Release Notes

BISM2 Firmware Version 11.28.1.0

August 2010

This document is in regards to the following part numbers:

BTM402	BISM II PA - BISM II With Power Amplifier 3.6V
BTM403	BISM II - Bluetooth Serial Module 3.3V
BTM404	BISM II PA - BISM II With Power Amplifier 3.3V
TRBLU23-00200	BISM II - Bluetooth Serial Module II
TRBLU23-00300	BISM II - No Antenna, u.FL Jack
BISMS02BI	BISM II Surface Mount Module
BISMS02BI-NA	BISM II Surface Mount Module, No Antenna
BTM430	Bluetooth AT Data Module, No Antenna with BISM II Firmware
BTM431	Bluetooth AT Data Module, Internal Antenna with BISM II Firmware

To our Valued Customers:

Laird Technologies is releasing version 11.28.1.0 of our Bluetooth 2.0 Firmware for all AT Bluetooth modules. Version 11.28.1.0 is a comprehensive release of all previous features and bug fixes and is the default firmware loaded at production for all BT v2.0 AT modules. Customers who previously ordered components with additional suffixes can continue to order with their suffix or may switch to the standard part number (no suffix). The parts above which are manufactured after November 1, 2010 will arrive pre-loaded with firmware version 11.28.1.0.

Firmware history:

11.28.1.0

- Production Release for all BISMII variants and BTM43x.

11.26.1.20

- Bug Fix: 11.26.1.19 was only a partial fix. It stopped the messages in the device which initiated the audio connection even though it was in online command mode.

11.26.1.19

- Bug Fix: When audio is connected, the AUDIO ON/OFF messages are being displayed. They should be suppressed for this mode. This bug was likely introduced when Audio gateway features were added two years ago.

11.26.1.18

- Added ATi333 command which returns a version in w.x.y.z format where w.x.z are the same as per ATi3. Now they denote a minor version number. 'x' is the major version number which will from now only change if the listing on SIG site changes due to a profile addition.
- Updated SReg532 so that auto audio on connection can specify eSco too. Use 1001 to 1007 to specify eSco.

11.26.17

- Corrected a spelling mistake in the ATi0 response for BTM43x units.

11.26.16

- Fix arising from PTS testing of OPP profile. In the PUT packet the Length is mandatory. The length value is not supplied via the PUT command in the form PUT "filename" lengthvalue. The lengthvalue is optional and if provided AND is nonzero will force a length header to be inserted in the PUT packet.

11.26.14

- Enhancement: Allow PIN? response after ATD is entered so that the AT+BTK command can be entered. If atdY is entered then U is automatically added to force a pairing.
- Created the BTM43X build.

11.26.13

- Enhancement: Previously, during an outgoing authenticated connection, if the link key was not available then it was rejected immediately. Now, the module will also check if a pin code is available; if it is, then it is allowed.

11.26.12

- BugFix: Fix 11.26.4 introduced a bug such that incoming authenticated connections, which worked in the last version, stopped. Previously, PIN? was thrown at the incoming side. Prior to this version it was always rejected.

11.26.11

- BugFix: After getting a NO CARRIER to ATD<bdaddr> (a Nokia e71 phone) and then connecting to another device, connections no longer continuously fail until the module is reset.

11.26.9

- Enhancement: Added the timeAlive timer, an S Register to enable it and an S register to read the time alive count.

11.26.8

- Bug Fix: SCO connect while sniff enabled was taking one second. Changing the stack solved the problem.
- Bug Fix: If S533=1 so that GPIO5 follows RI, on incoming connection GPIO comes on. When the connection was established, RI was deasserting but GPIO5 was not being turned off. This is now fixed.

11.26.7

- Bug Fix: In multipoint mode, for PA module, the TX power was restricted to 6. It can now be as high as 17.

11.26.6

- Bug Fix: After an AT+OPS connection, if there was an incoming SPP connection, data was not being exchanged. Look for comment "BUG FIX: Radiodetection" in AtDongle.h

X.26.5

- The bootmodes are now disabled if DISABLE_BOOTMODES is defined.

11.26.4

- Bug Fix: When a swarm of BISMs were pairing and connecting with each other randomly and frequently, it was possible to see a slave response to be PAIR 0 then RING and then PAIR 0 from another device. Now allows pairing to be allowed for ATD connections and if AT+BTK="bbb" is performed first. This means it is possible to deal with a pin request from the peer without host intervention.
- Grep for DISABLE_AUTOPIN_ANSWER_IN_ATD.
- Changed default value of S560 from 30 to 15.

11.26.3

- Bug Fix: S Reg 411, 412, and 413 were not setting values correctly.
- S Reg 411 max value changed to 4000.
- Added ATi411 412 413 to display short/medium/long press periods.

11.26.2

- Hostless Audio Gateway mode. When inquiring, the devclass filtering was too restrictive. For example: HF devclass is 200408 but the parrot handsfree kit has a devclass of 300408.

11.26.1

- Short/Medium/Long Press duration in Hostless Gateway is specified via SReg 411/412/413 in Gateway hostless mode
- Added SReg 414 for AuGateway Inquiry Abort in Hostless mode.

11.24.11

- For Audiogateway HANDSFREE implementation, added conditional code so that if the headset sends the AT+CKPD=200 command while the gateway is in service-level connection mode, it toggles the audio. The conditional code is dependent on ENABLE_CKPD_EQ_200_IN_HANDSFREE which is disabled for the moment, because the BC4 handsfree implementation does not send AT+CKPD=200 when the button is pressed.

11.24.10

- Enhanced AT+BTA command so that it accepts values in the range 1001 to 1007 which correspond to eSCO channel establishment.
- Added ATInnnn where nnnn > 10000 and (nnnn-10000) is the pskey ID to read from. NOT all pskeys are read, only some (such as the PCM-related ones). So far added PSKEY_PCM_CONFIG32, PSKEY_PCM_FORMAT, PSKEY_ANA_FTRIM.

11.24.9

- Fixed bug in hostless AG inquiry when pairing timed out.

11.24.8

- Added Hosted/Hostless HS and HF Gateway support resulting in following new S Registers: 400-410 inclusive, 595-599 inclusive and changes to 531, 102. Most of this new gateway functionality can be disabled at compile time via define ENABLE_AUDIO_GATEWAY.
- Removed all conditional code dependent on ENABLE_RINGING1_STATE (*) The gpDongle struct was getting too big. It is now split into gpDongle1 and gpDongle2.
- Added POST_CONNECT_MODE_UUID_DEPEND which means when S531 is set to 5 a daemon can process RFCOMM activity. This allows a modular approach to adding profile capability.

- Changes to how inquiry responses are processed. Now the processing can be routed to a daemon if needed.
- Added new ERROR codes arising from audio gateway functionality.
- Added a new DONGLE state which allows daemon- specific RFCOMM parsing.
- Files AuGateway.c, AuGateway.h, AuHfGateway.c and AuHsGateway.ca added.
- Changes to Pairing code so that itss responses can be routed to a daemon.
- Added a new set of AT+AG<command_letter> commands.
- Added a new <crlf>AG"something"<crlf> async response to cater for hosted audio gateway operation.
- Changed to AtPio.c to allow for PIO changes to be processed by daemon first.
- Added Hf Gateway Profile to AtSdp.c.

11.24.1 to 11.24.7 (inclusive)

- These are non-reproducible versions arising from working from home.
  11.24.8 Described above, rolls-up all the changes officially.

11.24.0

- Productionisation on CSR Stack 22b

9.24.0

- Productionisation on CSR Stack 21d
- This is a BismPA specific build where GPIO1_PIN & GPIO2_PIN are both set to -1 in AT and MP mode

9.22.9

- See Multipoint changes to 11.10.5 in BmBuild.h

11.22.8

- Added ATX"something" can now also flush output buffer. An empty ATX"" still generates an error

11.22.7

- Added ATY command which is similar to ATX command. ATY"string" copies 'string' to the RFCOMM buffer but does not flush it. Many of these commands can be called to buffer up data. ATY"" will force the data in the buffer to be flushed.

11.22.6

- Added AT+BTI="Friedlyname" command.
- Added ATDQ and ATDQ? capability.

11.22.1

- Bug Fix: If default S registers were stored in PSKEY_MOD_MANUF6 , it was found that AtSRegRefreshCache() was not being called. Fixed it by doing so in register AtPsStoreSetFactorySRegs()

11.22.0

- Productionise 11.20.25

11.20.25

- New 4294 (22b) stack from CSR.

9.20.25

- Added AT+OPS for obexpush client command and also created alternate FTP connect using AT+OFT.

9.20.23

- Special build for PA version. GPIO1 and 2 are mapped to -1 MPIO.

9.20.22

- Added SReg 594 to specify handsfree profile to be 1.1 or 1.5

9.20.21

- Added SReg 593 to automatically add the last 6 digits of the Bluetooth address to the local friendlyname.

9.20.20

- For BGWT11 build GPIO4 and RIGHTLED are driven by MPIO10.

9.20.19

- Added SReg 592 to limit trusted database to 1 record only when auto saving a successful pairing.

9.20.18

- S Reg 541/542 takes max range of +20 now and min is -47. This is OK as the power table will limit the max anyway.

9.20.16

- Added S Reg 591 which specifies the state of GPIO outputs when NOT in a connection when SReg531=4.

9.20.15

- Changes to Multipoint - see BmBuild.h and 0.9.9.4/5/6.

9.20.14

- BUG FIX: When configured as a generic variant, the ATI0 string comes from PSKEY_MOD_MANUF5. But we print the number of WORDS instead of characters and so only half the string is printed. Workaround was to double the string.
- BUG FIX: When configured as generic variant, AT&F* was forcing the baud to 9600 and not the default set in PSKEY_MOD_MANUF7.

9.20.13

- Changes to Multipoint - see BmBuild.h and 0.9.9.2.

9.20.12

- Changed error code in AtParserService_ATX() when it fails to send data.

9.20.11

- Added codec input gain capability in AT mode.
- Added SReg 590 to change codec input gain.

9.20.10

- Added codec gain capability in AT mode.
- Added SReg 589 to change codec output gain.

9.20.9

- Multipoint changed from 0.9.9.0 to 0.9.9.1 (see BmBuild.h).

9.20.8

- Minimum Link Supervision Timeout is guaranteed to be 1 slot (0.625).

9.20.7

- Added S Reg 588 to auto reset on disconnect.

9.20.6

- Send AT#xxx\r instead of AT#hhhh\r and x is not a hex digit but 0x40 + 4 bits.

9.20.5

- Skipped - Hence 588 S reg removed.

9.20.4

- Ignore "OK" or "ERROR" as a command if state is remote_command.

9.20.3

- Added S Reg 588 for digital I/O cable replacement.
- Modified schedPioEventAT() so that GPIO is sent.

9.20.2
9.20.1

- Skipped (Alternate GPIO cable using RFC_CONTROL_REQ) - source discarded.

9.20.0

- Productionise 9.18.16.

9.18.16

- Removed dependency of 0x2000 mask on PSKEY_MODULE_ID. This will always allow swap.

9.18.15

- Added S Reg 10001 to control UART_DTR.
- Added S Reg 10002 to control UART_RTS.
- Added S Reg 10003 to control UART_RI.
- Added S Reg 10004 to control UART_DCD.
- Added S Reg 10011 to sense UART_DSR.
- Added S Reg 10012 to sense UART_CTS.

9.18.14

- MP changed to 0.9.8.2 (Added SReg 19 for Bootmode)

9.18.13

- MP changed to 0.9.8.1 (Audio fix)

9.18.12

- New code dependent on #define ENABLE_FACTORY_DEFS_VIA_PSKEY (*) S Reg factory defaults are taken from PSKEY_MOD_MANUF6 if it contains valid data. To fill with valid data, copy and paste from PSKEY_USER49.
- Comms S Reg factory defaults are taken from PSKEY_MOD_MANUF7 if it contains valid data. To fill with valid data, copy and paste from PSKEY_USER48.

9.18.11

- ATI0 response can now be collected from a pskey. For this to happen, the lowest 3 nibbles of PSKEY_MODULE_ID must be set to 008. Also the string is read from PSKEY_MOD_MANUF5 and each word contains 2 characters, with the lowest byte being the first character of the two-byte sequence. The maximum name length is set via the #define MAX_ATI0_NAME_LEN and the name is terminated by a NULL character or the end of the pskey data array.

9.18.10

- Added SRegs 585,586,587 to enable a GPIO to be flashed. All new code is compiled on ENABLE_GPIO_FLASH
- The flags related to ENABLE_LED_BLINK_ONSCAN are now in a single uin16
- ati43=117, ati44=74, ati45=24

9.18.9

- When SCO is disconnected, streamdisconnect is called for the SCO sink as well. See function cmConnScoToPcmDisconnect() in file cm_connect.c

9.18.8

- Added "Ezurio Embedded AT Module" to ATI0 based on pskey. For this set PSKEY_MODULE_ID (Module Serial Number) to 0300 2301

9.18.7

- No change to the vmapp apart from the version number.
- However, you must deploy this new version with pskey PSKEY_LC_COMBO_DISABLE_PIO_MASK set to 0000 0000 0000 instead of the default 0200 0000 0000. This prevents access to MPIO9, which we use as DTR output.

9.18.6

- At x.18.1 when the max boot mode value in S Reg 103 was reduced to 4, should also have updated the ATZn command. The code is now changed so that S 103 definition and ATZn refer to a #define called MAX_BOOT_MODE which is specified in the target files.

9.18.5

- New 21d stack from CSR.

8.18.5

- New code conditionally compiled on #define ENABLE_LED_BLINK_ONSCAN S Reg 534 now takes values in range 0..2 instead of 0..1 If value 2 is specified, it means same as 1, but in addition when waiting for a connection or is discoverable, the led will blink.

8.18.4

- No change to the vm app.
- Default BootMode now caters for OKI 770x series and bootmode 3 for the old Motorola.

8.18.3

- No change to the vm app. Only the underlying CSR stack has changed to build 3888, which fixes the OKI 770x series codec bug.

8.18.2

- No change to the vm app. Only the underlying CSR stack has changed to build 3002 which allows PCM clock to be output on PIO7. REASON FOR NOT CHANGING the 8 to 9 is that we expect a few stack drops and I don't want to increment the number.

8.18.1

- Limited max value of SReg 103 to 4 down from 7/8. This is to allow the bootmodes 5/6/7 to be used for HCI modes.
  - 6= USB/HCI
  - 7= UART/HCI/H4/115K2
  - 0= UART/HCI/BCSP/115K2

7.18.0

- Productionised 7.16.2

7.16.2
7.17.1

- UART parms code is shared between AT and multipoint.
- COMMS settings now survive a mode change

5.14.22

- SReg 584 can now be changed after reset and it will take effect. If waiting for connection, changes to this register will not be accepted. Do AT+BTX and the ATS584=n. The eSCO enabling command is now sent in the CONNECT messages instead of the CM_INIT_REQ message.

5.14.20

- Added SReg 584 which can be used to enable eSCO. By default the value is set to 0 - disabled. AT+BTA1 - 7 is used as normal.

6.14.18

- Build to deploy the teleca bug fix - ONLY for dev purpose as the stack is only 56 bit encryption and CSR have stressed that it is a dev build. The build number is 2814.

X.14.16

- Test Build : Sends "\r\nEzurio Ltd vX.14.16\r\n" on power up via the #define SEND_POWERON_MESSAGE which was changed to notSEND_POWERON_MESSAGE before checking back in.

X.14.14
X.15.15

- In previous release changed Function AtSRegSetCommDefaults so that the default in the switch set baudrate to 9600 whereas before it was blank - which meant RS232 default baudrate got screwed up. Changed the code so that every variant has a case statement and appropriately set. BISM2 version of X.14.12 need to be replaced as we only have the module to worry about.

X.14.12
X.15.13

- New numbering scheme - 'y' and 'z' odd for 7 bit firmware

X.14.11

- Engineering release for bism1 and bism2
- ATI0 now generates a "(7 Bit)" suffix in 7 bit firmware
- ATI30 removed

X.14.10

- Default COMMS for 7 bit firmware is 2400,E,7,1
- Factory default via magic command needed to be sorted as the search included the 8th bit.

X.14.9

- Added 7 Bit mode - all code is around ENABLE_7BIT_DATAMODE.
  Enabling this will slow down overall data throughput.

X.14.8

- No change in the AT portion. Audio bug fix in multipoint portion.
- In future, changes to mp code only will not result in this version number being changed.
- Am changing this because the SMU deployed filename currently does not have a reference to MP version number.

X.14.7

- BC2 build for 21c stack - test
- Added S Reg 583 for controlling first modem_sig value in RFC_CONTROL_REQ when a connection is established
- Bug fix in AtSRegGetGoepPutMode/AtSRegSetGoepPutMode - wrong bitfield (handsfreeFeatures) was being read/written

- Define DIONE_1_5_0_LEGACY_MODE is no longer necessary as variant ATVARIANT_SERIAL_MODULE_BISMII_9K6_DIONE caters for the DV bit special case for Dione

X.14.6

- BC4 build for 21c stack - test

X.14.5

- Incoming connection bug fix which cropped up because RFC_EX_ESTABLISH_IND is a new message created in BL3.3 which we now cater for.

X.14.4

- Upgrade file for BC4 merged
- Added some code for 7-bit UART operation.

X.14.3

- FTP:: DIR did not work with SonyEricsson K700i. Found that the TYPE tag in the GET obex packet did not contain the null terminator as per the spec. Now the null terminator is sent and K700i is happy

X.14.2

- Dione found that authenticated connections took up to 4 seconds if one end was powered down. Have now added the call AtRfCommCmRfCommLinkKeyCacheAdd() in routine AtDongleHandleLinkKeyReq() so that the lower layer caches the link key after the first authenticated connection. This code is wrapped around the define CACHE_LINK_KEY

2.14.1

- PSKEY_HOSTIO_MAP_SCO_PCM set to 0000 like in multipoint firmware and connect PCM to SCO via API.

Sincerely, Chris Downey
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