GNX G604.08.09kX Release Notes

OVERVIEW

DATE ISSUED:	November 15, 2019
ISSUED BY:	Sierra Wireless GNX Product Management
PRODUCTS AFFECTED:	All GNX-6 LTE and GNX-5P LTE devices
FOR DISTRIBUTION TO:	All GNX Customers

SUMMARY:	This release includes:
	• Reduced napping mode power consumption by approximately 10mA @12v on OBD vehicle installations (not on J1939/1708 heavy duty). (LTE hardware only).
	• Fixed bug in G604.08.08 where parking brake status (column 182) is incorrectly always shown as 'B' (applied). (No Jira – discovered during regression test).
	• New configuration option to allow VIN, Engine serial number etc to be re-read and reported at ignition on. CAN_ENABLE[6] sets time in minutes since prior VIN report. If 0 then VIN is not re-read (to match prior firmware). If > 0 the VIN is reread if that number of minutes have elapsed since the last VIN report. Range 1-254 minutes. E.g. CAN_ENABLE=x.x.x.x.x.x.30; will cause the VIN to be reread at ignition on if it is > 30 minutes since the last VIN reading/reporting.
	• Improved J1939 DTC reading and reporting – reduced probability of corrupted DTCs due to interleaved CAN transport frames, and increased responsiveness for reporting cleared DTCs.
	• Improved handling of J1939 source address handling to allow coexistence with 3rd party J1939 devices that do not support address discovery.
	• Improved AT!GXSTREAMON=CAN logging to allow logging of J1939 traffic without UART buffer overflow – helpful when troubleshooting.
	• Content of AAVSTAT report column modified to include vehicle speed limiter information
	`SpeedLmt SPN74 | CCSS SPN 86 | ParkBrake/VDCMsb | VDC | VDCLsb | ASRABS | CCVSMsb | CCVSLsb`
	
	`For all 2 bit fields 11=unknown, 10=error, 01=on, 00=off`
	
	`SpeedLmt SPN 74 - km/h`
	`CCSS (Cruise Control Set Speed) SPN 86 - km/h`
	
	`VDC (3 bytes) includes the following SPNs (each 2 bits, starting with LSB) (all 00=off, 01=on, 10,11=undefined`
	`1.1 1813 VDC Information Signal`
	`1.3 1814 VDC Fully Operational`
	`1.5 1815 VDC brake light request`
	`2.1 1816 ROP Engine Control active`
	`2.3 1818 ROP Brake Control active`

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2.5    1817 YC Engine Control active
2.7    1819 YC Brake Control active
3.1    5624 Trailer-VDC Active
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- ParkBrake SPN 70 - 2 bits is in the lower 2 bits of the upper nibble of the VDC Msb

  `VDCMsbyte bit usage: xxPBxxTV  where PB = SPN70, TV = SPN 5624`

- ASRABS and CCVS are unchanged – see description in G604.08.08 firmware below.
- Fixed bug in CAN_ENABLE=x17 (J1708 only) where the GNX would still preferentially read RPM from the J1939 bus. Added "PoweredOff" to DIAG CAN to show when J1939 is powered off either due to J1708 being preferred or napping / power saving. (No Jira – discovered during regression test).
- Extra array for parameter MOVE_SPEED to prevent premature end/restart of idle timer due to GPS speed fluctuations, position jumps in idling vehicles.
  - MOVE_SPEED=x.1 - prevents premature end of idle due to GPS lat/lon movement when idling
    MOVE_SPEED=x.2 - as above plus prevents end of idle until BEGIN_MOVE event generated
- New option to detect wired ignition: FAKE_IGNITION=x.x.x.2 – if the GNX sees >=5 ignition transitions (ON->OFF or OFF->ON) in the ignition wire it will reset FAKE_IGNITION=0; This could be used as the basis for a universal configuration for a mixed install fleet. Not thoroughly tested – customer test and experimentation strongly recommended.
- Improved switch debounce / reporting for rapid PTO changes. (SWITCH_ON_TIME=0, SWITCH_OFF_TIME=0). Bluetooth BLE HOS GEN reporting of switch state is much more responsive to be able to report transitions of ~100ms. PVT events 20-28 are less sensitive (previously they were excessively sensitive and could generate a slew of events when not debounced) – they are now based on 50ms sampling of the PTOs so they will only detect/report switch transitions of > 50ms duration.
- Improved handling of BLE client to catch corner case where client disconnects during the attach (which would previously leave the GNX thinking a client is attached, preventing reattachment).
- Added feature to allow selective delete of CRCs from VALID_IB_CRC array. A new "parameter" VALID_IN_CRC_DEL , which can take up to 10 CRCs is available. All matching CRCs are deleted from VALID_IB_CRC. E.g. SETPARAM VALID_IB_CRC_DEL=x1111.x2111.x3111.x4111.x5111;
- New report column 192 which reports number of seconds RPM above parameter RPM_THRESHOLD in event 121. If an RPM excursion is short (> 2s, < 5s) then the single RPM event will contain a non-zero duration 2-5 seconds. If the RPM excursion is > 5 seconds then the first event will contain a 0 in this column and the second event will contain the true duration of the time above the RPM threshold. The server can generate the cumulative time that RPM was above RPM_THRESHOLD by adding all of the values in column 192 for event codes 121 during the time period in question
- GNX automatically clears nxtgenphone APN from GNX6-LTE external antenna when AT&T (or related MVNO) SIM is detected to allow automatic APN detection.
- Changed boundary configuration from 10 boundaries with up to 50 vertices each to 20 boundaries with up to 30 vertices each.
- Introduced limit of +/- 52 to parameter GMT_OFFSET(121) – this also fixes a bug where OTAP from pre-08 to 08 or newer can cause the GMT_OFFSET to

	be set to a huge value (due to bug in GMT_OFFSET parameter reading in pre-08 firmware), which subsequently corrupts parameters 137 (TIMEZONE_NAME) and 239 (SPEED_THRESHOLDS). • Added support for OTAP of larger .gxe binary images > 0x70000 bytes (448kBytes). **This means that OTAP of all future firmware releases will require the GNX to first be OTAPd to G604.08.09kX.** To ensure that there are no unintended consequences, we highly recommend testing the upgrade path in a limited capacity before performing this upgrade on a large population of devices. Consider rolling out the upgrade in increasing population sizes. e.g. considering testing 1 device then with 10 devices, then test with 100 devices, and then 1000 devices before upgrading the balance of your fleet. Release notes are on the Source

PRODUCT SUPPORT

WHEN IS THIS UPDATE AVAILABLE:	For products in the field this update is available now

CONTACT

SUPPORT:	support@sierrawireless.com

REVISION HISTORY

15-NOV-2019	Initial Release