Fixed CVC codec being loaded when A2DP was supposed to be used in CVC use cases.
- Updated appmatch support for IAP2, added [,n] option after PROTO: string.
- Fixed raw HID output report problem with link classification.
- Add NOBROWSE option to remove IAP from SDP browsing results.
- Fixed HFP re-dialing occasionally failing after call hang-up.
- Removed 65 second limit from DELAY command.
- Fixed potential UART flow control hangs.
- Fixed losing the most significant bits during ADC read over BGIO.
- Increased A2DP media channel MTU size to support Sony Xperia phones better in the case of aptX.
- Fixed SET BT SNIFF 0 false syntax error.
- Fixed possible crash with multiple A2DP connections

6 Changes from iWRAP 5.0.2

6.1 Build numbers

- iWRAP 5.5.0 build 891 for WT11i, WT12 and WT41 (Generic build)
- iWRAP 5.5.0 build 893 for WT11i, WT12 and WT41 (iAP build for MFI licensees)
- iWRAP 6.0.0 build 897 for WT32i (Generic build)
- iWRAP 6.0.0 build 898 for WT32i (aptX build)
- iWRAP 6.0.0 build 899 for WT32i (iAP build for MFI licensees)

6.2 Key features in iWRAP 5.5.0 (for WT11i, WT12 and WT41)

- Apple iAP2 protocol support has been added.

6.3 Key features in iWRAP 6.0.0 (for WT32i)

- MAP notification and message download support has been added.
- Partial MAP message filtering support has been added.
- AVRCP 1.5 Controller and Target support has been added.
- Apple iAP2 support has been added.
- AAC support has been added.
- External I2S audio codec configuration support has been added.
- SET DEVKIT command to quickly configure WT32i development kit to be a wireless speaker. Exact configuration documented and explained in WT32i Development Kit User Guide.

6.4 Other new features

6.4.1 General features

- SET CONTROL AUDIO now allows setting the number of bits when configured as I2S master.
- LOOPBACK command has been added that allows directly routing an audio input to an output.
- A new “{pskey} ?” command to read the value of a PS key has been added.
- A new optional parameter has been added to SET BT MTU command to set SDP MTU. This allows increasing the MTU from the default of 48 to avoid fragmenting SDP records (required by Apple BTCT tool). IAP builds use a larger setting by default.
- A new parameter has been added to SET CONTROL PIO to set PIOs which are ignored for SET CONTROL BIND. This is required for SLEEP command to work when any inputs are held high.

6.4.2 A2DP profile features

- A new “APTXX” command has been added to check for a valid aptX license key.

6.4.3 AVRCP profile features

- AVRCP Target update to version 1.5.

6.4.4 iAP profile features

- iAP now displays the protocol version in “IAP {linkid} OK {iapver}” print.

6.5 Issues addressed

6.5.1 General issues

- PSKEY_DEEP_SLEEP_ON_EITHER_LEVEL is now always written with DFU upgrade. This is required for the SLEEP fix.
- The low level CSR firmware has been updated to fix two issues: Disconnects due to RFCOMM_PEER_VIOLATED_FLOW_CONTROL errors should no longer happen (fixes the Known Issue IWRAP-578). SPDIF metadata no longer randomly indicates compressed audio.
- Setting an empty string with SET BT NAME no longer crashes iWRAP.
- INFO now displays the correct number of ACLs for WT32i.
- SET CONTROL PIO bias parameter is no longer ignored in some cases.
- The default supervision timeout has been lowered to 6 seconds from 20 seconds. This is to avoid excessively long delays when the connection breaks.
- HSP profile is now included in iAP builds.
- Memory allocation improvements on both BC4 and BC5 environments.
- CSR firmware updated to official release version (no new fixes).
- Bluegiga Support contact information updated.
- Updated default SDP MTU for SET DEVKIT and IAP builds.
- Do not ignore NO_AUTO_DATAMODE config bit in IAP.
- Disable pair count limiting with SET BT PAIRCOUNT 0.
- Display syntax error when 128-bit UUID has wrong format.
- AAx stream indicator GPIO doesn't work with KEEPALIVE flag.
- Fixed wrong profile version and removed leftover data that wasn't in any DataElementSequence in MAP MNS SDP record.
- Change SET C GAIN to be consistent with the other commands.
- SET listing now shows SET CONTROL CONFIG.
- Make AIO work on BC4.
- Limit SET BT NAME length to 140 chars.
- No longer complain about default BT IDENT when IAP is disabled.
- Fix SET BT IDENT to show correct IWRAP version.
- Show all data with INFO CONFIG command.
- Fixed SYNTAX ERROR wrongly appearing after the OBEX 0 FORBIDDEN in an OPP session.
- Fixed HID not going to data mode automatically.
- CONTROL CONFIG bit 12 set on by default.
- Update the "ANSWER" command with optional "audio_routing" parameter.

6.5.2 A2DP profile issues

- aptX codec has been updated to a newer version to improve audio quality. The new version always requires a valid aptX license key to start and will no longer work for 5 minutes without a valid license key.
- SBC codec has been updated to a newer version.
- A2DP commands are now automatically routed to the correct link if the currently selected link is not one. If multiple A2DP links are active, the first link shown by LIST command is used.
- SPDIF and I2S inputs have been fixed.
- SBC maximum bitpool is now set to the suggested 53 instead of 250.
- The version number stored in the A2DP SDP record has been fixed to 1.2.
- AAC and aptX codecs are no longer always enabled when compiled in the build and the other end is initiates the connection.
- Not putting the target into active mode after streaming started, but letting the controller to do it.
- Max bitrate fixed for AAC.

6.5.3 AVRCP profile issues

- AVRCP commands are now automatically routed to the correct link if the currently selected link is not one. If multiple AVRCP links are active, the first link shown by LIST command is used.
- AVRCP profile is no longer included in BC4 (WT11i, WT12, WT41) builds by default.
- Removed unused flag in SET PROFILE AVRCP.
- Fix PDU_GET_CAPABILITIES response appending two zero bytes to the response.
- AVRCP features broadcast in the SDP record are now configurable with SET P AVRCP xx, bits 0-3 = categories 1-4 respectively, bit 4 = browsing.
- Upgraded AVRCP TG to version 1.5, added Absolute Volume support, fixed PDU_GET_CAPABILITIES response in MUX mode.
- Fixed missing space in some AVRCP TG prints.

6.6 Newly discovered known issues

- IWRAP-680: When connected to an iOS device and making an outgoing call, the existing connection may be closed with L2CAP_DISCONNECT_LINK_LOSS error if the outgoing call fails. Decreasing page timeout with SET BT PAGEMODE may help with this issue.



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