PRU Software Revision History

Version 5.5.23 - *6/4/2017*

- Change Low Voltage Detection Threshold to 1.8 Volts
- Print reset source(s) following system reset

Version 5.5.22 - *2/20/2017*

- Increase delay after power switch in board detection logic before sampling ADC.

Version 5.5.21 - *3/30/2016*

- Revert changes from 5.5.18 and 5.5.19

Version 5.5.20 - *3/30/2016*

- Change to request reset on low voltage condition

Version 5.5.19 - *3/30/2016*

- Initialize CPU register to enable GPS power so if running on leakage current it may pull voltage down enough to generate a Low Voltage Reset

Version 5.5.18 - *3/30/2016*

- Change Low Voltage Detection Threshold from 2.1 Volts to 1.8 Volts (typical)

Version 5.5.17 - *11/3/2015*

- Abort running script when Aux Command is received on the serial port

Version 5.5.16 - *10/22/2015*

- Improve flash error handling
- Restore default parameters if parameter flash is erased at startup

Version 5.5.15 - *10/6/2015*

- Request hardware reset if Low Voltage Detection circuit is activated

Version 5.5.14 - *9/1/2015*

- Don't abort Iridium processing during READ_MODEM_SN command to avoid failure recognizing the modem

Version 5.5.13 - *8/6/2015*

- Fix problem where device failed to read MT commands when confirmations were disabled
- NAK auxiliary command received from serial interface if another auxiliary command is already in process

PRU Software Revision History

Version 5.5.12 - *7/31/2015*

- Fix problem where device failed to MT commands after ReportPosition or RunBIT command

Version 5.5.11 - *7/28/2015*

- Fix misplaced #else that caused problem when processing Tamper condition
- Change Tamper processing to properly initialize the MuxSemaphore before trying to send the Tamper message

Version 5.5.10 - *5/4/2015*

- Fix "double delete" problem in Iridium Modem driver
- Change aux command to program output triggers (i.e. 17x...) to refer to trigger numbers 1..4 instead of 0..3

Version 5.5.9 - *2/26/2015*

- Add aux command to program output triggers
- Change to accept aux commands from PruProgram via binary protocol to support sending them wirelessly

Version 5.5.8 - *2/20/2015*

- Defer reception of Iridium MT messages when processing one
- Change GPS position reporting strategy to better reflect intent of configuration parameters
- Correctly handle duplicate Iridium MT messages
- Fix problems when polling for Iridium MT messages
- Fix problems with motion retriggering timer
- Add support for "old" 6M devices

Version 5.5.7 - *7/14/2014*

- Fix problem where Factory Test output wasn't output wirelessly
- Reduce settling delay between power tests in Factory Test mode
- Upgade development environment to Codewarrior 10.6 Eclipse

Version 5.5.6 - *6/27/2014*

- Add 10 msec delay in power test for voltage to settle

Version 5.5.5 - *6/26/2014*

- Increase delay after powering on Iridium modem
- Fix bug that cause system to stop functioning after a command timeout condition was detected with the Iridium Modem

Version 5.5.3 – *1/24/2014*

- Always run WN2 Rev D board at 5V if Iridium modem connected
- Remove Factory Test steps that will never pass

PRU Software Revision History

- Add back Antenna Lost code but leave it disabled since ADC's saturate

Version 5.5.2 – 12/29/2013

- Reimplement Factory Test

Version 5.5.0 – 11/4/2013

- Add support for WN2 Rev D
- Rework logic for detecting modem configuration
- Upgrade for compatibility with trunk version of gb60Common
- Rewrite BIT Power Test

Version 5.4.14 – 6/24/2014

- Change default value for Iridium session timeout to 20 seconds.
- Change code that handles Modem Command Timeout to merely log the error and continue instead of declaring a Panic condition and rebooting the PRU.

Version 5.4.13 – 6/24/2014

- Add AT-MSSTM command to Iridium protocol.

Version 5.4.12 – 9/27/2013

- Add missing implementation for RESET PRU auxiliary command.

Version 5.4.11 – 8/6/2013

- Integration changes for Ublox GPS.

Version 5.4.7 – 1/31/2013

- Fix problem with updating timers when parameters are updated.

Version 5.4.6 – 1/21/2013

- Fix stack overflow problem in processing auxilliary commands.
- Fix bug that interfered with auxilliary command polling.

Version 5.4.5 – 3/22/2012

- Turn off power to Ublox GPS between fixes.

Version 5.4.4 – 3/18/2012

- Add support for Ublox 6 GPS.
- Fix problem with logging panic messages.
- Fix potential race condition when allocating timers.

Version 5.4.3 – 4/17/2008

- Increase wireless communication timeouts.

PRU Software Revision History

Version 5.4.2 – *4/3/2008*

- Fix handling of zero interval values for Periodic Report Interval and BIT Interval.

Version 5.4.1 – *3/20/2008*

- Change some default parameter values per customer request.

Version 5.4.0 – *9/28/2007*

- Add support for latching triggers.
- Add logic to help PruProgram avoid reading unpopulated polygons.
- Add interlock to disallow parameter I/O until the power test has been completed to alleviate memory contention issue.
- Upgrade to Interface Version 250.

Version 5.3.6

- Tweek battery life power conversion factors.

Version 5.3.5

- Fix overflow in computation of remaining battery life.

Version 5.3.4

- Fix bug that caused misinterpretation of GPS Antenna Type.
- Fix bux that caused incorrect GPS time calculation following BIT.

Version 5.3.3

- Remove references to Low Power mode in STX modem.
- Change logic to interpret Wireless Receive Cost as the steady state burn rate (in mW) of the Atmel. When the Atmel is enabled the effect will be the same as adding the Wireless Receive Cost to the Standby Cost.
- Fixed bug that treated bias constant (K2) as unsigned.

Version 5.3.2

- Complete integration of radio transmit count interface with Atmel.

Version 5.3.1

- Fix bug that cause program to incorrectly diagnose corruption of FLASH page containing Battery Life Estimation data.
- Add Atmel interface to acquire radion transmit count for battery life estimation.

Version 5.3.0

- Add battery life estimation.
- Upgrade to Interface Version 251.
- Remove code that computed and reported transmit counter.

PRU Software Revision History

- Reduce volume of console output.

Version 5.2.6

- Fix bug that incorrectly handled case where GPS fix is re-used.

Version 5.2.5

- Fix bug that incorrectly switched auxilliary power supply when both STX and Iridiuim modems are configured.

Version 5.2.4

- Fix bug that caused program to misinterpret modem configuration if only STX modem present.
- Fix bug that reported input trigger detections as triggers 0..3 instead of 1..4.
- Remove message reporting RTS/CTS failure as this is an indication that no STX modem is configured.

Version 5.2.3

- Change BIT test to only check for presence of voltage on power supplies.

Version 5.2.2

- Turn verbose console output back on.
- Improved power test failure messages.
- Added code to avoid writing unchanged polygons to FLASH.
- Changed PruProgram interface to minimize data transfers of polygon data.

Version 5.2.1

- Rewrite Power Test to better deal with slow voltage roll-off from power supplies.

Version 5.2.0

- Add PRU-7 support for two modem configuration, including use of polygonal zones to control modem reporting.
- Upgrade to Interface Version 252.

Version 5.1.1

- Avoid reporting Power Test failure caused by slow voltage roll-off from Iridium modem supply.

Version 5.1

- Added GpsAlwaysOn control.
- Upgraded Interface Version to 253.

Version 5.0

- Allow multiple active geo-fence zones.

PRU Software Revision History

- Detect entry and exit from geo-fence zones and allow association with output triggers.
- Add support for GD network.
- Remove battery consumption estimation.
- Incorporate support for Iridium 9501 modem.
- Expand version information in programmable parameter set.
- Add special GPS mode.
- Add wireless interface to PruProgram.
- Fix bug that required reset after changing switched power setting.
- Add separate control to force reports following motion and trigger events when no GPS fix is obtained.
- Add capability to abort GPS fixes and modem transmissions so parameter updates are not delayed.
- Add GPS filters for number of consecutive fixes required before reporting, and to reject fixes based on fewer than specified number of satellites.
- Report distinctive lat/lon values when fix not valid.
- Fix bug in calculating GPS retry delays.
- Add capability to suspend scheduled reporting after GPS max retry is hit.
- Fix bug in computing delay required for minimum motion duration.
- Add number of satellites in GPS fix to Position Report.
- Add functionality to initialize and decrement Transmit Counter and to include the value in the BIT Report

Version 4.15

- Change handling of GPS timeout condition to ensure accurate position reporting.
- Change GPS logic to wait for 5 consecutive fixes before reporting position.
- Add logic to cycle GPS power if device stops outputting.

Version 4.14

- Fix bug that cause Primary node to fail when processing a BIT message from C&C while wireless debug output was enabled.

Version 4.13

- Fix bug that caused I^2C clock to be held low until debug output message was sent.

Version 4.12

- Change default to leave wireless debug output off.

Version 4.11

- Fixed bug that disrupted communications with C&C following BIT.
- Fixed situation that required reset of C&C after reset of Primary.

PRU Software Revision History

Version 4.10

- Added parameter to disable debug output via Atmel wireless.

Version 4.9

- Fixed bug that corrupted Aux Buffer Free List following SW Error NoAuxBuf.

Version 4.8

- Fixed bug in reported version number.

Version 4.7

- Fixed bug that ignored Always On setting for Switched Power.

Version 4.6

- Added Automatic Channel Selection function for SENS modem.
- Changed Power On BIT script to attempt GPS fix before transmitting BIT message
- Added Auxiliary Command to change Geo-Fence coordinate.
- Avoid accessing modem device if modem BIT test fails.
- Fixed bug that caused wrong delay value to be used following failure to obtain a GPS fix.
- Fixed bug that caused Auxiliary Command Confirmation messages to be sent even though Auxiliary Command Confirmation was disabled.
- Fixed bug that would execute periodic BIT even when that function wasn't enabled.
- Miscellaneous bug fixes and improvements:
  - Fix bug in computing length of wireless message buffer.
  - Guard against buffer overruns when using sprintf.
  - Ensure debug messages don't overrun wireless buffer length.
  - Change to accommodate confirmation of Auxiliary Commands longer than ten bytes.
  - Optimize generation of timestamp on console log.
  - Add panic log to report fatal software errors.
  - Eliminate logging of CTS Late condition in SENS modem interface.

Version 4.5

- Initial release